LA&HA Doctor's Notes

Micro Laser Coring

1. Micro Laser Coring

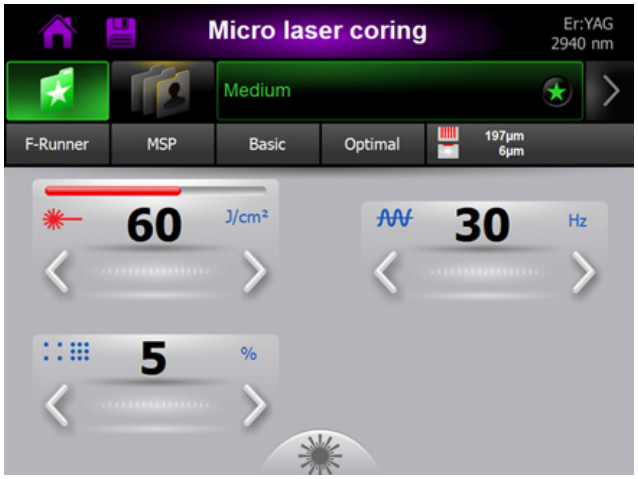
Micro laser coring is Fotona's advanced skin rejuvenation procedure, utilizing the precision and power of the F-Runner scanner. By delivering fractional Er:YAG laser energy, the F-Runner removes microcolumns of tissue just 250 µm wide through a vaporization process, affecting only a fraction of the total area being treated . This triggers body's wound healing response, stimulating fibroblasts to produce new collagen and elastin, while the surrounding intact tissue accelerates healing. This process effectively reduces wrinkles and significantly tightens the skin.

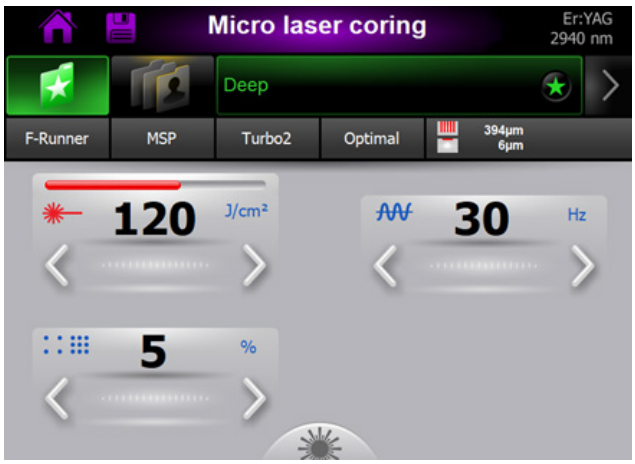
Micro-coring. In comparison to micro-coring procedures performed with hollow needles, micro laser coring offers more precise treatments that can be specifically tailored to the patient's needs. The hollow needles used in micro-coring have a diameter of 500 µm, which means they remove tissue columns that are twice as wide as those removed with micro laser coring. This difference in diameter is crucial because smaller tissue removal means less trauma for the skin and leads to faster healing. Additionally, micro-coring with hollow needles provides only up to 8% coverage, whereas micro laser coring allows for up to 20% coverage, ideal for addressing deeper wrinkles and scars. Furthermore, micro laser coring has the added benefit of incorporating heat into the procedure, as desired or needed, which enhances skin remodelling.

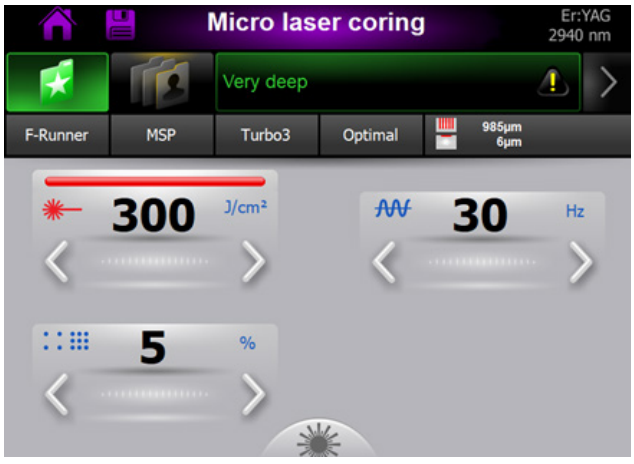
Upon selecting the **Micro laser coring icon**, users can choose between medium, deep and very deep settings. All pre-sets use a cold, micro short pulse (MSP) with a duration of 0.1 ms, which, compared to warmer pulses, offers shorter downtime and lower risk of hyperpigmentation, especially for darker skin types. For enhanced skin remodelling, users can choose to prolong the pulse up to the extra-long pulse (XLP) setting with a duration of 1.5 ms, which adds a thermal effect to the treatment. Medium and deep settings are suitable for facial treatments, with depths of 200 µm and 400 µm, respectively. The deep setting is recommended for very pronounced, deep wrinkles or acne scars. The very deep setting reaches 1000 µm and is best suited for hypertrophic scar remodelling. It is recommended to undergo at least three sessions of micro laser coring, with four to five week intervals.

