As we expand into the 21st century, ever-increasing numbers of dermatologists are incorporating aesthetics into their daily practice setting. In this regard, a union between the aesthetic spa environment and the practicing dermatologist’s office has evolved. Taking the leap by incorporating a medical spa into an established dermatology practice can be challenging; however, if accomplished successfully, it can be associated with unprecedented professional satisfaction. This issue of *Dermatologic Clinics* outlines the steps necessary to accomplish these goals.

The first article of this issue outlines the steps necessary for incorporating a medical spa into a dermatology practice. Following articles include product, technology, employee decisions, and marketing aspects of establishing a successful medical spa. These are followed by treatise outlining the medical/legal considerations in the medical spa environment, and finally an article on future trends in this ever-evolving field.

A thorough understanding of the issues outlined in this issue will allow the dermatologist who is interested in incorporating a medical spa into their practice to have a successful approach to accomplish this goal in a professional fashion, which will increase both their satisfaction and, most importantly, lead to improved patient care. Emerging trends will enable the practitioner to keep up with the rapid evolution of aesthetic dermatology.

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Incorporating a Medical Spa into a Physician-Run Practice

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HISTORY OF THE SPA

DeVierville1 proposed that the modern word “spa” came into the English language via the old Walloon word, “espa,” which means fountain, and which in English became “spaw.” It is difficult to pinpoint the actual origin of the first spa and spa treatments. The concept of the spa occurred in Europe and Asia where mineral springs and thermal mud were used to soothe and heal varying ailments.2 During the Roman Empire 1352 public fountains and 962 public baths were available to the citizens of Rome.3 After exercising, bathers entered the “warm room” to acclimate to the subsequent “hot room.” After the hot room, patrons would undergo an oiling massage and then plunge into a cold pool.3 Roman soldiers sought hot baths to recuperate after long battles. The baths were referred to as “aqua,” and the bathing treatments were known as “sanus per aquam” (SPA), that is, “health through water.”

After the fall of the Roman Empire, establishments with “hot rooms” disintegrated, but the concept of the spa flourished with continued use of the major springs. Despite the Church’s disapproval of bathing, patrons would undergo an oiling massage and then plunge into a cold pool.3 Roman soldiers sought hot baths to recuperate after long battles. The baths were referred to as “aqua,” and the bathing treatments were known as “sanus per aquam” (SPA), that is, “health through water.”

In France and Germany, people frequented spas to improve medical ailments ranging from renal disorders and infertility to paralysis and seizure disorders. The Belgian town of Spa became famous for the healing powers of its mineral hot springs during the fourteenth century. It became a place to be restored and pampered and still exists today.

Between the sixteenth and seventeenth centuries, many prominent figures supported the use of spa waters for treating varying ailments. Leonardo da Vinci used the waters at San Pellegrino. Michel de Montaigne was relieved when the spring waters stimulated passage of a kidney stone. Charles Darwin improved his dyspepsia with a combination of wet sheet packing, hot air baths, and showers.3

During the eighteenth and nineteenth centuries, the use of mineral springs and the development of hotels and boarding houses around the vicinity of natural springs propelled the popularity of the spa. Transplanted Europeans and North Americans learned about the healing properties of waters from Native Americans, and they developed resorts or health retreats. Some early retreats such as Bedford Springs, Pennsylvania, White Sulfur Springs, West Virginia, and Hot Springs, Arkansas became household names rivaling the renowned spas of Europe.4

In the late nineteenth and early twentieth centuries, some of the founding fathers of dermatology, among them Ferdinand von Hebra and Louis Duhring, discussed the importance in hydration and bathing for the treatment of psoriasis, ichthyosis, and pemphigus.4 Through the early twentieth century, the great spas of North America and Europe were popular destinations for the wealthy as well as the ill, who went there to rejuvenate and recuperate. As health care became nationalized and

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modern medicine became more efficient, however, the popularity of spas began to decline.

In the latter part of the twentieth century and continuing to the present, spas re-emerged as destination resorts and places for health maintenance as a complement to modern medicine. The resurgence in the popularity of the spa sprung from the growing depersonalization of the modern health care system and from a greater emphasis on wellness and preventive medicine. Over time, spas became destination locales for health maintenance.

Three major markers delineate the evolution of the spa industry in the United States. In the 1940s Rancho La Puerta in Tecate, Mexico, focused on a return to nature and minimalism and emphasized healthy eating and fitness. In the 1950s the Golden Door in southern California developed intimate, small centers of pampering and relaxation. In 1979 the Canyon Ranch in Tucson, Arizona integrated health and healing into the models pioneered by Rancho La Puerta and The Golden Door.

Traditional spas now are oriented toward providing pampering and beauty treatments such as massages and facials and serving as relaxation centers for the wealthy. As such, the popular modern spa descends from the ancient practice of bathing in hot springs and mineral waters.

EMERGENCE OF THE MEDICAL SPA

Despite the advances and evolution of the spa, patients and clinicians recognized the lack of true medical benefits from typical spa treatments such as facials, body treatments, and skin care products. The advent of topical dermatologic agents with proven anti-aging and therapeutic effects, as well as new technologies to treat medical conditions with minimal downtime paved the way for the emergence of medical spas. The concept of one-stop shopping for both credible spa treatments and prescription-grade medications appeals to a large segment of the population.

Medications that have demonstrated anti-aging properties include retinoids, alpha- and beta-hydroxy acids, 5-fluorouracil, and chemical peels. Modalities that have a central role in aesthetic-based medicine include laser hair removal, vascular lasers, laser photo rejuvenation, injectable fillers, chemical sclerosants, and chemical denervating agents. These tools are available to the well-trained physician, require virtually no downtime, and can augment the services available in a traditional spa dramatically. The services of an aesthetically trained physician joined with the pampering, wellness-oriented environment of a spa can meet baby boomers’ demand for credible spa treatments, provide the convenience of one-stop shopping, and eliminate the cold, sterile, and depersonalized environment of the traditional medical office.

What is a medical spa? First, one should define the traditional spa. The International Spa Association defines the traditional spa as an entity devoted to enhancing overall well-being through a variety of professional services that encourage the renewal of mind, body, and spirit. The medical spa is a facility that operates under the supervision of a licensed health care professional whose primary purpose is to provide comprehensive medical and wellness care in an environment that integrates spa services with traditional and complementary and/or alternative therapies and treatments. The facility operates within the scope of practice of its staff, which can include both aesthetic/cosmetic and prevention/wellness procedures and services.

To comprehend better the full scope of a medical spa, it is instructive to take a look inside the first medical spa, the Juva MediSpa. Its founder (BK) actually coined and trademarked the term “medi-spa.” Juva MediSpa was a traditional cosmetic dermatology practice on the Upper East Side in Manhattan, New York, that employed one aesthetician. In this practice the author (BK) recognized three trends. (1) There was increased patient demand for integrated services. (2) Traditional spa treatments did not offer lasting skin benefits. (3) He was treating an increasing number of patients suffering adverse reactions caused by poorly trained personnel at various spa locations. As a result, in 1999, the center moved to a larger, 5000-square-foot facility in midtown Manhattan, and the first physician-formulated medical spa treatments were born.

At the new facility a warm and inviting environment welcomes the patient as he or she enters from the elevator (Fig. 1). At the front desk, the...
patient is provided with an informational brochure that details the services offered by the center and intake forms that the patient completes in the spacious reception area. Unlike a traditional spa, the patient completes a detailed demographic and medical history form. Unlike a traditional spa, physicians are on site to assist the aesthetician with patient care, to answer patient questions, or to provide consultations.

Unlike a traditional medical office, the waiting area of the Juva MediSpa is luxurious and inviting with comfortable, cushioned chairs and additional brochures that provide information ranging from the prevention of skin cancer to the latest laser technology (Fig. 2). Two television monitors provide a visual tour of the center and media segments of procedures and technologies pioneered at the Juva MediSpa. The treatment areas of the center are divided into two separate but connected sections: one for the medispa treatments and the other for medical and surgical procedures. This arrangement allows the pampering and wellness-oriented environment of the spa to segue gently to the safe, efficient, professional, and confidential patient treatment area.

The popularity of the medical spa is rising as baby boomers who have discretionary income aggressively seek to maintain youthful looks and search for preventive health care services in environments that are more pleasant than the depersonalized medical clinic with its emphasis on disease. Medical spas also appeal to the growing number of Americans who want to combine conventional and alternative medicine in their quest for optimal health with a holistic approach.

One example shows the benefits of this approach. A patient presents for evaluation and treatment of a large port-wine stain. She receives a consultation regarding treatment options by a staff physician. She is informed of the risks, benefits, and side effects of the treatments as well as other alternatives. She undergoes the laser treatment after signing a consent form and experiences expected postoperative purpura. In contrast to the traditional medical office, she then is directed to the adjacent paramedical make-up counter located in the spa and is advised as to which cover-up make-up would match her skin tone best while camouflaging her treatment area. This one-stop shopping makes sense and is what the consumer demands today.

**HOW THE MEDICAL SPA DIFFERS FROM THE TRADITIONAL SPA**

Medical spas differ from traditional spas in several ways. At the medical spa, consumers enjoy treatments that have genuine medical value as well as long-lasting aesthetic benefits. For example, depending on state law, aestheticians trained by and under the supervision of the dermatologist may use medical devices for laser hair removal and nonablative laser rejuvenation. The aestheticians and physicians can consult each other regarding patient care, and spa treatments are incorporated into medical and surgical procedures to enhance outcomes. This collaboration contrasts with the traditional spa where modalities may be used by poorly trained technicians without adequate supervision. Adverse events in such settings have led to new legislation in certain states restricting laser treatments to physicians or licensed practitioners.

Because of the extensive training that dermatologists, plastic surgeons, and many other physicians complete, treatments at medical spas such as acid peels, lasers, botulinum toxin, and injectable fillers can be performed safely. Sterile technique always is employed when appropriate (Figs. 3 and 4), and consent forms and other...
appropriate documentation are kept securely on file. Patient information is confidential, and only direct caretakers are permitted access. Clients feel more confident in the efficacy of medically supervised treatments and are more likely to undergo more aggressive treatments such as chemical peels and microdermabrasion with an aesthetician when a physician is on site. It is important to maintain the consistency of procedures for all treatments; that is, ancillary staff should adhere to the same treatment protocols for each patient to ensure a uniform, reliable client experience. This concept is discussed further in the section on management.

Patient and client documentation is another important facet of the medical spa that contrasts with practice in the traditional spa. Appropriate documentation is required in both the spa and medical segments of the medical spa. As mentioned earlier, intake forms are mandatory. These forms include demographic information, medical history, and pertinent symptoms. Consent forms are reviewed with each patient, and no procedures are conducted without a signed consent in the chart. Ample time is provided to answer any questions patients may have.

In addition to intake and consent forms, flow sheets are created and maintained for each patient and for each treatment modality. In this way, previous treatment parameters (e.g., settings laser treatments or times for chemical peel) are documented and can be referred to for future treatments. These forms also may include the lot number for injectable fillers and chemical peels, which may assist in identifying the potential cause for adverse reactions. Finally, the flow sheets can be used to document which provider used the modality last to identify whether laser malfunction or adverse outcome can be attributed to human error. This documentation is an essential feature of the well-run medical spa that also helps educate the staff members. These forms legitimize the medical spa and help to differentiate it from the traditional spa, which may not use such strict documentation practices (Fig. 5).

The creation of a pampering experience and attention to service is integral to the medical spa experience. The adage “the customer is always right” should remain in the forefront of the minds of staff members. Attention to detail is paramount, and employees should be encouraged to take pride in their services. This attitude, although natural in the spa environment, unfortunately is at odds with that of many of today’s health care professionals who are overworked, underpaid, and often underappreciated by patients. On other hand, patients may view these same health care professionals as harried, sharp, and lacking in compassion. The medical spa environment can eliminate this dichotomy.

The medical spa and traditional spa share a serene environment. The environment of the medical spa entails both the physical setting and the patient/client experience. Medical offices can learn from the operation characteristically used by traditional spas. Warmth is emphasized with low-level lighting for common areas, soft music on overhead speakers, and beautiful artwork. Subdued wall colors rather than the sterile beige-white should be considered. A professional consulting firm or spa architect should be considered when developing a medical spa.

At the medical spa, clients can obtain comprehensive skincare in a single facility that establishes the connection between beauty and science. The credibility of the spa is enhanced, and the therapeutic benefits of medically formulated agents are passed on to the clients. This advanced program of aesthetic medicine can improve communication and relations with aestheticians and alternative medicine providers in the community.

IMPLEMENTING THE MEDICAL SPA CONCEPT

Before implementing the medical spa concept, it is important to understand the current trends in the industry. Understanding these trends will help the practitioner tailor services appropriately, thereby meeting the needs of the targeted
population. During the 9-year period between 1997 and 2006, the American Society for Aesthetic Plastic Surgery polled 14,000 practitioners to ascertain which of the following procedures were performed most commonly: collagen injections, hyaluronic fillers, chemical peels, microdermabrasion, laser hair removal, and botulinum toxin cosmetic procedures. Of these six most common nonsurgical cosmetic procedures, cosmetic procedures involving botulinum toxin represented more than 40% of the market share. In other words, cosmetic procedures involving...
botulinum toxin tallied more than laser hair removal and hyaluronic acid fillers combined. Therefore, the clinician would be well advised to provide botulinum toxin cosmetic procedures as a service to his patients and to train staff to answer patient inquiries about these procedures and to market them readily in the practice.

It also is important to conduct a continued review of the trends in the marketplace. The previous discussion about botulinum toxin demonstrates this point. Although the use of botulinum toxin increased in the period between 1997 and 2006, the rate of botulinum toxin use actually decreased by 3% toward the end of the survey, whereas the
Incorporating a Medical Spa

use of hyaluronic acid filler increased by 33%. A practitioner who did not stay current with the market trends might have missed an opportunity to serve patients appropriately, and this oversight might have resulted in decreased profit margins.

One of the risks in implementing the medical spa concept in a traditional medical practice is that staff members from varying backgrounds may not view treatments the same way. For example, a patient presents to the spa for a facial. At the end of the facial the patient asks the staff member about the botulinum toxin brochure displayed in the waiting area. Inadvertently, the staff member says, “Oh I would never want to have a poison injected into my face!” Similarly, after a surgical procedure to remove a skin cancer, a patient inquires about the benefits of a chemical peel for her face. The nurse removing the sutures responds, “Oh honey, you can get the same effect of a peel with many over-the-counter washes.” One can understand how these scenarios would pose a problem in a medical spa practice.

Employees should be encouraged to observe clinicians perform a variety of procedures, to attend educational seminars, and to read appropriate current literature. Clinicians should be encouraged to experience massages, to observe facials, and to listen in during make-up consultations.

Clearly, as the practice transitions to the medical spa, it is important to educate the staff about the qualities of the new services available. One should develop a standard operating procedural manual and make sure everyone reads it. A training program for the staff should stress the consistency of services. One should create a procedure manual and administer written and hands-on testing to ensure a high quality of service. Although more staff may be better, it also is important to weed out underperforming members. The dermatologist should test the services of the staff members personally and should employ secret shoppers to suggest improvements.

Secret shoppers or mystery shoppers are individuals such as friends or family members that the dermatologist selects to visit the practice. While visiting the medical spa, the secret shopper evaluates every aspect of the staff and services from the moment the shopper makes the appointment until he or she departs after the service. The shopper comments on factors such as the staff’s professionalism and knowledge about products. The information collected by the secret shopper then can be used to address any deficits or educational holes that need improving. Patient questionnaires also can be used to assess client satisfaction with services rendered in the medical spa. Using regular patient questionnaires and secret shopper reports can help maintain the quality of services. Policies should be in place to keep services consistent so that, when patients or clients have questions, the responses can be uniform and well informed. The importance of investing in staff training and development cannot be overemphasized.

Although training and testing staff members is crucial, it is also extremely important to show them appreciation. A holiday party or an occasional lunch or dinner is a simple way to reward the support team for work well done. One should measure patient and employee satisfaction levels and also strive to increase one’s own productivity.

The learning curve of transitioning to a medical spa may be steep and somewhat laborious for both the dermatologist and the staff, but the end result of proper education is a happier and more team-oriented group. When making the move from a medical office to a medical spa, everyone should convey a positive attitude about the transition, especially when informing patients of the availability of new treatments. One way to encourage this attitude is to place mirrors at all reception stations. This way, the receptionist may observe his or her reflection and be reminded to use supportive body language and to smile. These adjustments in body language and expression can be perceived over the telephone as well as in the office.

MARKETING THE PRACTICE

Marketing is an important way to inform patients and the public about the new services a medical spa provides. One should plan to allocate about 2% to 5% of revenues as a marketing budget to promote the medical spa. A reputable public relations firm can identify the appropriate media to reach the targeted demographic group based on age, socioeconomic description, geographic location, and other factors.

Branding is the first step in marketing a business. Branding is a concept that may be foreign to many physicians, but branding has been shown to improve recognition of services and products. For example, in 1999, Aflac was a zero-profile company selling supplemental health insurance in the workplace. A television advertisement in 2000 showed two people sitting on a park bench trying to remember the insurer’s name. A duck reminds them over and over again by quacking the name “Aflac” in the voice of comedian Gilbert Gottfried. After the introduction of the advertisement, the company enjoyed 90% brand awareness, a rate unheard of in its market.7 Just as branding was
used in the television commercial, branding can help the new medical spa create visibility and recognition. Most importantly, it conveys the positive experience a patient or client can expect at the spa. Branding of a medical spa starts with the creation of a logo, which should be simple but memorable. The logo helps personalize the product line as well as all aspects of the spa. The logo should be put on everything and everywhere: printed material, robes, cups, pens, and other items used in the facility (Fig. 6).

Other important marketing concepts include comprehensive brochures, monthly lectures, a quarterly newsletter, discounts for bringing or referring a friend, and gift certificates. A customized brochure should describe the services available, office policies, and physician profiles (Fig. 7). The design should be updatable easily to include the latest procedures.

Monthly lectures are a great way to bring new patients into the center. At Juva Skin & Laser Center, the waiting area is equipped with a projection screen that drops from the ceiling for presentations and visual aids. The lecture series serve several functions. (1) They get people in the door and introduce them to the clinic and spa. (2) They inform and educate the public about the services offered. (3) They allow the creation of a database containing the contact information of prospective clients.

Perhaps the most powerful referral source for a center is the happy, satisfied patient. Happy patients also are the least expensive way to promote services. A recent article suggests ways to use one’s current client base. An excerpt from this article begins: “Mrs. Jones, thank you for your kind words. You know I’d like to have more people just like you. Would you tell some of your friends about us?” The article continues by advising one to reward Mrs. Jones for the referral by sending a note of gratitude with a gift card toward something she has been buying or a procedure she wants to have done (Fig. 8). Capitalizing on these encounters or “bring-a-friend” discounts are easy ways to cultivate the existing client base.

A quarterly newsletter is a very cost-effective form of advertising, and suppliers’ advertisements can reduce the cost of printing and postage (Fig. 9). These newsletters can be sent or emailed to current clients or to prospective clients who came to a monthly lecture. One exposure usually is not enough. Most people forget what they read, and they also may be slow to move. People may need up to five or six contacts before they decide to come in for a procedure. Other marketing strategies include a complimentary product at the initial visit.

MANAGING THE MEDICAL SPA

Revenues from a medical spa can realize a profit margin of 20% to 30%, which can be twice that of a traditional spa. This kind of profit margin can be achieved only with good management, however. Good management is the key to success. One should hold regular meetings with the staff and keep minutes of the proceedings. It is extremely important to review the minutes from the previous meeting to make sure that new policies and procedures have been implemented. One should be explicit in delegating tasks and should be sure to state the obvious. What may seem obvious to the director may need to be explained to members of the staff.

Regular business reports should be assembled to show important financial parameters of the medical spa. These reports include revenues from procedures (broken down by providers), revenues from products, overhead expenses, payroll costs, and staff productivity. Product sales should provide approximately 30% to 40% of revenues, with the balance coming from services.

Benchmarking is another important practice that should become a routine part of the business. What is benchmarking? Benchmarking is process used to ascertain the best practices that will lead to superior performance. By benchmarking one can measure the performance of the methods, procedures, products, and services of a practice against those of other practices that consistently distinguish themselves in the same measurement areas. Statistical comparisons include charges, revenues, expenses, and gross/net collection percentages. For example, most practices spend a certain percentage of their revenue on staff. If a practice is spending 30% of revenue on staff
salaries and benefits, and the industry standard spends 15% (half the amount), the leader of the medical spa should strive to achieve this target and make adjustments where necessary to ensure the greatest profitability. One should benchmark the finances of the practice frequently and make practice planning a routine.

One should watch the business trends carefully and investigate numbers that do not make sense. For example, several years ago at Juva Skin & Laser Center, the number of patient/client visits was increasing, but income was dropping. What could have been the reason for this? After several weeks’ investigation, it was realized that the staff member responsible for appointment scheduling was scheduling extra time for new patients and procedures, padding the schedule so that the staff member could leave the office earlier. This staff member was terminated. A meeting with the rest of the staff alerted them that such practices were considered as sabotaging the medical spa and would not be tolerated. To achieve optimal performance, it is important to have good information to make good business decisions. One must
surround oneself with people one can trust, but one also should verify changes personally.

Although the example given previously could be explained as an innocent mistake in which the staff member did not realize how her actions might affect the bottom line, other more disheartening examples of staff theft, dishonesty, and even assault have been reported. To enhance the safety and security of the medical spa (for the director, for staff, and for patients), many offices use security cameras. These cameras, installed in public areas and not in patient rooms, are a valuable

**Smart Lipo - The Smarter Way to Make Good Results Look Better**

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Smart Lipo, technically known as laser lipolysis, uses a laser beam to melt away fat. The interaction between the laser light and the skin forms new collagen and shrinks the skin. Performed under local anesthesia, Smart Lipo is ideal for touching up small areas of residual fat (as well as treating new fibrous areas or areas with skin laxity). The glowing optical laser fiber allows the surgeon to actually see the path of the laser beam beneath the skin, providing unparalleled precision. Because the Smart Lipo cannula (the tube that houses the laser fiber) is so small, the surgeon can work close to the skin without overcorrecting the area of residual fat; the procedure is easier for both doctor and patient. When performed by itself, Smart Lipo causes virtually no pain or discomfort.

Because the procedure requires only local anesthesia, it can be performed when patients are standing up, making the whole process more precise and giving better results in both initial and secondary procedures. After undergoing a touch-up, patients usually return to work the following day. When used in combination with power liposuction for larger areas, patients get the benefits of both worlds — fat removal and skin tightening. Post-operatively, a compressive garment is worn consistently for the first week and intermittently the second week.

Not only do Dr. Katz and Dr. Bruck have the largest Smart Lipo experience in the United States (having performed more than 500 cases), but they combine the benefits of both plastic surgery and dermatology expertise, unique only to Juva Skin & Laser Center. We invite you to schedule an appointment for consultation with Dr. Katz or Dr. Bruck to discuss your liposuction needs by calling 212-688-5882.
investment. They can be installed so that the areas can be viewed online even when one is not physically in the office. Employees are notified of the camera’s presence, and this knowledge helps diminish dramatically the impulse to take products from the office. The film also serves as a possible record of any criminal offenses.

As noted earlier, it is important to attract good staff and to train them properly. How does one do this? Before hiring a staff member, it is crucial to have an established training program. One must create a training manual that details job descriptions. The practice manual should stress consistency of services and responses to various clinical and nonclinical scenarios. One should invest the resources in retraining current staff and encourage the pursuit of continuing medical education credits. One should establish patient questionnaires to evaluate staff performance. Once these building blocks are in place, one should use various recruitment methods, including word of mouth and advertisements in newspapers, medical journals, and perhaps on radio and television.

When an applicant is invited to visit the practice, one should make sure to include staff members (eg, the office manager, the head nurse, the patient care coordinator, front desk manager, and even competing assistants) in the interviewing process. Doing so helps ascertain the “best fit” for the practice. Also, during the interview, the interviewee should be asked to perform tasks relevant to the job description. Even though applicants may declare they have proficiency in various programs, they sometimes exaggerate their skills. One should ask the applicant to demonstrate his or her knowledge during the interview by working with the practice’s programs. Another method of assessing a suitable applicant is role-playing. One can provide various scenarios and evaluate the applicant’s responses. Factors predictive of good development include energy, potential, motivation, loyalty, and intelligence.

This discussion underscores several important points. It is important (1) to investigate when business numbers do not make sense, (2) to hire the right staff and invest in staff training, and (3) to weed out the underperforming staff. Also, and perhaps most importantly, one must recognize and embrace the role of the leader in the practice.

**DISPENSING SKINCARE PRODUCTS**

There are several advantages to dispensing cosmeceuticals from the medical spa. Kligman9 coined the term “cosmeutical” to indicate a topical preparation that is sold as a cosmetic but has performance characteristics that suggest a pharmaceutical action. This group of agents is difficult to categorize because of the well-established practice of media hype and because the publication of the preparations’ true pharmacologic actions would require reclassification of these agents as drugs. These factors make it difficult to distinguish fact from fiction. Despite these difficulties, in the first half of 2002 the sales of cosmeceuticals increased by 83% while overall sales for skincare products increased by only 1%.10

Rokhsar10 summarized the agents that show the most promise. These include vitamin C, alpha-hydroxy acids, retinoids, and growth factors. Vitamin C improves skin texture and pigmentation by acting as an antioxidant. Vitamin C is a known cofactor in collagen synthesis and has been shown to stimulate new collagen production. Alpha-hydroxy acids improve dyspigmentation and fine rhytids by accelerating exfoliation, resulting in increased epidermal turnover. Growth factors regulate fibroblasts and other mechanisms involved with wound healing. The end result is improved pigment, texture, and rhytids.10

Retinoids have been shown to be the most efficacious of these products. Retinol is the main dietary source, transport, and storage form of vitamin A and is found in many over-the-counter products. It is marketed as an anti-aging agent. In the body, retinol is converted to the biologically active form, all-trans retinoic acid (tretinoin).

Several studies have confirmed the efficacy of tretinoin in improving fine lines, mottled pigmentation, roughness, and laxity. Although retinol is 20-fold less effective than tretinoin, and the cutaneous concentration of tretinoin is 1000-fold less in topically applied retinol than in topically applied tretinoin, recent studies have shown efficacy.11 One study of 24 patients using 0.15%, 0.3%, and 0.6% concentrations over a period of 6 months showed histologic and clinical epidermal improvement in all patients using the two higher concentrations and in 40% of those using 0.15% retinol.12 Incorporating the use of products that have higher concentrations of retinol into the practice is something to consider. The use of some form of retinoid should be a mainstay of treatment in most patients’ skin care regimen.

In making other products available to patients, one should consider the following parameters:

1. Choose noncomedogenic formulations, especially for products that will be used on the face and neck
2. Make sure products are fragrance free to avoid possible allergic contact reactions.
3. For patients who have sensitive skin, the products should be hypoallergenic.
4. The ideal product should be pleasing to the patient when applied. In other words it should not feel greasy or leave a residue or film. The product should be “cosmetically elegant.”

One rationale for and advantage of dispensing products in the medical spa is obtaining knowledge about and control over the products patients are using on their skin. In the authors’ experience, patients present to the clinic after using numerous over-the-counter or Internet-purchased products; usually these patients are using too many products (often incorrectly) that have no proven efficacy after spending tens, hundreds, and sometimes thousands of dollars. By dispensing products from a line that one has chosen personally, one can provide the patient with efficacious, reliable products that are customized to meet the patient’s specific needs. Patients who obtain products from the medical spa will avoid confusion from the use of other products and will obtain more comprehensive care. Convenient one-stop shopping, minimizing irritant or contact dermatitis, and reducing issues of noncompliance are added advantages. Finally, repeat sales at the office and Web site improve profit margins.

As mentioned earlier, it is important to brand the products. When branding the office pens, paperwork and brochures, one should consider branding some or all of the topical agents. Branding these products adds to the medical spa’s exclusivity and visibility. Existing private-label lines can be used, or product formulations can be developed with a cosmetic chemist. To keep the product line simple, one can organize it by skin type (e.g., aging skin, sensitive skin, and oily skin). Products also can be organized by ingredients. With this method, one can provide comprehensive categories such as cleansers, sunscreens, moisturizers, eye creams, and body lotions. Key ingredients may include glycolic acid, antioxidants, botanicals, and alpha-lipoic acid. The products should be exclusive and difficult to find elsewhere.

The packaging of the products is important. Packaging provides 60% to 70% of product appeal and should be nicely styled but not flashy. The products should be presented in one location, in a highly visible area. The shelves should be open, and testers should be available so customers can try the products. A staff person should be nearby to monitor and answer questions. All staff, including physicians, aestheticians, nurses, and front-desk staff, should be educated about each product. Financial incentives may be given to all staff for selling products. One should test the staff’s knowledge about the products and undertake a periodic analysis of sales by staff.

Some physicians may feel uncomfortable about selling products from their practice. Several articles detail the various opinions, pro and con, surrounding the ethical issues of physician-office dispensing. Those who oppose physician dispensing claim the selling of nonprescription products in the office is driven solely by the profit motive and creates an inherent conflict of interest. Proponents of physician dispensing discuss the convenience for the patient, improved compliance, and physician expertise. Although the decision to dispense is a personal one, Gormley suggests eight facets of ethical dispensing:

1. The product must confer a true benefit.
2. Risks, benefits, advantages, and disadvantages should be discussed.
3. The product must be sold at a fair price.
4. There must be no misrepresentation of the product.
5. No pressure tactics should be used.
6. Patients must not be encouraged to discard existing stocks of similar products.
7. Products should be sold with a replacement guarantee.
8. In the unlikely event of an adverse effect, management for the problem must be provided free of charge.

One also should analyze the economics for the patient and the profit for the medical spa while avoiding pressuring the patient to buy the medical spa’s product rather than other retail products. To achieve this goal, the products should be priced below comparable retail products. This pricing should ameliorate the ethical dilemma of dispensing skincare products. In addition, one can improve customer service and patient satisfaction by providing full refunds if a client is not completely happy with the product.

**HEALTH AND WELLNESS SERVICES**

In addition to cosmeceuticals, several other services should be considered for inclusion in the medical spa. Health and wellness services are a natural extension. Associating with other health care professionals such as nutritionists, physical therapists, acupuncturists, psychotherapists, and others can provide an edge over the competition. Canyon Ranch has used this multitiered approach successfully. For example, working with a registered dietician who can advise clients about the relationships among food and health, fitness, and weight loss may help a liposuction patient fine-tune her posttreatment goals. Employing body
therapists who offer massage, herbal wraps, and water treatments will underscore the importance of the pampering environment.

The presence of a holistic physician with an orientation toward disease prevention and maintenance of a healthy lifestyle will add to the medical spa’s cachet. This provider can be an internist or a general or family practitioner. One should select colleagues who are excellent communicators and who value prevention and a healthy lifestyle. Patients can be referred to an acupuncturist for pain management or to a chiropractor for musculoskeletal issues. Patients seeking anti-aging treatments can meet with a psychotherapist for stress reduction or smoking cessation. Patients interested in liposuction or cellulite treatment can consult a personal trainer for an exercise regimen. A consulting relationship with a cardiologist for stress testing and other noninvasive studies can complement the medical and spa services.

INNOVATION AND CUTTING EDGE

The medical spa concept is new and exciting. Patients, clients, and physicians have recognized the desire for effective and convenient aesthetic-based services, and the emergence of the medical spa meets this desire. Providing the appropriate spa services and creating a pampering care environment is adds value for a dermatology practice. When incorporating medical spa services into the practice, the dermatologist should remember that he or she is the leader, and the entire team must support the transition. One must demand consistency of services from the staff and promote continuing education and training. Assertive marketing, branding, and managing of the medical spa are crucial components of long-term success. Diligent management with rapid response to changes in the marketplace and continued innovation will ensure the success of the medical spa.

REFERENCES

A dermatology spa and a medical spa (medi-spa) are basically the same entity: a spa environment located within a dermatology clinic. The spa may be within the actual space of the dermatology medical or cosmetic practice, or in a separate location somewhere near the medical practice. By its very nature, a dermatology spa is a spa that has an association with a dermatologist and their staff.

The spa business in the United States is booming. More and more of these facilities are opening up, almost on a daily basis. Not only are the owners of these establishments dermatologists, but more and more spas are being run by other physicians or, more alarmingly, by people who are unfamiliar with treating skin conditions of any kind and who appear only interested in cashing in on a fad.

With all of these spas opening up all over the country, it appears that there are just as many of them closing their doors or looking for associations with clinicians who know something about the skin and who have name recognition in their community. I was recently approached by such a business entrepreneur who had spent three years trying to make his strip-mall medi-spa work. He then realized, with all of the costs associated with running such a business and with all the competition in the area, that his business would not be able to make it on its own. He was looking for a “name” to add credibility to his business. I passed on the offer because I have enough “on my plate” at this time and I found that the numbers just did not make sense.

Why would a dermatologist be interested in starting a dermatology spa in the first place? What possible benefits could be gained by a dermatology practice? And why would one want to invest money into something which has very little to do with what we physicians went to school all those years for? These are the typical questions that I get asked when I lecture to young residents and practitioners on the subject at medical meetings. There are no easy answers, just my opinions after almost 17 years of running a fairly successful dermatology spa. In this article, I outline about how I ran my spa and the formulas we have used to make our dermatology spa a success in our community.

When I first opened my dermatology practice many years ago, I was a medical dermatologist who had received wonderful resident training in the cosmetic aspects of dermatology. It was not unusual in my residency program to be helping perform hair transplants, scalp reductions, liposuction, chemical peels, sclerotherapy, collagen injections, and laser therapy (although it was in its infancy at that time). When I started my own practice, I began to incorporate these cosmetic procedures into my practice. I enjoy the cosmetic practice very much and I have continued to grow its part in my dermatology practice over the years.
The cosmetic part of my practice led me to establish a separate, but associated, entity near my medical practice that provides strictly cosmetic procedures, specifically laser therapies and injections of fillers and toxins. The dermatology spa concept developed earlier, just one year into my medical practice of dermatology.

I saw an unmet need in our community when my patients were asking me what kind of cleanser to use, what kind of creams and lotions should be applied to the skin, and, more importantly, what kind of products should be used when the patients had a dermatologic condition. Expert recommendations were needed. Those needs were surely not being met in my community; there was an opportunity to begin something new, something not many had ventured into.

The concept began to take shape: develop a place where all of a client’s skin care needs could be met in a one-stop shopping environment. Yes, a one-stop shopping environment was preferred because dermatologists know more about skin care and the needs of the skin than anyone else. Why shouldn’t dermatologists be the ones to recommend skin care products, perform services that actually make sense, and work with medical conditions normally seen on a daily basis? Our dermatology spa concept began and it has been used for 17 years (Fig. 1).

In the beginning, I had no idea how to do this and no idea what products or services to provide. There were no “how to” books or consultants available to get things started. I had to do this on my own. I began to look around my community to find the person I thought had the most knowledge in the aesthetics business and I hired her. I paid her more money than she had been making in her cozy spa environment and I gave her the opportunity to help build a business from scratch.

