Hi Peeps,

I need some help with buying a diode laser. I just attended a course where they were trying to say 980 is better than 810 or a 940nm. I have no experience with lasers. I would like to get some input from you guys before I buy one.

Why is a 980nm best? I have used 810, 980, seen 940 and 1064, super pulsed, variable pulse, simple and light, complicated and heavy, disposable tips, not disposable, 35w, two watts. What did I think?

A diode is a diode is a diode.

Look at the price, support, packaging, size, weight, educational opportunities, disposables, number of units out there, and reputation of the company.

This is what differentiates a diode from another.

Sure there are minor differences and I saw the 1064 diode from Fox at the ALD and it was neat but honestly so much of this water absorption stuff is out there.

Just get one, be happy and get training and learn how to make it work for you.

Glenn

Hey Glenn,

The course I attended was about Fox 980nm. The guy was telling that the carbonization of the tip on 810nm will cause more collateral thermal damage than a 980nm, hemostasis is longer lasting with a 980nm and there is no char ring of the soft tissue or tooth structure with 980nm. We used ham and tomatoes to experiment the Fox. There was charring on those things, but when he was showing the videos, there was no charring of the tissue. Are these the differences you are talking about?

JGAG31,

First off any diode as soon as it is activated becomes essentially a hot tip. You activate the tip either with articulating paper or when you place it in the tissue. When placed in the tissue it gets a small glob of tissue on it and this now becomes essentially a hot tip. So 980 vs. 810, well who knows.

I don’t mind Jeff Jones from Fox but again I know that the track record at Biolase was to say that the reason they made their hard tissue an Er, Cr:YSGG at 2790 instead of the traditional 2940nm was that it cut better. Had nothing to do with the fact that all Erbium YAG companies had to pay a patenting fee to Premier for using the Er:YAG wavelength. Had nothing to do with the fact that from a marketing standpoint that their laser was unique both initially in wavelength and even in mechanism of action (Hydrokinetics).
Interestingly enough when I started seeing cases done with the “superior” wavelength and laser I thought... hmm my cases look exactly the same with an Er:YAG. Guess what recent research shows... the Er, Cr:YSGG actually cuts slower than an Er:YAG by 1.4 to 1.6 times.

Guess what the research showed... hydrokinetics was a farce!

Biolase has a 940nm diode. Is their clinical significance to this wavelength or is it a marketing gimmick? Is there any literature to back this up that any diode has less charring, less postoperative discomfort or is it just someone promoting their laser as “cuts faster, heals faster, less charring?”

To me as someone who has used a lot of lasers over the years and they all work, I am thinking its like the old beer commercials... “tastes great - less filling” now becomes “cuts great - less charring.”

In the end, Fox has a nice 980nm laser as does Sirona, Hoya Microdent and a few others. There are many 810nm diodes out there from companies like Ivoclar, Biolase, Zap, AMD, the Beamer, etc. and they all work.

What really separates these soft tissue lasers is their price, their disposables, weight, education, support and service, reputation of the company, size, and some parameters like pulse duration and wattage.

The issue is whether you can tell whether I cut with an 810, 980 or 1064 or heck even the 940nm. I am not sure it’s the wavelength so much as the settings.

Show me a soft tissue lesion cut with any diode and any Erbium, sure now there is a difference. The 810 vs. 980nm has been discussed at nausea here and I always ask the same thing show me clinical cases and show me literature. I will be waiting.

Sincerely, with warmest regards. ■ Glenn

Hi Glenn,

I use the Erbium for more than 90 percent of all my soft tissue surgery, however I have been using the 1064 for about a month and the results seem quite different than either the 810 or 980 I have from Hoya. Clinically it cuts extremely similar to the Erbium. It is fast and does not appear to heat the tissue up like the other two lasers, before I get tissue ablation. This is only my clinical observation. No science to back me up. However, I am using it on newborns and infants for frenectomies and the results have been impressive. So far no reports of any significant post surgery discomfort, bleeding, or swelling and at the end of five days, the healing is almost as fast as the Erbium. I agree at 1-3w all diodes should be similar; however I am not sure if the 1064 is in the same category. ■ Larry