	MEDIUM	DEEP	VERY DEEP
Depth	197 µm	394 µm	985 µm
Pulse duration	MSP	MSP	MSP
Fluence	60 J/cm²	120 J/cm², turbo 2 mode	300 J/cm², turbo 3 mode
Frequency	30 Hz	30 Hz	30 Hz
Coverage area	5%	5%	5%

2. Pre-sets


Micro laser coring
Er:YAG
2940 nm
Medium
F-Runner
MSP
Basic
Optimal
197µm
6µm
60
J/cm²
30
Hz
5
%


Micro laser coring
Er:YAG
2940 nm
Deep
F-Runner
MSP
Turbo2
Optimal
394µm
6µm
120
J/cm²
30
Hz
5
%


Micro laser coring
Er:YAG
2940 nm
Very deep
F-Runner
MSP
Turbo3
Optimal
985µm
6µm
300
J/cm²
30
Hz
5
%

3. Post-therapy and healing process

For optimal recovery, it is recommended to use an occlusive cream for the first two days after the procedure, followed by a repair cream and moisturizing cream for the next week. Patients should avoid serums and creams with active ingredients for one week following the procedure. It is extremely important to avoid dirty, dusty spaces, as well as pools and saunas, and to maintain proper hygiene to prevent infections.

4. Medium pre-sets

When medium settings are used (cold MSP pulse, 197 µm depth), downtime is minimal. After just two days, scabs are barely noticeable and only slight redness remains. Patients often begin to see significant improvements in skin quality already within a week after the treatment.

Courtesy of T. Osterc Diwersy, MD

Fig. 1: Before

Fig. 2: Immediately after

Fig. 3: After 24h

Courtesy of T. Osterc Diwersy, MD

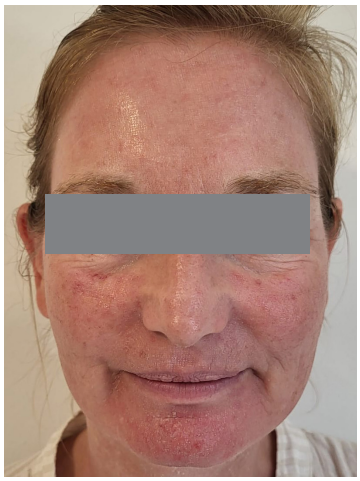


Fig. 4: After 48h

Fig. 5: After 1 week

With the same fluence and depth, but with warmer pulses, the downtime becomes significantly prolonged. There is some redness for even up to a week after the procedure.

Courtesy of T. Osterc Diwersy, MD

Fig. 1: Before

Fig. 2: Immediately after

Fig. 3: After 24h

Courtesy of T. Osterc Diwersy, MD

Fig. 4: After 48h

Fig. 5: After 3 days

Fig. 6: After 4 days

Courtesy of T. Osterc Diwersy, MD

Fig. 7: After 5 days

Fig. 8: After 6 days

Fig. 9: After 7 days

5. Deep pre-sets

When deep pre-sets are used (cold MSP pulse, 397 µm depth), downtime is slightly extended, however, it remains significantly shorter compared to treatments using warmer pulses. With warm pulses, there is a prolonged redness even after the micro wounds have healed, whereas with cold pulses, there is no prolonged redness.

Courtesy of T. Osterc Diwersy, MD

Fig. 1: Before

Fig. 2: Immediately after

Fig. 3: After 24h

Courtesy of T. Osterc Diwersy, MD

Fig. 4: After 48h

Fig. 5: After 3 days

Fig. 6: After 4 days

Using the same fluence, but with longer pulses (LP), the healing time is extended and there will be redness even after one week.

Courtesy of T. Osterc Diwersy, MD

Fig. 1: Before

Fig. 2: After 24h

Fig. 3: After 48h

Courtesy of T. Osterc Diwersy, MD

Fig. 4: After 3 days

Fig. 5: After 4 days

Fig. 6: After 7 days

Courtesy of T. Osterc Diwersy, MD

Fig. 1: Before

Fig. 2: Immediately after

Fig. 3: After 7 days