She had a clientele, all of whom were willing to follow her to her new home in my business. This had other benefits as well such as instant consults with many wanting cosmetic procedures, and so it was a perfect win-win situation for me.

I gave this aesthetician one of my examination rooms that was made to look and feel a little less medical than the other rooms in my clinic. I taught her the basics of acne, eczema, what ingredients in skin care products were good for the skin, and what ingredients might be irritants to the skin and should therefore be avoided. There was another problem: we had no skin care products to sell as there were no companies that actually sold skin care products to physicians at the time (which is hard to believe now). Through some connections I made while I had been a resident, I was able to arrange a deal with a major skin care company: we would have all of their products for use for our services and we would recommend specific products that our clients could purchase for a discount at a nearby department store. This was not the concept that I had when I started, but it was a good start.

The aesthetician began performing facials in her room with her clients. In turn, her clients all eventually found their way to purchasing the cosmetic procedures I was performing, which helped my cosmetic practice blossom in those early years. I was sending her patients for facials and she was sending clients to me for collagen, chemical peels, sclerotherapy, and laser procedures (Fig. 2). This is where I found the first benefit of a dermatology spa: cross-referrals through a built-in network of patients and clients whom we all shared, primarily my dermatology patients and her aesthetic clients.

Things were off to a great start: she was making more money than she had ever made before, had benefits which she never had before, and
was providing a wonderful service to an entire new

was providing a wonderful service to an entire new
group of people not used to this one-stop shopping
evironment.

We realized, however, that for a one-stop shopping environment, sending clients to a department store for products was not going to work, even though we were recommending the products that we wanted our clients to use. We began looking around the dermatology community and we soon found that there were “cosmeceutical” skin care products popping up in dermatology. We began to purchase skin care products from some of these companies; we also recommended the products, when appropriate, to the clients receiving services from our aesthetician. Finally, the concept of one-stop shopping had been realized.

The key to the medi-spa’s one-stop shopping environment was keeping it ethical. We never have forced our patients to purchase our skin care products, but we do give them recommendations, and often samples, of products that we want the clients to use. We have found over the years that by keeping the product sales ethical, our clients never feel pressured to purchase these products and, most of the time, they will eventually purchase the products that we recommend.

After a few years in this environment, we had outgrown our medical space and we moved into a new clinic, which we built with the spa in a completely separate space. We hired a second aesthetician and expanded our offerings to include more and more spa services. Although the majority of the services were medically related, some services were more cosmetic in nature. Because we found that there were more skin care companies selling products to dermatologists, we were able to expand our product inventory as well. The dermatology spa part of my medical practice began growing nicely: the aestheticians were continuing to make more money than they had ever made, and more clients were receiving cosmetic procedures from me. We have never looked back.

Currently, we have a full service dermatology spa with aestheticians and massage therapists. We sell over 500 skin care products to our clients. We rely heavily on the cross-referral system; we see a lot of patients in our medical dermatology practice and our laser and rejuvenation center takes care of many patients in their dedicated space. Our dermatology spa serves many of these patients by recommending skin care products and performing services, which include facials, micro-dermabrasions, and massage therapy. The program has worked successfully for 17 years; we have used many aestheticians and massage therapists who have been integral factors in our continued growth.

There are no actual formulas that I used; perhaps “trial and error” would be the best way to describe how we have grown over the years. There are many decisions that a clinician will have to make in deciding how to run a dermatology spa. I will share some of the types of decisions. The first decision is to determine whom you will hire to perform the spa services. As I stated, I found the best aesthetician available in my area, who already had established client base. This was a smart move for me. Since then, I have hired aestheticians who were recent graduates from aesthetic schools and who were excited to learn and venture into the dermatology spa business. The second decision is about what services you are going to offer to your clients. As I stated, I found the best aesthetician available in my area, who already had established client base. This was a smart move for me. Since then, I have hired aestheticians who were recent graduates from aesthetic schools and who were excited to learn and venture into the dermatology spa business. The second decision is about what services you are going to offer to your clients. This one isn’t as easy for most dermatologists as many of us have no real concept of the aesthetician’s language for facials and other services. You will need to learn the language and work with your aestheticians to find the services that go well with your dermatology practice.

Additionally, you need to decide if the offered services will be strictly medical in nature, cosmetic, or a blend of both. We have always found that a blend of both works best for our clientele. Some patients/clients need the more medical acne/eczema-related services and some need more pampering; both types of services can work in the dermatology spa environment. You will need to decide which choices work best for you.
Also, you need to decide how you are going to pay the staff. This group of individuals works for different pay rates and scales than your typical medical employees. Most of the aestheticians in the general community work either for a percentage of what they make or on a strict split of their charges. Either method is okay, but I have always found that it is best to have these employees on a salary, usually paying them by a set hourly wage. We always pay more than the normal “going” rate to ensure that our aestheticians are well compensated and feel part of the team. Once they work more than thirty hours per week, we allow them to enjoy the other benefits we give to our other employees, which include health insurance benefits, disability benefits, and enrollment into our retirement program. I promise that for the majority of aestheticians and massage therapists this is a new concept for them and you can help you differentiate your business from others in the community. We then add a bonus plan that in our case is a commission on products sold, which usually runs around 5% for our aestheticians and massage therapists.

With the skin care products themselves, there is no set formula that I am aware of which works for all dermatology spa settings. I have always chosen to work with skin care companies that support dermatology and then we have the assistance of the local support available to us to help move their products. These companies need to earn their place in our office; it is not a given that a skin care company will remain with us unless there is mutual help between the company and our dermatology spa.

What do I mean by this? There are several ways companies can help you grow your business. They can support your advertising initiatives by paying for some of your advertising or by coming up with individualized advertising for your spa. By buying skin care products, you should earn cooperative (co-op) dollars, which then can be used for your own internal promotions. We insist on this with all of the companies that we purchase skin care products from. We also insist that the sales representatives from these companies help us with local, in-house promotional activities, which we have from time to time to promote certain products and services.

I only use skin care products from well-respected dermatology companies; however, there is another form of products, known as private-label products that also serve many in our group well. There are now several well-established private labeling companies out there, and the labeling can brand the product yours. Those using private labeling should be ethical in letting their patients know that these products were not made by them, but have their name on them. Also, let patients know that these labeled products are not the only skin care products that will take care of a particular problem or concern. Again, keeping the selling ethical is very important. We also expect that all of the companies that we purchase products from will have products available for use as back-bar stock; these are products that the aestheticians actually use on a daily basis with their clients.

After you have your staff hired and have decided which skin care products you are going to sell, you need to have several items in place to assure the smooth running of your dermatology spa. You need to have an inventory control system; someone knowledgeable about inventory management will need to control the products you have on hand. We use our in-house accountant, in concert with our spa staff, to handle our inventory needs. Products are ordered by the spa’s staff with purchase orders; the purchase orders go to our accountant for approval. Once the products have arrived, they are inventoried in our computer system before they make their way onto our shelves.

Spa practice-related software also exists which can help you track your clients and help with scheduling, confirmations, and follow-up. These software programs are usually not part of your typical electronic medical record software packages, although that would surely reduce the efforts of our information technology team, which must keep up with all of this software. Tracking your clients is extremely important: where do they come from and who sent them to you? Are your clinic’s patients making their way to your dermatology spa? Are your cosmetic patients buying skin care products post-procedure to help maintain their skin? Are you receiving new clients from regular clients? And from where else are you getting clients? Tracking these clients is crucial to the success of a dermatology spa.

You will also need to determine if you are going to advertise your dermatology spa. The forms of advertising you choose will help you make a decent return on your investment. I chose to advertise my dermatology spa, initially, in print advertising, especially when I could use co-op dollars to help offset the expenses. I found these ads worked only fairly well. By far, our best means of marketing is our internal marketing, using the nearly 95,000 patients who already exist in our database. We routinely send out e-mail blasts to this group letting clients know weekly specials on products and services.

We create a newsletter at least two times per year that is of magazine quality and describes
the many facets of our center, also focusing on our dermatology spa and its employees. The newsletter concept has been, by far, our most successful advertising tool; I encourage all dermatologists to develop a newsletter that can educate your patients and separate you from your competition.

I have truly enjoyed running a dermatology spa these past 17 years. I have seen the environment change dramatically over time, with many spas opening and many closing. I believe that the spa business is not going to lead one to retire from the income it can potentially make. At times, with all of the expenses you might allocate to your spa, you can actually lose money in the spa. If there are cross-selling efforts and referrals being made, and if our spa clients are receiving other cosmetic procedures that are more expensive, then the spa serves a great purpose for my clients and for me. I encourage everyone in dermatology to embrace the spa concept and to allow those who know how to run one efficiently, professionally, and ethically to have a place in our wonderful dermatology family.
Medical spas are the fastest growing segment of the 15-billion dollar spa industry. Although medical spas have been in existence since ancient times to treat a wide variety of ailments such as gout, arthritis, and diabetes, our modern concept of the medical spa combines relaxation with medical rejuvenative procedures. In Europe, the first attempts at medical rejuvenation occurred with nutritional supplements, colonic cleansing, and intravenous therapy with a variety of hormones and animal-based extracts. The location of medical spas near thermal springs has been important, and even Napoleon had a spa build at La Roche Posey to treat the topical wounds of his war veterans.

The use of oral and topical waters and supplements also occurred in the “New World.” This article focuses on the more recent technologic advancements in rejuvenation.

MODERN HISTORY OF MEDICAL SPA TECHNOLOGY

This author believes that the modern explosive evolution in medical spas coincided with the development of intense pulse light (IPL) and laser treatments for hair removal. This coincided with the recognition that epilation of hair from areas treated with the IPL was not a side effect of the IPL (as reported to the FDA in our initial studies on the treatment of vascular lesions with the IPL) but was a new treatment for excessive or unwanted body and facial hair. The company that first developed the IPL under the name Photoderm VL (Energy Systems Corporation, Ltd., now Lumenis, Inc., Santa Clara, CA) recognized that hair loss after IPL treatment was a new business. They modified the Photoderm to have a large spot size and more powerful fluence and called the new machine the “Epilyte.” Clinics devoted to hair removal, such as Vanishing Point, were started, and physicians added the Epilyte to their practices. The Epilyte became so successful that in 1998 our practice dedicated an adjoining office space to the medical suites to house the Epilyte and added facials, massage, and hydrating treatments and called the new business The Spa at Dermatology Associates. Within a few months, the “Spa” became profitable, primarily due to the success of IPL hair removal. Laser companies took note, and the 810-nm diode Lightshear (Palomar/Coherent/Lumenis) and the long-pulsed 755-nm Alexandrite lasers (Candela and Cynosure) were developed.

In the late 1990s, physicians who had been using the IPL for hair removal and to treat leg veins and other vascular lesions noticed that solar lentigines lightened or resolved when coexisting vascular lesions were treated, and the skin took on a smoother appearance and feel. Dr. Patrick Bitter Sr. and Dr. Patrick Bitter Jr. termed this effect “photofacial,” (now known as “photorejuvenation”), and the medical spa had a second large clientele. The development of minimally or noninvasive lasers that could also produce rejuvenation of photodamaged skin were developed and continue to be improved upon. More recent skin-tightening radiofrequency (RF) or infrared devices were developed to treat fine lines, wrinkles, and skin elasticity. Most recently, women have been...
educated as to the undesirable appearance of the natural female characteristic of cellulite, prompting the development of yet another treatment modality.

In summary, the technological advances were in the treatment of unwanted hair, photodamaged skin, and cellulite. One could also make a case for the treatment of tattoos and fatty deposits, but a discussion of every possible treatment is beyond the scope of this article. This article focuses on the three most important and common medical spa treatments.

**Spa Nursing Personnel: Who Should Deliver Medical/Technologic Care?**

Equipment available to vaporize hair, reduce signs of photodamage, improve the appearance of cellulite, and tighten skin has become easier to use over the last few years. This ease of use has resulted in the ability of nonphysicians to serve as technicians, which permits widespread use. Because nonphysicians receive less training than physicians, they charge less for their services on an hourly basis. The use of nonphysicians to operate rejuvenating equipment translates to a lower charge per procedure or a higher profit margin for the owner of the equipment. Because nonphysicians receive less training than physicians, they charge less for their services on an hourly basis. The use of nonphysicians to operate rejuvenating equipment translates to a lower charge per procedure or a higher profit margin for the owner of the equipment. Many rejuvenating procedures use laser, IPL, and (RF) technology, and these procedures are not fool-proof and can cause adverse effects. Because United States law delegates the responsibility of public safety to State governments, rules and regulations governing the use of these machines are not uniform or are non-existent. Despite this variability of State regulation, common ethics dictates that one should strive to provide safe and effective procedures. The dangers of inappropriate delegation of medical procedures are listed in **Box 1**. Common problems seen from nonsupervised medical procedures are listed in **Box 2**.

Some states, such as Georgia, do not require training or testing of competency of physician supervision in using lasers, RF, or IPL devices. Other states, such as Florida, require that the physician who supervises a nurse on sight be a dermatologist or plastic surgeon. The problem is that the American Society for Dermatologic Surgery estimates a 25% increase in complications from using these procedures by nonphysicians over the last 5 years. Therefore, the American Academy of Dermatology and the American Society for Dermatologic Surgery in 2004 approved a position statement that required a supervising physician to be present and immediately available to respond to problems associated with nonmedical administration of IPL, RF, or laser treatments. The American Society of Laser Medicine and Surgery in 1999 took a similar stance and added that the supervising physician must be trained and certified to administer the treatments s/he is supervising and be within 5 minutes of the nonphysician. The American College of Surgeons takes a more restricted position in their 2007 regulations, stating that individuals who perform these procedures be licensed physicians with the same certification that governs all surgical procedures. Ultimately, the delegation of patient care depends on the ethical standards of the medical director. As physicians, we took an oath not to make the most money possible but to deliver the best care we can and do no harm.

**Hair Removal Lasers**

The first laser assisted hair removal device was marketed in 1996. Such hair removal devices include ruby, alexandrite, diode, and neodymium: yttrium aluminum garnet (Nd:YAG) lasers and IPL sources.

**MECHANISMS OF HAIR FOLLICLE DESTRUCTION**

There are three means by which light can destroy hair follicles: thermal (due to local heating), mechanical (due to shockwaves or violent cavitation), and photochemical (due to the generation of toxic mediators like singlet oxygen or free radicals). For
our purposes, photothermal destruction is the most important factor.\(^5\)

**Photothermal Destruction**

Photothermal destruction is based on the principle of selective photothermolysis. The principle states that by choosing an appropriate wavelength, pulse duration, and fluence, thermal injury can be confined to a target chromophore.\(^4\) In the visible to near-infrared region, melanin is the natural chromophore for targeting hair follicles. It is found in the hair shaft, the outer root sheath of the infundibulum, and the matrix area. Lasers or light sources that operate in the red or near-infrared wavelength region (694-nm ruby laser, 755-nm alexandrite laser, 800-nm diode laser, 1064-nm Nd:YAG laser, and noncoherent light sources with cut-off filters) lie in an optical window of the electromagnetic spectrum where selective absorption by melanin is combined with deep penetration into the dermis. Because melanin in the epidermis competes a competing site for absorption, cooling of the epidermis with cold air, a cryogen spray, or a cold sapphire window minimizes epidermal injury.\(^5\) The pulse duration of the laser should be matched to the thermal relaxation time of human terminal hair follicles, which is estimated to be about 10 to 100 milliseconds.

Hair removal is also dependent upon fluence. Careful studies with computerized hair counts have demonstrated that greater hair loss was achieved at the higher fluences tested. The limiting factor is damage to the skin, which determines the highest tolerated fluence.

**CLINICAL TECHNIQUE**

**Patient Selection**

The individual’s skin type and hair color and coarseness determine which device is the most appropriate and help to predict response to treatment. The ideal patient has realistic expectations, normal endocrine status, thick dark hair, and light skin tones. Current techniques are not generally successful in permanently removing white hairs or fine vellus hairs. Laser treatment is much more effective when the pigmented hair shaft is present within the follicle. Patients should therefore not pluck or wax for at least 6 weeks before treatment. Shaving, bleaching, or using chemical depilatories is an acceptable alternative for patients awaiting laser treatment. Due to the increased risk for eye injury, patients should not be treated within the orbital rim. Certain medications and hormonal imbalances may inhibit permanent hair removal due to hair stimulation. Although treatment can be safely performed with a shorter wavelength device (eg, ruby laser) in fair-complexed patients, it is preferable to use a longer wavelength device in darker-complexed patients. Further epidermal protection is afforded by using longer pulse durations and active cooling. When assessing individuals who have a suntan, it is usually prudent to delay treatment until fading of the tan occurs.

**Laser Selection**

**755-nm alexandrite lasers**

Several long-pulsed alexandrite lasers (755 nm) are available for hair removal. These lasers provide pulse durations between 5 and 40 milliseconds and fluences up to 50 J/cm\(^2\). A cooling handpiece allows a continuous flow of chilled air to the treatment area, or dynamic cryogen spray cooling gives short (5–100 milliseconds) cryogen spurts, delivered on the skin surface through an electronically controlled solenoid valve; the quantity of cryogen delivered is proportional to the spurt duration. The liquid cryogen droplets strike the hot skin surface and evaporate. Skin temperature is reduced as a result of supplying heat for vaporization.\(^6\)

Most studies demonstrate 70% clearing of hair for at least 6 months after five treatments.\(^6,7\) Side effects are rare, with postinflammatory hyperpigmentation at high fluences. The longer pulse durations provided better protection to the epidermis. Cryogen spray cooling has been associated with rings of hypopigmentation.\(^8\) Pigmentary problems usually resolve within 1 year.

**800-nm diode lasers**

An extremely high-powered (2900W) diode laser (LightSheer; Lumenis) is a popular laser hair removal device. Long-term results suggest that the pulsed, 800-nm diode laser is effective for the removal of dark, terminal hair: Permanent hair reduction of 70% or more can be obtained.\(^9,10\) This laser operates at 800 nm and has pulse widths between 5 and 400 milliseconds, a 12×12 mm spot, a 2 Hz repetition rate, fluences ranging from 10 to 60 J/cm\(^2\), and a patented contact cooling device (ChillTip). Because of the longer wavelength, the active cooling, and the longer pulse widths, darker skin types can be treated more safely than with the Alexandrite lasers. The major drawback is that the use of this laser requires contact with the skin surface, making it difficult to use in the pelvic region.

**Long-pulsed 1064-nm Nd:YAG lasers**

Several long-pulsed Nd:YAG lasers (1064 nm wavelength) that deliver pulses in the millisecond domain are available for hair removal laser treatment on all skin types. The long-pulsed 1064 nm Nd:YAG laser is deeply penetrating.\(^11\) The
Photodynamic therapy (PDT) involves the use of a photosensitizer and light to produce therapeutic effects. The mechanism of action is presumed to involve the generation of toxic reactive oxygen species, subsequent to the photochemical activation of the photosensitizer by light. The recent introduction of 5-aminolevulinic acid as a topical photosensitizer has opened up a variety of potential therapeutic options. Selective protoporphyrin IX synthesis in pilosebaceous units is a unique feature of ALA over other photosensitizers, and topical application circumvents the photosensitivity that is induced by systemic agents.

Preliminary reports from a recent study including, examined the ability of Levulan stick with a proprietary nonlaser light source compared with a laser to remove human hair. The nonlaser light plus Levulan did not result in more significant hair loss than placebo plus light. Levulan plus laser light seems to prevent approximately 30% of the hair from regrowing with one treatment (unpublished results from DUSA pharmaceuticals).

Photodynamic therapy may be a useful approach for hair removal. Because photosensitizers tend to localize in the follicular epithelium, photochemical destruction of all hair follicles, regardless of hair color or growth cycle, could be obtained. Long-term data and large-scale studies are needed to determine the safety and long-term efficacy of this modality.

Treatment Guidelines

The procedure for hair removal is similar using any of the devices previously described. The ideal treatment parameters must be individualized for each patient. Test sites can be placed at inconspicuous sites in the area to be treated. The treatment fluence is carefully increased while the skin is observed for signs of acute epidermal injury, such as whitening, blistering, ablation, or Nikolsky’s sign. Slightly overlapping laser pulses should be delivered with a predetermined spot size. It is recommended that the largest spot size and the highest tolerable fluence be used to obtain the best results.

The ideal immediate response is vaporization of the hair shaft with no other apparent effect. After a few minutes, perifollicular edema and erythema may appear. The intensity and duration depends on the hair color and hair density. If there is a sign of epidermal damage, the fluence should be reduced.

Ice packs reduce postoperative pain and minimize edema. Analgesics are not usually required unless extensive areas have been treated. Mild topical steroid creams may be prescribed to reduce post-treatment edema and erythema. Trauma (eg, picking or scratching) to the treated area should be avoided. During the first week of healing, direct sun exposure should be avoided, or sunblocks should be used. Make-up may be applied on the day after treatment unless blistering or crusts develop. The damaged hair is often shed...
during the first few weeks after treatment. Patients should be reassured that this is not a sign of hair regrowth.

Laser hair removal requires the presence of a pigmented hair shaft. Retreatment can be performed as soon as regrowth appears. Regrowth is based on the natural cycle, which varies by anatomic location, but on average, the timing is 6 to 8 weeks.

**Expected Benefits**

Patients have different expectations of treatment (eg, temporary versus permanent, partial versus complete hair removal). All responses are clinically significant and may be separately desirable for different patients. Growth delay that provides a few months of hairless skin is far more reliably achieved than permanent hair loss. All laser systems have been shown to temporally reduce hair growth for all hair colors (except white) and at all fluences.

Effectiveness for permanent hair reduction is strongly correlated with hair color and fluence. Long-term, controlled hair counts indicate an average of 20 to 30% hair loss with each treatment, indicating the need for multiple treatments to obtain near complete hair removal. Research also shows that in the ideal patient with fair skin and dark hair, the probability for long-term hair removal is about 80 to 89%, depending on the device used. Long-term comparison of different lasers (alexandrite, diode, Nd:YAG) and light sources (intense pulsed light) indicates that effective long-term hair removal is about 80 to 89%, depending on the device used. Effective methods for achieving near complete hair removal can be achieved with all systems. The alexandrite and diode lasers and IPL achieve about the same results, with the 1064 nm Nd:YAG being much less efficacious and reserved for dark skin types.19–23

The maximum fluence tolerated is determined by the epidermal pigmentation. Fair-skinned, dark-haired patients are most easily treated. Dark-skinned patients pose a greater challenge. Any of the hair removal devices are safe and effective in light-skinned patients, whereas longer wavelengths (near-infrared) and longer pulse durations have been shown to treat darker skin types more safely when combined with cooling devices. For patients presenting with recent sun exposure, pretreatment with a bleaching agent, sunscreen, or sun avoidance is recommended before laser treatment.

The number of treatments needed to obtain the best results for different anatomic sites is unknown. On average, five to seven hair-removal treatments, performed at 1- to 3-month intervals, are required to achieve a significant reduction of excess hair. A rare patient can obtain long-term, complete hair removal after a single treatment, whereas others may respond poorly for unknown reasons. Most patients (80–89%) respond favorably.

Often, regrowing hairs are thinner and lighter in color, as indicated by measurements of diameter and color of regrowing hairs. This contributes to the overall cosmetic outcome because the clinical impression of hairiness is not only defined by the absolute number of hairs, but also by the color and by the length and the diameter of the hairs. The range of outcomes can be summarized as absolute hair number reduction; finer, lighter regrowing hair; and slower regrowth.

**Intense Pulsed Light Photorejuvenation**

One of the most controversial light based technologies, which had its birthplace in San Diego in 1992 and was cleared by the US FDA in late 1995 as the Photoderm (ESC/Sharplan, Norwood, MA, now Lumenis), is the noncoherent polychromatic filtered flashlamp IPL source. It was initially launched and promoted as a radical improvement over existing methods for the elimination of leg telangiectasia due to pressure from venture capital groups that funded its development.1,24 Although the treatment of leg telangiectasia was possible, additional advantages are the IPL’s ability as a specific modality to minimize the possibility of purpura common to pulsed dye lasers (PDL) and the elimination of hair and lentigines. Continued use proved that the device was of far greater utility for other indications than leg telangiectasias.2 The road to usability, reproducibility, and efficacy was a long one, with some clinical users and many “laser experts” dismissing the IPL as harmful and useless. The term “photoburn” was commonly used.25 It is ironic that the IPL is now considered the gold standard for the treatment of vascular lesions in addition to the many of the signs of photoaging. Testimony to the acceptance of the IPL as a valid efficacious technologic breakthrough is evidenced by over 20 different manufacturers producing various forms of IPL with the estimated sale of 25,000 IPL devises worldwide in the last 15 years.

Although some IPL devices have one or two cut-off filters, available cut-off filters are 515, 550, 560, 570, 590, 615, 645, 690, and 755 nm. To allow optimal transmission of light by decreasing the index refraction of light to the skin and promoting a “heat-sink” effect, filter crystals are often optically coupled to the skin with various thicknesses of a transparent water-based gel.

The working premise for IPL is that noncoherent, polychromatic light can be manipulated with filters to meet the requirements for selective photothermolysis (ie, for a broad range of wavelengths, the
absorption coefficient of blood in the vessel is higher than that of the surrounding bloodless dermis). When filtered, the Lumenis IPL device is capable of emitting a broad bandwidth of light from 515 nm to approximately 1200 nm. (Other IPLs have different wavelength outputs.) This bandwidth is modified by filters that exclude the lower wavelengths. Although the output is not uniform across this spectrum, with the Lumenis IPL, during a 10-millisecond pulse, relatively high doses of yellow light at 600 nm are emitted, with far less red and infrared, although output has been demonstrated beyond 1000 nm (Fig. 1).24

Allowing proper thermal relaxation time between pulses theoretically prevents the elevation of epidermal temperatures above 70°C and is an inherent advantage of “multiple sequential pulsing” of the IPL device. Thermal relaxation time is the amount of time it takes for the temperature of a tissue to decrease by a factor of e = 2.72 as a result of heat conductivity. For a typical epidermal thickness of 100 μm, the thermal relaxation time is about 1 millisecond. For a typical vessel that is 100 μm (0.1 mm), the thermal relaxation time is approximately 4 milliseconds; for a vessel of 300 μm (0.3 mm), the thermal relaxation time is approximately 10 milliseconds. Therefore, vessels greater than 0.3 mm cool more slowly than the epidermis with a single pulse. For larger vessels, multiple pulses may be advantageous, with delay times of 10 milliseconds or more between pulses for epidermal cooling. This delay time must be increased with larger vessels because thermal diffusion across a larger vessel elongates the thermal relaxation time. Multiple sequential pulsing with delay times permits successive heating of targeted vessel(s) with adequate cooling time for the epidermis and surrounding structures (Fig. 2).

The treatment of individuals who have darker skin (types IV–VI) or patients with hyper-reactive melanocytes becomes of increasing concern when performing photo-epilation. In these cases, the 755-nm filter is used primarily with delay times between pulses from 50 to 100 milliseconds to allow plenty of time for the skin to cool, thereby avoiding thermal damage.

The newest concepts for IPL and what has most contributed to the success of the technique is the ability to elongate pulse durations for larger vessels, to shorten pulse durations for smaller vessels, and to use these in a variety of combinations of synchronized short and long pulse widths. For a small vessel (0.3 mm), heat distribution is assumed to occur instantaneously. For a larger vessel, this cannot be assumed because more time is required for heat to pass from just inside the superficial vessel wall through the vessel to the deeper wall. Additional cooling time is required to release the accumulated heat from the core to the vessel surface.

Treatment of Photoaging with Intense Pulsed Light

Facial telangiectasia
The treatment of facial telangiectasia is the foundation of treatment of photoaging by IPL. Clinical observations of smoother skin texture were made after treatment of facial telangiectasia. This observation was made by the author and others treating patients during 1995 through 1997.26,27 The advantage of the IPL over the PDL is that with the large spot size an entire cheek of telangiectatic matting can be treated with less than a dozen pulses in less than 5 minutes. In addition, there is little if any purpura. For larger, more purple telangiectasias typically seen on the nasal alae or for venous lakes or adult port-wine stains, the same settings may be used as for small vessels of leg (ie, a short pulse followed by a long pulse).

Fig. 1. Emission spectrum of an intense pulsed light head with the 515-nm filter at 10-millisecond pulse duration. Peak output shown by line is at 600 nm. (Courtesy of Holger Lubatschowski, PhD, Hannover, Germany.)
Poikiloderma of civatte

This photoaging process consists of an erythematous, pigmented, and finely wrinkled appearance that occurs in sun-exposed areas, mostly on the neck, forehead, and the upper chest. For areas of poikiloderma on the neck and lower cheeks consisting of pigmentation and capillary matting, the IPL device is ideal with the use of a 515-nm filter, which allows absorption by melanin and hemoglobin simultaneously. For patients who have more dyspigmentation, treatment begins with higher filters, such as the 550-nm or 560-nm filter, to prevent too much epidermal absorption, which causes crusting and swelling that lasts for several days. Additional treatments with the IPL may be performed with a 550-, 560-, or 570-nm filter to treat the vascular component of poikiloderma.28

Photorejuvenation

The overall appearance of aging skin is primarily related to the quantitative effects of sun exposure with resultant UV damage of structural components, such as collagen and elastic fibers. Appearance is also affected by genetic factors, intrinsic factors, disease processes such as rosacea, and the overall loss of cutaneous elasticity associated with age. With excessive sun exposure, visible signs of aging have become more evident in younger individuals. Photorejuvenation has been described as a dynamic, nonablative process involving the use of the IPL to reduce mottled pigmentation and telangiectasias and to smooth the textural surface of the skin. The treatment is generally administered in a series of two to five procedures in 3- to 4-week intervals. The entire face is treated, rather than a limited affected area, and the patient may return to all activities immediately. Marketing has made the public and medical community aware of these changes through various unsuccessfully applied for service trademarks, such as Photofacial, Fotofacial, and Facialite.

Zelickson29,30 demonstrated that IPL treatment results in an 18% increase in collagen Type-1 transcripts, whereas PDL treatment results in a 23% increase in collagen Type-1 transcripts. This may explain the improvement in fine wrinkling with photorejuvenation. A further investigation demonstrated that collagen I and III, elastin, and collagenase increased in 85 to 100% of patients and that procollagen increased in 50 to 70% of patients.

Hernandez-Perez and colleagues31 evaluated the histologic effects of five IPL treatments with 570 to 645 nm, 2.4 to 6.0 milliseconds, delay 20 milliseconds, 25 to 42 J/cm². They showed epidermal thickening of 100 to 300 µm, better cellular polarity, a decrease in horny plugs, new rete ridge formation, decreased elastosis, and dermal neocollagen formation.

Weiss and colleagues27 evaluated 80 of their initial patients treated for vascular lesions to determine if photorejuvenation occurred. Images from three subsequent visits, including one follow-up at 4 years, were graded. There was an 80% improvement in pigmentation, telangiectasia, and skin texture. Hypopigmentation lasting for 1 year occurred in...
Photodynamic Skin Rejuvenation

The combination of IPL and photodynamic therapy sensitizers, such as 5-aminolevulinic acid (ALA) (Levulan; DUSA Pharmaceuticals, Wilmington, MA), allow for new options in the treatment of severely photodamaged skin and may offer a significant cosmetically beneficial alternative to photodynamic treatments with blue light for such conditions as actinic keratoses, early skin cancers, and cystic acne.

We have termed this advanced technique “photodynamic skin rejuvenation”. The photodynamic skin rejuvenation application of PDT involves activation of a specific photosensitizing agent, 5-ALA, activated by the conventional IPL. This process produces activated oxygen species within cells, resulting in their elimination or destruction. The topically active agent, ALA, is the precursor in the heme biosynthesis pathway of protoporphyrin-9, which facilitates cellular destruction. Exogenous administration of ALA, along with 410-nm continuous blue light, has been FDA cleared for the treatment of actinic keratoses and seems to have significant long-term efficiency. In clinical practice, a variety of light sources has been used in photodynamic therapy to reduce time and discomfort for patients and to enhance the clinical and cosmetic outcome of the procedure.35

IPL treatments have shown enhanced benefits of photodynamic therapy. Short-duration PDT, using Levulan for 60 minutes coupled with a treatment of IPL, has shown significant benefit in the treatment of precancerous conditions such as actinic keratoses and in the treatment of actinically damaged skin with a significant degree of cosmetic enhancement.36

Great benefit is seen with topical ALA and IPL skin treatments using photorejuvenation in conditions such as moderate to severe acne and rosacea. The mechanism for improvement in acne and rosacea is due to the enhanced absorption of ALA by sebaceous glands. This enhanced absorption followed by photoactivation with IPL damages the sebaceous gland, causing its involution. A decrease in the size or activity of the sebaceous gland leads to an improvement in acne.37,38

Adverse Reactions

In our experience with thousands of treatment sessions, there has been about a 2% incidence of scattered areas of crusting in areas of increased pigmentation. This typically heals within 7 days by peeling off. We accelerate this process by having the patients apply a moisturizer twice a day or undergo a treatment with microdermabrasion 1 to 2 days after IPL treatment. When there is

2.5%, temporary mild crusting occurred in 19%, erythema for more than 4 hours occurred in 15%, hypo- or hyperpigmentation occurred in 5%, and rectangular foot-printing occurred in 5%.

In a recent study, 49 subjects who had varying degrees of photodamage were treated with a series of four or more full-face treatments at 3-week intervals using IPL (Vasculight IPL; Lumenis). Fluences varied from 30 to 50 J/cm² with typical settings of double- or triple-pulse trains of 2.4 to 4.7 milliseconds and pulse delays of 10 to 60 milliseconds. Cut-off filters of 550 or 570 nm were used for all treatments.32 Photodamage, including wrinkling, skin coarseness, irregular pigmentation, pore size, and telangiectasias, was improved in more than 90% of the patients. Treatments involved IPL of the entire facial skin except in male patients who elected to avoid treatment of the beard area because of potential hair loss. In this study, 72% of subjects reported a 50% or greater improvement in skin smoothness, and 44% reported a 75% or greater improvement. Minimal side effects were reported, with temporary discoloration consisting of a darkening of lentigines, which resolved within 7 days. Two subjects reported a “downtime” of 1 and 3 days due to moderate to severe swelling.

The dual-mode filtering IPL system, Elipse Flex DDD (Danish Dermatologic Development, Copenhagen, Denmark), was evaluated in 20 women for facial photorejuvenation.33 First, areas of telangiectasia were treated with a pulse duration of 14 to 30 milliseconds. A second pass was then made with a double pulse of 2.5 milliseconds with a 10-millisecond delay. Two types of filters were used: 530 to 750 nm at an energy level of 11 to 17 J/cm² and 555 to 950 nm at a fluence of 13 to 19 J/cm². Both groups reported significant improvement in telangiectasia and pigmentation without adverse sequelae.

