

Titan Users Report Positive Tissue Tightening Results

By **Bob Kronemyer**, Associate Editor

According to researchers, the Titan from Cutera (U.S.) is a safe infrared light source from 1100 to 1800 nm with a unique wavelength filtering design that uniformly heats the dermis to produce measureable skin tightening effects. “This is the first technology of its type,” said Bruce Katz, M.D., director of the JUVA Skin and Laser Center in New York City (U.S.). “It’s the first time we’ve actually had such a long wavelength range to target the dermis.”

By contrast, Dr. Katz’s reservation with radiofrequency (RF) for skin tightening is “that it goes too deep. RF not only heats the dermis, but the subcutaneous layer of fat as well. Side effects that have been seen with RF include fat necrosis and uneven irregularities of the fatty layer. I believe the Titan is the appropriate technology for skin tightening because it only targets the deep dermis.”

Because the Titan uses pre-, parallel- and post-cooling, “it has a high safety profile,” Dr. Katz noted. “This ensures that the tissue is nicely cooled with no side

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effects, as long as you keep the chiller in contact with the skin. If you don’t keep the cooling system in contact with the skin, the patient may develop a blister.”

Dr. Katz primarily uses the Titan for laxity of the jowl area and neck. “It can also be used to help loose skin on the abdomen in women who have been pregnant,” he said. “We’ve also used it on the upper arms and on the knees, and males with depressed eyebrows also benefit from treatment.”



Before Tx

After Titan Tx

The single treatment head is 15 mm by 10 mm. “I typically use fluences between 35 and 45 J/cm²,” Dr. Katz explained. “We use the highest fluence that the patient is able to tolerate. And we pretreat the site with ELA-Max or EMLA topical anesthetic to minimize discomfort.” Dr. Katz’s treatment protocol usually requires two passes for each session at two week intervals. “Some physicians treat at one month intervals, but I think better results are achieved by scheduling treatments more frequently,” Dr. Katz commented. “After four or five sessions, we are seeing very nice tightening of the neck and jowls. But you need to tell your patients to have realistic expectations. Results are not immediate. It will take four or five treatments. But there is no downtime.”

Dr. Katz has been using the Titan for about seven months. To date, he has treated nearly 50 patients. “Patients have continued to improve as long as we’ve been able to follow them. I suspect it will take between three to six months after completing a course of treatments to see the final results. We don’t know how long the effect will last, but I think results will be long-term. The fact that we’re achieving tightening means that new collagen is being created in the dermis, which is more elastic now. This effect

should last several years, if not longer. But it's hard to say for sure."

Patients are "very pleased with the treatment," Dr. Katz continued. The daughter of a woman he recently treated was married this April. "We compared the patient's before and after photos and the difference is dramatic."

Dr. Katz considers the Titan "a non-surgical facelift. It is aimed for people with mild to moderate changes in laxity around the jawline and the neck. Other candidates are those who have contraindications to a surgical facelift or don't want to subject themselves to a facelift quite yet. The Titan is a really good temporizing measure. In my mind, it is breakthrough technology."

Everyone is searching for the Fountain of Youth, but Glenn DeBias, M.D., medical director at the Institute for Laser and Aesthetic Medicine in Pennsylvania (U.S.), believes he may have found a good substitute with Titan. "The most exciting thing, at least from what I've seen, is the ease with which the

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device is able to take back some of the youthfulness that has been lost. This is a very subtle technology and a very interesting one. A treatment from this device is like a cup from the proverbial Fountain of Youth because aging is a process. Titan is simply a device with its own counter-process."

Barry DiBernardo, M.D., a plastic surgeon practicing in New Jersey (U.S.), explained the Titan process.

"There is a dual mechanism of action. One is similar to what we've known from CO₂, which is a tightening of the collagen fibers, and that will occur almost immediately. Then there is also a stimulation of fibroblasts, increased production of collagen and elastin. There's a longer period of time, perhaps six months or more, in which we're going to see the effects of that secondary mechanism."



Before Tx

After Tx

Photos courtesy of Bruce Russell, M.D.

Dr. DiBernardo is also impressed with the Titan's clinical results. "This is a very impressive device. For one thing, it's what patients are looking for since it's non-ablative. The next question is does it really tighten, and how much does it tighten? We've seen significant results in the neck, face and the body; the abdomen particularly has shown very measureable results."

Maritza Perez, M.D., associate professor of dermatology at Columbia University (U.S.), has in her mind the perfect patient for this device. "The perfect patient who would achieve the very best results, would be late thirties or early forties. After one treatment, there will be anywhere from 30 – 40 % improvement, and after two treatments, there will be anywhere from 50 - 70 % improvement in that age group, considering the texture of the skin."

When asked about the time course for skin tightening, Dr. Perez was able to put it very simply. “The tightening is immediate. I have done half-face treatments and compared the treated to the untreated side. There is immediate tightening that both the patient and I can observe. There is also a prolonged period of collagen reformation that can take anywhere from six weeks to three months.” This immediate tightening is one of the aspects of this device that most excited Dr. Perez. “Immediate tightening of the skin was only seen before with ablative resurfacing methods, such as the Erbium or the CO₂ laser.”

Dr. Perez is pleased with her results but advises doctors to speak with patients about their expectations beforehand. “When it comes to inducing tightening, this device is very effective. As long as you manage patient expectations, both you and your patient will be pleased.”

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Michael Gutling, M.D., a dermatologist practicing in Switzerland, said, “The Titan really has very little downtime. You have a little erythema for four to six hours and a little edema, which disappears very quickly. The results, on the other hand, last for a long time.” Dr. Gutling sees merit in combining Titan with other procedures. In addition, according to Dr.



Before Tx

After Tx

Gutling, this device lends itself to maintenance after plastic surgery.

Dr. Debias has noticed the many treatment options for the Titan, specifically, how it relates to the different needs of patients. “I have patients in their thirties who come in once a year, engaging in a sort of maintenance program. I have patients who are in their forties or fifties who want to get back a percentage of what they’ve lost over years of aging. I have patients from their seventies and eighties who want a onetime treatment for a special occasion.”

Dr. DiBernardo, in summing up the Titan, stated, “I think that in the armamentarium of what we have right now for non-ablative treatment of the skin, this technology is probably among the best I’ve seen. It’s not perfect, but I think that this has a lot of potential and we’re just scratching the surface right now.”

Dr. Debias is currently looking under that surface for other uses of the Titan. He has started an investigational study on how the device can be used to suppress sebaceous glands and hormonal, acne, and pustular breakouts. He began thinking about the study after “middle-aged patients kept on coming in and saying that not only has the device tightened their skin, but their acne breakouts have dropped off dramatically.” The acne study has been in progress for two months and Dr. Debias is very optimistic about the results. ■