As 2009 draws to a close, we still see evidence that the US economy is struggling to recover from the meltdown that culminated late last year. Several industries have felt the brunt of the recession, which has forced companies to innovate new strategies to stay afloat during uncertain economic times. Practitioners in cosmetic dermatology have felt the sting, with rising concerns that consumers would spend less on aesthetic procedures to maximize personal savings. However, given the great advances made within cosmetic dermatology, from the release of a new botulinum toxin to a wave of new dermal fillers, dermatologists have found success in creative applications of established procedures mixed with a steady integration of newer devices and procedures.

One area of cosmetic dermatology that continues to develop in many promising directions is the laser market. Manufacturers have developed new lasers in high numbers in recent years, giving dermatologists a larger field of possibilities to offer their patients. Moreover, interest in laser procedures has increased, too. Although 2009 numbers are not yet available, 2008 statistics from the ASAPS indicate

Choosing the Right Laser: Expert Tips for Decision Making

Lasers provide dermatologists with an array of possibilities. Realizing this potential requires the practitioner to understand the market as well as her or his own interests and commitment to the field.

By Ted Pigeon, Senior Associate Editor

Patient above is shown before (left) and after (right) IPL therapy for telangiectases.
that laser resurfacing procedures have risen 12 percent in one year alone.

Physicians who use lasers wear many hats, including that of doctor, investor, merchant, and even artist. These roles are complicated by growing consumer interest in lasers and an increasing number of devices and types of procedures. Altogether, physicians must consider many different factors before investing in lasers or expanding their repertoires, especially given the importance of anticipating trends in the field and keeping ahead of the curve.

This article explores a number of the factors that may influence a physician’s decision, with several laser experts lending insight into the process.

Understand the Physician/Vendor, Patient/Consumer Relationship
Dermatologists have years of experience in school and/or practice and a great deal of published data to inform clinical decisions regarding therapy selection. But the field of aesthetics and associated decision-making presents very different challenges. For one thing, services like laser procedures change the nature of the physician/patient relationship. Perhaps more so than in medical treatment of common dermatoses, the aesthetic patient sees the physician as just as important as the laser. Patients are therefore more like consumers, while physicians take on the role of merchant.

This consumer quality carries over into (or perhaps emerges out of) the FDA clearance process for lasers, according to Mitchell Chasin, MD, Medical Director of Reflections Center for Skin and Body in New Jersey. “The FDA approves drugs for both safety and efficacy, but the clearance process for lasers is oriented more toward safety,” Dr. Chasin notes. Where physicians are perhaps less prone to question the efficacy of a drug, it is more difficult based on data to determine if a given laser is effective. Moreover, results are difficult to measure with laser treatments because of different kinds of procedures and the downtime associated with each. But according to Dr. Chasin, the measure of efficacy is much more difficult than simply seeing the change on the individual’s skin.

Another reason for the emphasis on safety over efficacy during the review and clearance process is that a laser’s efficacy is dependent on how the physician uses the laser, says Dr. Chasin. How dermatologists choose to invest themselves in lasers will significantly influence their level of success. Importantly, Dr. Chasin suggests, there is not one right way to find that success; it will likely depend on how the individual dermatologist wishes to define her- or himself in the field of lasers.

Get Educated
For dermatologists who have recently completed residency or who simply wish to transition their practice into a laser-oriented cosmetic dermatology practice, there are many ways to begin exploring the investment. The first is education. Learning about laser technology requires physicians to become involved on all fronts, including reading a variety of publications and attending conferences whenever possible. According to E. Victor Ross, MD, Director of the Scripps Clinic Laser and Cosmetic Dermatology Center in Carmel Valley, California, organizations such as the American Society of Laser Medical Science (ASLMS), the American Society of Dermatologic Surgery (ASDS), and the American Academy of Dermatology (AAD) all provide useful materials and information about technology. “In addition, many conferences now offer courses and presentations for beginners on how to use and select lasers,” adds Dr. Ross.

Attending conferences also provides the opportunity to network with other laser specialists and manufacturers, which would allow beginners to gain more hands-on access to lasers, according to Dr. Chasin. Dr. Ross also notes that there are several company-sponsored, high-intensity training programs available that give physicians the ability to learn about and actually use a number of different lasers.

Stay Focused
Once a physician has gained familiarity with different types of lasers, the next step is selecting and
using them. Importantly, Dr. Chasin reminds, a physician must exhibit great focus when selecting and using lasers. “I recommend choosing one laser that you will be comfortable with and may be efficient at using and use it for its primary purpose,” suggests Dr. Chasin. This suggestion is surely difficult to follow as the market expands and lasers are now being developed to function in a variety of settings. Nevertheless, Dr. Chasin advises that building a focused foundation from which to grow is essential to integrating oneself in a field of devices that would otherwise be difficult to break into.