Newer IPL systems have increased the efficacy of treatment by providing a more uniform distribution of energy over the pulse duration. Twenty patients of Fitzpatrick skin types I through III, each with components of photodamaged skin including telangiectasias, dyschromia, skin roughness, enlarged pore size, or rhytides, received with a single treatment of the Lumenis One IPL. The results showed an average of 40% improvement in resolution of telangiectasias, dyspigmentation, and fine wrinkling. Previous studies with IPL using other IPL systems found that three to five treatments were needed to obtain a similar improvement. These IPL systems have a smaller spot size, a different energy output profile, and a cutaneous cooling mechanism, which may explain their decreased efficacy compared with the Lumenis One.34
no underlying pigmentation, crusting occurs primarily on curved body areas, such as the neck over the sternocleidomastoid muscle curvature. Purpura occurs in scattered, isolated pulses in about 4% of treatments. Purpura is more likely when the 515-nm filter is used or when the pulse durations are too short, such as coupling a 2.4-millisecond pulse duration with another 2.4-millisecond pulse duration. The purpura from IPL is different from typical short-pulse PDL purpura in that resolution occurs within 2 to 5 days as opposed to the 1- to 2-week purpura seen with PDL treatment.

With the newest progressive set of parameters, the incidence of acute side effects has been markedly reduced. Side effects include a mild burning sensation lasting less than 10 minutes noted in 45% and erythema, which typically lasts several hours to 3 days. Mild cheek swelling or edema occurs 25% of the time with full face treatments primarily after the initial treatment and lasts from 24 to 72 hours. Short-term hyper- or hypopigmentation (<2 months) has been noted in approximately 8 to 15% of sites treated.

**Skin Tightening**

Wrinkles and skin laxity are structural skin changes that affect patients physically and emotionally, leading many to seek treatment to achieve a more youthful appearance. A variety of technologies, such as dermabrasion and laser resurfacing, have been developed to achieve wrinkles reduction, skin tightening, and lifting of sagging skin. Although some of these therapies have demonstrated impressive efficacy, their ablative nature has resulted in long recovery periods and postoperative complications, which in today’s fast-paced world are not acceptable to most patients. New nonablative and noninvasive alternatives are being developed and advanced to safely rejuvenate aging skin without downtime. Among the newer nonablative technologies is RF energy (Box 3).

Box 3

**Ideal system for skin tightening**

- Low cost
- <$1,000 total cost to patient
- No disposable costs
- Minimal pain
- Uniform efficacy
- No variability
- No adverse effects

Radiofrequency energy produces a thermal effect when its high-frequency electrical current flows through the skin. The amount of heat generated in the tissue can be described mathematically by Joule’s Law:

$$H = \frac{j^2}{\sigma}$$

where \(j\) is the density of the electrical current, and \(\sigma\) is the specific electrical conductivity. Tissue resistance, or impedance, is inversely proportional to the electrical conductivity. Based on Joule’s equation, heat is generated as the RF current flows and encounters resistance in the tissue. The flow of RF energy through biological tissue is a complex process that depends on a number of additional factors, such as the magnitude and frequency of the electrical current and the physical characteristics of the target tissue, including its electrolyte content, hydration level, and temperature. Another variable that significantly affects RF energy applications is the distribution of the current applied to the tissue, which is dependent on the geometry and location of the electrodes used to deliver it, an aspect that is further discussed below.

The use of RF for the treatment of skin textural alterations in a nonablative manner is becoming increasingly common due to the vast popularity of optical energy–based systems in aesthetic medicine. An underlying network of collagen and elastin fibers provides scaffolding for the skin and determines its degree of firmness and elasticity. Over time, this intricate fiber network loosens and unravels, altering the appearance and function of the skin. It is estimated that adult skin loses approximately 1% of its dermal collagen content on an annual basis due to increased collagen degradation and decreased collagen synthesis.

When collagen fibers are heated, for example using RF energy, some of the intramolecular cross-links are broken, and unwinding of the triple helix structure occurs. Beyond a certain level, depending on a combination of the maximal temperature and the exposure time, collagen fibers undergo denaturation. When the intermolecular cross-links are maintained, at least partially, collagen shrinkage and thickening is achieved.

Two major electrode configurations (monopolar and bipolar) are available in current RF devices. The energy field created by these electrode configurations differs, but the interaction of the emitted energy with the targeted tissue is similar. In a monopolar setting, one electrode emits the RF energy and the other serves as a grounding pad. The main characteristics of the monopolar configuration are the high power density on and close to the electrode’s surface and the relatively deep
power penetration, which contribute to this configuration’s suitability for electrosurgery. Due to these attributes, relatively high pain levels and some safety concerns may be associated with applying this configuration in dermatology. In a bipolar setting, the current flows between two identical electrodes that are set at a small fixed distance. This creates a more controlled current distribution in the tissue than with the monopolar setting, but the depth of penetration is limited to approximately half the distance between the electrodes. As a result, under certain circumstances, less energy of sufficient density may reach the deeper skin layers and structures.\textsuperscript{43}

A number of nonablative RF devices, such as ThermaCool TC (Thermage, Inc., Hayward, CA), Polaris WR, and Aurora SR (Syneron Medical Ltd., Yokneam, Israel), have been reported to be safe and effective for the reduction of facial wrinkles and for improvement of the skin’s texture.\textsuperscript{43–46} ThermaCool TC is based on a monopolar RF electrode configuration. Polaris WR uses bipolar RF in combination with a 900-nm diode laser, and Aurora SR consists of the same bipolar RF configuration combined with IPL. In the two latter devices, the bipolar electrodes are placed flush on top of the skin (Box 4).

Significant dermal collagen contraction and skin tightening resulting not only in aesthetically pleasing wrinkle reduction but also in lifting of the skin in the upper (eg, forehead, periorbital region) and lower face (eg, cheeks, jowls, nasolabial folds) have been achieved with ThermaCool TC treatment.\textsuperscript{47–51} Nonsurgical eyebrow, neck, and breast lifting have been demonstrated as a result of treatment with this device.\textsuperscript{49–51} Some tightening effect has been reported recently using the Polaris WR for cheek skin laxity.\textsuperscript{52}

The therapeutic gains achieved with some of these devices have not been without drawbacks. Significant patient discomfort and difficult-to-manage side effects\textsuperscript{53,54} have made noninvasive treatments with some of the previously developed RF technologies unappealing to a number of patients and cosmetic surgeons. The potential adverse effects with ThermaCool TC have been reported to be less with recent lower energy protocols.

**Functional Aspiration Controlled Electrothermal Stimulation (FACES)** is a more recent implementation of nonablative RF technology that has been incorporated into the device tested in this study. Besides various technical differences between the FACES-based device and the aforementioned RF devices, this device is unique in the combined use of RF with vacuum for the treatment of wrinkles and skin laxity. By using vacuum to fold the skin, variable predetermined depths of the dermis are placed in close alignment with the RF energy, unlike the constant and larger gap between the dermis and the RF energy when monopolar or conventional bipolar electrodes are placed on top of the skin surface. By limiting the volume of treated tissue only to that located between the two electrodes in the specially designed tip, the required energy density can reach and affect the chosen skin layers, whether superficial or deep, using lower energy levels.\textsuperscript{55} We have found that nearly 80% of patients express satisfaction with their treatment, and investigator and patients notice at least a 30% improvement in fine lines and wrinkles, which compares favorably with other RF devises. Unlike other RF devises, the Aluma FACES device is relatively painless. Full face treatments take less than 15 minutes and do not require topical or systemic anesthesia. Like all RF skin-tightening procedures, multiple treatments increase efficacy with maximal efficacy noted 3 to 6 months after treatment. We are trying to enhance therapeutic efficacy by having patients use growth factor and antioxidant creams, which have been demonstrated to further enhance fibroblastic stimulation in producing collagen and elastic fibers to minimize wrinkling.\textsuperscript{56,57}

**Treatment of Cellulite**

Cellulite affects almost all women after puberty, irrespective of age. Over time, this condition gets worse and gives rise to changes in appearance and resulting psycho-social distress.

The condition presents as dimpling of the skin surface, ranging from small and sparse to many and deep dimples, often described as a “cottage cheese” appearance. The dimpling alters the local skin appearance and affects skin texture and overall body contour. Cellulite mainly affects the hips, thighs, and the inner part of the knee, shoulders

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**Box 4**

**Available radiofrequency systems**

- Thermage Thermacool
- Unipolar
- Syneron Aurora
- Bipolar
- Lumenis Aluma
- Bipolar vacuum
- Cutera Titan
- Infrared
and arms. Less frequently the breast and stomach are affected.58,59

The etiology of cellulite is poorly understood. A genetic predisposition has been recognized that is associated with concomitant causes of an endocrine, environmental, postural, and iatrogenic nature.

A number of methods are available for the treatment of cellulite, including topical creams and lotions, ultrasound, electrolipolysis, iontophoresis, and mesotherap. None of these has provides long-term resolution of cellulite. The most successful treatments for cellulite seem to be those that increase local vascular and lymphatic drainage.

Low-energy lasers have been demonstrated to have beneficial effects on wound healing and biochemical effects on endothelial cells, erythrocytes, and collagen.60 We have evaluated a device with a low-fluence laser and suction massage that was developed to reduce the appearance of cellulite. This device combines massage with a dynamic suction action, a low-energy diode laser, and contact coolant. The proposed mechanism of action consists of increased tissue perfusion, increased mobilization of lymphatic drainage due to the combination of dynamic suction massage and low-level laser irradiation, and reduced tissue edema due to contact cooling (Fig. 3).61

The Triactive device decreased hip and thigh circumference. In addition, blinded evaluators found improvement in appearance of cellulite in all subjects. Treatment was progressive, with an improvement in cellulite over the course of the procedures. Patients enjoyed the procedure and found it to be relaxing. There were no side effects.

Another study compared the efficacy of treatment of cellulite using two novel modalities, TriActive (Cynasure Inc., Westford, Massachusetts) versus VelaSmooth (Syneron Medical Ltd., Yokneam, Israel).62,63 The VelaSmooth is based on a combination of two different ranges of electromagnetic energy that produce heat (infrared light and RF) combined with mechanical manipulation of the skin and has been demonstrated to improve the appearance of cellulite.

Patients were treated twice a week for 6 weeks with the randomization of TriActive on one side and VelaSmooth on the other side. There were a total of 12 treatments per leg. In comparing efficacy between VelaSmooth treatment versus TriActive treatment, we calculated a 28% versus a 30% improvement, respectively, in the upper thigh

Fig. 3. Triactive J device, showing close-up of treatment handpiece. Handpiece includes (a) cooling face, (b) suction port, and (c) diode laser emitters. (Courtesy of Cynosure Inc., Westford, MA; with permission.)
circumference measurements, whereas a 56% versus a 37% improvement was observed, respectively, in lower thigh circumference measurements. These differences in treatment efficacy, using the thigh circumference measurements, were found to be nonsignificant ($P > .05$).

Based on before and after photographs that were blindly evaluated, 25% (5/19) of the subjects showed improvement in cellulite appearance for TriActive and VelaSmooth. The average percent improvement based on random photography grading from a scale of 1 to 5 (1 representing no improvement and 5 representing most improvement) for the VelaSmooth versus TriActive was 7% and 25%, respectively. This difference was nonsignificant ($P = .091$).

Perceived change grade was calculated based on random side-by-side comparisons of before and after photographs. Seventy-five percent (15/19) subjects showed improvement in the VelaSmooth leg, whereas 55% (11/19) subjects showed improvement in the TriActive leg. The average mean percent improvement was roughly the same for both treatments (22% and 20%, respectively) and showed no statistically significant difference ($P > .05$).

Bruising was reported in 60% of the subjects. Bruising incidence and intensity was 30% higher in the VelaSmooth leg than in the TriActive leg. Seven out of 20 subjects reported bruising with VelaSmooth, one subject reported bruising with TriActive, and three subjects reported bruising with both treatments. Extent of bruising ranged from minor purpura to larger and diffused bruises that lasted for an average of a week with no intervention.

Our study revealed that both machines effectively reduced the appearance of cellulite. When using a $P$ value of 0.05, there was no statistically significant difference between using the TriActive versus the VelaSmooth in the reduction of cellulite. The TriActive provides low-energy diode laser, contact cooling, suction, and massage, whereas the VelaSmooth provides a combination of two different ranges of electromagnetic energy: infrared light and RF combined with mechanical manipulation of the skin. After twice weekly treatment for 6 weeks, there was no statistical significance between the two units in upper or lower thigh circumference measurements, randomized photographic evaluations, or perceived change in before and after photographic evaluations. Incidence and extent of bruising was higher for VelaSmooth than TriActive.

Many other devises are being developed and are in use for the treatment of cellulite. It is anticipated that they will have similar efficacy. There are no other peer-reviewed clinical studies on these devises or comparative studies between these devices. The reader should carefully evaluate each device. The most important point is that cellulite is not curable and is a normal expression of fat deposition in women. If a woman wants to temporarily diminish the appearance of cellulite, treatment options conducive to a medical spa are safe, effective, and available.

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Procedures Offered in the Medical Spa Environment

Amy F. Taub, MD

There are several types of medical spas which include: those that are individually run and owned by a physician; those that are owned by entrepreneur with physician as medical director (either on or off site and in single versus multiple locations); those owned by an entrepreneur, with physician as medical director off-site (single versus multiple outlets); and those owned by physician with multiple sites.

Typical core services at most medical spas include: microdermabrasion, medical facials, chemical peels, botulinum toxin, injectable fillers, hair removal, and photorejuvenation. Common procedures include: cellulite reduction, body shaping, tissue tightening, mesotherapy, and acne therapy. Less common medical services include: fractional resurfacing, erbium resurfacing, sclerotherapy or laser leg vein treatments, photodynamic therapy, tattoo removal, laser-assisted lipoplasty, muscle stimulation devices, liposuction, cosmetic surgery (eg, blephroplasty, rhytidectomy, brow lift), acupuncture, and LED treatments. Less common spa services include: massages, body wraps, manicure/pedicure services, smoking cessation, and nutritional guidance (Table 1).

Typically, the closer the on-site involvement with a physician, the more likely “aggressive” procedures, such as laser resurfacing, liposuction, cosmetic surgery, sclerotherapy or laser-assisted lipoplasty, are used.

TYPES OF LASER EQUIPMENT USED BY MEDICAL SPAS

Many medical spas use “multiplatform” devices. These are typically one box with multiple handpieces that can perform many different procedures. This is different from using individual lasers or light devices that specialize in one or a few applications. There is no definite superiority to the multiplatform devices, but most established medical spas which have close involvement of a medical director have multiplatform devices in addition to individual devices. This is optimal for patients because there is some variation in how patients respond to various devices. In medical spas with multiple sites, using multiplatform devices makes training easier as well as providing a uniformity of services. Additionally, multiplatform use probably reflects a financial incentive for the provider.

CORE SERVICES

Microdermabrasion

Microdermabrasion has been a mainstay of “esthetician-based” adjunctive care for most cosmetically oriented dermatologists and plastic surgeons for many years. It debuted as a crystal-based aluminum oxide closed loop system in the mid-1990s. Microdermabrasion provided a way to superficially abrade the epidermis and it achieved improvement in scars, superficial skin damage, and pores.1

Microdermabrasion has been studied histologically as well as with respect to the function of the epidermis. Chronic histopathologic effects were examined in three volunteers who underwent skin biopsies before and after a treatment series on the dorsal forearms.2 By patient assessment, there was statistically significant improvement in roughness, mottled pigmentation, and overall...
improvement of skin appearance, but not in rhytides. Acne scarring sometimes improved, but required deeper ablation. Acutely, the stratum corneum was homogenized and focally compacted. Chronically, there was epidermal hyperplasia, decreased melanization, and some increase in elastin. These changes demonstrated that there were some measurable effects on signs of photo aging and surface topology. Grimes and colleagues demonstrated that both aluminum carbonate and sodium chloride-based microdermabrasion initially decreased transepidermal water loss (TEWL) but then resulted in increased hydration after 24 hours or one week. They concluded that the alteration in epidermal function was most likely responsible for the effects seen with this technique.3 Another study revealed that microdermabrasion resulted in the following histologic changes: thickening of the epidermis and dermis, flattening of the rete pegs, vascular ectasia and perivascular inflammation, and hyalinization of the papillary dermis with newly deposited collagen and elastic fibers.4 The authors suggested that microdermabrasion produces clinical improvement by a mechanism resembling a reparative process at the dermal and epidermal levels. There are hundreds of different microdermabrasion machines on the market. These include aluminum oxide, sodium chloride particle-based systems, and units that use ultrasound and either water, diamond or other rough materials in addition to suction (Table 2). These machines also are used to improve the penetration of topical actives, such as aminolevulinic acid5 or vitamin C.6

The FDA has classified microdermabrasion units as Class 1 medical devices. As such, the machines can be sold without demonstration of clinical efficacy. Additionally, they can be operated without medical supervision, as long as the procedure only removes the stratum corneum and does not affect the skin’s structure or function.7 They are sometimes categorized as “spa” and “medical” devices based on how aggressively the procedure can penetrate the epidermis. There is a wide variation in the training of providers for this procedure. Aggressive procedures can cause excessive exfoliation, increased redness or rosacea, and dermatitis flares.

According to the American Society of Plastic Surgeons, microdermabrasion is the fourth most popular non-surgical procedure with 1,023,931 procedures performed in 2005, a decrease of 7% from 2004.8

### Chemical Peels

Chemical peels performed in the medical spa are usually of the superficial or “lunch-time” variety. Three types of chemical peels are available with terms based on the depth of the peel: superficial, medium, and deep. Chemical peels are typically used for: the treatment of acne or enlarged pores, for melasma, for anti-aging, and to enhance the results of other aesthetic interventions, such as laser treatments.9 Mild chemical peels have also been popular for treating type V and type VI skin, due to their efficacy and safety.10

A variety of mild chemical peels are available including: glycolic acid, trichloroacetic (TCA) acid, Jessner’s solution (14% lactic acid, 14% resorcinol, and 14% salicylic acid), salicylic acid, pyruvic acid, and resorcinol preparations.11 Retinoic and lactic acid are other agents used.

**Table 1**

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</tr>
<tr>
<td></td>
<td></td>
<td>Muscle stimulation devices</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Liposuction</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cosmetic surgery</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Acupuncture</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>LED</td>
<td></td>
</tr>
</tbody>
</table>

According to the American Society of Plastic Surgeons, microdermabrasion is the fourth most popular non-surgical procedure with 1,023,931 procedures performed in 2005, a decrease of 7% from 2004.8
Both lactic acid and Jessner’s were found to be effective treatments for epidermal melasma. In another study of type IV–V skin patients, the addition of chemical peels (6 glycolic peels, 30%–40%) with a topical formulation (2% hydroquinone, 1% hydrocortisone and 0.05% tretinoin) showed a statistically significant improvement of melasma over those patients who were treated with topical therapy alone. One study showed that 70% glycolic acid and Jessner’s peels were equally efficacious for the treatment of acne, but Jessner’s peels resulted in much more exfoliation. Thus, the authors recommended usage of glycolic acid. However, treatment with glycolic acid (70%) is much more difficult technically and it may result in complications that could be considered severe.

### Table 2
**Microdermabrasion devices**

<table>
<thead>
<tr>
<th>Device</th>
<th>Supplier</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Esprit</td>
<td>Aesthetic technologies</td>
<td>Aluminum oxide crystals</td>
</tr>
<tr>
<td>Prestige</td>
<td>Aesthetic technologies</td>
<td>Aluminum oxide crystals</td>
</tr>
<tr>
<td>Esprit duette</td>
<td>Aesthetic technologies</td>
<td>Aluminum oxide crystals or crystal-free diamond tip</td>
</tr>
<tr>
<td>Prestige duette</td>
<td>Aesthetic technologies</td>
<td>Aluminum oxide crystals or crystal-free diamond tip</td>
</tr>
<tr>
<td>DermaSweep</td>
<td>Cosmetic R &amp; D, Inc.</td>
<td>Particle-free, nylon bristles</td>
</tr>
<tr>
<td>DermaSweep mini</td>
<td>Cosmetic R &amp; D, Inc.</td>
<td>Particle-free, nylon bristles</td>
</tr>
<tr>
<td>MegaPeel platinum</td>
<td>DermaMed international</td>
<td>Aluminum oxide and sodium bicarbonate crystals or crystal-free diamond tip</td>
</tr>
<tr>
<td>Megapeel gold</td>
<td>DermaMed international</td>
<td>Aluminum oxide and sodium bicarbonate crystals or crystal-free diamond tip</td>
</tr>
<tr>
<td>Megapeel silver</td>
<td>DermaMed international</td>
<td>Aluminum oxide and sodium bicarbonate crystals or crystal-free diamond tip</td>
</tr>
<tr>
<td>Delphia</td>
<td>Edge systems</td>
<td>Aluminum oxide and sodium bicarbonate crystals</td>
</tr>
<tr>
<td>Delphia IIe plus</td>
<td>Edge systems</td>
<td>Aluminum oxide and sodium bicarbonate crystals or crystal-free diamond tip</td>
</tr>
<tr>
<td>Dephia del sol plus LED</td>
<td>Edge systems</td>
<td>Aluminum oxide and sodium bicarbonate crystals or crystal-free diamond tip and blue light or red light LED</td>
</tr>
<tr>
<td>Diamond delphia</td>
<td>Edge systems</td>
<td>Crystal-free diamond tip</td>
</tr>
<tr>
<td>Aesthilese</td>
<td>Lumenis</td>
<td>Aluminum oxide crystals or crystal-free diamond tip</td>
</tr>
<tr>
<td>Aesthipeel</td>
<td>Mattioli engineering</td>
<td>Corundum powder</td>
</tr>
<tr>
<td>Ultraceepe pepita</td>
<td>Mattioli engineering</td>
<td>Corundum powder</td>
</tr>
<tr>
<td>Ultraceepe crystal</td>
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<td>Corundum powder</td>
</tr>
<tr>
<td>Ultraceepe II</td>
<td>Mattioli engineering</td>
<td>Corundum powder</td>
</tr>
<tr>
<td>Gemini</td>
<td>Science innovative aesthetics</td>
<td>Fine crystal all natural organic grain</td>
</tr>
<tr>
<td>Aurora</td>
<td>Science innovative aesthetics</td>
<td>Crystal-free diamond tip</td>
</tr>
<tr>
<td>SkinBella</td>
<td>Sybaritic, Inc.</td>
<td>Ultrasound</td>
</tr>
<tr>
<td>Libra</td>
<td>Syneron</td>
<td>Corundum crystals</td>
</tr>
<tr>
<td>Pristine</td>
<td>Viora</td>
<td>Crystal free diamond tip</td>
</tr>
</tbody>
</table>

*Adapted from Aesthetic Buyers Guide, July/August 2007.*
significant improvement of melasma with 1% retinoic acid peels versus 70% glycolic acid. A study of 30% salicylic acid peels showed that they improved photodamage and skin roughness. In a comparison study of 70% glycolic acid and 35% TCA, both peels demonstrated similar levels of improvements in papillary dermal proteins, with only TCA showing epidermal necrosis and both showing histologic changes that last about 2 years. In a study of 35 Korean patients with acne who received biweekly treatments with 30% salicylic acid, a significant decrease in Cunliffe acne score was found to be correlated with duration of therapy. Eighty patients receiving 8–10 treatments of 70% glycolic acid found improvements in comedonal, papulopustular and nodulocystic acne as well as post-acne scars and pigmentation.

Most medical spas use estheticians or nurses for the administration of mild chemical peels. Peels that are considered mild would be those with 20%–30% glycolic acid, 20%–30% salicylic acid, Jessner’s solution, and up to 30% lactic acid. The mild category might also include 10%–20% TCA peels. The more moderate to deep chemical peels, such as glycolic acid 70%, TCA >30%, lactic acid >35%, should be administered by a physician or under the direct supervision of a physician.

**Medical Facials**

Medical facials could be defined as facials whose primary goal is to effect an improvement in the condition of the skin rather than deep cleansing and relaxation.

A facial could be considered the most basic of aesthetic services. Typically provided in relaxation focused spas (as opposed to medical spas) and day spas, as well as in some beauty salons that have extended their services, facials are usually comprised of deep cleansing, skin analysis (by an esthetician who examines the skin with a magnifying lens), exfoliation (often with steam), extractions, massage, a mask (targeted to the client’s skin type), and application of moisturizer. Often the esthetician will provide advice on home skin care and offer products for purchase.

The requirements for estheticians and cosmetologists vary by state. In Illinois, the requirement for education is 1500 hours for a cosmetologist and 750 hours for an esthetician. Cosmetology curricula usually encompass the study of hair styling, skin care, nail care, and make-up. Esthetics courses typically focus on make-up application, facials, massage, and waxing.

Medical facials often focus on specific problems such as aging skin, large pores or acne, maintenance of skin with rosacea, hydration, or a combination of these conditions. Medical facials often use physician-dispensed products and a method of penetration that allows the ingredients to penetrate more deeply into the dermis to enhance the effects. Various methods for penetration may be used: stratum corneum removal with either chemical agents or microdermabrasion; ultrasonic devices that use heat and/or ultrasound; or suction and sponges (prototype device, Aesthera, Pleasanton, CA). The goals of these facials may include optimal dermal moisture, antioxidant penetration, reduction in lines or wrinkles, improved skin elasticity, reduced hyperpigmentation, and overall improvement of skin color, texture, and tone.

While permanent results are not realistic with these mild treatments, the treatments should be considered to maintain and improve daily skin care regimens as well as being appropriate as adjuncts to laser or other procedures. In addition, the treatments provide an entry-level service for patients/clients who may not be ready for “injectables” or laser procedures.

**Botulinum Toxin**

Botulinum toxin A (BOTOX, Allergan, Irvine, CA) is a purified complex of the neurotoxin produced from the bacterium Clostridium botulinum. In the mid-1980s, clinical reports began to emerge regarding the therapeutic effects of botulinum toxin in blepharospasm and strabismus and, in 1989, the FDA approved BOTOX for these indications. In 1992, the first published cosmetic study reported that 16 of 17 subjects had a marked improvement of glabellar wrinkles after BOTOX injections into the corrugators or brow furrows and the result lasted 3–11 months. In April 2002, BOTOX Cosmetic was granted FDA approval for the treatment of moderate to severe frown lines of the glabella. It is used off-label in other areas of the face for cosmetic benefit as well. Injection of BOTOX Cosmetic has become the most commonly performed cosmetic procedure with over 3 million injections performed in 2006.

Performing treatments with BOTOX Cosmetic requires a strong knowledge of the anatomy and function of the muscles in the treatment area. Only dynamic wrinkles that are caused or worsened by muscle movement or expression can be expected to improve with treatment. The most common area treated is the upper third of the face including: crow’s feet around the eyes; frown lines between the brow; and transverse lines across the forehead. Highly experienced providers also treat vertical lines of the upper lip, platysmal bands, dimpling of the chin, muscles exacerbating
the marionette lines, and other areas of the lower face. BOTOX Cosmetic should not be performed on patients who have neuromuscular junctional disorders, such as multiple sclerosis, myasthenia gravis, or Lambert-Eaton syndrome.

The FDA has warned consumers that, despite its name, BOTOX Cosmetic is a drug and not a cosmetic. They go on to say: "Increasingly, the word ‘cosmetic’ is being used as a medical term to describe a number of surgical and non-surgical treatments that are intended to enhance appearance and are performed only by a licensed healthcare professional. BOTOX Cosmetic is one such treatment." Only those medical spas that use physicians or licensed health care providers under physician supervision are following FDA policies.

Unwanted local effects of the botulinum toxin are generally transient. As with any injection, pain, bruising and infection can occur. The most common side effects—aside from bruising—include asymmetry, headache, and pronounced lateral eyebrow elevation ("Spock" eyes). Brow and eyelid ptosis are more severe side effects, which occur in less than 1% of injections and are usually related to technique.

**Injectable Fillers**

Injectable wrinkle fillers have experienced a huge increase in popularity with over 1.5 million hyaluronic acid procedures performed in 2006. This is probably attributed to the advent of safer, longer-lasting agents, as well as to the increasing acceptance of and the recognition of the significant enhancements that are able to be realized with these procedures.

FDA-approved fillers include: hyaluronic acids (Restylane and Perlane, Medicis, Scottsdale, AZ; Juvederm, Allergan, Irvine, CA; Captique and Hylaform, Inamed, Fremont, CA), collagen-based materials (Cosmoderm, Cosmoplast, Zyderm and Zyplast, Inamed, Fremont, CA), calcium hydroxylapatite (Radiesse, BioForm Medical, San Mateo, CA), and poly-L-lactic acid (Sculptra, Dermik, Berwyn, PA) (**Table 3**). All fillers except Sculptra are approved for nasolabial fold enhancement whereas Sculptra is approved for correction of lip atrophy in HIV-infected individuals. However, these injection fillers are widely used off-label for other procedures such as lip augmentation, brow elevation, marionette line correction, cheek enhancements, and overall volume improvement.

The injection of fillers requires an artistic aesthetic sensibility, excellent eye-hand coordination, and an intimate knowledge of facial anatomy. The necessary skills are difficult to obtain and require much experience. Injectable fillers are recommended for use by experienced dermatologists or by physician assistants or nurse practitioners.

**Table 3**

<table>
<thead>
<tr>
<th>Filler</th>
<th>Supplier</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silikon 1000</td>
<td>Alcon laboratories</td>
<td>Silicone</td>
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<tr>
<td>Zyderm</td>
<td>Allergan/Inamed</td>
<td>Bovine collagen</td>
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<tr>
<td>Zyplast</td>
<td>Allergan/Inamed</td>
<td>Bovine collagen</td>
</tr>
<tr>
<td>CosmoDerm</td>
<td>Allergan/Inamed</td>
<td>Human-based collagen</td>
</tr>
<tr>
<td>CosmoPlast</td>
<td>Allergan/Inamed</td>
<td>Human-based collagen</td>
</tr>
<tr>
<td>Juvederm</td>
<td>Allergan/Inamed</td>
<td>Hyaluronic acid</td>
</tr>
<tr>
<td>Artefill</td>
<td>Artes medical</td>
<td>20% polymethylmethacrylate (PMMA)</td>
</tr>
<tr>
<td>Radiesse</td>
<td>BioForm</td>
<td>Calcium hydroxylapatite</td>
</tr>
<tr>
<td>Sculptra</td>
<td>Dermik/Aventis</td>
<td>Poly-L-Lactic acid</td>
</tr>
<tr>
<td>Fascian</td>
<td>Fascia biosystems</td>
<td>Fascia</td>
</tr>
<tr>
<td>FG-5017</td>
<td>FibroGen</td>
<td>Human collagen</td>
</tr>
<tr>
<td>Restylane</td>
<td>Medicis</td>
<td>Hyaluronic acid</td>
</tr>
<tr>
<td>Perlane</td>
<td>Medicis</td>
<td>Hyaluronic acid</td>
</tr>
<tr>
<td>Puragen</td>
<td>Mentor corp</td>
<td>Hyaluronic acid</td>
</tr>
<tr>
<td>Prevelle</td>
<td>Mentor corp</td>
<td>Hyaluronic acid</td>
</tr>
<tr>
<td>Belotero</td>
<td>Merz Pharma</td>
<td>Hyaluronic acid</td>
</tr>
<tr>
<td>HylaNew</td>
<td>Prollenium medical technol</td>
<td>Hyaluronic acid</td>
</tr>
<tr>
<td>Teosyal</td>
<td>Teoxane SA</td>
<td>Hyaluronic acid</td>
</tr>
</tbody>
</table>

Adapted from Aesthetic Buyers Guide, July/August 2007.
practitioners who are under the close supervision of a dermasurgeon.

**Hair Removal**

Lasers are approved for permanent hair reduction. The FDA defines this as “long-term stable reduction in the number of hairs regrowing after a treatment regime.”

Laser hair removal first became available in the mid-1990s. As with almost all laser technology, laser hair removal is based on the idea of selective photothermolysis. In this case, the goal is to heat and destroy the follicular unit without damaging the surrounding tissue. The target chromophore is melanin in the hair follicle. The amount of melanin in hair and skin varies widely between individuals. Therefore, it is crucial to select the appropriate wavelength, spot size, and pulse duration based on the patient’s skin type and hair color for efficacy and safety. The first lasers were only effective for light-skinned and dark-haired patients. Advances in technology has allowed for safe treatments in darker-skinned patients and those with lighter-colored hair (Table 4).

**Ruby**
The ruby laser (694 nm) was the first laser widely used for hair removal. Although it was effective in lighter-skinned patients, it is not used frequently today.

**Alexandrite**
The alexandrite laser (755 nm) was introduced shortly after the ruby and is still used frequently today. Its longer wavelength allowed for deeper penetration and it could cautiously be used to treat some darker-skinned patients. Studies have reported hair reduction up to 50% after only a single treatment; and up to 95% hair reduction after multiple treatments, depending upon number of treatments and body location.

**Diode**
Treatment of unwanted hair with the diode laser (810 nm) has been demonstrated as comparable to those of the ruby or alexandrite lasers. After a single treatment, hair reductions of about 30% have been reported; and up to 84% hair reduction has been reported after multiple treatments. The diode laser can also be used cautiously in darker-skinned patients due to its longer wavelength.

**Nd:YAG**
The Nd:YAG laser (1064 nm) is the safest type used to treat unwanted hair on patients with dark skin, but the laser does not provide an optimal wavelength for hair removal. Results can be achieved, but higher energies are necessary to achieve results due to the lesser affinity with melanin. Reports have shown improvement of about 50%, depending on the number of treatments administered and the body location.

**Intense pulsed light**
Intense pulsed light (IPL) systems have wavelengths from 550–1200 nm, in contrast to laser light sources, which produce monochromatic light of a specific wavelength. In IPL devices, filters are used to cut off lower wavelengths and the lasers can be set to varying wavelengths. In a study of 210 patients who had hair removal treatments with IPL, a mean hair reduction of 80% was reported with five treatments.

**Intense pulsed light and radio frequency**
Elos technology, combining either IPL or diode laser with bipolar radiofrequency (RF), is the most recent advancement in laser hair removal. In this dual energy treatment, the hair follicle is preheated by light or laser, and then, RF causes further injury. Because RF does not require a chromophore target, this was the first technology that studies have shown to be effective at treating light-colored hair, including white. The efficacy is lower when treating light-colored hair, however.

The number of treatments necessary and the interval between treatments depends upon the area of the body being treated. Only hair in the anagen or growing phase is able to be effectively treated. Hair in the telogen (ie, resting phase) or catagen (ie, the phase between anagen and telogen) does not have a mature enough follicle to be effectively treated. The length of time spent in each phase depends upon the location of the hair. On the scalp, hair follicles spend up to 10 years in anagen, but on the trunk, brow, and limbs, anagen lasts no longer than 6 months. Catagen lasts only 2–3 weeks, and telogen lasts from 3–4 months. Explaining the need for multiple treatments, the correct timing of treatments and the inability to remove hair 100% help achieve good results and maintain patient satisfaction.

