Table 6-1

Examples of Ablative and Nonablative Lasers Used in Facial Resurfacing[3]

Ablative Lasers			
Wavelength	***Laser Type***	***Company***	***Device Name***
2790 nm	Erbium:YSGG	Cutera	Pearl
2790 nm	Erbium:YSGG (fractional)	Cutera	Pearl Fractional
2940 nm	Erbium:YAG	Sciton	Contour TRL
2940 nm	Erbium:YAG (fractional)	Sciton	Profractional
2940 nm	Erbium:YAG (fractional)	Palomar	Lux2940
10,600 nm	CO_2	Lumenis	Active FX
10,600 nm	CO_2 (fractional)	Lumenis	Deep FX
10,600 nm	CO_2 (fractional)	Solta	Fraxel re:pair
Nonablative Lasers			
Wavelength	***Laser Type***	***Company***	***Device Name***
1064 nm	YAG	Cutera	Laser Genesis
1410 nm	Diode (fractional)	Palomar	Emerge
1440 nm	Diode (fractional)	Solta	Clear and Brilliant
1540 nm	Erbium (fractional)	Palomar	Lux1540
1550 nm	Erbium Glass Fiber (fractional)	Solta	Fraxel re:store

YSGG = Yttrium-scandium-gallium-garnet; YAG = Yttrium-aluminum-garnet; CO_2 = carbon dioxide.

hands, and eyelids, among other areas. When used on the eyelids, patients notice a tightening of the skin and reduction in dark circles. This laser is a good choice for patients with skin types I to IV (Table 6-2) and those who would like more aggressive treatment with more significant results than nonfractional nonablative laser, but without the downtime required with ablative laser resurfacing. Like the Laser Genesis, nonablative fractional lasers also require a series of treatments for optimal results (on average 3 to 6). Posttreatment, patients may be red and swollen for a few days, but this can be covered up with makeup because the stratum corneum remains intact. Posttreatment side effects are minimal. An example of pretreatment appearance and posttreatment results with reduction in fine lines and improved skin tone is shown in Figure 6-1.

The most aggressive laser treatments for skin resurfacing are the ablative lasers, which include wavelengths of 2790, 2940, and 10,600 nm (see Table 6-1). These lasers have a high affinity for water and cause vaporization and surrounding thermal necrosis when the energy is absorbed by the targeted tissue. Ablative lasers can also be used in 2 different ways: nonfractional and fractional. Nonfractional ablative treatment causes a superficial confluent laser injury to the epidermis and superficial dermis. In contrast, fractional treatment is delivered in nonconfluent, deeper, thinner