**Understand Your Base**

Equally critical in the selection and use of lasers by a dermatologist, according to Dr. Ross, is understanding one’s patient base and the interests of patients. “Skin rejuvenation can be accomplished in a number of ways, and the patient’s input is key to determining a direction,” observes Dr. Ross. Apart from evaluating the types of lasers, there will be unique considerations associated with each laser, he notes. “For example, if you decide to invest in a non-ablative resurfacing device, some lasers will offer the possibility of receiving several treatments every four to five weeks with little to no downtime, whereas others can do the same in one treatment with a long recovery,” says Dr. Ross. That is why it is so important to be in tune with what your patients want. Ultimately, you will be unable to provide services that cater to all patients’ wishes, but Dr. Ross recommends factoring in these wishes as you make decisions on purchasing lasers. “You have to know what risks the patient is willing to assume,” he concludes.
### Choosing a Laser

#### Research Manufacturers

When it comes to purchasing a laser, Dr. Chasin observes that the sheer number of manufacturers can be intimidating. “After you’ve gained comfort and familiarity with certain lasers and performed the appropriate research, researching the manufacturers of the respective lasers you’re interested in is a very helpful measure,” says Dr. Chasin. One should not necessarily operate according to the size of the company but should instead evaluate its stability and quality of lasers. According to Dr. Chasin, this is one of the many important steps in the decision-making process.

#### Consider Financials

Importantly, balancing your own goals and desires with those of your patients is key to getting started and achieving success. Dr. Chasin suggests that these considerations should provide perspective on the level of commitment that is required to achieve success in aesthetics. But he stresses that investing in lasers requires as much of a financial commitment as a clinical one. Dr. Ross agrees: “Determining demand is not just a matter of competition and patient interests but also involves practical financial analysis.”

When shopping for a laser or weighing the option of replacing one, Dr. Ross suggests an examination of the number of times you use the laser and analysis of the financial return. He argues that an analogy to airlines is helpful to understand how lasers should be approached financially. “Planes costs a lot of money, whether they’re flying or not,” he observes, suggesting that lasers that sit idle, even if they are innovative, pose financial burdens for a practice.

One must be able to calculate a return on investment (ROI) in order to determine the worth of a given laser, according to Dr. Chasin. There are a number of approaches to financial assessment that may fit within your practice planning schemes. A pro-forma spreadsheet, for example, identifies and quantifies direct and indirect costs to predict the possible net effect of a given investment. A pro-forma may even include calculation of return based on a few different scenarios, plugging different assumptions—more or fewer patients, higher charges for procedures, etc.—into the calculations to predict results.

Another model is a break-even analysis, which looks at key indicators to determine the specific point at which expenses and revenues even out. If your situation allows you to achieve beyond this point, your endeavor will yield positive returns. There is also a “revenue-per-patient-encounter” analysis, which is a quick and easy way to consider possible revenues and the feasibility of incorporating a new laser.

These models provide different approaches to gauging the financial return on a given laser or procedure that you may offer your patients. Dr. Chasin reminds of the importance of including other factors in your financial analysis, such as marketing, staffing, and insurance costs, all of which will differ depending on the laser itself.

Another additional expense to consider, Dr. Ross says, is a repair contract, which ensures that your laser can be fixed, if broken, and costs about 10 percent of the value of the laser.

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#### Know Your State Regulations

The status of regulation for light-based devices is currently in flux, as many states are considering legislation to implement stinger rules regarding the use and occupation of light-based devices. Some states permit only physicians to perform light-based procedures, while in others physicians can delegate some procedures to individuals without medical licensing (MedEsthetics. May/June 2008). Dr. Chasin recommends becoming very familiar with your state’s regulations so as to operate lasers in accordance with them. “It is incumbent upon all physicians who operate lasers to know the laws as you do the devices,” says Dr. Chasin. Moreover, he observes that if you use physician extenders, it is essential to get to know them and their philosophy about the practice of lasers. Finally, he explains that training is key toward establishing a relationship with your extender and keeping within the ethical practice of operating light devices.
Dr. Ross suggests that financial considerations are central to the process of working with lasers, particularly because there is great competition among practitioners to offer the best services possible. Financial responsibility is therefore key to success. He also suggests maintaining a critical approach to assessing all lasers, no matter if it is a brand new device or one you’ve operated with success in the past. “You should be considering how well each laser is servicing your practice and where each fits within your overall repertoire,” notes Dr. Ross.

Weigh Upgrades and Additions
As with financial details, a critical approach is also needed in practical and clinical manners. For example, Dr. Ross notes that physicians should avoid evaluating a laser’s worth based on the number of features it offers or on new additions. “There is great pressure to constantly stay ahead of the curve and the competition, especially in the ever-changing market,” says Dr. Ross. But it is important to consider the strengths of what you currently offer and maintain a critical approach regarding the true worth of upgrades, he observes. This is a difficult balance to achieve, Dr. Chasin suggests, and it should be a constant negotiation between what works for you and your patients and what can truly add another component to your platform.

To help determine when and how to upgrade, Dr. Chasin singles out three important areas of consideration. “One should evaluate new and current lasers in terms of efficacy, speed, and safety,” he notes. “When contemplating an upgrade, it’s helpful to consider how a new laser would improve over your current laser in these three areas,” Dr. Chasin adds. There are also a multitude of enhancements and appliances that are considered “add-ons,” such as handpieces that increase the efficacy of intense pulsed light devices. These present physicians with options to enhance their current laser while avoiding the purchase of a new laser.