**Photorejuvenation**
Many lasers and light sources have been developed with the idea of simultaneously removing unwanted epidermal pigmentation and reducing upper dermal telangiectasia, thus overall improving the texture and tone of the skin (Table 5). It was noted by a number of investigators that these modalities also seemed to improve superficial wrinkles and to cause some skin smoothing and tightening.
Table 4
Laser hair removal devices

<table>
<thead>
<tr>
<th>Device</th>
<th>Supplier</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>LightPod neo</td>
<td>Aerolase</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>Soprano XL</td>
<td>Alma lasers</td>
<td>CW Diode</td>
</tr>
<tr>
<td>Harmony</td>
<td>Alma lasers</td>
<td>AFT pulsed light</td>
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<tr>
<td>GentleLASE</td>
<td>Candela</td>
<td>Alexandrite</td>
</tr>
<tr>
<td>GentleYAG</td>
<td>Candela</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>GentleMax</td>
<td>Candela</td>
<td>Alexandrite/Nd:YAG</td>
</tr>
<tr>
<td>VARIA</td>
<td>CoolTouch</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>CoolGlide CV</td>
<td>Cutera</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>Prowave</td>
<td>Cutera</td>
<td>Infrared</td>
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<td>Cynosure</td>
<td>Alexandrite</td>
</tr>
<tr>
<td>Elite</td>
<td>Cynosure</td>
<td>Alexandrite/Nd:YAG</td>
</tr>
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<td>Acclaim</td>
<td>Cynosure</td>
<td>Nd:YAG</td>
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<tr>
<td>PhotoSilk plus</td>
<td>Cynosure</td>
<td>XE Lamp</td>
</tr>
<tr>
<td>Cynosure PL</td>
<td>Cynosure</td>
<td>Pulsed light</td>
</tr>
<tr>
<td>Quadra Q4</td>
<td>DermaMed</td>
<td>Intense pulsed light</td>
</tr>
<tr>
<td>DermaYag</td>
<td>DermaMed</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>NaturaLase LP</td>
<td>Focus medical</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>NaturaLight</td>
<td>Focus medical</td>
<td>Pulsed light</td>
</tr>
<tr>
<td>RevLite</td>
<td>HOYA ConBio</td>
<td>EO Q-switched Nd:YAG with photoacoustic therapy pulse (PTP) technology</td>
</tr>
<tr>
<td>MedLite C6</td>
<td>HOYA ConBio</td>
<td>EO Q-switched Nd:YAG</td>
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<tr>
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<td>Lumenis</td>
<td>Diode</td>
</tr>
<tr>
<td>IPL Quantum</td>
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<tr>
<td>Asclepion MedioStar XT</td>
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<td>Diode</td>
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<td>Milesman</td>
<td>Diode</td>
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<td>Palomar</td>
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<td>Radiantcy</td>
<td>LHE (light and heat energy)</td>
</tr>
<tr>
<td>Duet</td>
<td>Radiantcy</td>
<td>LHE (light and heat energy)</td>
</tr>
<tr>
<td>SpaTouch pro</td>
<td>Radiantcy</td>
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</tr>
<tr>
<td>ClearScan</td>
<td>Sciton</td>
<td>Nd:YAG</td>
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<td>Sybaritic</td>
<td>Pulsed light</td>
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<td>SpectraQuattro</td>
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</tr>
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<td>Syneron</td>
<td>Diode/RF</td>
</tr>
<tr>
<td>eLight DS</td>
<td>Syneron</td>
<td>Optical energy/RF</td>
</tr>
</tbody>
</table>

Adapted from Aesthetic Buyers Guide, July/August 2007.

**Pulsed dye laser**

As the first laser developed to apply the principle of selective photothermolysis, the pulsed dye laser (PDL), 585 nm, remains the gold standard for the treatment of vascular lesions.59 Zelickson and colleagues50 reported the first investigation of PDL for the treatment of sun-induced facial rhytids. Histologic examination revealed dermal changes consistent with collagen remodeling. These results were confirmed in 2000 by Bjerring
<table>
<thead>
<tr>
<th>Device</th>
<th>Supplier</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>LightPod neo</td>
<td>Aerolase</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>Harmony</td>
<td>Alma lasers</td>
<td>AFT pulsed light, Near-infrared, Nd:YAG</td>
</tr>
<tr>
<td>Vbeam</td>
<td>Candela</td>
<td>Pulsed dye</td>
</tr>
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<td>GentleYAG</td>
<td>Candela</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>CT3 plus</td>
<td>CoolTouch</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>CoolGlide vantage</td>
<td>Cutera</td>
<td>Nd:YAG</td>
</tr>
<tr>
<td>Xeo</td>
<td>Cutera</td>
<td>Intense pulsed light</td>
</tr>
<tr>
<td>Limelight</td>
<td>Cutera</td>
<td>Intense pulsed light</td>
</tr>
<tr>
<td>Acclaim</td>
<td>Cynosure</td>
<td>Nd:YAG</td>
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<tr>
<td>Cynosure PL</td>
<td>Cynosure</td>
<td>Pulsed light</td>
</tr>
<tr>
<td>Elite</td>
<td>Cynosure</td>
<td>Alexandrite, Nd:YAG</td>
</tr>
<tr>
<td>Cynergy</td>
<td>Cynosure</td>
<td>Pulsed dye, Nd:YAG, Intense pulsed light</td>
</tr>
<tr>
<td>Quadra Q4</td>
<td>DermaMed international</td>
<td>Intense pulsed light</td>
</tr>
<tr>
<td>NaturaLight</td>
<td>Focus medical</td>
<td>Nd:YAG</td>
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<td>RevLite</td>
<td>HOYA conbio</td>
<td>EO Q-switched Nd:YAG with photoacoustic therapy pulse (PTP) technology</td>
</tr>
<tr>
<td>MedLite</td>
<td>HOYA conbio</td>
<td>EO Q-switched Nd:YAG</td>
</tr>
<tr>
<td>VariLite</td>
<td>Iridex</td>
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Adapted from Aesthetic Buyers Guide, July/August 2007.
and colleagues who, by altering the pulse duration, obtained cosmetic improvement without purpura. Tanghetti and colleagues reported similar clinical improvement in facial dyspigmentation and wrinkling after single-pass and double-pass treatment with either 585 nm or 595 nm. In a controlled, split-face study, Hsu and colleagues reported improvements in surface topography of 9.8% (one treatment) and 15% (two treatments) supported by histologic evidence of collagen remodeling.

**Intense pulsed light**
Generally considered the gold standard for the nonablative treatment of superficial photodamage, intense pulsed light (IPL) achieves selective photothermolysis with non-coherent polychromatic light (\(\sim 500 \text{ nm to } \sim 1200 \text{ nm}\)). Due to the broad spectrum of visible light, the two main chromophores, hemoglobin and melanin, can be effectively targeted with only one piece of technology. The minimal risk and downtime associated with this procedure have contributed to its success. Two key studies were reported in 2000. Bitter showed that serial treatments with IPL visibly improved wrinkling, irregular pigmentation, skin coarseness, pore size, and telangiectasias in more than 90% of patients with little downtime. The patient satisfaction rate exceeded 88%. Goldberg and Cutler showed that IPL therapy improved facial rhytids and skin quality with minimal adverse effects. In a 93-patient study, Sadick and colleagues showed that up to five IPL treatments resulted in significant improvement in a variety of clinical indications of photoaging. A newer technology that combines IPL with bipolar radiofrequency (electro-optical synergy or elos) was evaluated by Sadick and colleagues. The investigators found it to be at least as efficacious for pigmentation and vascularity but potentially more advantageous for pore size, superficial rhytides, laxity, and texture. This difference was caused by the addition of the RF modality which can penetrate more deeply into the dermis to stimulate collagen remodeling.

**Potassium titanyl phosphate**
The 532 nm wavelength of the potassium titanyl phosphate (KTP) laser device is readily absorbed by oxyhemoglobin and melanin, making it especially effective for treating red and brown discolorations due to photodamage and inducing growth of collagen and elastin fibers when endothelial damage causes the release of cytokines. Combining the KTP with the 1064 nm Nd:YAG laser device makes use of the greater penetration depth of the longer wavelength to create a synergistic effect that further improves skin quality and wrinkle reduction beyond what is achievable by KTP alone. The efficacy of the KTP laser is comparable to that of IPL. The smaller spot size and ergonomic flexibility of the KTP handpiece, however, promotes ease of use and allows practitioners to focus on resistant lesions. Although fewer treatments are required, the risk of erythema and edema is higher with the KTP and the treatment is less tolerable.

**COMMON SERVICES**

**Cellulite Reduction**
Treatments of cellulite can be divided into four main categories: attenuation of aggravating factors, physical and mechanical methods, pharmacologic agents, and laser treatments (Table 6).

**Endermologie**
Endermologie was developed in the 1970s as a way to soften scars and standardize physical therapy. Endermologie is a machine-assisted massage system that applies negative pressure to the skin and subcutaneous tissues. Originally from France, endermologie was found to have some effects on smoothing the surface of the skin and reducing the body circumference. Endermologie is still used today and it is now called lipomassage. Once popular in plastic surgeons’ and other cosmetic practitioners office, endermologie has lost favor because other methods appear to be more effective, although some of these new technologies incorporate rollers and massage.

**Ionithermie**
Ionithermie is a treatment that was developed in France 25 years ago using galvanic and faradic current causing passive contraction of the muscles and increasing circulation of the tissues. The application of current is followed by an application of topical products, which vary between practitioners. Available in the US for only about two years, it appears to be available in many medical spas. This treatment is touted to improve the appearance of cellulite and reduce “toxic waste” in the tissues although there are no peer-reviewed journal articles on this technique.

**Bipolar radiofrequency, infrared light, vacuum and massage**
Numerous studies have shown the effectiveness of elos technology to treat cellulite demonstrating an improvement of surface texture as well as reduction of circumference of thighs or abdomen from 0.5–5.0 cm. The VelaSmooth (Syneron, Yokneam, Israel) combines bipolar
radiofrequency, infrared light (700–2000 nm), and vacuum. Recently the VelaShape (Syneron, Yokneam, Israel) was released, and it is considered by some to be a second generation cellulite device. This device increases the power of the bipolar radiofrequency from 20–50 W, amongst many other modifications that make the coupling of the radiofrequency more effective. Two applicators are included, the VSmooth and the VContour, with the former for cellulite and the latter for contouring. The claim is that the treatment time can be reduced, the results improved, and the number of treatments recommended changing from 14–16 to 4–8. If the claims are true, this technique will change the landscape of cellulite treatments, making them more accessible and more popular for this difficult to treat condition.

**Laser plus vacuum massage**
The TriActive laser (Cynosure, Westford, MA) is intended to reduce the appearance of cellulite through the combination of diode laser, contact cooling, suction, and massage. A split-thigh evaluation of TriActive versus VelaSmooth showed improvement in cellulite noted with both devices without a significant difference in efficacy.69

Other technologies in the market that purport to help with cellulite are: dual wavelength laser with vacuum massage, SmoothShapes (Elémé Medical, Merrimack, NH); and dual wavelength

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<tr>
<th>Device</th>
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<td>DermaWave</td>
<td>Dual wavelength (685 and 830 nm) diode laser plus three electrical waveforms</td>
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*Adapted from Aesthetic Buyers Guide, July/August 2007.*
(685 nm and 830 nm) diode laser plus three electrical waveforms, DermaWave No-Needle Mesotherapy System (DermaWave) using a scientific technique.

Overall the devices for reductions of cellulite take multiple treatments (8–16) and require fairly frequent maintenance (ie, monthly) to maintain an effect. The results are modest, with some improvement in contour, reduction of rippling, and slight circumferential reduction. This often is manifest in the patient’s perception of smoother skin and improvement of the fit of clothing. If patients are properly informed about the procedure, timing, and the need for maintenance as well as having realistic expectations, then these procedures can be successfully implemented into an esthetic practice with success.

Tissue Tightening

Tissue tightening has been a major force in the aesthetic movement in the past five years. Initiated by the technology of monopolar RF treatments, and later extended to unipolar and monopolar RF devices, broadband infrared light, and bipolar RF with broadband light, the ability to firm and lift tissues of the face and body without surgery has proved to be an important component of nonsurgical aesthetic rejuvenation (see Table 6).

Monopolar radiofrequency

ThermaCool (Thermage, Inc., Hayward, CA) was the first non-invasive technology developed specifically to tighten dermal layers while leaving the epidermis undamaged. It delivers monopolar RF energy deep into the dermis by use of a proprietary “ThermaTip”. The first tip available was the ThermaTip TC, with a medium heating profile, which penetrated 2.4 mm. The addition of shallow profile ThermaTip ST with penetration to 1.1 mm allowed for treatment of thinner areas such as eyelids and hands. Modification to the cooling of the TC tip created the ThermaTip STC that still penetrates to 2.4 mm but is less cooling for a greater volume of tissue heating. Most recently the ThermaTip DC was launched with a deep heating profile to 4.3 mm for increased collagen tightening in the subcutaneous layer of the skin. This is ideal for treating areas of the body such as the abdomen, flanks, thighs, buttock, and arms.

The ThermaCool was FDA cleared in 2000 for dermatologic and general surgical procedures for electrocoagulation and hemostasis. In 2002 it was FDA approved for the “non-invasive treatment of periorbital wrinkles and rhytids,” expanding to clearance of “non-invasive treatment of facial wrinkles and rhytids” in 2004, and losing the distinction of facial in 2005 with the clearance of “non-invasive treatment of wrinkles and rhytids,” and specifically adding the non-invasive treatment of periorbital wrinkles and rhytids including the upper and lower eyelids” in 2007. Although Thermage does not yet have FDA approval for body shaping or deep contouring, it did receive clearance for the “temporary improvement in appearance of cellulite, relief of muscle spasm, relief of minor muscle aches and pains, and temporary improvement of local circulation” in 2006.

Original treatment protocols suggested using high fluence and performing few pulses. Treatments were often very painful and there was a relatively high rate of complications. Kist and colleagues treated three subjects in the preauricular region using a single pass or multiple passes (3–5) in the same 1.5 cm² treatment area. Biopsies taken from each region immediately post treatment, 24 hours post treatment, and six months post treatment showed an increased amount of collagen fibril changes with increasing passes. Changes seen in the samples that had five passes were similar to those in the single pass higher energy treatments. Another study by Weiss and colleagues evaluated the safety of 600 consecutive treatments of the face and neck over a four-year period. Treatment protocols evolved from 1–3 passes over the entire area to one pass over the entire area and 2–4 vector passes to two passes over the entire area with up to four additional vector passes. Energy was adjusted during treatment, based on patient pain feedback on a 0–4 scale with 0 being no pain or heat and 4 being intolerable pain or heat, so most pulses were rated at 2 by the patient. The overall rate of temporary unexpected adverse effects as noted by patients or staff was 2.7%. Of particular note was that no patients reported side effects beyond the expected temporary erythema and edema over the final year. Based on these findings, now it is widely practiced to use multiple passes with vector technique with all tissue tightening treatments and devices. With this treatment protocol, treatments have been much less painful, the rate of complications has greatly diminished, and good results have become more prevalent and consistent.

Unipolar and bipolar radiofrequency

Accent Dual Mode RF System (Alma Lasers, Caesarea, Israel) consists of both unipolar and bipolar mode RF energies. The bipolar RF penetrates the skin more superficially, facilitating the treatment of areas where skin is thinner and more delicate, such as the face. Tissue resistance to the bipolar RF current creates local, superficial dermal heating that penetrates 2–6 mm. This device also
uses a UniPolar mode, an innovation of Alma Lasers’, which delivers radiofrequency energy deep into the dermal and subdermal layers to efficiently treat large volumes of tissue. UniPolar RF generates alternating electromagnetic fields that cause rotation and friction in the dipole water molecules of deeper tissue and penetrates up to 20 mm. One study showed that two treatments on the subcutaneous tissue of the buttocks and thighs provide a volumetric contraction effect in the majority of patients.72

**Bipolar radiofrequency and infrared light**

ReFirme ST (Syneron, Yokneam, Israel) uses elos technology combining bipolar RF and 700–2000 nm infrared light. The intersection of the broadband infrared light and the RF current creates a controlled, focused thermal energy. This technology has been used for both facial73 and body tightening.74

**Vacuum assisted bipolar radiofrequency**

Functional Aspiration Controlled Electrothermal Stimulation (FACES) found in the Aluma (Lumenis, Yokneam, Israel) uses RF technology accompanied by vacuum-assisted positioning and folding of the skin for the treatment of wrinkles and for skin tightening. By folding the skin, the dermis is placed in a more direct alignment with the electrodes than when the electrodes are pressed onto the skin surface. A topical conductive medium and the specially designed tips enable the creation of concentrated heat in the dermis, maximizing both efficacy and safety. Subjects receiving up to eight facial treatments noted a significant decrease in dermal elastosis,75 and 90% patient satisfaction.

**Infrared light**

Titan (Cutera, Brisbane, CA) uses broad spectrum infrared light 1100–1800 nm. This is highly absorbed by water as the chromophore in the dermis at a depth of 1–3 mm. The result is volumetric dermal heating causing immediate collagen contraction and neocollagenesis (a well-known delayed response to a thermal wound in the dermis), similar to the effects of other tissue tightening devices. One of the authors of a three-center perspective article treated 42 patients twice at 1 month intervals over 18 months.76 The mean improvement score was 1.83 (scale 0 to 4, with 4 denoting maximum improvement) with an average follow-up time of 3.7 months. More than 90% of treated patients showed visible improvement.

**Ultrasound**

Thirty-five adult patients were treated with a new ultrasound device called Ulthera System (Ulthera, Mesa, AZ) for tissue tightening. The full face and neck were treated with a single pass with a 7.5 MHz or 4.4 MHz transducer with a 4.5 mm focal depth and energies of 0.4–1.2 J. At least 0.5 cm of brow elevation was achieved in 89% of evaluable subjects.77

**Mesotherapy**

Mesotherapy has used as a general term indicating intradermal injection of multiple chemical substances, but most now use the term to denote the injection of a lipolytic agent for the purpose of circumferential reduction and body shaping.78 The active ingredient appears to be deoxycholate, a detergent that saponifies fat and leads to fat’s reabsorption by the body. Most of the time the lipolytic agent is formulated as a phosphatidylcholine/deoxycholate mixture in various proportions, although a recent publication did study various chemicals and their lipolytic activity.79

The lipolytic agent is injected—during multiple sessions—into the target area for fat lipolysis. Although widely used, this technique is not standardized; has almost no peer-reviewed publications supporting it; and is not approved by the FDA,80 although one paper showed efficacy for treatment of lipomas.81 One concern with regard to this method is the absorption of the active material into the systemic circulation. Multiple treatments are required that result in fat necrosis and subsequent absorption.

**Acne Therapy**

Light, heat, and RF energy devices and modalities, as well as photodynamic therapy (PDT) have emerged as useful co-therapies or, in some cases, replacements for systemic medications. There are studies to show efficacy for blue, red and blue/red light combinations, pulsed dye and KTP laser, photodynamic therapy with various light sources, intense pulsed light with suction, infrared laser, and radiofrequency devices (Table 7).

Therapy with visible light takes advantage of the photosensitivity of porphyrins produced by Propionibacterium acnes,82 the skin bacterium associated with acne. Activation of protoporphyrin IX (PpIX) in the presence of oxygen produces singlet oxygen, a metastable intermediate that destroys cells (in this case, P. acnes).83,84 PpIX absorption peaks occur at 410 (maximum), 505, 540, 580, and 630 nm,85 all wavelengths in the visible light spectrum.

When light is used alone, biweekly or weekly treatments up to eight treatments are usually required for efficacy. Both LED sources and non-LED sources may be used; the advantages of
Photodynamic therapy

PDT usually uses either blue or red light, intense pulsed light, or pulsed dye laser to activate 5-aminolevulinic acid (Levulan Kerastick, Dusa Pharmaceuticals, Wilmington, MA), a precursor of PpIX. Since there is a preferential uptake of this drug by sebaceous glands, there results a high concentration of PpIX in the gland. This creates an opportunity to not only kill the bacteria but also to destroy or reduce the gland capacity, leading to the potential for more long-term improvement. Usually done as a series of 3–4 treatments over 6–12 weeks, there can be downtime with this procedure, due to the fact that there is a 48-hour window of photosensitivity. However, PDT is capable of treating very severe and even cystic acne effectively. Experts in this area recommend using IPL or pulsed dye to activate the drug and using a short contact (10–30 minutes) to limit the non-specific absorption of 5-ala in the epidermis. Alexiades-Armenakas showed that ALA-PDT with long-pulsed, pulsed dye laser activation was

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Adapted from Aesthetic Buyers Guide, July/August 2007.
effective against a variety of acne lesion types with minimal adverse effects. Gold and colleagues were the first to use IPL for ALA-PDT for acne and demonstrated its effectiveness. The results of these and other studies culminated in a consensus recommendation for the treatment of acne. Consensus panel members agreed that ALA PDT provides: (1) the best results when used to treat inflammatory and cystic acne, and (2) modest clearance when used to treat comedonal acne.

**Pulsed dye laser**
The efficacy and safety of the pulsed dye laser (PDL) has been studied by Seaton and colleagues and by Orringer and colleagues. One study showed a clear improvement and the other found no improvement. The reasons for the discrepancy between the results are not clear, and no further studies have been undertaken.

**Potassium titanyl phosphate laser**
The 532 nm potassium titanyl phosphate (KTP) laser has been evaluated for the treatment of mild to moderate acne. The randomized split-face study of 26 patients showed moderate reduction in acne score at 1 week and diminished reduction at 4 weeks post-treatment, supported by histologic studies. The study suggests that the KTP laser may have promise in the treatment of acne.

**1450-nm laser**
In 2002, Paithankar and colleagues showed that a mid-infrared (1450-nm) laser device (Smoothbeam, Candela, Wayland, MA) with cryogen spray cooling could thermally damage the upper dermis (where sebaceous glands are located) without injuring the epidermis in an animal model. In their clinical study of 27 subjects with acne on the bilateral areas of the upper back, the authors showed that lesion counts on the treated sides of the backs were statistically significantly reduced after treatments compared with the control sides; they showed that side effects were minimal and transient. Other studies showing clinical efficacy have been published.

Jih and colleagues completed a 20-patient study of the 1450 nm wavelength and treating patients with skin types II–VI with inflammatory acne. Three split-face treatments were performed at 3- to 4-week intervals at randomly assigned fluences of 14 J/cm² to 16 J/cm². Mean lesion count reductions were 75.1% for 14 J/cm² and 70.6% for 16 J/cm². These improvements were maintained at a 12-month follow-up. The treatments were tolerated with a minimal side effects and an average visual analog pain score of four to six. One criticism of 1450 nm laser therapy is that it is too painful for many teenagers to tolerate.

From the available data, the 1450 nm infrared laser appears to be an important modality for the treatment of acne. The results with the KTP laser are limited and preliminary. However, it is unlikely that any short wavelength that did not have a profound effect on the sebaceous gland could produce a long-term acne remission by itself.

**Radiofrequency**
In the first report on the use of RF energy (Thermacool) for the treatment of moderate to severe acne, most patients received a single treatment and were followed for up to 8 months. Effects due to RF alone are not clear, however, because 9 of the 22 patients received medical therapies for acne during the RF treatment period. The authors obtained encouraging results, however, and suggested that the responses are due to inhibition of sebaceous gland activity by RF-produced heat.

Prieto and colleagues evaluated the efficacy and safety of the Aurora AC (Syneron Medical Ltd., Yokneam, Israel), a device that delivers pulsed blue light and RF energies by elos. An eight-treatment course (twice weekly for four weeks) resulted in reductions in: (1) lesion count; (2) percentage of follicles with perifolliculitis; and (3) areas of sebaceous glands.

The results of both studies suggest that RF is a promising nonablative alternative for the treatment of acne, but too little information is available to be able to comment on effective protocols, duration of effect, or reproducibility of results.

**Suction with pulsed light**
A new device using pneumatic therapy (Ppx), (Iso-laz Device, Aesthera, Pleasanton, CA) has been available for a short period of time; the device combines vacuum suction and pulsed light. The suction brings the skin closer to the light, making the penetration of all visible wavelengths deeper. The device also functions as a “pore-cleansing” device. Early accounts of improvements with this device are encouraging, although there are no published papers in peer-reviewed journals. Although treatment protocols have not been determined, most practitioners using this device do four treatments over eight weeks, with varying degrees of subsequent maintenance.

**LESS COMMON MEDICAL SERVICES**
Many other medical services may be performed in a medical spa (see Table 1). These are procedures usually performed by a physician. A complete review of these is beyond the scope of this article.
LESS COMMON SPA SERVICES

Many other spa services, those traditionally associated with a non-medical spa, may be performed in a medical spa (see Table 1).

SUMMARY

The variety of spa equipment reflects the predilection and experience of the medical director and/or owner. Core services such as microdermabrasion, medical facials, photofacials, laser hair removal, and injectables are fixtures at most medispas. Procedures such as cellulite reduction, tissue tightening, and procedural treatments for acne are also fairly common. More invasive procedures such as resurfacing, sclerotherapy, photodynamic therapy, laser assisted lipoplasty, and tattoo removal are more common in medical spas where the medical director is often the owner and directly involved onsite. Multisite medispas often rely on multiplatform devices to ensure uniformity of services and ease of training, as well as relying on allied health care providers.

REFERENCES


In the early 1900s, cosmetics entrepreneur Helena Rubinstein claimed that dry, oily, combination, or sensitive were the best words to label what could be considered the four fundamental types of skin. For the ensuing century, these categories have been used to characterize skin types with only minor, if any, modifications. During the same time period, the skin care product market has developed into a multibillion dollar industry featuring numerous innovations and frequent new product introductions. The industry has, in recent years, also witnessed the emergence of “cosmeceuticals,” a new product category that refers to cosmetic products that may impart some biologic function to the skin.

Amidst a market now deluged with a plethora of skin care products, the traditional designations for skin types have been seen as incomplete or inadequate descriptions of skin, thus providing insufficient guidance for practitioners and consumers to select the most suitable products. A more thorough depiction of skin type could yield such assistance to patients/consumers and physicians, particularly because some products are now marketed based on the skin types for which they are designed. But does a person have simply dry or sensitive skin? The skin types identified by Rubinstein tell only a fraction of the story. An innovative approach to classifying skin type, the Baumann Skin Type Indicator (BSTI), treats two of Rubinstein’s categories as one of four dichotomous parameters to characterize facial skin types: dry or oily; sensitive or resistant; pigmented or nonpigmented; and wrinkled or unwrinkled (tight). Evaluating skin based on all four parameters yields 16 potential skin-type permutations. The BSTI is a 64-item questionnaire that is designed to determine baseline skin type identifications and assessments after significant life changes.1

All four parameters must be considered for patients to accurately self-assess their skin type or for practitioners to be able to make appropriate skin care recommendations to their patients. For example, a person who has dry, sensitive, pigmented, wrinkled skin would require markedly different skin care products or treatments than an individual who has oily, resistant, nonpigmented, unwrinkled skin.

This article describes the four parameters that make up the BSTI, focusing on basic science and defining characteristics and summarizing the 16 skin-type variations (Table 1). Variability is a key concept underlying the questionnaire and accurately identifying skin type. Skin types are not necessarily static. Moving to a different climate or experiencing marked stress fluctuations, pregnancy, menopause, or other significant exogenous and endogenous events can engender skin type changes. Significantly, noninvasive, primarily topical therapies are the focus of treatments based on the BSTI system.
SKIN HYDRATION
Oily Versus Dry

Having skin that is sufficiently hydrated, which would fall in the middle of the oily–dry spectrum, is most often ideal regarding this parameter. The dry end of this dichotomy is considered more troublesome than the oily end, however. Dry skin, also known as xerosis, is the result of a convoluted, multifactorial cause, but its description is relatively straightforward. Dry skin is characterized by dull color (typically gray white), rough texture, and an elevated number of ridges. Levels of stratum corneum lipids, sebum, natural moisturizing factor, and aquaporin are considered to be the most important factors that regulate the degree of, or contribute to, dry skin.

Of these factors, the role of the stratum corneum (SC), especially its capacity to maintain skin hydration, is the most significant factor in the mechanism of xerosis. In turn, the SC is composed of ceramides, fatty acids, and cholesterol, among other less active constituents. When present in the proper amount and balance, these three groups of primary constituents of the SC contribute to protecting the skin and keeping it watertight. SC equilibrium is also believed to be maintained through stimulation of keratinocyte lipid synthesis and keratinocyte proliferation by primary cytokines.

Improper balance in these constituents contributes to a cascade of interrelated events, including a diminished capacity to maintain water and increased vulnerability to external factors, which increases sensitivity of the SC. Xerosis results through such impairment in the SC. These flaws in the skin barrier lead to increases in transepidermal water loss (TEWL). The enzymes necessary for desmosome metabolism are inhibited by insufficient hydration, resulting in the abnormal desquamation of corneocytes. Superficial SC desmoglein I levels simultaneously remain high. The resultant compromised desquamation yields a visible collection of keratinocytes manifesting in skin that is rough and dry in appearance. A perturbation in the lipid bilayer of the SC because of increased fatty acid levels and decreased ceramide levels is also associated with dry skin. The lipid bilayer is also susceptible to being influenced or inhibited by exogenous factors, such as ultraviolet radiation, detergents, acetone, chlorine, and prolonged water exposure or immersion. Recent research has indicated that local changes in pH may explain the initial cohesion and ultimate desquamation of corneocytes from the surface of the SC. It is believed that these changes selectively activate several extracellular proteases in a pH-dependent fashion.
Natural moisturizing factor (NMF), an intracellular, hygroscopic compound found only in the SC that is released by lamellar bodies and synthesized by way of the breakdown of the protein filaggrin, plays an important role in maintaining water within skin cells. Filaggrin, which consists of lactic acid, urea, citrate, and sugars, is broken down by a cytosolic protease into free amino acids, such as arginine, glutamine (glutamic acid), and histidine, in the stratum compactum, an outer layer of the SC. These water-soluble compounds stay in the keratinocytes and bind strongly to water molecules. The pace of filaggrin decomposition and the level of NMF present are attributed to aspartate protease (cathepsin). Changes in external humidity can influence cathepsin, potentially yielding fluctuations in NMF production. NMF production typically increases over the course of several days after an individual enters a low-humidity environment. Low levels of NMF are associated with xerosis and ichthyosis vulgaris. NMF development can be inhibited by ultraviolet radiation and surfactants. There are no products or procedures yet available to artificially regulate NMF production.

Aquaporin-3 (AQP3) is an important member in the family of homologous integral membrane proteins that selectively facilitate the transport of water and small neutral solutes, such as glycerol and urea, across biologic membranes. AQP3 is present in the kidney collecting ducts and epidermal keratinocytes was hindered by mercurials involvement, the water permeability of human epidermal keratinocytes was hindered by mercurials and low pH. In a different study, some of the same researchers investigated skin phenotype in transgenic mice lacking AQP3 and found significantly lower water and glycerol permeability in the AQP3 null mice, buttressing previous evidence that AQP3 acts as a plasma membrane water/glycerol transporter in the epidermis. Conductance measurements showed substantially lower SC water content in most cutaneous areas of the null mice. Epidermal cell water permeability is not a significant determinant of SC hydration, however, because water transport across AQP3 is slower in skin compared with other tissues. The activity of AQP3 has only been shown to be enhanced through the use of extracts of the herb Ajuga turkestanica. A high-end line of skin care products includes A turkestanica as an active ingredient. In the future, skin conditions caused by excess or diminished hydration may be treated through pharmacologically manipulating AQP3.

Sebum, the oily secretion of the sebaceous glands that contains wax esters, sterol esters, cholesterol, di- and triglycerides, and squalene, confers an oily quality to the skin and contributes significantly to the development of acne. In addition, sebum, which is an important source of vitamin E, is believed to provide cutaneous protection from environmental factors, whereas low levels of sebum have been cited as a potential contributing factor to dry skin development. This theory has not found support, though, because low sebaceous gland activity has not been demonstrated to promote the development of xerosis. Sebum production has actually been found to play a more convoluted role in the cause of this condition. Previously, it has been speculated that sebum has no impact on epidermal permeability barrier function primarily because skin with few sebaceous glands (eg, as in prepubertal children) displays normal basal barrier function. Prepubertal children between 2 and 9 years old frequently present with eczematous patches (pityriasis alba) on the face and trunk that do not emerge with the onset of sebaceous gland activity. The pharmacologic involution of sebaceous glands with supraphysiologic isotretinoin doses does not affect barrier function or SC lamellar membranes. Similarly, using ether to denude the skin does not interrupt SC function.
Although barrier function is not influenced by sebum levels, sebum may still contribute to the etiologic pathway of xerosis in individuals who have dry, resistant skin (the DR type in the BSTI). Lipids from meibomian glands, which are modified sebaceous glands located in the eyes, are known to stave off dryness by preventing the evaporation of tears. Similarly, perhaps, sebum-derived fats may produce a lipid film over the skin surface, thereby preventing TEWL. A recent study evaluating permeability barrier homeostasis and SC hydration in asebia J1 mice with sebaceous gland hypoplasia supports this theory. The normal barrier function in these sebum-deficient mice was attributed to consistent levels of the three most important barrier lipids (ceramides, free sterols, and free fatty acids) and the persistence of normal SC extracellular membranes. The investigators observed, however, that the asebia J1 mice exhibited diminished SC hydration, suggesting that although an intact intercellular membrane bilayer system suffices for permeability barrier homeostasis, it does not necessarily contribute to normal SC hydration. The researchers found that topically applying glycerol restored normal SC hydration. In normal skin, sebaceous gland–derived triglycerides are hydrolyzed to glycerol before transport to the skin surface. In individuals who are sebum deficient, xerosis may be allayed by replacing this glycerol. The acceleration of SC recovery has also been shown to be successful with the use of glycerol.

Reduced sebum production is rarely the source of patients’ complaints, but elevated sebum production, rendering oily skin that can lead to acne, is a common complaint. The age-related trajectory of sebum production is well known. Sebum levels are typically low during childhood, increase in the middle to late teens, and remain relatively stable for decades until decreasing in the seventh and eighth decades as endogenous androgen production declines. Other factors also have an impact on the level of sebum production. One’s genetic background, diet, stress levels, and hormone levels affect sebum production. A fascinating study of 20 pairs each of identical and nonidentical like-sex twins revealed nearly equivalent sebum excretion rates with significantly divergent acne severity in the identical twins, but significant differences in both parameters among the nonidentical twins, suggesting that both genetic factors and environmental factors had an impact on acne development. The use of oral retinoids to shrink sebaceous glands is well established, but topical retinoids have not yet been shown to have this capacity. In addition, no other topical formulations have been demonstrated to reduce sebum production.

**Skin Care for the Oily–Dry Parameter**

Skin that falls in the middle of the oily–dry continuum can be best characterized as manifesting an intact SC and barrier, normal levels of NMF and hyaluronic acid (HA), normal AQP3 expression, and balanced sebum secretion. Whether or not acne develops from it, elevated sebum secretion is usually responsible for placing skin on the oily side of the oily–dry spectrum. The BSTI profile for oily skin accompanied by acne is OS, because acne-infiltrated skin is distinguished by heightened sensitivity (see later discussion). For individuals who have OS skin, treatment should focus on reducing sebum levels with retinoids, eliminating or decreasing skin bacteria with antibiotics, benzoyl peroxide, or other antimicrobials, and using anti-inflammatory ingredients. Treatment of oily skin without acne—an oily, resistant (OR) type in the BSTI—should be tailored to reduce sebum production, unless other parameters, such as dyspigmentation and wrinkling, are factors (see following sections). Sebum secretion has been effectively decreased with the use of oral ketoconazole and oral retinoids, but such results have not yet been seen with topical products. The sebum in OR skin can also be camouflaged using sebum-absorbing polymers and talcs.

