Many people notice signs of aging when skin loses its elasticity and begins to sag around the face, jawline and neck. Intrinsic aging, also known as the natural aging process, is a continuous process that normally begins in our mid-20s (see graph below). Lifestyle, diet, personal habits and sun exposure often act together with the normal aging process to prematurely age our skin. Most premature aging is caused by sun exposure (photoaging). Other external factors that prematurely age our skin are repetitive facial expressions, gravity, sleeping positions, and smoking.

The concept behind nonablative laser and light-based skin tightening is to coagulate dermal tissue, with water as the chromophore, in the absence of epidermal vaporization. A dermal wound response is initiated due to the heating and results in fibroblast stimulation and subsequent collagen remodeling.

Nonablative non-laser devices, such as those with monopolar RF, have also been utilized to denature deep dermal collagen. However, these noninvasive technologies have yielded inconsistent results, with only modest improvements in skin laxity, and require multiple treatment sessions.

Profound was developed by Syneron-Candela to address this market need more effectively and consistently with fewer treatments than other nonablative laser and non-laser devices. Profound is a novel and innovative device that utilizes a microneedle electrode array to deliver bi-polar RF energy directly into the deep reticular dermis and incorporates a patented Real Time Temperature Control algorithm to predictably meet the desired thermal endpoint.

Profound received FDA clearance with an indication for use in dermatologic and general surgical procedures for electrocoagulation and hemostasis, and the percutaneous treatment of facial wrinkles. Profound's bipolar RF micro-needle array delivers controlled heating within dermal tissue. The patented Intelligent Feedback System (IFS) measures impedance and monitors real time temperature for continual adjustment of power levels to deliver a highly controlled thermal profile. By varying pulse width and target temperature, thermal zones of partially denatured collagen are created within the reticular dermis. A wound healing response occurs with unique elevations in elastin, collagen and hyaluronic acid.
Profound can be used to treat nasolabial and melolabial folds, jowls, submental (Profound Lift), sub-mandibular redundancy (Profound Contour) and neck strands by repairing the dynamic properties of the skin, elastin, collagen and hyaluronic acid, and restoring dermal volume loss.

Utilizing Profound’s unique mechanism of action, a single treatment produces a profound increase in elastin and collagen content at 4-10 weeks after treatment and 100%* response rate for rhytides and 95% for laxity at 6 months after treatment.1,4


* Based on results of a clinical study in 20 patients, measuring improvement in Fitzpatrick Wrinkle Scale at 3 months compared to baseline based on independent review of photographs