Stay on the Cutting Edge
It’s difficult to pinpoint how the field of lasers will continue to develop, since it changes much more rapidly than most other markets in medicine. Current trends in new lasers indicate that invasiveness and downtime are key areas to which manufacturers devote much attention. Dr. Chasin feels that this may be attributed to patients becoming more involved in the market and demanding excellence. “Patients are very savvy and they learn as much as possible about various laser procedures, meaning that it is all the more importance for physicians to stay on the cutting edge and be in tune with what patients desire,” Dr. Chasin observes. “Patients seem to be trending more toward procedures with less downtime that deliver the best results,” he notes.

Factor in Functionality
One of the latest movements within the laser field is the preponderance of multi-functional lasers, according to Dr. Ross. Traditionally, different laser types addressed different issues. They could easily be separated based on how effectively each type of laser treated a particular condition. Currently, however, lasers such as the V-beam Perfecta (Candela), expand the traditional approach to intense pulse light devices.

In the fractional realm, Dr. Ross points out that the Fraxel Dual with Thulium laser offers two distinct wavelengths that allow physicians to operate at different spectra in the same system. “The different wavelengths offered by various fractional technologies present opportunities to treat different colors in various capacities,” notes Dr. Ross. The potential downside for lasers with newer wavelengths that can treat a broader set of condition is that clinical endpoints are not the same, he notes. Thus, it’s hard to acquire immediate feedback to determine the success of the procedure.

Dr. Chasin notes that while new multifunctional lasers create vast possibilities, increasing complication rates remind that caution should be exercised when investing in and using lasers. “Significant complication rates are discouraging, but as the field continues to evolve there are new opportunities for education,” says Dr. Chasin.
Multifunctional lasers point to a future in which lasers can treat a variety of conditions, but both Dr. Chasin and Dr. Ross indicate that this future may include new kinds of lasers and require physicians to use a number of approaches as their understanding of laser technology and clinical endpoints continues to progress. “It will not be uncommon to use two to three devices in each treatment and to use older technologies in established ways,” notes Dr. Chasin. Moreover, Dr. Ross anticipates the use of new combinations, as well. “We will may eventually begin to see greater use of combination treatments employing drugs and devices,” he says, indicating that the field still has a long way to go before it is fully developed.

As new technologies develop, Dr. Ross notes older technologies will likely persist and function as vital complimentary approaches. While new types of lasers give dermatologists wide choice, some established technologies offer clinicians a great deal because of their flexibility and reliability.

An example of this is the Gemini laser from Iridex, says Dr. Ross. Lasers such as the Gemini are really not competitors to fractional mid-IR devices as much as complementary therapies,” he says. “The Gemini can treat reds and browns very well and therefore often recommend fractional laser treatment after one or two Gemini sessions,” Dr. Ross explains.

According to Dr. Chasin, using established technologies in novel ways is an early trademark of aesthetics, in particular laser technology in dermatology. “This spectrum of therapies and procedures is still in its infancy, and we will continue to see more dimensions emerge and new advancements made over short periods of time,” notes Dr. Chasin.

A Growing Field
As researchers and manufacturers continue to test and develop new technologies and increase access to the technology for all patients, Dr. Chasin reminds that dermatologists play a crucial role in the ongoing dialogue and exchange of information. “How dermatologists use lasers and discuss them in academic settings goes a long way toward establishing new protocols and setting the curve for how lasers are used in practice,” notes Dr. Chasin. One thing that is undeniably clear upon examination of the many factors that contribute to the laser process is that physicians must be committed to their craft and their investment in order to reap the rewards that laser technologies present. This commitment encompasses many different properties, from financial to clinical, and it is becoming more demanding given the changing market and technology. Therefore, it would be difficult for dermatologists to operate in both the aesthetic branch and the medical branch, according to Dr. Chasin. “It is becoming harder for clinicians to ‘dabble’ in lasers and do it well,” he notes.

While competition with other laser-operating physicians will no doubt play a role as the field evolves, Dr. Ross stresses that laser procedures will not be in competition with other forms of aesthetic treatments. “Fillers and Botox injections do not overlap much with laser procedures and are better viewed as complimentary procedures to lasers,” he notes. They function collectively under the moniker of cosmetic dermatology, and their respective development should bolster the specialty, he explains.

For lasers’ part, Dr. Ross sees a bright future with more types of procedures, such as fat-burning and energy contouring. “It’s an exciting time to be a laser specialist,” he says.

In light of these new developments on the horizon and the already dizzying number of procedures and research avenues, Dr. Chasin reminds that the most important aspect of investing in lasers at any stage is to do so wisely, and to make well-informed decisions that best suite your own interests and the needs of your patients. This extends from your clinical knowledge through your financial analyses and all the way to your marketing approaches.

“Apart from resources and the knowledge, dermatologists need to make sure that they have the time, energy, and dedication to commit to lasers, because that’s what it takes to successfully engage this field and participate in its growth,” says Dr. Chasin.