Dry skin chronically exposed to the sun is likely characterized by an impaired skin barrier and reduced NMF. Therapy for such skin should focus on skin barrier repair and reducing sun exposure, avoiding the sun if possible or at least providing adequate sun protection.

All patients who have xerosis should abstain from using harsh foaming detergents (found in laundry and dish cleansers along with body and facial cleansers), which remove hydrating lipids and NMF from the skin. Protracted bathing, particularly in hot or chlorinated water, should also be avoided by all patients who have dry skin (Box 1). For those who have very dry skin, humidifiers should be used in low-humidity environments and moisturizers should be applied two to three times daily and after bathing.

In addition to pharmacologic products beneficial in the treatment of xerosis and practical recommendations regarding what patients who have dry skin should avoid, there are several over-the-counter (OTC) moisturizers (eg, occlusives, humectants, and emollients) available that are effective in hydrating the skin (Table 2). Moisturizers are the third most often recommended type of OTC topical skin care product. Awareness of
the differences among moisturizer types is an important part of a practitioner’s knowledge base from which to suggest the most suitable products for a given patient’s skin type. Moisturizers are usually packaged as water-in-oil emulsions (eg, hand creams) and oil-in-water emulsions (eg, creams and lotions).

Occlusives

When used in skin care products, occlusives, which are oily substances that can dissolve fats, coat the SC to inhibit TEWL. In addition to impeding TEWL, occlusives confer an emollient effect, and are therefore suitable products for treating xerosis. The most effective occlusive ingredients are petrolatum and mineral oil. Petrolatum, used as a skin care product since 1872, is considered one of the best moisturizers and a gold standard by which other occlusives are measured. A resistance to water vapor loss that is 170 times that of olive oil is ascribed to petrolatum. Unfortunately, petrolatum has such a greasy texture that some consumers find such products cosmetically unacceptable. Besides petrolatum and mineral oil, other frequently used occlusive ingredients include paraffin, squalene, silicone derivatives (dimethicone, cyclomethicone), soybean oil, grapeseed oil, propylene glycol, lanolin, lecithin, stearyl stearate, and beeswax. Derived from the sebaceous secretions of sheep, lanolin contains the important SC lipid cholesterol and can coexist with SC lipids as solids and liquids at physiologic temperatures. Lanolin has been deemed a sensitizer by some, although it has been demonstrated to be a weak allergen. Lanolin may also be eschewed because it contains animal products. Although numerous moisturizers are now labeled “lanolin-free,” lanolin is still widely used. No occlusive ingredients provide long-lasting benefits. TEWL returns to its previous level once the occlusive agent is removed from the skin. Occlusives are typically used in combination with humectants because decreasing TEWL by more than 40% risks maceration, with elevated bacteria levels.

Propylene glycol

An odorless liquid with antimicrobial and keratolytic properties, propylene glycol (PG) acts as an occlusive and a humectant. PG has been shown to facilitate the cellular penetration of some drugs, including steroids and minoxidil. PG is believed to be a weak sensitizer, but it may contribute to contact dermatitis by facilitating the penetration of allergens into the epidermis.

Humectants

Humectants are water-soluble and hygroscopic substances. Humectants applied to the skin have the capacity to attract water from the external environment (in conditions with at least 80% humidity) and from the underlying skin layers. In low-humidity conditions, however, humectants may absorb water from the deeper epidermis and dermis, thus contributing to TEWL and aggravating skin dryness. Consequently, humectants are more effective when combined with occlusive products. Several humectant products have also been identified as exhibiting emollient characteristics. Humectants are incorporated into cosmetic moisturizers because they prevent product evaporation and thickening, which prolongs the product’s shelf-life. These products do not impart long-lasting antiwrinkle effects on the skin, however. Humectants, by drawing water into the skin, provoke a minor swelling of the SC, rendering a perception, which lasts for about 24 hours, of smoother skin with fewer wrinkles. Some humectants confer other benefits, such as bacteriostatic activity. The most effective humectant ingredients in skin care products are glycerin and glycerol. Several other compounds function as active humectant ingredients, including alpha hydroxy acids, panthenol, carboxylic acid, sorbitol, sodium hyaluronate, sodium and ammonium lactate.
sodium pyrrolidine, urea, propylene glycol, gelatin, honey, and other sugars. Effective moisturizers usually include occlusive and humectant ingredients.

**Glycerin** A strong humectant, glycerin exhibits hygroscopic activity comparable to that of NMF. Investigators reported after a 5-year study comparing two high-glycerin moisturizers to 16 other popular moisturizers used by 394 patients who had severe xerosis that the high-glycerin products were the most effective, quickly restoring dry skin to normal hydration with longer-lasting results than the other moisturizers, which included petrolatum preparations. In addition, glycerin has been shown, by way of ultrastructural analyses of skin treated with high-glycerin preparations, to expand the SC by enhancing corneocyte thickness and producing greater distance between layers of corneocytes. Glycerin has also been demonstrated to stabilize and hydrate cell membranes and the enzymes required for desmosome degradation.

**Urea** Since the 1940s, urea has been included in many hand creams. This dynamic compound is an end product of protein metabolism in mammals, the primary nitrogen-containing ingredient of urine, and an NMF constituent, and it displays humectant and mild antipruritic properties. Combining urea with hydrocortisone, retinoic acid, and other ingredients has been shown to promote the cutaneous penetration by these agents. The Cosmetic Ingredient Review Expert Panel recently declared that urea does have the capacity to enhance the percutaneous absorption of other chemicals, and that urea is safe for use in cosmetic products. There had been some earlier disagreement as to whether urea had exhibited such activity. A double-blind clinical study comparing 3% and 10% urea cream found that the study formulations were more effective in dry skin than the vehicle control. The 10% cream reduced TEWL but the 3% cream had no impact on TEWL, although the creams were reported to be equally effective.

<table>
<thead>
<tr>
<th>Type</th>
<th>Function</th>
<th>Examples</th>
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</thead>
<tbody>
<tr>
<td>Occlusives</td>
<td>Coat the SC and reduce TEWL</td>
<td>Lanolin&lt;sup&gt;a&lt;/sup&gt;, Mineral oil&lt;sup&gt;a&lt;/sup&gt;, Petrolatum&lt;sup&gt;a&lt;/sup&gt;, Propylene glycol, Paraffin, Squalene, Dimethicone, Cyclomethicone, Soybean oil, Grapeseed oil, Lecithin, Stearyl stearate, Beeswax</td>
</tr>
<tr>
<td>Humectants</td>
<td>Attract H&lt;sub&gt;2&lt;/sub&gt;O from outer the atmosphere and underlying epidermis, hydrating the skin</td>
<td>Glycerin, Glycerol, Propylene glycol, AHAs (glycolic acid, lactic acid), Urea, Sorbitol, Sodium hyaluronate, Sodium and ammonium lactate, Sodium pyrrolidine, Carboxylic acid, Panthenol, Gelatin, Honey</td>
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Abbreviation: AHAs, alpha hydroxy acids.
<sup>a</sup> These products also act as emollients.
Hydroxy acids: Alpha hydroxy acids (AHAs) are a class of naturally occurring organic acids that have been found to function as humectants and exfoliants. The most frequently used AHAs in moisturizing formulations are glycolic and lactic acids (derived, respectively, from sugar cane and sour milk). Other AHAs include malic acid, citric acid, and tartaric acid. Glycolic and lactic acids were the first AHAs to become commercially available. It was shown more than 30 years ago that topical formulations containing AHAs exert significant effects on epidermal keratinization.53 A decade ago, glycolic acid was demonstrated to exhibit photoprotective activity.54 The only beta hydroxy acid (BHA), salicylic acid, which is derived from willow bark, wintergreen leaves, and sweet birch, acts as a chemical exfoliant and is included in synthetic form in various topical preparations.55 AHAs and BHA erode corneocyte cohesiveness at the lowest levels of the SC, also influencing pH in the process, and break down desmosomes, thus facilitating desquamation.56,57

Lactic acid: This prominent AHA is unusual in that it is also a component of NMF. Lactic acid was first used in dermatologic therapy in 1943 to treat ichthyosis.58 In vitro and in vivo experiments have since shown that lactic acid can enhance ceramide production by keratinocytes.59,60 In addition, a double-blind vehicle-controlled study using an 8% L-lactic acid formula revealed that the AHA was a superior treatment than the vehicle for photoaged skin, rendering statistically significant improvements in sallowness, skin coarseness, and blotchiness.61

Emollients: Included in cosmetics to hydrate, soften, and smooth the skin, emollients are composed mainly of lipids and oils. A smooth skin surface is rendered by these substances that act by filling in the gaps between desquamating corneocytes.62 Emollient formulations enhance cohesion, yielding a flattening of the curled edges of individual corneocytes.2 As a result, a smoother skin surface decreases friction while improving light refraction. There are several classes of emollients, including astringent, dry, fattening, and protective, along with protein rejuvenators.38 There are also primarily occlusive ingredients that confer an emollient effect, such as lanolin, mineral oil, and petrolatum.

Moisturizers are generally regarded as safe, with reports of adverse effects exceedingly rare. Products containing preservatives, perfumes, solubilizers, sunscreens, and some other classes of compounds have been linked to reports of allergic contact dermatitis. Lanolin, propylene glycol, vitamin E, and Kathon CG have been associated with contact dermatitis.63,64

Collagen and Polypeptide Ingredients

Most of the collagen “extracts” contained in many expensive moisturizers touted for replacing collagen lost with aging have a molecular weight of 15,000 to 50,000 daltons, but only compounds with a molecular weight of 5000 daltons or less can actually penetrate the SC.40 Nevertheless, the collagen and other hydrolyzed proteins and polypeptides produce a temporary film on the epidermis that, once the product dries, fills in surface irregularities. A subtle stretching out of fine skin wrinkles is provided by the film created by these products. This fuller or slightly plumper appearance can be further enhanced with the addition of a humectant. Formulations with collagen and polypeptide ingredients confer little or no effect on TEWL, but are typically labeled as moisturizers and firming creams.

SKIN SENSITIVITY

Sensitive Versus Resistant

Resistant skin is characterized by a robust SC that strongly protects the skin from allergens and other exogenous environmental irritants. Erythema and acne are rare in people who have resistant skin. Erythema may arise if an individual is overexposed to the sun; acne may emerge because of stress or hormonal fluctuations. Individuals who have resistant skin can use most skin care products without fear of adverse reactions (eg, acne, rashes, or a stinging response). The same qualities that allow for such an advantage, however, also render several products ineffective in such individuals, who have an exceedingly high threshold for product ingredient penetration and bioefficacy. Consequently, people who have resistant skin may be unable to detect differences among cosmetic skin care formulations because most products are too weak to cross the potent SC to impart benefits.

Sensitive skin is a more complex phenomenon and more difficult to characterize. It is also becoming increasingly common.65 Most patients who present to a dermatologist complaining of sensitive skin are healthy women of childbearing age. Fortunately, with age, the incidence of sensitive skin seems to decrease. As the prevalence of sensitive skin has increased, so too has the number of products marketed as suitable for the treatment of sensitive skin. There are variations in the qualities of sensitive skin. There are four discrete subtypes: acne type (propensity to develop acne, blackheads, or whiteheads), rosacea type (tendency
toward recurrent flushing, facial redness, and experiencing hot sensations), stinging type (proclivity to experiencing stinging or burning sensations), and allergic type (prone to manifesting erythema, pruritus, and skin flaking). Each of these subtypes presents distinct treatment challenges to the practitioner because products designed and marketed for sensitive skin are not necessarily appropriate for all sensitive skin subtypes. Despite such differences, the four subtypes of sensitive skin share one significant feature: inflammation. One consistent focus in any sensitive skin treatment program therefore is decreasing and eliminating inflammation. For patients who present with more than one type of sensitive skin, the treatment is understandably more complex and challenging.

**Acne Type**

Although incidence and prevalence rates vary, acne is by far the most common skin disease, typically affecting adolescents and young adults, equally by gender, between the ages of 11 and 25 years. The second-largest demographic group that suffers from acne in appreciable numbers is adult women, who exhibit a hormonal component to their acne. The pathogenesis of this conspicuous and, therefore, stressful condition originates from the intersection of four main factors: increased sebum production; clogged pores due to dead keratinocytes inside the hair follicles adhering more strongly than in those without acne (higher sebum production may also promote such cellular clinging), the presence of the bacteria *Propionibacterium acnes*, and inflammation. Although acne can occur in various idiopathic presentations, the quintessential feature is the adherence of dead keratinocytes in the hair follicles as a result of increased sebum production, yielding clogged follicles and the emergence of a papule or pustule. Subsequently, *P. acnes* migrates into the hair follicle, intersecting with the collected sebum and dead keratinocytes. This interaction spurs the release of cytokines and other inflammatory factors that engender the inflammatory response leading to the formation of the characteristic redness and pus. High levels of primary cytokines, chemokines, and other inflammatory markers are usually present in chronic inflammatory skin conditions such as acne.5

The treatment of acne targets the four primary etiologic factors: reducing sebum production (with retinoids, oral contraceptives, or stress reduction), unclogging pores (with retinoids, AHAs, or BHA), eradicating bacteria (with benzoyl peroxide, sulfur, antibiotics, or azelaic acid), and decreasing inflammation.

**Rosacea Type**

According to the National Rosacea Society, 14 million Americans,66 usually adults between 25 and 60 years of age, are affected by rosacea. This acneiform condition, the pathophysiology of which has yet to be completely elucidated, shares some symptoms with acne, specifically facial redness, flushing, and papules; however, rosacea is also characterized by the formation of prominent telangiectases, the primary manifestation of the condition. Topical rosacea treatments target the use of anti-inflammatory ingredients to decrease the dilation of the blood vessels and the avoidance of exposure to factors that trigger or aggravate symptoms. The goal of rosacea therapy is to reduce vascular reactivity, attack free radicals or reactive oxygen species (ROS), inhibit immune function, and interfere with eosinophilic activity, degranulation of mast cells (which often colocalize to areas of eosinophil-mediated disease), and the arachidonic acid pathway. Eosinophils are pleiotropic multifunctional leukocytes involved in initiating and promoting numerous inflammatory responses.67,68 The most effective anti-inflammatory ingredients (many of which are derived from botanical origins) in the myriad topical rosacea therapies include aloe vera, arnica, chamomile, colloidal oatmeal, cucumber extract, feverfew, licorhcalone, niacinamide, Quadrinone, salicylic acid, sulfacetamide, sulfur, witch hazel, and zinc.69 Various prescription anti-inflammatory products, including antibiotics, immune modulators, and steroids, are also available to treat rosacea.

**Stinging Type**

The stinging response is a nonallergic neural sensitivity that some people experience in reaction to various triggers. Several tests are available to identify “stingers” or the stinging tendency. The lactic acid stinging test is a particularly well-regarded method of evaluating individuals who report invisible and subjective cutaneous irritation. The stinging sensation is not necessarily linked to erythema, because many patients feel stinging without manifesting redness.70 Rosacea patients exhibiting facial flushing are more susceptible to experiencing stinging caused by exposure to lactic acid.71 Patients who are confirmed to have the stinging subtype of sensitive skin should avoid topical products containing the following ingredients: alpha hydroxy acids (particularly glycolic acid), benzoic acid, bronopol, cinnamic acid compounds, Dowicil 200, formaldehyde, lactic acid, propylene glycol, quaternary ammonium.
compounds, sodium lauryl sulfate, sorbic acid, urea, or vitamin C.

Allergic Type

A recent epidemiologic survey in the United Kingdom found that over 1 year 23% of women and 13.8% of men exhibited an adverse reaction to a personal care product (eg, deodorants and perfumes, skin care products, hair care products, and nail cosmetics). Further, numerous studies have shown that approximately 10% of dermatologic patients who are patch tested for anywhere from 20 to 100 ingredients manifest allergic sensitivity to at least one ingredient common in cosmetic products. The most common allergens are fragrances and preservatives and the preponderance of people who experience such reactions are women aged 20 to 60 years. Greater susceptibility to allergic reactions is seen among those who are overexposed to skin care products and patients who have an impaired SC, as manifested by xerosis.

Based on the principles of the BSTI, people who have oily, sensitive skin require oil control. Such an individual would also likely require an acne or rosacea treatment regimen. Those who have dry, sensitive skin require treatment to achieve skin barrier repair. People who have sensitive, wrinkled skin would benefit from treatments intended to reduce present wrinkles and prevent the formation of new ones. Those who have sensitive, pigmented skin typically seek the removal of the pigmentary lesion and treatment to prevent additional pigmentation.

SKIN PIGMENTATION

Pigmented Versus Nonpigmented

This skin parameter does not pertain to skin color, but to the propensity to develop undesired hyperpigmentations on the face, chest, or arms. Skin conditions or lesions that require excision or treatment beyond skin care (eg, congenital nevi, seborrheic keratoses) are not considered within the realm of typical pigmented skin in the BSTI framework. Pigmentary conditions or changes that can be ameliorated with skin care products and minor dermatologic procedures, such as melasma, solar lentigos, ephelides, and postinflammatory hyperpigmentation, do fall within this rubric, however. Some patients pay significant sums in the pursuit of satisfactory treatment of these anxiety-producing pigmentary problems; for practitioners to know how best to treat them, the origin of pigmentation should be clearly understood.

The skin pigment melanin is derived from the enzymatic breakdown of tyrosine by tyrosinase into dihydroxyphenylalanine and then dopaquinone, ultimately yielding the two melanin types, eumelanin and pheomelanin. The more prevalent type, eumelanin, regularly correlates with the visual phenotype. Melanin is produced in darker-skinned individuals than lighter-skinned ones. The larger melanosomes in darker-skinned people accommodate more melanin and therefore decompose more slowly than in lighter-skinned people. Melanin is synthesized by melanocytes and then transferred by way of melanosomes to keratinocytes. Ultraviolet (UV) irradiation can also induce melanogenesis, however, which under these circumstances represents the skin’s defense to the insult of UV exposure. In this reaction to UV irradiation, melanocytes accelerate the production of melanin and its transfer to keratinocytes, resulting in the darkening of the skin in affected areas.

One melanocyte is usually linked to approximately 30 keratinocytes. In the process of transferring through melanosomes, the melanocyte loads the melanosome with melanin and then attaches to the keratinocytes. The keratinocytes surround the melanosome and absorb the melanin after the protease-activated receptor (PAR)-2 is activated. PAR-2, which is expressed in keratinocytes but not melanocytes, is a seven transmembrane G-protein-coupled trypsin/tryptase receptor activated by a serine protease cleavage. It is believed that PAR-2 regulates pigmentation by way of exchanges between keratinocytes and melanocytes.

The development of skin pigmentation can be inhibited by way of two main pathways: inhibiting tyrosinase, thereby preventing melanin formation, and impeding the transfer of melanin into keratinocytes. Effective tyrosinase inhibitors include hydroquinone, vitamin C, kojic acid, arbutin, mulberry extract, and licorice extract. Two proteins found in soy—soybean trypsin inhibitor (STI) and Bowman-Birk inhibitor (BBI)—have been identified as agents that have the capacity to impede the development of skin pigmentation. In addition to their depigmenting activity, STI and BBI have also been demonstrated to prevent UV-induced pigmentation in vitro and in vivo. STI and BBI impart such effects by inhibiting the cleavage of PAR-2, and are therefore believed to affect melanosome transfer into keratinocytes. This pivotal transfer of melanosomes from melanocytes to keratinocytes has also been shown to be inhibited with the introduction of niacinamide, a derivative of vitamin B3. As the most effective PAR-2 blockers, soy and niacinamide are the primary agents for impeding melanin transfer to keratinocytes.
Within the two approaches to hindering melanin formation, there are three types of topical agents useful in exerting such influence. Besides the tyrosinase inhibitors and PAR-2 blockers, exfoliating agents, such as AHAs, BHA, and retinoids, can accelerate cell turnover to such an extent that it outpaces melanin production. Procedures, such as microdermabrasion, and instruments, such as facial scrubs, can also be used for these purposes. Any skin care regimen focused on reducing or eliminating the development of unwanted pigmentation should also include the use of broad-spectrum sunscreens. Sun avoidance remains the most effective way to prevent pigmentary changes to the skin, among other deleterious effects. In the BSTI, an individual who has a tendency to form unwanted dyschromias would be considered to have type “P” skin and, otherwise, type “N” skin.

SKIN AGING

Wrinkled Versus Tight

Cutaneous aging is a dynamic, multifactorial process under endogenous and exogenous influences. The etiologic factors have traditionally been considered so distinct that two discrete processes have been described: natural intrinsic aging is genetically driven, or cellurally programmed, inevitable, and eventually results in visible skin alterations; extrinsic aging, which also manifests in cutaneous changes, results from the chronic exposure to various environmental insults and is therefore avoidable. Recent insights suggest that the primary factor implicated in extrinsic aging—UV radiation—may actually alter the normal course of natural aging. If this is the case, intrinsic and extrinsic aging are less distinct than previously believed.

This brief discussion considers these processes separately. In recent years, the function of telomeres, the specialized structures that protect the ends of chromosomes, has come to be identified as one of the keys to intrinsic aging. Telomere length is known to diminish with age, and this erosion is seen as tantamount to a gauge by which to measure chronologic aging. This veritable internal aging clock mechanism is the basis for one of the currently favored theories on aging. The enzyme telomerase, which stabilizes or lengthens telomeres, is expressed in about 90% of all tumors but does not appear in many somatic tissues. This phenomenon implies that most cancer cells, unlike healthy cells, are not programmed for apoptosis, or cell death, essentially placing aging and cancer on opposite sides of the same coin. The epidermis is one of the few regenerative tissues to express telomerase. Currently, no treatment options target telomerase because current data are insufficient regarding the safety of extending telomere length.

Extrinsic aging, as implied in the definition, is preventable and is thus subject to human control. Individuals can make a concerted effort to limit exposure to the primary causes of exogenous aging. These etiologic factors include smoking, other pollution, poor nutrition, excessive alcohol consumption, and especially solar exposure. Cutaneous damage results from exposure to UV irradiation through various mechanisms, including the formation of sunburn cells by way of pyrimidine and thymine dimers, collagenase synthesis, and the promotion of an inflammatory response. Significantly, signaling through the p53 pathway after telomere disruption induced by UV irradiation (UVB in particular) has been linked to aging and photodamage. Photoaging, photocarcinogenesis, and photo-immunosuppression are well known adverse effects of UV (particularly UVA), although much more remains to be learned about the mechanisms through which UV irradiation fosters harmful effects. Because UV irradiation inhibits DNA and accelerates telomere shortening, this primary source of extrinsic aging can be considered to influence the course of intrinsic aging.

Rhytid formation, which begins in the lower dermal layers of the skin, is the quintessential manifestation of aging skin. Few skin care product formulations can actually penetrate far enough into the dermis to alter or reverse deep wrinkles, despite the wealth of products advertising otherwise and the significant outlay of consumers’ money for such products. Antiaging skin care consequently focuses on the prevention of wrinkle formation. Because it is well known that the three main structural components of the skin—collagen, elastin, and HA—decline with age, the primary goal in product formulation is to prevent the degradation of one or more of these key constituents. Although there are no topical products that can deliver these substances deeply into the epidermis, despite what the marketing might indicate, some products do promote the natural production of these important compounds. Topically, retinoids, vitamin C, and copper peptide have been demonstrated to stimulate collagen production, and oral vitamin C is also believed to have the same capacity. In addition, retinoids have been demonstrated in animal models to promote the synthesis of HA and elastin, whereas glucosamine supplementation is also believed to augment HA levels. As of yet, no products have been shown or approved for the stimulation of elastin production.
Another important target of wrinkle prevention that occurs beneath the skin is reducing inflammation, because inflammation is known to contribute to collagen, elastin, and HA degradation. Antioxidants play a significant role in this approach because they protect the skin by way of several mechanisms that are becoming better understood and elucidated. For example, ROS acting directly on growth factor and cytokine receptors in keratinocytes and dermal cells can engender skin inflammation. Nevertheless, much remains to be learned about the direct roles of growth factors and cytokines in cutaneous aging. Currently, growth factors and cytokines are known to function synergistically in a complex mechanism involving various types of growth factors and cytokines. It is believed that UV irradiation triggers a cascade of events, acting on growth factor and cytokine receptors in keratinocytes and dermal cells, leading to downstream signal transduction by activating mitogen-activated protein (MAP) kinase pathways (extracellular signal-regulated kinase, c-jun N-terminal protein kinase, and p38). These then collect in cell nuclei, forming cFos/cJun complexes of transcription factor activator protein 1, and inducing the matrix metalloproteinases collagenase, 92 kDa gelatinase, and stromelysin to break down collagen and other cutaneous connective tissue.

The direct effects of ROS on the aging process and skin aging are more clearly understood. Kang and colleagues have shown that free radical activation of the MAP kinase pathways induces collagenase synthesis, which leads to the breakdown of collagen. Inhibiting these pathways by the use of antioxidants is believed to deter photoaging by preventing collagenase synthesis and its ensuing harmful effects on collagen. In experiments using human skin, Kang and colleagues found that the pretreatment of skin with the antioxidants genistein and N-acetyl cysteine inhibited the UV induction of the cJun-driven enzyme collagenase.

A plethora of antioxidants are used as ingredients in topical skin care products, including vitamins C and E, coenzyme Q10, and those derived from botanical sources, such as caffeine, coffee berry, ferulic acid, feverfew, grape seed extract, green tea, idebenone, mushrooms, polypodium leucotomos, pomegranate, Pycnogenol, resveratrol, rosemary, and silymarin. Although copious evidence is presented in the literature identifying the antioxidant potency of these ingredients, their efficacy in topical formulations intended to combat the cutaneous signs of aging has not yet been established. It likely that in the not-too-distant future technological innovation in tissue engineering and gene therapy will yield breakthroughs in the therapeutic uses of growth factors, cytokines, and telomerase. It is equally probable that some such applications will be included in the dermatologic armamentarium. In the interim, several practical steps can be taken to mitigate or even prevent extrinsic skin aging, including: avoiding/limiting exposure to the sun (particularly from 10 AM to 4 PM), using broad-spectrum sunscreen when avoiding the sun is impossible, avoiding cigarette smoke and pollution, taking oral antioxidant supplements or topical antioxidant formulations, regularly using prescription retinoids, and eating a diet high in fruits and vegetables. Protecting the skin is a key step in fundamental skin care (Box 2).

**SKIN TYPE COMBINATIONS AND CHANGES**

Because the skin parameters together describe the simultaneous state or tendencies of the skin along four different spectra, the permutations of the four skin parameters yield 16 different skin types. The BSTI skin typing system can assist individuals, once they have identified their skin type, in gaining insight into treating their particular skin problem areas and provide guidance as to the most suitable OTC products for their skin. For example, an individual who has oily, sensitive, nonpigmented, wrinkled skin (the OSNW skin type) would be best served by using products with retinoids and antioxidants. A person who has dry, sensitive, nonpigmented, tight skin (the DSNT skin type), would be advised to use products with ingredients intended for skin barrier repair. Although the BSTI can provide significant guidance for one’s skin care choices, an individual’s skin type can change, especially because of stress and exposure to variable environments (eg, when traveling to a region with a different climate). This phenomenon should be considered.

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**Box 2**

Four elements of fundamental skin care

1. Mild cleansing
2. Hydrating
   - Effective moisturization (with humectants and emollients)
3. Replenishing
   - With lipids, ceramides and fatty acids
4. Protecting
   - UV protection
   - Increased humidity
by patients and physicians in arriving at an overall skin type assessment. In addition, particular skin features, proclivities, or manifestations are seen in certain skin types, which is important to acknowledge when using skin care products based on the BSTI skin typing system. For instance, pigmented, wrinkled skin (PW) is more typical in an individual who has a significant history of sun exposure, resulting in wrinkles and solar lentigens. Dark skin is more common in individuals characterized as PT types; light skin is a common feature of those described as NW types. As for certain cutaneous conditions, rosacea is observed in OSNW skin types more often than in those who have other skin types. Eczema is more typical in people who have the DS combination than in individuals who have other skin types. Acne is associated with OS skin more than any other skin type.

SUMMARY

The categories used to describe skin types have changed little over the last century, whereas the skin care product market has undergone rapid innovation and exponential growth. The four traditional labels used to depict skin type cannot adequately characterize the actual variations observed in skin type nor provide sufficient guidance for the proper selection of skin care products. There are four basic dichotomies or parameters that more accurately characterize skin types and these have only recently been introduced. By evaluating skin according to these parameters—dry or oily, sensitive or resistant, pigmented or non-pigmented, and wrinkled or unwrinkled—and thus differentiating among the 16 permutations of possible skin types, consumers can more easily identify the most suitable topical treatments for their skin. An individual’s BSTI four-letter descriptive skin type is derived from answers to a 64-item self-administered questionnaire. The BSTI is based on the understanding that the various parameters are not mutually exclusive; an individual’s skin should be described along all four spectra simultaneously. Once armed with a patient’s BSTI score, physicians are equipped with significant information that can assist them in treating numerous skin conditions and confidently recommending the most appropriate OTC topical skin care products for their patients. Myriad topical skin care products are available that can meet the needs of most of the 16 skin types.

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Selling Skin Care Products in your MedSpa

R. Stephen Mulholland, MD

The marriage of retail and medicine began its popularity back in the 1990s. Since then, many physicians have been attracted to the allure of unmanaged care, more money and the binding loyalty created when a patient becomes the physician’s consumer. Annually, the cosmetic industry in the United States nets $50 to $75 billion a year, and the allure of this retail market has brought forth a new wave of competitors: physicians. Now competing for the retail dollar of the consumer are not only the mega-manufacturers like Lancome, Clinique, and L’Oreal; every physician has a vast array of lotions and potions to cure and enhance cosmetic results. In fact, just his past year, one of the very first medical skin care product companies, Obaji, successfully completed an initial public offering and continues to trade well on NASDAQ. Many of these storefront medical clinics, now termed medical spas (medspas) offer a vast array of laser services, fotofacials, laser hair removal, fat reduction, cellulite treatment, leg vein therapy, chemical peels, injectable rejuvenation, and an even larger selection of must-have medical skin care products. The term medical spa, an oxymoron. the word spa is an acronym of the Latin phrases “Salus Per Aquam” meaning health through water. Medspas offer little of the traditional relaxing treatments that have come to be known and are now based more on obtaining results than relaxation. I first started a medical spacalled SpaMedica, back in 1997 and adopted and trademarked the name as I felt it represented the merger of the customer service commitment and experience of the day spa with the biological credibility and outcomes of medicine. In reality, the “no pain, no gain” principle applies to most of these services. This niche market was created by the demand of consumers to receive treatments that deliver results in a retail environment of awesome customer service. The consumer no longer was satisfied with a few creams and some steam applied by a beautician. This new savvy individual wanted a treatment that delivers results and was performed by a licensed medical professional. In an effort to enhance these results and achieve the goals of the patient, cosmeceuticals were born. What is a cosmeceuticals? According to Wikipedia, “cosmeceuticals are cosmetic products that are claimed, primarily by those within the cosmetic industry, to have drug-like benefits. The word is a portmanteau of the words cosmetic and pharmaceutical.” To many others in the cosmetics industry, it really has become something closer to the ringing of a cash register. Cosmetic manufacturers have figured out that it is to their advantage to create this new category between cosmetic and pharmaceutical drug, as it is costly to obtain US Food and Drug Administration (FDA) approval. Rather, these manufacturers place claims on their product to be medically effective without leading the consumer to believe it is a drug. Is this truth in advertising or a play on words? Frankly it is a combination of both. If sold to the consumer without proper consultation and continued follow-up, these cosmeceuticals are akin to every other topical beauty product on the market. If one pair the cosmeceutical with the professional skill and knowledge of a medically trained professional, however, the consumer is delivered a comprehensive service and takes home continuity of care that is unparalleled in the traditional spa industry. This article explains the legalities of selling retail products in the medical practice, how to sell effectively and profitably, how this will help
retain clients and how to encourage those clients to refer their friends with confidence, medical practice and its retail mix. Welcome to the beginning of your journey into retail medicine.

REGULATORY OVERVIEW TO SELLING PRODUCTS AND SKIN CARE

In the current regulatory environment, cosmeceutical manufacturers can mislead the consumer through advertising that suggests that the product is as effective as a medication. Wrinkle, cellulite, and stretch mark reduction or improvement creams are commonplace in the nonphysician medical retail market. Consumers are led to believe that the same testing and rigorous controls that are required by the FDA for medications have to be performed on the cosmeceutical product. In actual fact, the FDA and the Food and Drug Act do not recognize any product class as cosmeceuticals. Therefore a product is a drug, a cosmetic, or a combination of both, but the idiom cosmeceutical has no legal significance.

The FDA states that:

“Food, Drug, and Cosmetic Act defines drugs as those products that cure, treat, mitigate, or prevent disease or that affect the structure or function of the human body. While drugs are subject to an intensive review and approval process by FDA, cosmetics are not approved by FDA before sale. If a product has drug properties, it must be approved as a drug.”

Cosmeceutical manufacturers avoid legal actions and investigation by the Federal Trade Commission by labeling the products clearly and avoiding statements that point toward the properties and intended effect of a medication. If the manufacturer wants to make claims regarding the affect of the product on the structure or function of the human body, such claims must be substantiated by scientific evidence. This process of review, investigation, and approval is costly and time-consuming. If the product is not recognized as a drug then it may be rendered as legally unmarketable.

Legally speaking, the difference between a cosmetic and a drug is the product’s intended use, as the laws and regulations differ for to each type of product. The Food, Drug and Cosmetic Act defines cosmetics as

“articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body...for cleansing, beautifying, promoting attractiveness, or altering the appearance” [FD&C Act, sec. 201(i)].

Listed in this group are:

- Makeup
- Perfumes
- Nail polish
- Perms
- Toothpastes
- Moisturizers for skin
- Lip-enhancing products
- Shampoos
- Hair colors
- Deodorants

The Food, Drug and Cosmetic Act defines drugs as:

“(A) articles intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease...and (B) articles (other than food) intended to affect the structure or any function of the body of man or other animals” [FD&C Act, sec. 201(g)(1)]

There are some products that can be considered both cosmetic and drug. These products are not to be confused as cosmeceuticals but rather when a product has two defined intended uses that fit into both the cosmetic and drug categories. Some products listed in this category by the Food, drug and Cosmetic Act are:

- Antidandruff shampoo
- Deodorants that are antiperspirants
- Any product with a recognized sun-protection factor
- Fluoride toothpastes

Intended use is established in two ways: claims on the product label and claims in the advertising. These claims, depending on their content, may cause a product to be considered a drug, even when the product is marketed as if it were a cosmetic, because the intended use is to treat or prevent disease or otherwise affect the structure or functions of the human body. Ingredients may cause a product to be considered a drug, because they have known and proven therapeutic affects on the structure and function of the human body. Some examples of products in this category are:

- Hair growth products
- Cellulite treatment products
- Wrinkle and stretch mark reduction products
- Varicose vein treatment products
- Cellular rejuvenation products
- Fluoride toothpaste
The FDA does not have an approval system for cosmetic products or ingredients before they are marketed to the consumer (with the exception of color additives). Drugs, however, are subject to FDA approval. Drugs either must receive premarket approval by the FDA or conform to final regulations specifying conditions whereby they generally are recognized, proven by data, as safe and effective, and not misleading in their intended affect on the function and structure of the human body. Examples of this are:

- Acne medications
- Dermatitis and psoriasis treatments
- Dandruff treatments
- Sunscreen

Although there are minimum good manufacturing practice (GMP) regulations for drug products, there are no regulations regarding the GMP of a cosmetic product; it is important that practitioner’s medical skin care products are neither misleading nor misbranded for their intended use. Practitioners must research the companies from which they are purchasing and have them provide data to support their product claims. Ensure the product line(s) chosen to recommend to patients are labeled according to cosmetic labeling regulations and if they have drug claims, are labeled according to drug regulations, including “Drug Facts” labeling. Labels should be clear to the consumer, and drug ingredients must be listed alphabetically as “Active Ingredients,” followed by cosmetic ingredients, listed in order of prevalence as “Inactive Ingredients.” All products should have a clear expiration date. Reputable manufacturers are not shy to show practitioners their packaging facility. Research; ask questions, and get the data before committing to a product or product line. The time investment will prevent legal implications, patient complications, and disappointment from the consumer.

Now that cosmetics, drugs, and cosmeceuticals have been defined, it is time to see how retailing to the consumer is affected.

THE SCIENCE OF SERVICE AND THE ART OF THE SELLING SKIN CARE PRODUCTS

Besides having a product or service to sell, it is important to realize one needs to know how to sell. Selling is not just about having the product or service, it is about knowing what to do when interacting with the patient face to face, on the phone, or over the Internet. What all three of these media have in common is the ability to allow the patient to say “no thank you.” This fear of rejection often keeps physicians from being confident sales people. The fear of being perceived as pushy, manipulative, or the used car salesman prevents physicians from offering that additional service or product. Up-selling seems like a dirty word, but is it? If one does not up-sell, offer a product or an additional service to a client, is the physician saving the patient money, saving his or her ego, or doing a disservice? The physician in fact is making decisions for the patient.

Allowing these negative and presumptuous ideas to get in the way of selling is one way to ensure one will not succeed. To put it simply, if one does not make the sale, one will not have the business, no matter how good the skin care product line is, how successful the practice is, or how much marketing and advertising have been done.

The best way to view selling effectively is to change how one views sales. First, one must change the idea of sales to relationship management. This relationship management is the basis of any interaction the physician will have with a patient. Whether one is consulting with the patient on a service or skin care product, one needs to manage the relationship. The physician needs to fully understand the patient’s aesthetic skin concerns, his or her ultimate goals of treatment with a skin care product, and then manage his or her expectations. Additionally, one needs to foster and grow relationships with patients. What this means is, make the skin care product or service meet the needs and expectations of the patient so both of patient and physician benefit from the sale. The physician wins the sale; the patient wins the benefit of expertise, product, and service. A benefit of this relationship management explained later on in this article is the plethora of referrals physicians will get from a satisfied patient.

Building a relationship with patients does not mean one has to spend hours getting to know them and their families. It does mean knowing about their motivations for having a service or buying a product. I mean understanding their goals and matching those goals to realistic service outcomes and products to enhance those results. If a patient’s goal is unrealistic, be candid with him or her. Offer the patient what can be delivered and be willing to refer him or her on to someone else, if that will be of benefit. Word of mouth travels fast when a referral is satisfied. Patients are also loyal to the physicians they know and trust, returning to them month after month, year after year. Allow patients to know what the practice stands for, what staff are expected to deliver to them, what skin care product line and services one believes in and why. Let patients begin to see the physician as a person and less like a vendor. Following up on all patient purchases removes buyers’ remorse, allows the patient to ask
questions, and shows them physicians care about them, not just the dollars they pay to the practice. Follow-ups allow the relationship management cycle to continue, as there is always a reason to stay in touch.

Building rapport in a short period of time is difficult, but not impossible. One of the best ways to obtain pertinent details about a customer’s needs is to ask questions that elicit information, rather than a simple yes or no. Ask open-ended questions. These questions usually begin with the following: who, what, when, where, why, and how. The patient’s response to these questions will allow the physician an opportunity to discuss the appropriate skin care products and adjunctive clinical service that will deliver the results the patient is seeking. Most physicians are used to closed-ended questions, as these facilitate a faster response that is generally objective and not subjective. In relationship management one needs the subjective responses to really get to know what the patient is expecting from skin care product experiences or clinical service. Asking questions does not mean making the patient feel like he or she is being interrogated, but rather that the physician is listening to his or her concerns and are genuinely interested.

The most uncomfortable part of relationship management is when the patient says “no thank you.” Aside from the obvious factor of limited funds, there are only three main reasons a patient will not proceed with a service or purchase a product:

- The patient did not like the physician.
- The patient did not trust the physician.
- The product or service offered did not match expectations or goals.

Hard to hear, I know, but very true. All of this means the physician did not build a relationship with the patient. Do not “throw the baby out with the bathwater,” however; just revisit the consultation. Did the physician listen or talk? Were open or closed questions asked? Did the physician listen or hear what the patient was asking for? What were the goals and expectations of the patient, and did they match what was offered? I guarantee something was missed and can be followed up with another consultation, another opportunity to close the relationship management circle and form a “win–win” with that patient. Although it is true not every interaction made with a patient will become an immediate skin care product or clinical services sale, it is true that there will some deferred opportunities with patients if one continues to manage those relationships and build their trust.

Do not think that the relationship management process ends when the patient has said yes or no to the product or service. This is just the beginning. Now begins the follow-up. Every skin care product purchase and every interaction require a follow-up. Remember the saying “every action creates a reaction?” Well, this is the same theory. Every interaction with a patient is another opportunity to follow up with him or her. The patient buys a product or service; call to see how he or she is enjoying the product or how the service was. This is particularly important with skin care products, as consumers often use the product incorrectly as first and following up with a phone call will help correct any skin care misconceptions or product concerns and salvage the retail relationship. Similarly, when the patient calls to book an appointment, call them to confirm the appointment. If a patient cancels an appointment, follow-up to see when he or she wants to reschedule. Even passive interactions such as knowing birthdays or how long it has been since patients have been in is an opportunity to follow up with a letter, a phone call, or an E-mail. Remember, one’s medical skin care line and products are meant to be a lifetime commitment. Keeping in touch means keeping in business.

MEDICAL SKIN CARE PRODUCTS THAT SELL

There are nine areas to consider when choosing medical skin care line to carry and sell. This is an easy process but requires time and dedication to perform the research needed to get the right answers. The choices available today are limitless, and the information available is confusing and overwhelming at best. The best choice will be a product that compliments the physician’s practice, enhances patients’ clinical service and skin care product results, meets the needs of patients, is something the physician believes in and, most importantly, is profitable. Whatever one chooses, the physician must know it and how it compares to what the competition has. The six key factors to consider are:

- Marketability and competition
- Trends versus simplicity
- Profit
- Quality
- Consumable
- Private label versus mega-brand

Marketability and Competition

The first thing to consider is who is the physician’s market and why are they buying the medical skin care product, where are they buying similar products, and from whom are they buying them. It does
not matter what a physician sells if patients are not in the market to buy it. This requires strategically thinking who the target market is. Consider gender, age, social demographic, and regional ethnicities. With knowledge of the target audience, physicians can assess and anticipate needs. The product needs to appeal to the largest mass of target patients for one to sustain a business. Marketing to a small niche will give a small return on your investment. A physician’s choice will not appeal to everyone, but it should appeal to most potential patients in the target market. The choice should answer the reason patients are buying the skin care product. The choice should reflect the place the patient would buy the product and the person from whom they would purchase the product.

### Trends Versus Simplicity

Physicians who sell what is popular or new will become “out of fashion” as trends change. It is important to consider timing in the market place and to realize that one has to be at the beginning of a skin care product trend to cash in on “what’s hot and what’s not.” It is more important to have a reliable focused product line mixed with fresh new trends. Keep patients informed of new skills, products, services, but always have a focused base of products that are consistent and deliver reliable results. Stable services and medical skin care products become the staple of business and allow the trends to enhance practice. Keep a close eye on skin care product trends that will keep things fresh for patients while consistent products and services offer them assurance in outcomes and something to fall back on when the trend passes. Learning to pick a hot product or service trend before it becomes mainstream is a valuable skill that comes from knowing one’s market and patients well. One should keep his or her product offering focused when beginning. If one’s product line is simple, then marketing will be focused on the needs of one’s target patient market, which will bring the most return on investment. As one’s practice grows, the physician can add new products to the existing mix; however, keep new products compatible with the needs and expectations of current patients. One wants to attract new business but not at the expense of losing current patient loyalty.

### Profit

One will not be in business long if without making a profit. Choose a medical skin care line that can be sold allowing a comfortable return. This means taking into account not only the product cost but all of the overhead that goes into it. Overpricing the retail mix will not help either. One has to know the market value of the product and the expense of it and then evaluate its profitability based on realistic marketability. The strategy of inflating the price to make a profit margin will only work until the patient finds a better price at the practice next door. The best products are those that retail at reasonable marketability, provide value to patients, and produce a return on investment.

### Quality

Medical skin care products and service quality are extremely important and go hand in hand when one’s reputation is on the line. Purchasing inferior products or supplies to perform services invariably will create patients whose expectations and goals are not met. Match product quality with service and outcome quality for a fail-proof mix.

### Consumable

Choose a medical skin care line with recurring sales opportunity. An item that is consumed on a regular basis is one way a physician can establish long-term loyalty and continuity of sales volumes. Selling super sizes and large formats is not beneficial, as patients have no reason to return for a very long time. Remember, each opportunity to make contact with patients is another opportunity to expose them to another product or service you are offering. Smaller quantities allow for more frequent purchase and clinic visits, allowing physicians the opportunity to recommend related products and services and offer those new trendy items.

### Private Label Versus Mega-Brand

Private labeling is the business of partnering with a company that already makes the product one wants but allows the physician to brand it himself or herself. There are many advantages to this partnership, the most obvious being the patient loyalty that is created when the product is only available through one source. The other advantage is that private labeling usually allows for greater profit margins, because there is no established market value for the product. The down side is that one is competing with brand names that are known nationwide (Obaji, PCA, ProcYTE, Perricone, Murad, Brandt) and have limitless (or seemingly limitless) marketing and advertising dollars. These mega brands employ professional trend and market consultants who know the market demands before the consumer has time to think about what they want. How? These companies make and set the trends, telling consumers what they need and
want. The one big advantage physicians have over these giants is the relationship with their patients. In the end, it is an individual decision to private label a skin care line, carry a national brand, buy a whole line, or carry a few select products from each line. The most important choice to make will be the choice of due diligence. One must know the products, know the market, and believe in one’s decision. If a physician has done his or her homework, the sales will flow naturally.

THE PROCESS OF SELLING SKIN CARE IN THE MEDSPA

Selling skin care products or clinical services is leveraging client relationships, and one needs to optimize the service and outcome experiences at all conversion contact points within the medspa. The selling process is comprised of the steps taken to build the relationship needed to manage with patients. I have developed a proven formula for sales conversions: the six stages of success. When selling skin care products or clinical services, the six conversion stages become integral to the long-term success of the skin care line and medspa business. These stages are easy to track and are a measurable means to gauge success (Box 1).

Everyone has come across bad sales people. To avoid this, educate physician and staff must be educated. Be prepared to answer patient questions, provide patients with solutions, and exceed their expectations. Loosely speaking, successful relationship managers know the steps to a sale and the ongoing maintenance of the patient relationship.

The Meet and Greet

This is the opportunity to begin a relationship with the patient. Ask open-ended questions, find out information about the patient and let him or her know about the business. This is the evaluation process for both physician and patient, so it is important to present oneself and the practice well.

Assessing the Patient’s Needs

Take time to evaluate the patient’s needs, goals, and expectations. Get a list of the patient’s skin health concerns and the goals he or she has from a skin care line. Manage those expectations by pairing the patient with products or services that will match these expectations. Manage any unrealistic expectations by being candid with the patient and either referring him or her to another physician who can meet his or here needs or by suggesting a different goal. An example is a patient who expects her postpregnancy belly fat to instantly melt away with a cream. By suggesting miniliposuction or a tummy tuck, the physician changes the patient’s expectations of the cream and focuses her on the procedure that will deliver the results she is expecting. Always underpromise and overdeliver.

Skin Care Product Demonstration

This is where the physician can show knowledge about the skin care line, its features, and benefits. The features are the qualities that the product demonstrates; benefits are the “what is in it for me” for the patient. Focusing on the benefits tells the patient how this product will meet his or her expectations and fulfill or enhance his or her goals.

Conquering Objections

Objections can happen if one has not managed the patient relationship well. Turn every objection into an opportunity to follow up. Never let a patient walk out the door and not have a plan to contact him or her again in the near future.

Preventing Buyers’ Remorse by Future Pacing

Preventing buyers’ remorse involves creating an emotional goal in the mind of the purchasing patient, around which the client builds value into his or her skin care product or clinical services purchase. It is common for any consumer to feel remorse after spending money on any product if the acquisition of that product is not linked emotionally to a significant and future benefit for the consumer. For example, if the patient purchasing the skin care line from is getting ready for a big family event, wedding, anniversary, reunion, or birthday, and the goal is to have her skin looking great for that event, then the retail purchase of the skin care products is unlikely to stimulate any buyers’ remorse when the patient takes the skin care products home. During the consultation, work future pacing, by drawing attention to the client’s skin in relation to upcoming events.

Closing

Assume the sale. Unless the patient has said no, he or she is agreeing to the purchase and understands that the physician has met his or her needs. Use the language of the assumed sale throughout the skin care product selling exchange, such as: “While using this product you will find”…….. “The skin care product will give you
this sensation or side effect”........”you will find that the skin care products give you”......

Follow up

Follow up with the patient to maintain a long-term relationship that will assure a repeat consumer. Satisfied patients will send referrals. This important word of mouth is the best skin care product sales tool. Reward patients who do send referrals by providing them with a discount program on services or products. Thank them when and let them know their confidence is appreciated. Creating a network through referrals forms a solid patient base and a guaranteed income.

For most physicians, selling is challenging. When one starts looking at selling as relationship management and product sales as continuity of care, one begins to find the process not only easy but enjoyable.

BUILDING PATIENT RETENTION WITH THE SKIN CARE LINE

Patient relationships and client retention are among the medspa’s most valuable assets; however they are often one of the most undervalued assets too. Physicians who devote most of their resources toward marketing to new patients usually do so at the expense of retaining their existing patients. If a physician ignores his or her network of patients to obtain new ones, his or her patient base will shop elsewhere for their skin care products and ultimately, their medspa services.

Every patient relationship is an asset and has a economic value or lifetime market value (LMV). A patient’s LMV is calculated by taking the average patient transaction amount and multiplying it

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**Box 1**

The Mulholland six conversion stages to success

**Stage 1**

Awareness: phone call

- Needs: excellent marketing
- Goal: $100 lead cost
- External: advertising, print, broadcast, public relations consultant, community public relations, B2B
- Internal: inverting, ambassador coupons, newsletter and coupon

**Stage 2**

Phone call: consultation

- Needs: excellent call management system and response, staff bonus program
- Goals: 70% plus conversion to positive lead, 50% plus conversion to consultation
- Client contacts physician by phone call or E-mail.
- Standard E-mail response and try to gain phone call access
- Client is greeted warmly on the phone (within three rings).
- Client’s questions are answered,
- Create excitement, personal prospective, and need.
- Phone closure procedure:
  - Positive lead: gives demographic data and can be data mined
  - 1 Close to consultation: active
  - 2 Gain demo data and mail out: passive
  - Dead lead: no information gained

**Stage 3**

Consultation: treatment

- Need: employee incentivization program
- Goal: 70% plus book to treatment and skin care product purchase

**Stage 4**

Treatment: maintenance package or prescription

- Need: good treatments and outcomes, staff incentivization program
- Document with picture presentation, maintenance program plan
- Goal: 80% plus book maintenance treatment or packages

**Stage 5**

Treatment or maintenance patient: other services

- Need: active cross merchandising, employee incentive program, and product knowledge
- Goal: 80% cross-merchandising

**Stage 6**

Patient (any stage): word-of-mouth referral

- Need: active word-of-mouth referral system
- SpaMedica ambassador coupon program
- SpaMedica staff ambassador program
- Goal: 80% of clients refer more than two clients per visit
by the number of transactions he or she will conduct with the practice over a period of time (usually 20 years).

For example, if the average patient spends $2000 worth of clinical medspa services and $500 worth of skin care products every quarter for 20 years, then the average patient’s LMV is:

$$\text{LMV} = \frac{2500 \times 4 \times 2000}{2500} = \frac{10,000 \times 2}{2} = 200,000.$$  

For every happy skin care client who has become part of a physician’s retention program and are coming for repeat services and skin care products, there are ambassador opportunities that will result in three word-of-mouth referral patients per year. Each of the these word-of-mouth patients who were referred will spend $10,000 per year and send three of their friends. Very quickly, that one a happy skin care and medspa client becomes $1 million in LMV. When staff starts to view each client as $1 million in revenue, the approach to customer service will improve.

How can one afford to lose this patient? Is it not worth marketing dollars to invest in this patient? How does one market to this existing patient base? How does one ensure that they come back for 20 years?

DEVELOP A PATIENT RETENTION STRATEGY

Patient Mail Out/E-Blast

Keep in contact regularly with patients by mailing them or E-blasting them with specials, holiday or seasonal offerings, new skin care products, or procedures.

Ask for Patient Feedback

There are many points during the patient’s visit where one can ask for feedback and participation in quality assurance programs. During the in office visit, have the receptionist give the patients comment cards to fill out. By filling these out, patient perceptions of the clinic can be discovered, and patients have an opportunity to share their experience. By writing a letter afterward, thanking them for their feedback and attaching a gift certificate for a nominal amount, physicians ensure that the patient will feel valued and will be certain to visit again soon.

After several appointments at the clinic, a mail-out feedback questionnaire that is more detailed than a comment card is sent to the patient in return for a gift certificate. The patient is provided a prestamped envelope to encourage his or her participation in the quality assurance program. Patients like to feel they are contributing to the overall well-being of the clinic and that they will be heard.

Make Patients “Win:” Create a Customer Loyalty Program

Patients like to feel good about their purchases. Patients also like to feel that their repeat business, skin care products purchases, and word-of-mouth referrals will be appreciated and valued by their medspa. Take advantage of this by offering promotions of various kinds to get patients to engage in spending behaviors they feel good about. Create a loyalty, high spender program that rewards high purchasers with value options.

These promotions include special patient discounts, loyalty programs, thank-you notes, newsletters, and birthday notes with gift certificates. Promotions encourage patients to do something that makes them feel good. Retaining patients means keeping in touch with them and ensuring they remain active in the clinic.

Know Patients’ Anticipated Behavior Based on Previous Behavior

Occasionally, patients express in words, if they are not happy. Listen to what they are saying nonverbally.

If, for example, a patient regularly makes a skin care product purchase of a particular cream every 3 months but has not been in for 4 months, something is wrong. Her latency, the number of days between purchase events, has changed. This is where most clinics fail. One’s medspa operation software must create call retention action lists daily of patients who need to be called and reminded that it is time to schedule a repeat visit for skin care product renewal or repeat clinical booster service. If one overlooks this opportunity to follow up with this patient, he or she may be lost for good. This is an opportunity for the physician to follow up and find out why he or she has not returned. This will provide a chance to win the patient back, and an opportunity to solidify his or her loyalty as the follow up call will make him or her feel significant to the clinic.

Now, track new patients who come in once and make one purchase only. If a patient has not returned within the normal latency period for a new patient then that patient is not satisfied. Follow up.

As can be seen, it is just as important to retain one’s existing patient base as it is to build new patients. The patient database not only provides a reliable revenue stream but are an invaluable source of new referrals.

Maintain high patient satisfaction and protect patient relationships as satisfied patients are a clinic’s most valuable asset.
BUILDING WORD-OF-MOUTH SKIN CARE PRODUCT REFERRALS

Word-of-mouth referrals are an important way to create a strong network of patients. Most of a practice can be built just on word-of-mouth referrals, saving valuable marketing dollars. One must be able to effectively leverage each happy skin care product and service patient in a practice into three or more word-of-mouth referral patients per year. To really take advantage of this opportunity, one needs to think outside of the patient database and one’s circle of family and friends.

RECRUIT SUPPORTERS (THE BASICS OF WORD OF MOUTH)

Enlist the support of current friends, family, and fellow colleagues. Family and friends who use medspa services will be strong advocates, referring their friends and colleges. Keep in mind the saying that we are all separated by only 6° of separation. Do not underestimate the power of support from other physicians. A strong referral business needs to be supported by reciprocal referrals. Make sure to keep colleagues well-informed any service or product offerings are added or changed. Make sure that those who make referrals can speak knowledgeably and accurately about the medspa’s medical skin care line and products, services, and qualifications. An uniformed referral can harm one's reputation.

NETWORK AND THEN NETWORK MORE

Physicians should join professional associations and local business clubs both related to their area of expertise and outside. Particularly helpful are associations that allow one to acquire member lists and participate in group lectures. Physicians will get to know experts and colleagues who will refer patients. Presentations and marketing efforts will allow other members to get to know and trust the medspa physician, which will turn them into patients. To get referrals, people need to like a physician and trust him or her because they are putting their reputations on the line by referring patients. To gain that type of trust, they need to know a physician.

BE CAREFUL OF CLUBS

Be careful of clubs that have political overtones, as one may end up turning away some patients who may not share those views or who feel passionate about an opposing cause. Some not for profit associations also can be viewed as a cheesy way of getting media attention instead of a sincere effort to contribute to the community. Local and regional business associations will give physicians an opportunity to network with other business owners who may be interested in his or her skin care line or clinical services or know someone who is. These relationships almost always result in reciprocal referrals.

MAKE CURRENT CUSTOMERS AMBASSADORS

When a patient/client expresses satisfaction with the skin care line and products or clinical services, ask for word-of-mouth referrals. There are many ways of doing this that do no appear to be pushy. After every visit, thank the patient for his or her support and express interest in working with him or her again. Suggest that his or her friends would also appreciate the opportunity to benefit from skin care products. Encourage patients to refer others and reward them for doing so. This could be by means of a coupon or a gift card offering them a call to action value discount on their next visit. One also can offer patient ambassadors who refer patients value recognition that does not require spending more in the medspa (dinners, show tickets, magazine subscriptions). Do not put a lot of restrictions on the reward and make sure it is simple for the patient to understand. Do not wait to see if the patient cashes in on the reward; instead, be proactive and call him or her. Follow up by asking him or her when he or she is coming in for his or her discounted service. Sincerity will go a long way.

BECOMING ONE’S OWN AMBASSADOR

Research opportunities to reveal professional expertise through free industry or community publications, radio, and television media. Offer free presentations or articles on upcoming trends; suggest interviews and make known one’s practice scope and retail products that deliver results. Make sure that information is relevant to listeners’/readers’/viewers’ interests and does not sound like a thinly veiled commercial for your business.

One never knows when there may be an opportunity to generate a word-of-mouth referral. Therefore it is critical for each member of the staff to become familiar with the skin care product line and to develop an elevator pitch, a short 2- to 3-minute sales pitch of features and benefits of each service and for the skin care line.

It is important to always engage people with one’s skin care line and service mix. Ask to get together and talk with those in an occupation that would have many similar patient demographics with the medspa. Talk about referring patients and forming a business-to-business relationship.
Advertising costs even can be shared by forming a campaign together.

Getting referrals may seem a bit too salesman like, but remember, with shared demographics networking is desirable for both parties. Nothing needs to be promised other than a commitment to provide a service to their referrals that will respect their reputation.

Habits are hard to break so make one very smart business habit. Promise to take time to meet with someone in a business to business capacity at least once a week.

Word of mouth can be a strong marketing tool, but one has to implement it wisely, constantly work on new business-to-business relationships, and remember to reciprocate the referrals to really benefit from it.

**CROSS-MERCHANDISING ONE’S SKIN CARE LINE**

Wikipedia offers this definition of cross-selling: “the term used to describe the sale of additional products or services to a customer.”

Cross-merchandising is the process of cross-selling and up-selling a patient products and services.

By cross-selling, one offers patients skin care products or services related to whatever they are already buying, giving them a more comprehensive group of products or services. It can be defined as simply as the cashier at McDonald’s asking “do you want fries with that?”

All good retailers know this trick of satisfying the customer’s demand for the best experience by offering related bundled items for that experience. A good retailer can increase the check average of the customer significantly by effectively cross-merchandising.

Up-selling positions higher-priced products in a good/better/best succession allowing the patient to see that their treatments and products are continually progressing. A prime example is the information technology industry. This industry continually introduces software and hardware upgrades that offer more options and the ability to improve overall systems.

Both methods of encouraging patients to spend a little more can enhance revenue significantly.

Many physicians are concerned about being conceived as pushy, or perhaps they are concerned about whether the patient can afford it. Do not be concerned. Limiting their choices and opportunity to enhance their outcomes by making presumptions and choices for them provides a disservice to patients. Better meeting their needs with additional medical skin care products and services demonstrates that the physician is aware of their needs and cares about their satisfaction.

Here are some tips to help improve one’s cross-marketing success.

**Natural Pairings**

Many opportunities arise naturally. If one sells Botox for a more youthful appearance, for example, one also can offer Soft Tissue Fillers, to smooth out fine lines and sculpt or define other areas, thus better achieving patient goals. To gain this extra sale, one simply might have to mention that the other products or services are available and will assist the patient with better attaining his or her aesthetic objective. It is fortuitous that medical skin care products are a natural paring for any of the skin rejuvenation therapies in the medspa, from microdermabrasion to photorejuvenation and fotofacial packages. During the purchase of these skin rejuvenation programs the features, advantages, and benefits of bundling the skin care products (increased efficacy of the aesthetic result, home maintenance, and protection of the investment) with the clinical service are presented to the patient. Most patients are very receptive to the concept of the skin care product line providing home maintenance for the in-office services that the physician delivered.

**Stay Relevant and Stay Related**

If one suggests too many unrelated cross-marketing suggestions, the whole sale may be lost. Offering acne-controlling lotion with acne treatments is a good fit, but if one attempts to sell that patient eyelash curlers, body cream, and laser hair removal all at once, the chances of success are much less likely. Patients do not see a relation between the items and therefore perceive that they are just being sold items without consideration to their needs. Rather, offer some of these unrelated items once trust has been gained, and it can be brought up casually, in a conversation.

**Display Expert Recommendations**

One way to facilitate cross-marketing is to post the item with a specific recommendation from a known expert in the field. An example would be “Dr. Mulholland recommends home skin care products together with in-office IPL fotofacial procedures for the treatment of vascular lesions and sun damage.” These recommendations can come from other patients as well, on mail outs or E-blasts. These can be patient testimonials: “Liz Fairbanks, 46, says that she has never has this many compliments on her beautiful skin thanks to our medical skin care products.”
Timing

In some cases, the best opportunity to cross-merchandise is while a patient is trying something out. If they come in for a fotofacial or chemical peel consultation, one can recommend a combination therapy program of home skin care products and the in-office clinical service, thus targeting the problem with two different methods increasing the probability of success.

Leveraging the Selling Potential of One’s Web Site and Printed Material

One’s Web site and printed literature should suggest complimentary skin care products or services that naturally enhance the results of the treatment or product about which patients are reading. Give a variety but do not overwhelm them with choices and options. Keep it simple salesman (K.I.S.S).

Service Bundles

Bundling long has been used as a way to entice patients to buy not just a single item or service, but an entire group or series of items or treatments that go together. Offering a price break on package deals will help close the sale. For example, many patients interested in purchasing an IPL photorejuvenation series will be open to a bundle of the IPL fotofacials, skin care products, Botox and fillers if there is a value-added discount of the bundle and if the perceived outcome is superior. Staggered or financed payment options to relieve the financial burden also may assist the patient in the final decision to upgrade his or her original purchase.

The way one approaches the cross-marketing of services and products will determine success with this modus operandi. Although a practice can survive on single services, it can flourish by capitalizing on cross-merchandising opportunities.

ART OF THE CLOSE

It is relatively simple to explain the features and benefits of something, but closing the sale is another story altogether. Although this is not the easiest part of the sales process, it is the most rewarding and profitable. Therefore it is to the physician’s benefit to do it well and to close at least 80% of patient consultations for procedures, services, or the purchase of skin care products. Here are a few basic pointers to help expose this process to its raw necessities.

Close from the Start

Begin with realistic outcomes that match patient expectations. Pave the way for a smooth close by building patients’ trust in physician and practice. Do not hard sell, going for the sale within a few minutes. The cutthroat approach alienates many potential patients. Once they have left the practice they are gone for good, and so are all their referrals. Use consultative selling, by offering the patient skin care options and services that address accurately the patient’s presenting skin concerns and goals. Provide patients with as much information as possible about the product or service. Let them know that their purchase does not end once they buy, but rather the practice is built on follow-ups and support that is available whenever they need it. Scheduled follow-up after the first skin care product purchase is important to ensure that the client is applying the product properly and to assess the skin reaction to the product. Additionally, one’s recommendation can be altered accordingly until the client is in a happy homeostasis with each product in the skin care line. Once a consumer is happy with a skin care line, it is difficult to alter buying habits. By making oneself available, patients will not feel the need to go somewhere else for convenience.

Recognize Who is Ready to Buy

As one seeks information from the patient, it is important to listen for signs that he or she is ready to buy.

A patient might indicate an inclination to purchase by asking questions about the skin care product or the buying process: “How long will it take before I see results?” “What will this do to my skin if I am tanning?” or “Can I change services in this package if I want to?” All of these comments have one important thing in common; the patient is assuming that he/she has already purchased the item. This is one of the best scenarios, because clearly, the patient wants the product but wants confirmation of something to prevent buyers’ remorse. Buyers’ remorse is what happens when a patient purchases something and regrets it once they have had time to think or reevaluate his or her decision to purchase. By confirming that the patient is purchasing something that matches his or her expectations, one eliminates the reevaluation process. When physicians validate that their practice provides support and is available to patients whenever they have questions or concerns, they reassure patients that they have invested in something that will continue to meet their needs or will be altered to meet those goals until they are satisfied.

When a patient gives this classic sign and after their questions have been answered, ask them for authorization. Pass the sales receipt or quote over to them and say, for example “If you will
just authorize this, I will start scheduling your appointments for the series of treatments you require to treat your rosacea.” The word “authorize” is less threatening than the words “sign here” and is more definitive than asking the patient’s permission to process the sale or asking when the patient wants to purchase.

**Respond to Questions with a Return Question Not a Closed-End Answer**

Patients’ questions should be replied to with another question, allowing the flow of conversation to continue. These return questions can close the sale in an assumptive fashion. For example, instead of answering the question, “Does this come in black?” with yes or no, one could ask, “Would you like it in black?,” therefore, assuming the sale if it is available in black. One could answer the question about the latest technology with something like, “Would you like the latest technology available or would you be interested in something else if it would better achieve your aesthetic goals more efficiently, thus saving you time and money with better treatment results?”

**Everyone Likes Something Free**

This approach is coined the puppy-dog close. It reflects the attachment children develop to a puppy after keeping it overnight. This is seen very commonly in the cellular phone industry where one receives a month of unlimited time. The idea is to get one attached to the product or service and thus creating a need. Trials in the clinical setting can be a free service or samples of a skin care product line. The try before you buy strategy is effective but only with certain consumers and is not for those who lack follow-up. If these freebies are not followed up on, one could be wasting time and resources, as the patient will not be motivated to return to buy.

**Suggest Specific Terms**

Rather than asking whether the patient wants to buy, suggest a specific purchasing scenario and then ask if he or she agrees to it. For example, “I will draw up 60 units of Botox which we can use to achieve a smoother, more rested appearance at $12 per unit. Are there other goals you would like to achieve?” By addressing three separate questions: the number of units to be used, the price of the treatment, and if all concerns have been addressed, the physician provides the patient with an opportunity to clarify any concerns before proceeding. This is a technique akin to the presumption sale but is slightly softer in its approach as the physician does not end it with a “yes I will buy or a no I won’t buy” question. The physician closes the sale with a reciprocal question of affirmation for the sale.

**Alternative Closing**

When closing the sale, consider offering alternatives. This is a slight variation on the presumption close as one still assumes the patient wants the item; however alternatives are offered based on preference. Patients feel empowered when they have choices. Physicians can use this to their advantage by saying, “Which of these would you like, the lighter weight sunscreen with pigment for that healthy glow without tanning, or the heavier protection sunscreen that provides a full-spectrum block?” With this close, you are likely to make the sale either way. Even if one is selling a single skin care product or service, choices of dates, times, and payment options still can be offered. This differs from the classic presumption sale, which sometimes can sound ignorant, arrogant, or pushy.

Understanding when it is time to close a sale and what techniques should be used takes time and experience. Remember, the close is the end of the selling process, but it is the beginning of building a lifelong patient relationship.

One’s skin care line should serve as an important vehicle for introducing one’s medspa business and its services to the consumer, and the skin care line should act as the anchor for patient retention, ambassador programs, and repeated buying decisions.

Good luck!
When one considers the procedures that can be performed in the medical spa environment, it should come as no surprise that the number of newly opened medical spas increases yearly. When one considers the medical–legal issues (and their impact on the business aspects) of the medical spa environment, it should also come as no surprise that the number of newly closed medical spas also increases yearly. A better understanding of the medical–legal considerations of the medical spa environment plays a role in promoting a successful medical spa. The medical spa setting is ideal for the performance of procedures that are incisionless, provide minimal discomfort, create little to no skin wound, and are performed in less than 1 hour. The procedures that fit this model include those that promote anti-aging, those that lead to rhytid treatment, and hair removal. In the future, there will be other procedures as well.

Traditionally, medical antiaging and rhytid treatments have been fairly aggressive. They have included a variety of ablative procedures, such as dermabrasion, deep chemical peels, and carbon dioxide and neodymium:yttrium aluminum garnet (Nd:YAG) laser techniques. Such procedures, because they produce an open wound and prolonged cutaneous erythema and have a risk of infection, are not ideal for the medical spa setting.

Newer nonablative procedures that do not cause an obvious wound are ideal in a medical spa. Multiple treatments with the various nonablative laser and light source technologies lead to improvement in skin toning with a reduction of mild wrinkles.

In addition to the various nonablative approaches that improve collagen formation in the skin, botulinum injections that lessen wrinkles caused by hyperkinetic muscle tone and the wide gamut of available FDA-cleared filler agents are part and parcel of any successful medical spa.

Nonablative techniques, in addition to botulinum toxin and filler agents, can dramatically improve skin quality, can be done is less than 1 hour, and produce no significant visible wound. They are ideal for a high-quality medical spa.

Growing patient interest in the power of cosmetic interventions has led to an exponential rise in cash flowing into the market for fillers, lasers, and botulinum toxin injections.1 This phenomenon coincides with advances in the science of aging and the growth of the medical spa environment.2 Because the medical spa environment is almost exclusively a fee-for-service business, medical spas are considered by business-oriented physicians to be the golden egg. Where money goes, legal questions often follow.

In addition to antiaging and rhytid treatments, laser hair removal has become a commonly performed procedure in nearly all medical spas. In the United States, over 10 million women spend more than $3.5 billion for laser/light-source hair removal. The number of women seeking hair removal exceeds the number of men by 3 to 1. With the current popularity of laser hair removal, an increasing number of men are seeking treatment.

There are many different lasers and laser-like devices that are effective at removing unwanted hair. They include alexandrite, diode, Nd:YAG...
lasers, and intense pulsed light sources. Several manufacturers make each type of generic system. Except for darker skin types that are ideally treated with an Nd:YAG laser but may be treated with some diode lasers, all of the previously mentioned lasers have been successfully used to remove pigmented terminal hairs.

Experience leads to the best results. Some medical spa providers are well experienced; others are not. Risk and resultant complications are often related to the experience of the medical spa physician or, more commonly, of the physician extender.

There are more than 6500 spas in the United States. In a recent survey, 5% of these generic spa owners said they intended to add laser hair removal to their list of provided services over the next year. Laser hair removal treatments are expected to double over the next 5 years. All medical spas provide such services. In the spa setting, there have been some well publicized complications, with resultant malpractice lawsuits. Calling such a center a “medical spa” does not negate these concerns. Because of these problems, state regulatory organizations and several medical societies have seriously looked at these trends.

The American Society for Dermatologic Surgery recently conducted a survey of its member dermatologists. Forty-five percent of the reporting physicians had seen nonphysician-induced complications from one or more of the previously mentioned procedures. There has been significant recent media concern about these problems. Because of the increasing concern about nonphysician performance of cosmetic procedures, the American Academy of Dermatology, the American Society for Dermatologic Surgery, and the American Society for Lasers in Surgery and Medicine have recently published guidelines. The guidelines mandate that under appropriate circumstances, and in accordance with state regulations, physicians may designate some cosmetic treatment procedures to certified or licensed nonphysician personnel. The physician must be on site and be immediately available. Some states allow nonphysicians to perform these procedures, others have no current regulations, and others prohibit any person other than a physician to perform cosmetic laser procedures.

The medical spa movement is growing. With the increasing elegant and simple procedures available, the time is ripe for medical spa success. Along with the trend toward more medical spas will be increasing government and medical specialty concern. The trend is toward more regulation, not less. When planning for the development of a medical spa, all of these issues must be addressed.

The most common medical–legal consideration in the medical spa environment relates to complications seen within this setting. These complications lead to the potential for medical malpractice cases based on negligence.

**NEGLIGENCE**

Malpractice claims often arise from negligence. The proliferation of new laser technology and evolving medical indications and parameters for treatment complicates the issue. Negligence can come into question especially when physician extenders, such as medical assistants and aestheticians, perform laser treatments. The physician is responsible for the employee performing the laser treatments.

There are four required elements for a cause of action in negligence: duty, breach of duty, causation, and damages. The patient bringing a case against a physician must establish that her physician had a duty of reasonable care in treating her and that he breached that duty. That breach must also lead to some form of damages. A mere inconvenience to the plaintiff, such as mild swelling or ecchymosis, usually does not lead to physician liability in a cause of action for negligence. If the patient is unable to work for several days, she can report damages for the economic loss.

**STANDARD OF CARE**

The physician’s duty is to perform the cutaneous laser procedure in accordance with the standard of care. When there is a breach in the standard of care that leads to damages, the laser operative may be found negligent of committing medical malpractice. At the core of medical malpractice is the concept of performing in accordance with the standard of care of the reasonable person performing that identical procedure. The law expects the cutaneous laser operator (physician or nonphysician) to perform a laser procedure in a manner of a reasonable physician. This means the operator need not be the best in his field. He need only perform the procedure in a reasonable manner.

How does the medical spa provider know what is reasonable? The standard of care is not necessarily derived from some well known legal text. In most situations, the standard of care is neither clearly definable nor consistently defined. It is a legal fiction to suggest that a generally accepted standard of care exists for any area of practice, especially in this field where so many lasers are new to the marketplace.
To illustrate the standard of care in a malpractice case, lawyers generally present laws, regulations, and guidelines for practice and for the medical literature, including peer-reviewed journal articles. Together, these materials help to show some consensus about standard treatment. In addition, an expert’s view helps assemble a complete picture. The standard in the medical spa environment is no different from the standard of care of any medical office.

POLICY AND PROCEDURE

Physicians have put forth substantial efforts toward setting standards in treatment approaches and various conditions. Organizations such as the American Academy of Dermatology, the American Society for Dermatologic Surgery, and the American Society for Laser in Medicine and Surgery, provide position statements and practice guidelines; however, guidelines do not represent law. Using guidelines as evidence by the legislature and signed by the governor into law. The Colorado bill was passed by the legislature, the bill was vetoed by the governor. The Colorado bill was passed by the legislature and signed by the governor into law. In some states, nonphysicians have been given the right to perform certain cosmetic procedures, including laser hair removal and microdermabrasion, without direct supervision by a physician. Such a situation, although perhaps financially lucrative for some, may raise a variety of legal issues.

Clinical guidelines, such as who can and cannot do procedures within a medical spa, can raise thorny legal issues. Although such guidelines do not represent law, they have the potential to offer an authoritative statement for the standard of care. Thus, a dermatologist or physician extender working for a dermatologist can use these to shield themselves from liability. Using guidelines as evidence of professional custom can be problematic if these guidelines are not necessarily consistent with prevailing medical practice. In New Jersey, for example, only physicians may perform laser treatments. In this case, the state law takes precedence over less-restrictive society guidelines.

Professional societies often attach disclaimers to their guidelines, thereby undercutting their defensive use in litigation. The American Medical Association, for example, calls its guidelines “parameters.” The American Medical Association’s disclaimers stating that the guidelines are not intended to displace physician discretion.

To assemble a complete picture, expert witnesses also articulate the standard of care. The basis of the expert witness, and therefore the origin of the standard of care, is grounded in the witness’ personal practice and the practice of other experts the witness has observed in action. Plaintiffs usually use their own expert, as opposed to the physician’s expert, to define the standard of care.

Ultimately, the physician community establishes that standard of care. For example, many physicians would say the safest technique for unwanted hair removal in darker skin types is the Nd:YAG laser. However, a physician using a non-Nd:YAG laser or light source that is approved by the FDA for unwanted hair treatment in darker skin types may be performing laser treatment within the standard of care. Many medical spas cannot afford two different lasers, so they may purchase a diode laser even though the Nd:YAG laser is viewed as safer for darker skin types. The diode laser is within the standard of care because it is approved by the Food and Drug Administration for darker skin types.

An example of where the standard of care was breached and a resultant medical malpractice case followed was seen in New York where an esthetician in a medical spa used excessive energies to treat a darker-skinned individual who desired laser hair removal. The standard of care dictated using lesser energies; therefore, the standard of care was breached. The resultant scaring was permanent and represented the damages caused by the breach in the standard of care.

Another example involved a gynecologist who purchased a skin laser to treat his female patients who had spider veins on their legs. He purchased the appropriate laser and used appropriate treatment parameters. Because the skin can get hot when such lasers are used, the skin must be significantly cooled during treatment. He did not know this, did not use cooling, and a patient was scarred. This breach led to scarring—the damage required for a successful medical malpractice case when the duty of using appropriate cooling was breached.

In addition to the legal issues arising within the medical spa environment, a variety of ethical issues may arise. A variety of cosmetics firms have borrowed code words from medicine, such as “clinical tests” and “dermatologist proven,” that bestow scientific credibility on their product. These claims are often advertised by medical spas. Product claims such as “71% of users
noticed a reduction in the appearance of wrinkles” are typical. To support this precise statistic, an advertisement may note (in a smaller font toward the bottom of the page), “In clinical tests under dermatologic control, the above results were confirmed after 4 weeks of use.” Another product claim states that the product offers “[d]ermatologist proven results equal to a professional facial peel.” It is unclear what “under dermatologic control” or “dermatologist proven” means or even if that matters, but it sounds scientific. Some companies use powerhouse advisory boards of dermatologists. Should the consumer seeking treatment in the medical spa assume that this board proved the efficacy of the product? Companies could provide such information on their websites. Secrecy about many studies that purport to prove a product’s effectiveness creates a dilemma—neither patients nor physicians can validate or analyze the data. Such is the typical situation of many products sold in the medical spa.

Under federal law, unsubstantiated claims about a skin-care product that stretch beyond puffery may be illegal. The tenor of these advertisements invokes science, proof, and medicine. Consumers may realize that these claims are akin to a sugarless gum’s boast that “4 out of 5 dentists surveyed” recommend their gum, but the problem is far more pervasive in the antiaging industry, and the targeted audience is all too willing to suspend judgment because they have a great interest in erasing the signs of aging. Irrespective of whether or not such claims are legal, exaggerated claims may be unethical.

**WHAT IS REQUIRED**

A simple action plan can help reduce the likelihood of being sued in the medical spa environment.

*Know state laws.* Be certain your state allows nonphysicians to perform noninvasive laser procedures. You can contact your state Board of Medical Examiners or hire an attorney to obtain this information. Know your state laws regarding physician extenders. These state laws outweigh more liberal society guidelines.

*Invest in training.* Ensure that all members of the medical spa environment are adequately trained. This extends beyond a simple evening course. Invest in continuous training and live demonstrations.

*Don’t be overly aggressive.* Do the procedure in the same way as your peers.

*Be honest with your patients.* Communicate realistic results with your patients. Communication skills help to keep patients happy. Happy patients almost never sue. Training leads to experience. Experience reduces the likelihood of lawsuits.

Knowing what requirements need to be fulfilled in a negligence case helps to prepare you in the unlikely case someone decides to sue. One can never predict the outcome of a malpractice suit. A clear understanding of the aforementioned principles lessens the concern of medical–legal considerations arising within the medical spa environment.

**REFERENCES**

Medical spas are different. We are not just selling medical and dermatology services; we are offering clients viable new solutions to their skin care, body care, and hair care challenges. Traditional medical marketing becomes blurred today, as the expansion and acceptance of medical spas helps you to effectively compete with traditional skin care clinics, salons, and spas, while offering more therapeutic treatments from professionally licensed doctors, nurses, aestheticians, massage therapists, spa professionals, and medical practitioners.

MEDICAL SPA MARKETING: ONE WAY VERSUS NO WAY

There is no crystal ball with answers or magical solutions for creating your medical spa marketing strategies, nor is there one way to do it right. The only wrong way is to do nothing at all, expecting new staff and patients to magically walk in your doors each day. As medical spa doctors, owners, and managers, we must strategically create a marketing plan. This article shares some successful ideas to help you better market your dermatology and medical spa services to your patients and to your community.

Professional medical spas are rapidly becoming popular; thousands are now opening here in North America and across the globe each year. There are more and more medical professionals switching over to medical spas from traditional practices. The rules of marketing and advertising are decidedly different, being much more relaxed than what is required of a traditional medical practice. Staffing and service requirements are different, and there are new options for how clients can pay for these services. Because many medical spa services are considered luxury services, they have more appeal than clinical treatments, and patients are willing to pay for themselves, without insurance.

Medical spas are now much more mainstream popular with everyone from women, men, and teens to the Hollywood celebrities. There are competitive advantages and disadvantages. The good news is that more people are now aware of the unique benefits of professional medical spas. The downside is that you must make yourself stand out by marketing yourself as a medical spa expert. You must learn how to create an effective and coordinated marketing, advertising, promotional, and public relations (PR) campaign for your medical spa.

DEFINE YOUR MEDICAL SPA’S UNIQUE SERVICE ADVANTAGES

Do you and your medical spa team have a series of services in which you specialize? Do you promote your expertise for these medical spa services as your specialties? Do you know what your unique service advantages are? There are skin care clinics, spas, dermatology centers, and salons on virtually every street corner and in every shopping center, office complex, and mall across the globe.

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Everyone in town may offer traditional facial treatments. Not everyone may offer or be good at your signature facial treatments, laser hair removal, sclerotherapy, or other specialized services, however. You create a marketing advantage by defining your unique service advantages.

**TOP MEDICAL SPA SPECIALTIES**

This is a short list of some of the most popular medical spa services. The list grows every day as new technologies are offered and with the blending and blurring of multiple spa businesses within a medical spa. There is no traditional medical spa or cookie-cutter approach. You have the option to develop your own specialties.

**Dermatology**
- Skin analysis
- Skin rejuvenation
- Signature facial treatments
- Facial enhancements
- Smoothing and contouring
- Skin tightening

**Cosmetic procedures**
- Breast augmentation
- Breast lifts
- Rhinoplasty
- Blepharoplasty
- Face lifts
- Brow lifts
- Liposuction/cellulite treatments
- Body contouring
- Mesotherapy/liposculpting
- Mesolift
- Thread lifts
- Botox
- Restylane

**Specialized hair treatments**
- Hair loss treatments
- Hair replacement treatments
- Intense pulsed light/laser permanent hair reduction treatments
- Traditional hair removal services: sugar, wax, depilatory, and thread

**Medical treatments and scientific skin care**
- Sclerotherapy
- Spider/leg vein laser treatments
- Ambulatory phlebectomy
- Endovascular treatments
- Specialized hand treatments
- Microdermabrasion
- Microcurrent
- Micro laser skin peels
- Acne light therapy
- Red/infrared light therapy
- Photodynamic light therapy
- Photodynamic rejuvenation
- Cool touch treatments
- Medical cleanse facials
- Chemical and enzyme peels
- Acne prevention/treatments
- Antiaging treatments

**Medical spa treatments**
- Massage therapies
- Reflexology
- Body wraps
- Oxygen treatments
- Vitamin therapies

**Physiotherapies**
- Lymphatic drainage
- Trigger point therapies
- Scar tissue reduction
- Exfoliation treatments
- Detoxification treatments
- Circulation stimulation
- Sport rehabilitation

**Special medical spa extras and options**
- Hair care and scalp therapies
- Spa nail care
- Prenatal/pregnancy therapies
- Mineral makeup
- Wedding makeup
- Camouflage makeup
- Eyelash extensions
- Lash and brow tints
- Makeup extensions and lessons
- Teeth whitening
- Nutrition counseling
- Yoga
- Meditation
- Chiropractics
- Research and clinical trials
- Comprehensive wellness therapies
- Professional retail products: skin care, hair care, body care, nutraceuticals and cosmeceuticals

**THE ADVANTAGE WITH MANY NEW CHOICES**

There are plenty of new choices for you and your medical spa patients. Although everyone seems to understand what spas, dermatology centers, cosmetic surgery practices, and skin care clinics are, you must help to clearly define the benefits of your medical spa for your patients, your staff, and yourself.

Today’s spa clients and medical spa patients are better educated than ever before, yet there remain many mysteries that they need you to explain. Because many of our professional services are performed behind closed doors, you must become a market-driven medical spa business and not just a well-run operation. Not all medical spas are the same.
MEDICAL SPA MARKETING BASICS

Your marketing strategy must be able to clearly define the benefits of your position, mission, and vision, so that you may become respected and known as the best medical spa in town. Sit down with your staff to write out your mission and vision statements and plan to share them with your patients.

You must know exactly what and where you are now and what and where you plan to be over the next 5 years. These strategic business objectives and goals must be facilitated through a well-supported marketing, advertising, and PR campaign.

Example Mission Statement 1: Our mission at the XYZ Medical Spa is to be respected as the center of choice for our medical patients, professionals, and staff. The needs of our patients will always come first. We are committed to providing only the highest quality of personalized and customized care through state-of-the-art technologies, services, and products.

Example Mission Statement 2: Our mission is to have the XYZ Medical Spa proudly respected by you and all of our patients, medical professionals, staff, and our entire community.

We will always deliver extraordinary personalized and customized patient services.
We will always educate and inform our patients of every available service to support their needs.
We will always provide exceptional quality medical and spa care services and products.
We will always maintain a safe environment that is special and caring.
We will only offer you the latest and most appropriate state-of-the-art medical spa technologies.

MARKETING CALENDARS

Take the time to define an annual calendar strategy for specific medical spa promotions and services you want to promote through the year. We suggest that you facilitate bimonthly promotions, taking into account the various seasons and holidays throughout the year. List up to three promotions per bimonthly period. If needed, create an Excel spreadsheet or a computerized graph that lists all of the potential options (Table 1), and attempt to promote each of your special medical spa services and treatment areas at least once per year.

LOGOS AND CORPORATE IMAGERY

You should have a professionally designed logo created for you. It is important to consistently use this logo with your corporate colors throughout all of your signage, stationery, advertising, marketing, graphic design, PR, Internet, and Web site programs. If you do not have a beautiful logo and icon image developed, hire a local graphic designer.

MEDICAL SPA BROCHURES AND SERVICE MENUS

You may already have a traditional and beautiful medical spa service menu to share with your prospective patients. Many of you probably also have extra tri-fold brochures from the technology, service, and product companies with which you are affiliated.

Your medical spa service menus should define all of your comprehensive medical spa services and specialties, while carefully, yet briefly, listing all the benefits and features. It is important to share these details for numerous reasons. First, many prospective clients do not know the benefits of your medical specialties and spa services. Second, your service menu helps you sell more services to your existing patients. Third, this

Table 1
Promotion options

<table>
<thead>
<tr>
<th>Month</th>
<th>Medical Treatments and Therapies</th>
<th>Spa Treatments</th>
<th>Retail Programs</th>
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<tr>
<td>January/February</td>
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critically important marketing device effectively helps to present you to the local media.

This service menu can have prices printed with the design or they can be offered as a separate slip-in sheet. Research has proved that your patients spend more if they know the potential benefits and cost implications. Without these details, the “fear factor” takes over. Most people are afraid to ask how much your services cost. Many medical spa services and treatments require long-term care, so your service menus should also present the a la carte services and the various package options. You can note that all service prices are based on a professional and personal consultation. Further, you should devote at least one page to Spa Courtesies, wherein you clearly define your hours, payment terms, appointment guidelines, cancellation policies, and so forth.

Should you have special services and categories, you may even want to consider creating a separate menu dedicated to each of your professional services and areas of expertise.

Finally, be sure to embellish this spa service menu with photographs of your key medical professionals and some of your services. Show some of your best makeovers. If needed, use stock photographs as illustrations. A picture is still worth a thousand words.

**MEDICAL SPA PRICING STRATEGIES**

You must analyze your own marketplace before you begin to successfully and competitively promote your medical spa services. With higher prices comes respect for you and your staff, while you must maintain credibility. Do not worry too much about being competitive with all of the plastic surgeons, dermatologists, aestheticians, salons, spas, and massage therapists in town. There is no need to worry about discounts or being the cheapest in town. In fact, we recommend that you may want to be marketed at above average to the highest-priced services in town. Your advertising and marketing strategies may offer package specials, yet you do not need to competitively offer endless promotional discounts.

**MARKETING AND ADVERTISING STRATEGIES**

Do you want to become known as the top dermatologist or the top medical spa in town? If you want to become respected as the best team of aestheticians and medical spa professionals in your area, you need to create a complete annual marketing, advertising, and PR strategy dedicated to providing high-quality state-of-the-art medical spa service treatments, while balancing these with your other services. If no one has created a position for themselves as the leading medical spa in town, then you need to create a marketing plan that will earn this title for you. Even if plenty of others offer aesthetic, medical, and spa services locally, you can become respected as the top medical spa. There are many options and promotional strategies that you may consider.

**ADVERTISING BUDGETS**

We suggest that you project an investment toward your annual marketing, advertising, and PR budget of at least 5% to 8% per year. A 3% budget is much too lean, whereas a healthy and aggressive budget would be 10% to 12%. Each year you should project your annual sales for the next year so that you may project your annual marketing investments; these can easily be adjusted on a quarterly basis as needed. This annual projection is important, so that you can be prepared for the slower and the more successful months each year. A new medical spa should project no less than 10% to 15% for the first 2 years.

**PRINT ADVERTISING**

Print advertising is essential for you and your medical spa. Despite the advent of the Internet, most Americans are still visually oriented, seeking news and information from the print and broadcast media. That is why USA Today, People magazine, and CNN Headline News are so popular. Everything you print must be professional, well designed, colorful, and have terrific photographic illustrations.

**Advertising Campaigns**

Work with a professional graphic designer, writer, or a marketing agency to develop a complete, comprehensive and consistent advertising campaign. To build name brand awareness, you cannot randomly allow the advertising media to independently create your advertising for you one advertisement at a time.

**Advertorials**

Explore advertorials; these should look like editorials, yet they are paid advertising space. An advertorial appears to be an editorial article, but in the small print you are required to use the word “advertisement.” They can look like any other feature article in that same newspaper or magazine. You can pursue advertorials in your local newspapers and regional magazines or purchase them on a regional basis in major national magazines, such as Town & Country, People, Glamour, Self, and Allure.
City and Regional Magazines

Consider advertising your medical spa services, makeovers, and aesthetic artistry in some of the best local city and regional magazines. This advertising is one of your most effective marketing strategies, especially when combined with direct mail. Even if you only acquire one third, one half, or full-page advertisements three to six times per year, this helps to position you as one of the top medical spas in town. The regional magazines are usually well respected by the most affluent executives, homemakers, politicians, and trendsetters in your area. You should definitely be in every Best Of, To Doctors, Health Care, Medical, and Medical Spa theme issues you can work with. Try to request right-hand page positions within the first third of the magazine. You can negotiate for annual agreements to save money. Market research has shown that the most read and preferred advertisements have a right-hand page position within the first third of the magazine, so positioning your advertisement appropriately may help to yield higher returns on your investment.

Community and Metropolitan Newspapers/Magazines

We do not recommend advertising in regular newspapers unless they are offering a special Medical, Spa, Wellness, or Best Of section. If they have their own Sunday magazine insert in the large metropolitan editions, you should consider a long-term advertising agreement here.

In most large metropolitan communities today there are special magazine-format vehicles that cater to medical, health, and wellness professionals. Some of these offer the options of advertising, advertorials, and editorials, so be sure to explore every potential option.

Research the various media opportunities available to you. Write down their contact information (Table 2) and invite the advertising sales representatives to come in for a presentation.

Direct Mail Marketing

Direct mail can be facilitated independently, with direct mail houses and through local printers and nationally recognized direct mail resources that are available in most major communities across America. Direct mail should become an essential part of your annual medical spa marketing strategy. Look at various direct mail marketing and advertising opportunities available to you (Table 3). Visit your local Yellow Pages or explore the Internet to find direct mail resources near you.

Collect the names, addresses, telephone numbers, and E-mail addresses from your patients. Create a computerized direct mail database of your patients so you can mail them special postcards, newsletters, fliers, and brochures. You can send customized postcards or E-cards to your database of patients wishing them happy birthday, as reminder cards for their upcoming appointments if scheduled far in advance, or even a “We Miss You” greeting (eg, “We haven’t seen you in 6 months and we’d like to offer you a new service!”). Often the highest yield for return on advertising investment is based on retaining current patients for repeat business. It costs far less in advertising dollar return on investment to retain existing patients than it does to acquire new ones.

To advertise to potential new patients, local direct mail houses can sell or rent you lists of targeted homeowners and businesses near your medical spa. Often they can help write, design, produce, print, and mail these for you. They can merge your own database with targeted homes within a 3 to 10 mile radius of your medical spa. For a slightly higher price, they can help you target certain streets, incomes, and demographic choices, rather than just blanket the entire targeted zip code.

With more than 99% of American homes now turning to direct mail and coupons as part of their everyday pattern for shopping and to find resources near their homes, many medical practices have also turned to direct mail as a viable source

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<th>Media</th>
<th>Contact Name</th>
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<th>E-mail Address</th>
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<td>Local community newspapers</td>
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<td>College/student newspapers</td>
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<td>Regional city newspapers</td>
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<td>Metropolitan city newspapers</td>
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<td>Regional magazines</td>
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<td>Other print media options</td>
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for creatively increasing their revenue. This advertising and marketing format is quickly becoming more favorable with medical professionals.

**Newsletters and E-mail Newsletters**

We suggest you write and facilitate a professional newsletter for your regular patients and targeted homes in your community two to six times per year. These newsletters become an effective marketing tool if you use them to educate your current and prospective patients about the benefits of your varied services and specialties. Most people do not know what goes on behind closed doors. The fear factor keeps most people from asking about services or their costs. We strongly suggest that you do not make these overtly commercial. Most newsletters should go from a single sheet of double-sided and printed paper to four 8.5 × 11-in page formats, with a full-color layout using photographs.

You should talk about your staff, specialties, seasonal procedure updates, seminars, and special events. You should also tell folks if you have recently been published or in the news. Direct them to your Web site. Show photographs of your staff, facilities, and makeovers. There is no need to offer specials or discounts. Keep newsletters informative, so the recipients look forward to receiving them.

Should you develop an ongoing program, research using bulk mail indicia at your local post office. These newsletters can also be facilitated by E-mail if they are kept to one page. They can also be distributed as free-standing inserts within your local community newspapers, often much cheaper than by mail.

If you do not have a professional writer or marketing associate on staff, hire an outside resource so that your presentation is extremely professional.

An E-mail marketing campaign should become another essential part of your annual medical spa marketing strategy. You can create colorful E-mail blasts with some of your most important news, special event announcements, and makeovers. Create a special computerized E-mail database of your patients so you or your Webmaster can E-mail them on a regular basis.

**Solo Direct Mail**

At approximately 3 to 4 cents per home, direct mail magazine or cooperative format marketing is extremely affordable, as opposed to solo direct mail campaigns, which usually cost between 50 cents to 1 dollar or more per home. Solo direct mail is also extremely effective, however. You can independently facilitate newsletters, postcards, full-sheet fliers, letters, brochures, and marketing devices. For solo direct mail, you need to write the copy, create the artwork, determine your targeted markets, and hire a local direct mail house to facilitate the mailing.

**Postcard Campaigns**

Postcards are useful as reminders for next appointments, to promote new staff, announce new services, thank patients for their first visits, thank them for referrals, and much more. Each patient should receive a personalized thank you postcard after every visit, while seasonally promoting some potential new service or treatment option for them. Create colorful postcards with beautiful skin care, body, and makeover photographs and your logo on the front with a personalized message about complimentary consultations on the reverse side.

**Upscale Direct Mail Magazines**

With direct mail magazine formats, you can specifically target neighborhood homes surrounding...
your medical spa practice. Explore upscale Clipper Magazine, Savvy Shopper, and Mint direct mail magazines, in which you can affordably promote your services for less than 3 to 4 cents per home while reaching 50,000 homes surrounding your medical spa per targeted mailing area. Priority position within these direct mail magazines may be a factor for you. If available, explore buying the front or the back covers and the first few pages.

Explore every possible option with each vendor. For example, the Clipper Company offers many other special marketing devices. Some are targeted specifically to new homeowners, and they can also host and facilitate your E-mail loyalty programs on a monthly basis with E-mails sent to your E-mail database.

Clipper Magazine, Savvy Shopper, and Mint Magazine sales representatives are prepared to help you plan the most effective annual direct mail marketing campaigns with customized advertising solutions for your business. For example, Clipper Magazine is a unique premier-quality full-color glossy direct mail magazine. Because of our success here, we have begun to work with them directly for many of our clients. For a complimentary direct mail consultation or more information about Clipper Magazine, Savvy Shopper, or Mint Magazine call 866-802-1429, E-mail marketresearch@clippermagazine.com, or visit their Web site at www.ClipperMagazine.com. Clipper, Savvy Shopper, and Mint Magazine are known as some of the best premier-quality full-color direct mail advertising magazine publications in the United States.

Cooperative Direct Mail Envelopes

A few examples of some of the best direct mail coupon envelope resources, such as Valpak and Money Mailer, cooperatively mail loose independent coupons from various local service businesses, medical professionals, and retail businesses to 10,000 homes per targeted zone (www.valpak.com or www.moneymailer.com).

When you add up the costs of artwork, printing, mailing labels, and postage, it is a greater advantage to use colorful and upscale direct mail magazines, cooperative direct mail, or a combination of both, whether or not you also use solo direct mail campaigns.

Detached Address Labels/Postcards

These are the special full-color oversized postcard-style devices that ride along with free-standing inserts within your city and metropolitan newspapers. You can purchase these through Clipper, Savvy Shopper, and Mint Magazine at approximately 9 cents per targeted home.

Free-Standing Inserts

These are the special inserts that are distributed within your city and metropolitan newspapers, with broadsheets and marketing materials from drug stores, supermarkets, home improvement businesses, and other local merchants. Your medical spa newsletters can be distributed by way of free-standing inserts more affordably than by postal mail.

Boilerplate Medical Spa Marketing Programs

Some manufacturers and vendors offer professionally predesigned brochures, posters, postcards, and newspaper and magazine advertisements to which you can easily add your own medical spa logo, address, telephone number, and Web site information. These are fine, yet if possible you should create your own unique identity with a complete, consistent, and ongoing marketing program (Table 4).

Aesthetic, Cosmetic Surgery, and Makeover Consultation Books

Create your own personalized makeover consultation and presentation books. These are excellent marketing tools that help turn a preliminary consultation into a confirmed appointment. They are important visual presentations of your medical spa. Share as many of your own makeover photographs as you can in your advertising, posters, and point-of-purchase materials.

Table 4
Marketing program organizer

<table>
<thead>
<tr>
<th>Newspaper advertisements</th>
<th>Magazine advertisements</th>
<th>Counter cards</th>
<th>Post cards</th>
<th>Other options</th>
</tr>
</thead>
</table>

Medical Spa Marketing
New Patient Kits
Create a special folder with your logo on it for first-time patients, facilitating a formal presentation with your brochures, media kit pages, background on your doctors and staff, and notes on potential payment options. These should be personally presented in a private consultation.

Medical Spa Photography Sessions
We strongly suggest that you hire a photographer to take pictures of your staff, building, facilities, and services; this is much better than using stock photography. Although stock photography is inexpensive, you run the risk of having every other medical spa, salon, and skin care clinic in town using the same photographs you purchase. If you do want to explore stock photography, visit www.istockphotography.com.

Many cosmetic surgery centers and medical spas have a camera on hand, and some even have a permanent photography studio room set up to record every patient makeover. You can ask some of your patients to sign model releases so you can use their makeovers in marketing, advertising, and PR.

Promotional Strategies
You may want to offer a $100 or $200 gift certificate discount toward any first-time medical spa service. You can offer a free gift with purchase by offering a large gift of professional products with the purchase of any large medical or aesthetic service package.

Point-of-Purchase Merchandising
Be sure to design or acquire and place patient brochures, counter cards, and PR reprints throughout your medical spa. You may use the merchandising devices supplied by vendors and manufacturers, but it is best to create your own tasteful, colorful tent cards, counter cards, shelf talkers, posters, and outdoor signage that seasonally promotes all of your medical spa services. Be sure to share large photographs of your best aesthetic, spa, massage, and medical service makeovers on women, men, and teens.

Web Site Marketing
You need an effective Web site. Make sure your Web site promotes your medical spa services, sharing a complete gallery of your own makeover photographs. Share news about your doctors, aestheticians, staff, services, media honors, and special events. Take the time to do an Internet search of other medical spa Web sites across the United States to get some ideas. You can also explore banner advertisements or paid Internet and Google Search Ad Words. Hire a professional Web designer and Webmaster to give your Web site a professional look with superb graphic design that incorporates your logo and branding images, hoisting and updating it on a regular basis.

Radio and Television Broadcast Advertising Options
Radio and television are terrific. Cable television affordably offers you the opportunity to visually present your medical spa, services, makeovers, and benefits. Radio is a bit less advantageous because it is really theater of the mind, so you must be able to paint word pictures. We therefore only recommend cable television and radio advertising in small city markets or if you have multiple locations in a large metropolitan city.

Network television on ABC, CBS, FOX, and NBC may be affordable in smaller markets, so it is worth exploring if you can afford to buy advertising during prime time news or surrounding some of the latest medical, makeover, and wellness reality shows.

Radio and television media are usually expensive if you buy preferred drive-time spots. It is not worth buying “run of schedule” with odd hours in the middle of the night. Radio and television usually target a much larger area than you need; most medical spa patients will only drive 3 to 5 miles for their services. If you can afford it and you can put together an ongoing campaign, then do it (Table 5). Your radio and television stations

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<tr>
<th>Media</th>
<th>Contact Name</th>
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<th>E-mail Address</th>
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<td>Local cable television</td>
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<td>Network television</td>
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<td>Regional radio</td>
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<td>Other options</td>
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will help you create the commercials, so negotiate for these as part of your annual advertising agreement package. Target your television or radio commercials to your target market by factors such as age, gender, income bracket, ethnicity, and marital status by choosing specific time slots or television shows that are viewed by your desired target market. Your local television or radio advertising sales staff can help you narrow down this strategic process.

Some local radio, cable, and network television stations are able to offer you the option of infomercials; you can create and produce your own 30 to 60 minute television shows in their studios or at your own medical spa facility.

Yellow Pages

We are not big fans of printed Yellow Page directories or any local telephone directory because most people today do not let their fingers do the walking. We only recommend small free listings or small display advertisements, rather than the large full-color display advertisements. If you do desire Yellow Page presentations, be sure to explore all of the various categories for skin care clinics, medical spas, dermatologists, and more. There are some valuable Internet directories and Web-based Yellow Page directories that are worth exploring.

OTHER ADVERTISING AND MEDIA OPTIONS

The signage on your building or at your office is one of the most important and powerful investments you can make. Make sure you have an attractive logo with a well-designed and well-lit sign.

You can explore billboards, bus cards, bus shelters, signs at sports stadiums, advertisements in upscale neighborhood telephone directories, and ads in area church, temple, and religious newsletters; the list of potential advertising options seems to go on endlessly. It is smart to explore some of these creative new ideas, yet you do not need to be everywhere. Instead, selectively pick the best options that work for you with a consistent and comprehensive campaign to reach your target market.

ADVERTISING TIPS

Present a strong image. Remember that today’s consumers are visually oriented. People tend to read advertisements with colorful photographs and logos that are supported by strong headlines with clear messages. It is good to be clever, yet when you get so cute that readers do not easily know what you are selling, they may completely miss your message. You must be able to stop customers in their tracks with strong visual presentations.

Use Quality Photographs, Logos, and Colorful Illustrations

For added effectiveness, try to maintain a consistent visual image for your medical spa throughout all of your advertising, direct mail, and marketing campaigns. If you have any photographs, use them. Customers will read all of the small details once they are attracted by your consistently beautiful photographs, logos, colors, and headlines.

Use Full Color

A picture is still worth a thousand words. When possible, avoid most black and white marketing options. Look for professional full-color printing capabilities. You can affordably market your services and products in full color to ensure the best possible redemption. Research has shown that full-color advertising options can increase redemption rates by 30% to 60%.

“Free” Always Works Great

Nothing beats “free” or “complimentary”; these terms can help persuade your current regulars to try new services or products and get new patients to try you for the first time. Consider offering a free consultation or a free product gift with a special series service package. You can make an offer, such as “Buy Any Six Series Service Treatments and Get the Seventh Free,” to promote ongoing facial treatments, body wraps, and massage therapies.

Use Dollars Off, not Percentages

If you elect to offer specials on some of your spa and aesthetic services, patients react much better to strong dollars-off discounts and incentives. Percentage discounts are not perceived to be as strong, especially if they are only 10% to 20% off. Unless you use 50% off or higher percentage discounts, they are perceived as weak offers and ignored. For example, try: “$20 Off—$100 Value Services and Up” or “$10 Off Any Two Medical Spa Products—Minimum $50 Value.”

Use Care with Disclaimers

Try to avoid excessive disclaimers and rules for what is not included in direct mail and advertised special offers. Try to keep your special offers simple with words like, “No Double Discounts. Expires 00/00/09.” Use expiration dates of no more than 60 to 90 days to keep your offers timely.
Always Introduce New Services, Products, or Equipment

Special new spa services, aesthetic products, and equipment can be featured seasonally within the same advertisements. Although it is best to promote your strongest and most popular services, it is still important to promote the special benefits of the unique services, merchandise, and equipment that people might not know you offer. Most consumers prefer convenience and one-stop shopping alternatives, so if you offer something extra special, unique, or distinctively different, take advantage of the opportunity to promote that. Once they trust you, most patients are happy to use several different types of services.

SEASONAL PROMOTIONS

Unlike traditional medical clinics, you can promote gift certificates for some of your aesthetic and spa services. You can create promotions for Valentine’s Day, Mother’s Day, Father’s Day, graduations, and the year-end holidays. You can promote Spa Series Specials, Gifts of Beauty, and Spa Packages. Gift certificates have become the best way to have a paid new patient referral program. You may want to facilitate some cross-marketing programs with other professional noncompeting service providers.

TARGETED PROMOTIONAL STRATEGIES

You can create and market directly to teens, men, women who have cellulite challenges, or whomever you wish. It is wise to create an annual marketing calendar, with most promotions targeted to your desired audience. It is also important to have at least some promotions targeted to other markets. For example, men make up 38% of all spa visitors for skin care, massage, and body treatments. Teens, college students, and young career women are becoming an ever-increasing market. If you are focused on only targeting upscale women aged 30 to 55, you are missing some of your potential marketplace.

JOIN MEDICAL AND MEDICAL SPA ASSOCIATIONS AND ATTEND CONVENTIONS

You can join the International Medical Spa Association, the Day Spa Association, the International Spa Association, and many other fine organizations that host special events, lecture seminars, and conventions. You should attend as many medical spa marketing, advertising, and PR seminars as possible or get someone on your staff to help stay up on the latest trends. Examples can be found at www.MedicalSpaAssociation.org and www.DaySpaAssociation.com.

PUBLIC RELATIONS AND MEDIA RELATIONS STRATEGIES

You must pursue local and national PR exposure to promote your medical spa services and staff and to educate the public on your specialty services. Public and media relations are not paid media exposure and thus they must be handled differently from paid advertising strategies.

You cannot over-commercialize or sell anything through PR by way of press releases and feature stories. Media relations are a specialty. It is not paid advertising, so it must be handled professionally. Plan a medical spa and makeover photography session so you can share your best services and work with the local newspapers and the national trade magazines. The more PR exposure you get, the more PR you will get. Once published, it is important to create a “Wall of Fame” for your medical spa. These special media honors should also be used in your newspaper advertisements, postcards, newsletters, and on your Web site.

Develop a professionally written and printed media kit with biographies on your medical spa doctors and aestheticians. Create a series of press releases. Research editorial calendars of the local media so you can send out cover pitch letters with media kits at least 4 months before they plan to feature top doctors, top spas, top medical spas, or to publish a Best of City issue. Not only is it a great honor to be published but these media accolades bring you plenty of credibility, respect, pride, and new patients.

Develop your own local, regional, and national target media lists with the names, addresses, E-mail addresses, and telephone numbers of your preferred media targets. Although it is important to pursue local media, you will be well positioned if you can also start a national PR campaign. Local media prefer to work with nationally recognized experts, rather than just any local doctor or aesthetician. Developing a series of national and international media honors while writing some feature stories for nationally respected trade publications is definitely in your best interest. Once published nationally, share PR reprints with your local media by offering to share your expertise with a regular newspaper column, in a feature story, or on a special television news or talk show.

PR should be handled by a professional third party, so find someone locally or hire a respected industry professional who understands medical spas. Remember that PR is not a paid medium, so your PR pitches must remain educationally oriented and totally noncommercial.

If an editor ever gets anything wrong, be careful not to complain. You may never get any press
again from that writer or editor if you complain. There are only two rules in PR. Rule #1: The editor is always right. Rule #2: If the editor is ever wrong, reread rule #1. The best local media resources all know each other and they move around, so it is best to establish positive long-lasting relationships. Do not be afraid to invite in medically focused newspaper writers, magazine editors, and television producers for a complimentary consultation and introductory service, so they may have a personalized tour of your facility.

SPECIAL EVENTS

Open houses and lecture demonstrations are wonderful to lure in prospective new patients, while also cross-marketing some of your regulars into more services. Create and promote a series of lecture demonstrations at your own facility and at Chamber of Commerce luncheons, special networking events, and community fairs.

CHARITY EVENTS

You may be able to promote your medical spa services by being affiliated with a charity. Annualized events to benefit skin cancer, breast cancer, prostate cancer, leukemia, and special children’s causes, such as cleft palate, a local women’s shelter, Locks of Love, or any favorite charity are worthwhile. As a medical spa facility it is wise to work with a charity that is related to skin care and health care challenges. Take the time to visit with several targeted charities to see how you can work together before the event to maximize pre-event publicity.

Donate gift certificates to help local community events and charitable fundraisers, to promote your facial treatments, massage therapies, and the more traditional spa services. This donation helps get your name out in the community.

STAFF RECRUITMENT MARKETING

All of our advertising, marketing, and PR campaigns could and should draw potential new medical, aesthetic, and staff professionals. You should also create a special brochure for prospective staff and employees. Your Web site should have one page dedicated to promoting career opportunities.

CREATE NEW MEDICAL SPA MARKETING SOLUTIONS

There is a huge and growing market today for professional medical spa services. Take advantage of this open marketplace by creating a complete marketing, advertising, and PR program to promote yourself, your staff, and your medical spa. If you expect to merely open your doors with a great staff, wonderful equipment, and big dreams, you will be sadly waiting for the customer bus to arrive each day. As the owner of a medical spa, you need to wear many hats. You must also plan to put on the bus driver’s hat with a complete marketing, advertising, and PR program that will drive new patients into your medical spa.

You can certainly do it all yourself, although we do not recommend it. It is best to hire a full-time staff marketing associate or to hire a professional outside resource. If you do hire someone internally, be sure they are capable of giving you a complete marketing, advertising, PR, and graphic design service while you give them all of the budgets and tools to succeed.

If you hire an external resource, you can search for resources within your own community. You do not need to hire someone locally, however. It is best to find and individual or a full-service agency that understands medical spas, skin care, and dermatology, so you do not have to train them in how to market your service specialties. You can hire a publicist, while also separately hiring a graphic designer for you and an assistant to supervise. We believe it is best to put all of this responsibility under one person or one roof, so your marketing campaigns are consistent, well integrated, and effective. With the Internet and telephone, your marketing, advertising, and PR agency can be located anywhere.

In our experience successfully working within this specialized industry for more than 30 years, once your medical spa begins to thrive it is more effective to hire an outside agency that specializes in medical spa, wellness, and beauty care marketing services. If you have enough resources, your company will grow faster if you can hire a professional agency from the beginning, when you first launch your new medical spa business. In that way you can serve your patients best by being a specialist in medical spa services and you can refer your marketing needs to a specialist in that field. You can make money doing what you love and someone else can design and execute your comprehensive marketing strategy.

MARKET-DRIVEN MEDICAL SPA STRATEGIES

We professionally recommend that you make the choice to successfully and competitively become a market-driven medical spa with an annual strategic plan, rather than to become an operationally driven business. The choice is yours.
Spas have been identified back to times of the ancient Babylonians and Greeks. The Romans are responsible for instituting the spread of spas over much of the world as their empire spread.1

The trend toward relaxation and reward for over-worked people seems to be increasing and has developed a more clinical and medical flavor in the 21st century. This article details the past, present, and future of spa dermatology and discusses the implications for dermatologists.

HISTORY OF SPAS

To understand and fully appreciate the place and potential of medical (particularly dermatologic) spas, it is important to recognize the history of spas. The word “spa” originates from the Latin verb “spagere” to pour forth. As practiced by the Mesopotamians, Minoans, Greeks, Romans, and other ancient cultures, the spa experience in those times may truly have been curative, especially given the lack of bathing by the general populace in those times and the benefits that regular or semiregular bathing most likely afforded.2

According to SpaFinder:2

Homer and other Classical writers report that the Greeks indulged in a variety of social baths as early as 500 BC, including hot air baths known as laconica. In 25 BC, Emperor Agrippa designed and created the first Roman “thermae” (a large-scale spa), and each subsequent emperor outdid his predecessor in creating ever-more extravagant thermae. Over time, they were built across the Roman Empire, from Africa to England, gradually evolving into full-blown entertainment complexes offering sports, restaurants, and various types of baths. A typical routine may have involved a workout in the palestra, followed by a visit to three progressively warmer rooms, where the body was alternately bathed, anointed with oils, massaged and exfoliated. The ritual would end with a bracing dip in the “frigidarium” followed by some relaxation in the library or assembly room.

We may think of today’s spas as elaborate, but they pale when compared with these ancient reports. Spas were a significant form of entertainment in that period, and that may account for their splendor. There is no doubt that these spas were valuable medically and antiseptically.

Different traditions involving spas have evolved in various areas of the world, often coinciding with religious traditions and natural springs present in the area. For example, Japan started its first “onsen” spa near Izomo in 737 AD, which led to inns named “ryoko” scattered about the country. These, in many instances, contained Zen gardens, outdoor baths, and soaking tubs. Japan, being a volcanic island, has at least 150 hot springs with 14,000 individual springs, and these played a significant role in spa culture and development there. Two types of springs are found. Virgin water springs occur where the earth’s magma cools down and is released as a mixture of vapor and gases, which turn into water. Fossil liquid springs occur when ancient forms are dissolved and return to the surface via these springs thousands of years later. Springs may be classified by their content and temperature, leading to classifications of springs as simple, carbonate, heavy carbon soil, salt, saltine sodium hydrogen carbonate, mirabilite, mirabilite sodium chloride, gypsum, true bitter, iron, acidic, alum, sulfur, and radium. Each of
these types of springs has been identified as having various medicinal and healing properties.

Japanese authorities recommend not washing off for at least 6 to 7 hours after exiting the spring as the minerals take that time to fully “abсорb.” Many authorities recommend drinking the water (if it is safe) to maintain full benefits.3

In Finland there is one spa per each two Finnish inhabitants, with equal representation of these spas for women and men. Towns such as Spa, Belgium; Baden-Baden, Germany; and Bath, England centered around natural springs and promoted the visibility and overall awareness of spas.

Early in 1350, many spas were destroyed due to the bubonic plague and the thought that they may have been responsible for its spread. In 1538, France razed its public baths due to the thought that they had contributed to an ongoing epidemic of syphilis. These examples are in contradistinction to events in the 19th century, when it became the vogue to travel to spas for the treatment of syphilis and other sexually transmitted diseases. In respect to these examples, Thomas M. Lachocki, Ph.D., chairman of the National Spa & Pool Institute’s Chemical, Treatment and Process Committee and director of product development at BioLab Inc. in Decatur, Georgia, notes “The likelihood of transmission is very, very, very, very low. Anything could happen, but it’s extraordinarily unlikely.” An important layer of protection shields hot tub users against sexually transmitted diseases, according to Lachocki, in that the water is treated with chemicals that are designed to kill viruses and bacteria.

Lachocki says, “When you look back at some of the literature in the late 1800s or early 1900s, people would often travel long distances to different hot springs and spas to treat syphilis.”4

The United States started its first spas in the 1850s in Saratoga Springs, New York. Innovations and elaborations followed with the opening of the Red Door Salon in Manhattan in 1910 and the advent of other icons such as Tucson’s Canyon Ranch in Arizona, Rancho La Puerta in Baja, California, and the Golden Door in California. These spas generally catered to famous clients, such as President Franklin Delano Roosevelt and Jane Fonda, many of whom extolled the virtues of this type of activity and promoted the development of spas in the United States.

Medical spas became a part of the picture in the mid-1990s, with dermatologists among the first operators. Dr. Michael Gold (Nashville, TN) was most likely the first dermatologist to open a medical spa in 1991, followed by Dr. Barry Ginsburg (Birmingham, AL) in 1995, this author and Dr. Mitchell Goldman (La Jolla, CA) in 1996 (Dr. Mitchell Goldman, personal communication, 2007), and Dr. Bruce Katz (New York, NY) in 1999, who coined the term MediSpa.5 All these dermatology-based facilities shared the goal of integrating medical and spa-like atmospheres in the same building.

According to Dr. Gold (Michael Gold, MD, personal communication, 2007):

We opened up our spa and spa services in 1991 and it was unchartered territory in dermatology. The response from the community was very positive and we have continued to offer products and services over these past 16 years. When we first opened, I was nervous that I was bucking a trend in dermatology but I truly believed it fit a need that was not being performed in our field. And despite a lot of early criticism, the spa concept is pretty much standard in our business in today’s world.

Dr. Ginsburg describes his opening of his spa as follows (Barry Ginsburg, MD, personal communication, 2007):

We first opened our ‘spa’ which was really an acne clinic in the early 1980’s. I am not aware of any other similar clinics in doctors’ offices, but there may have been a few. We didn’t call it a spa back then. It operated out of one room in my office and was called Skin Dynamics. We mainly did acne facials and light chemical peels. We realized that we wanted to do more for our acne patients. Medical treatment alone didn’t seem to fulfill all the acne patient’s needs. I guess you can say we opened our clinic to offer a wider range of options for acne patients in a more relaxing environment with an RN who did treatments. We also selected a line of cleansers and cosmetics that we liked for acne. At that time acne make ups were not very elegant and the department store options were confusing and inadequate. We expanded the services as we saw the need for anti-aging treatments. At first I did TCA peels and soon glycolic acid became popular and we started doing glycolic acid peels, and started selling home products for anti-aging. This was before any topical antioxidants were used. We mainly relied on retinoic acid (which was not yet approved for anti-aging) and glycolic acid products. When I moved my office in 1992 we enlarged the area, adding several treatment rooms and a private waiting area. We still specialized primarily in acne and anti-aging treatments. Soon, IPL and laser hair removal came.
into being and we began to perform those treatments in the SPA area. In 1995, I opened a free standing, very eloquent, day spa in Mountain Brook Village. This was more of the relaxing kind of spa. We offered massages, facials and a full line of beauty products as well as anti-aging products. We closed this spa after about 5 years because of the enormous amount of work it required and the relatively high overhead/low profitability. I now have a smaller spa in my office where we sell cosmetics, cosmeceuticals. Additionally, we offer IPL, Sciton light laser peels, laser hair removal, facials and massage. It is onsite and I supervise all laser treatments.

My employees have all been there more than 5 years and it basically runs itself. It can be a very high maintenance area and I would not recommend it for someone who is just looking for some easy money, because it isn’t.

I think there is a limited future for spas. As more states pass supervision laws, it will be difficult for unsupervised spas to operate. It seems there is a spa popping up on every corner now, so the competition is severe. If the physician owns a spa he will have to rely on someone to manage it, and those employees tend to jump around from spa to spa.

In the beginning, most of these medical spas were inside the practice and moved from having an esthetician who visited or worked for the practice to a stand-alone esthetician to a stand-alone or “practice-within-a-practice” spa.

The author’s experience with the medical spa began in 1995, 2 years after I started practice, when a patient of mine who was an esthetician asked to work for me in some capacity. She was excited about the opportunity to work in a dermatology practice because she had been trained in paramedical aesthetics. At the time, my practice’s limiting factor was space because I operated in a facility that contained only about 2600 square feet total space. My esthetician was hired with the understanding that she would probably not be busy from the outset but would grow with marketing and promotions from within the practice. At first, she performed tasks ranging from filing to front desk work when she was not busy with esthetitian activities. The room that she used was our former break room. Sadly, no other break room space existed except for the previous bathroom, which became our “break room.” Luckily, we had another bathroom down the hall, which barely sufficed until we built space for the spa.

In 1996, we built out a space for a spa in the building next to that which housed our dermatology practice. It was a small, 1500-square foot facility that had three treatment rooms and one break area. Two of the rooms were for an esthetician, and the other was eventually used for laser hair removal treatments and endermology treatments. There was adequate space for product displays, and it served well, but there was a problem in that many patients who were recommended to go to the spa to speak with an esthetician did not make it the 50 ft from the practice to the spa next door. The situation prompted us to look into other space, where the spa and the medical practice could co-exist. This space was created over the next 2 years in a facility that housed all of our activities. The spa (Aesthetica) emerged with improved functionality, and the integration of the estheticians (by this time three) into the rest of the practice achieved the expected synergism.

During the intervening years, the spa has functioned quite well, but its focus has been more medical than pampering in nature. Although the spa has massages and facials as options, these are not the bread and butter of the spa and never will be. Additionally, manicures and pedicures are not popular because our prices are more than the standard salons in town. Some procedures, such as waxing and lash tints, are routinely performed in our spa with good results at fairly comparable prices, but these are not heavily promoted. Other procedures, such as endermology and microdermabrasions, are popular and have been mainstays during the entire time in the old and new facility. For these procedures, patients may benefit from being seen in a dermatology practice first and then bringing these problems from the initial or follow-up consultation to spa visits.

Having an integrated spa within a medical practice has been of benefit and has allowed for the close interplay between the estheticians and myself. During the past 12 years, I have worked at teaching my estheticians about dermatology during their employment, and I view them as helpers for the practice and as teachers for patients about products and procedures. Their licenses allow them to do certain things that I cannot do and vice versa.

The lines of delineation of activities in my practice have been somewhat changed over time, based on state regulations and the determination of which procedures can and cannot be best performed by estheticians. What this author finds most rewarding is the ability to offer his patients a truly different experience that would not be available in a traditional dermatology practice.
PRESENT SPA DERMATOLOGY

Spa dermatology has grown to a $1.063 billion business. According to the International Spa Association, medical spa revenues doubled in 2007 as compared with 2006. Out of a total of 14,615 spas in the United States, only 976 were “medical spas” (7% of the total), but these medical spas provide about 12% of the income for the entire spa industry. Other salient features presented by this report:

- There were an estimated 14,615 spas in the United States in August 2007, up 6% from 13,757 spas in August of 2006 and contrasted with 10,128 spas in April of 2004.
- Despite the growth of spas, the rate of growth is slowing.
- The number of day spas, resort/hotel spas, medical spas, and destination spas increased between 2006 and 2007. The number of club spas and mineral-springs spas decreased.
- There are 11,736 day spas in the United States 80% of the total number of spas. There are 1345 resort and hotel spas, comprising 9% of the total. The medical spas number 976, which is 7% of the total. There are 428 club spas, which is 3% of the total, and 51 mineral springs spas represent 0.4% of the total.
- There are 79 destination spas, comprising 0.5% of the total.
- Although there were more spas in the United States, revenues fell 3.4% from $9.7 billion in 2005 to $9.4 billion in 2006. Revenues at medical spas more than doubled during the same period.
- Revenues for the day spas were $5.294 billion in 2006, down from $6.794 billion in 2005. Resort and hotel spas had revenues of $2.499 billion, up from $2.026 billion, and medical spas showed income of $1,063 million, up from $469 million in 2006. The income at club spas was $242 million, up from $209 million.
- Visits to spas totaled 110 million in 2006, a 16% decline from the 131 million spa visits in 2005. The number of spa employees also declined, perhaps reflecting the emphasis on medical rather than other types of spas, with increased efficiencies. There were 234,588 total spa employees in July 2007, compared with 267,400 in August, 2006. Most of the decline was in part-time employees, with 118,078 of the employees being full-time in 2007, 73,648 being part-time, and 42,862 comprising contract employees. This is in contradistinction to figures of 215,200 total spa industry employees in April 2004.6

There are 7,340,000 medical spa entries when Googled currently, versus 224,000,000 under the heading spa, which illustrates the public perception of medical spas, or, at the very least, the Google perception. The number of entries indicates that “medical spa” has reached the vernacular and is highly sought out among typical search engines.

TYPICAL PROCEDURES

Typical procedures offered at medical spas include treatments ranging from microdermabrasion to laser treatments and massage. Many of these are documented below, as well as ancillary services, such as product sales, which provide welcome income to the spas.

MICRODERMABRASION

Although the Merriam-Webster dictionary does not list this term, Wikipedia reports that microdermabrasion is defined as:

A cosmetic procedure popular in day spas, doctors’ practices, and medical spas in which the stratum corneum … is partially or completely removed by light abrasion. Different methods include mechanical abrasion from jets of zinc oxide or aluminum oxide crystals, fine organic particles, or a roughened surface. Particles are removed through the wand/handpiece through which the abrasive particles come.7

Microdermabrasion is used mainly to remove minor skin imperfections and improve upon post inflammatory hyperpigmentation (PIH). It is not typically painful and can sometimes be used for light scarring (mainly that due to PIH), but is ineffective for deeper forms of scars. While initial articles on microdermabrasion in the dermatology literature suggested that collagen formation might occur, there has been no significant evidence in long term studies of this. While it does tend to improve acne on a short term basis, long term improvement isn’t likely, and it is not recommended for at least 12 months after isotretinoin use.

Initially, microdermabrasion was introduced with the use of lightly abrasive crystals. Now, there are other options including various handpieces with roughened surface. At the time of this article, there are no regulations which mandate medical oversight of this procedure, and it is commonly performed in non-medical as well as medical spas. While crystal systems using aluminum oxide or salt crystals are still used, there are now diamond microdermabrasion systems, which operate...
without the need for crystals. The exfoliation process results from the diamond tipped head making contact with the skin and abrading it. Both systems eventually suction the dead skin cells from the face. Home microdermabrasion systems, produced by the larger cosmetic makers, are now entering the market. It remains to be seen if most people will have the discipline or desire to use these systems rather than going to their local esthetician or day spa. It should be noted that these systems are less powerful than the other, spa oriented systems and may have less impressive results than the more aggressive treatments.

ENDERMOLOGY

This procedure was introduced in the 1990s to the United States by a French manufacturer (www.endermologie.com) and has been a mainstay of treatment for cellulite since that time. Although several other manufacturers have licensed or developed technology that is similar, the main concept in all cases is the treatment of cellulite with a suction mechanism and rollers that suction in the fat/tissue and knead it in a rolling motion. Many medical spas offer this service, and there are newer forms that are laser associated (Triactive, Cynosure) or use infrared applications (Velasmooth, Syneron). Although this procedure provides a temporary benefit, the long-term benefits are minimal unless maintenance procedures are continued.

LASER TREATMENTS

Although laser treatments are offered in many dermatology spas and medical spas, most of these are under the direction of, or are performed by, medical professionals. The average day spa that is outside of a dermatologist’s office is poorly equipped to do these procedures. It is this author’s opinion that many disservices have been done to patients by the inappropriate performance of these procedures by nonmedically trained individuals with little or no supervision, so this article does not treat this topic in any depth, given the concerns with the operation of these treatments by nonqualified or underqualified individuals.

BOTOX AND FILLER TREATMENTS

Although many medical spas run by or with full oversight by qualified dermatologists offer these services, this is an area rife with misleading claims, due to the many corporate-run day spas that perform these treatments with poor results traceable to untrained individuals and little medical oversight. It is this dermatologist’s fervent hope that this problem will be addressed by the governing authorities and medical review boards on a state-by-state basis.

MANICURES AND PEDICURES

These procedures are often done in day spas, and medical day spas are no exception. They provide many patients a source of pleasure and can be effectively performed in a much more sterile environment when done in a dermatology setting. Most salons do not carry tools such as autoclaves and even bactericidal trays that can render tools sterile. Many of the technicians performing these procedures have little or no education in sterile technique. This has resulted in several high-profile instances of contamination with mycobacterium infection in the baths or tools used for these procedures. In our clinic, we no longer perform this procedure due to poor reimbursement and the lack of interest compared with the price necessary to make the procedure sterile and profitable. This situation is one that bodes ominous consequences for many who seek out these services in a nonclinical setting.

MASSAGE

Although massage is a mainstay of the destination spa, most medical spas in nonresort towns may have less traffic for this procedure. Although we perform massage, it is not one of our main sources of revenue. The top 10 of the many different forms of massage, according to about.com, are Swedish massage therapy, aromatherapy, hot stone massage, deep tissue massage, shiatsu, Thai massage, pregnancy massage, reflexology, sports massage, and back massage.

Swedish massage is the most common type of massage therapy in the United States. Using long smooth strokes, massage therapists knead with circular movements on superficial layers of muscle using massage lotion or oil.

Aromatherapy adds essential oils that address specific needs to the massage. The masseuse selects oils that are relaxing, energizing, stress reducing, and balancing, the most common of which is lavender. Aromatherapy massage is used for many stress-related conditions and conditions with an emotional component.

Hot stone massage involves using heated, smooth stones on the body to warm and loosen
tight muscles. It is especially useful for those who are seeking a more superficial massage.

Deep tissue massage targets the deeper layers of muscle and connective tissue. Using slower strokes or friction techniques across the grain of the muscle, the massage therapist kneads tight or painful muscles or muscles that have sustained injuries.

Shiatsu, a Japanese technique, uses localized finger pressure to simulate acupuncture point manipulation. Thai massage also uses gentle pressure on specific points, incorporating compressions and stretches. Pregnancy massage is an increasingly popular massage for expectant mothers. Massage therapists become certified in this technique and may have special instruments for this. Reflexology is a form of foot massage that involves applying pressure to trigger points on the foot that presumably correspond to organs and systems in the body.

Sports massage is specifically designed for people who are involved in physical activity, with faster strokes than in Swedish massage and with stretching incorporated into the massage. Back massage is commonly performed solely during the treatment. Other techniques, such as Reiki and cranio sacral massage, are beyond the scope of this article but are offered in some medical spas.10,11

**WAXING**

Waxing is a procedure that incorporates various waxes used as a short-term (2- to 8-week) depilatory for unwanted hair. This is used in many salons and medical spas for the patient who wishes removal of hair from facial, back, or bikini/leg areas.

**PRODUCT SALES**

Although any dermatology spa maintains its character via procedures offered, the bulk of the profits revolve around product sales. These sales are often made by the estheticians or the dermatology staff in conjunction with the estheticians. It is important to have a product line that is excellent and that is embraced by the staff, or the sales will lag. Additionally, it is important to have excellent oversight of inventory, sales records, tax receipts, and product freshness.

Considering that many spas in the area begin stocking the same product once one spa introduces it, it is important to keep an eye on prices in the community and other operations’ promotions to be competitive. Product sales are such an important part of the operation that it is important to have a manager who agrees with the overall philosophy.

Because certain employees of a spa may not be the best at product sales, it is important to have “closers” for the patients who may wish to purchase product but need assistance at the checkout counter.

**WEB SITE**

Any spa should have a Web site that allows for patients to explore available options. These include the potential to give a gift certificate, book an appointment or inquire into booking an appointment, and see a price list of procedures. Our Web site has been a source of great PR for the day spa and is constantly updated. Additionally, we send a monthly newsletter to our patients via e-mail that includes a special of the month.

**GIFT CERTIFICATES**

One of the biggest “products” of a Web site is the gift certificate business, especially around the holidays. Christmas and Valentine’s Day provide quite a bit of business for the rest of the year if gift certificate business is courted and strongly received. Gift certificates are placed at locations within the office for easy access by patients. There are many rules in different states regarding gift certificates and the ways in which they may or may not be redeemed. Additionally, if they are not used, the office may be required to refund the money to the state. It is important to check with your accountant to find out the answers and proper procedures for your situation. As for the appearance of the gift certificates, they may range from a handwritten certificate on embossed paper to a card that is credit-card-like and entered into a system. Our office uses both and can provide them depending on the wishes of the purchaser. Credit card companies often work with an office to make a very attractive card.

**THE FUTURE OF SPA DERMATOLOGY**

This author is somewhat circumspect about the opportunities in the future for this part of dermatology. Although I am personally enthusiastic about the types of services provided in my clinic for dermatology patients and for nonpatients via the day spa, I am concerned that there are many other spas in operation that are manned by nonphysicians and/or nondermatologists or core cosmetic surgery specialists that may be providing less than optimal care for the public. In recognition of these concerns, this article discusses different outcomes based on the type.
of dermatology spa experience offered in the future.

NONMEDICALLY SUPERVISED, FAUX-DERMATOLOGY SPAS

There are many more nonmedically supervised spas than there are true, dermatology-run spas. In Omaha, Nebraska, there are at least five such spas in operation, and more are coming. The owners and operators range from physician assistants to emergency physicians to a dentist. The common factor seems to be the desire on the part of the owners/managers to leave their area of expertise and dabble in dermatology, and the results have ranged from misleading to disastrous. Many complications from these clinics have been noted in the community, including poor results, scarring from inappropriately performed laser procedures, infections from poor wound care after the procedures, and poor advice regarding such wound care. As a consequence of poor management and poor procedure technique, many of these clinics have gone bankrupt or are out of business. One has been cited for not following state regulations regarding who should perform medical procedures. At least one medical malpractice suit has been filed against one clinic that did not carry malpractice insurance; this clinic is still in operation.

It seems that these types of “faux dermatology” clinics are here to stay, but it would be hoped that regulations may force a modicum of services that approximate the high level of care that dermatologists and other core specialists provide. This probably will not happen without a huge amount of work on the part of dermatologists and the state officials overseeing these sorts of ventures. Although it has always been the practice in the medical profession to try to work with fellow practitioners whose results are not up to par, that will not work for many of these clinics that have no oversight and are run by a corporate group thousands of miles away that has no intention of stepping foot in the town in which they operate the clinic. They hire nurses or people with less or no credentials to administer the treatments and pocket the earnings for the corporation. This is the type of disconnect that leads to disasters such as were mentioned previously.

In Florida, Dr. Mark Nestor spearheaded the effort in 2006 to pass a bill to improve standards in medispas. The bill was signed by Governor Jeb Bush. His accounting of the process is detailed here (Mark Nestor, personal communication, 2007):

The genesis of the Florida Legislation is that it essentially tightens supervision requirements in all offices including Dermatology offices and med spas. The reason for the law is simply patient safety issues. The physicians in the state of Florida, as well as the board of medicine were seeing significant problems with burning from lasers as well as problems with fillers and other issues. We had a total fiasco with Botox that was injected by a chiropractor (in Florida). The legislature and the board also recognized that there was extremely lack of supervision in the area of “medical spas” and patient safety was significant concern. Based on this, the Florida Society of Dermatology and Dermatologic Surgery as well as the Florida Medical Association and multiple state organizations and societies sponsored what has been known as HB 699 or the ‘Safe Supervision Bill’, which was signed into law by Governor Jeb Bush and went into effect July 01, 2006. This bill essentially sets new standards for physician supervision of nurse practitioners and physician assistants.

The bill limits the number of satellite offices that a physician can supervise: four for primary care, two for special care, and two eventually phasing to one for offices offering primary dermatologic care, including those offices offering primary aesthetic skin care services. It also limits two main supervisor satellite offices offering primary dermatologic care. The physicians who supervise the satellite office offering dermatologic care (including aesthetic care or Med Spas) have to be board eligible, board certified dermatologists or plastic surgeons. This last aspect was a reaction to multiple medical spas that were opening up and being supervised by retired radiologists.

This bill was fought vigorously by certain aesthetic laser companies but the Florida Society along with Florida Medical Association, with backing from the American Academy of Dermatology and American Society of Dermatologic Surgery prevailed and the bill was passed. The bill has been in effect and we feel that, to-date, there has been improvement in patient safety. At this point, there have been numerous violations that have been identified and these violations have been addressed on an ongoing basis. We feel that the Florida Society has done a great service for the patients in State of Florida who desire appropriately supervised care and safe treatment.
This is one bright spot in a field where safety has not always been of paramount importance and legislation has been weak or non-existent. For some of the spas, such as the aforementioned that have a medical owner in state, that individual may never be involved because he or she may be busy in a practice, while the spa is being managed and operated by a noncredentialed employee. The labeling of the spa in these instances is often misleading; terms like “dermatologic” and “skin practitioners” are used, but no explanation of the qualifications of the people who perform the procedures is offered. Finally, there are many tales of “cheap Botox” for $99 or less at these sorts of facilities, accompanied by the concern and frequent reality that the Botox is watered down or, in some cases, bogus. The author notes the many arrests in the last Botox scandal at clinics such as these where “Chinese” Botox was being substituted for the real Botox (as referenced in Dr. Nestor’s note).

TRUE SPA DERMATOLOGY

The future of spa dermatology in which a dermatologist provides care within their office or practice and oversees the everyday activities of the spa seems bright. Dermatologists coming out of residency have never been more interested in these sorts of endeavors and have never been exposed to as much cosmetic dermatology as they are now taught in their programs and after their entrance into practice. Organizations such as the American Academy of Dermatology, the American Society of Dermatologic Surgery, and the American Society of Cosmetic Dermatology and Aesthetic Surgery offer numerous opportunities for dermatologists to learn more about this field. Additionally, companies are providing more opportunities for education, and product selection for lasers/equipment and cosmetic/cosmeceutical products is at an all-time high. The boom in such procedures and concurrent interest among prospective patients has spurred larger numbers of companies, which can only improve the options available.

The challenge for the practitioner, and for the dermatologist in particular, is how to run this type of facility in a profitable and personally rewarding manner. There are many facilities that are not able to survive in the current environment. This may be an opportunity for the dermatologist who is willing and able to provide these services from within or near their clinic.

The dermatologist in practice has a natural advantage over the nondermatologist because he or she has a built in base of patients who know the quality of the clinic’s services and have seen them for other, related concerns. It is my opinion that this makes the dermatology practice–run spa a higher-quality entity in the public mind than the spa that is run by a nurse, noncore cosmetic MD, or less. On the other hand, the public needs to be educated on the differences or they may assume that a pretty spa with a clean look translates to good medical practice. As many dermatologists know, this could not be further from the truth.

Starting a dermatology spa in the future is going to be easier than ever before due to company support and a population of estheticians that is willing and interested in working for a dermatologist. This is evidenced by the creation of magazines solely devoted to estheticians working in medical practices (PCljournal.com, medesthetics.com). My staff has improved greatly over the years as a consequence of improved training of estheticians, and I expect the quality of estheticians to improve more with time. Additionally, the esthetician schools and magazines are more aware of the natural alliances between estheticians and dermatologists than they were in the past. When I started my medical day spa, there was a lack of trained estheticians who were willing to consider working for a dermatologist. We have many more applications than we ever did before, including applications from trained staff with over 12 years of experience.

With the lines between dermatology- and non-dermatology-related services blurring, it is going to be increasingly important to market services well and make sure that the public knows the importance of seeking a professional who deals in skin issues on a daily basis. This is essential for the field to continue to be held in high regard by the consumers and patients.

It is necessary for practitioners to invest additional time and effort to ensure that safety is of paramount importance. This may mean self-regulation of spas that may not be performing up to medical standards or provision of legislation to insure regulation. With proper attitude and involvement of dermatologists on all levels of medical spas, the future of spa dermatology should remain bright.

REFERENCES


