

JUNERA

LIFT | SCULPT | DEFINE

100 PATIENT CLINICAL WORKBOOK

ONYXA
— MEDICAL

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Anesthetic Protocol

Subdermal tumescent anesthesia, administered sparingly, in a fan pattern via 22g / 2 and 3/4 inch cannula to the area to be treated.

50/50 mixture of 2% Xylocaine with 1:100,000 epi and 1% lidocaine, no epi, based on the weight of the patient and the maximum allowable dose to avoid toxicity.

Additional medications added to the mixture include:

Sodium Bicarbonate

8.4% sodium bicarb to buffer the pH (to reduce stinging) equal to 1/10 of the anesthesia used.

Tranexamic Acid

Tranexamic acid to reduce bleeding and bruising as well as to reduce melanin transfer, help prevent melasma, PIH, and hyperpigmentation (4-5cc total).

Bacteriostatic Saline

As required - 0.9% bacteriostatic saline to stretch the anesthetic so that a larger area can be covered.



The tumescent mixture must be applied evenly but sparingly to provide adequate pain relief without creating a heat sink that disrupts the energy.

The cannula is not only used to administer the tumescent anesthetic, but also to disrupt tethering to allow the fiber to move more freely through the subdermal plane.

JUNERA System: Wavelengths and Fibers

The Wavelengths

1470nm Wavelength

For collagen and connective tissue contraction in areas with less volume or where reducing volume is undesirable.

980nm Wavelength

For tightening areas that have excess volume, and to help control bleeding where bruising is likely.

Fibers

400 Micron

Great for the delicate eye and brow area.

600 Micron

Easiest for the face and neck as it's a bit more sturdy than the 400, which tends to flex too easily where tissue is tethered.

800 Micron

Perfect for the body.

Treating the Face: Preparation and Upper Cheek

- ❏ **Mark important facial landmarks to stay oriented during the procedure.**

I typically divide the face into areas with a light colored, easy to remove sharpie (light blue, green, orange), **marking the buccal branch of the facial nerve from the oral commissure in the direction on the tragus.** I also **mark the mandible, both notches, and box out the area where the marginal mandibular nerve is likely to cross with a 1.5cm buffer for anatomical variance and safety.** I also mark the foramen along the pupillary line.

Upper Cheek Treatment

- To lift the cheek area, use a lateral, high-cheek entry point. I've found entry just above the zygomatic arch, slightly inferior to the lateral canthus midway between the orbital rim and the hairline, to be helpful.
- It's typically preferable to preserve volume in the cheek area, so low pulsed energy 1470nm at 1-3 watts in a fan pattern, with energy delivery per side around 250-300 joules, is usually plenty to see a nice lift.
 - **Note- this requires switching from CW to Pulse Mode**
- The passes are delivered retrograde in slow, continuous movement, hugging the dermal underside.
- If some facial sculpting is needed to ease zygomatic transition or reduce lateral bulk, 30-60 joules of 980nm at 4-5 watts can be helpful for smoothing.



Lower Face Treatment Protocol

980nm has proven particularly helpful for my typical client base of menopausal women that have developed a less youthful squared face (inverted triangle) due to hypertrophic fat along the jawline, jowling, submentum and neck.

980nm works great between 6-8 watts in the lower face, cooling the tissue every 500 joules or so to prevent overheating.

This area (below the buccal branch and superior / along the mandible, staying shy of the mental foramen and the marginal mandibular nerve, and also treating posterior to the gonial angle to sharpen the jawline) responds well to 980nm at 6-8 watts, about 500 joules max done in fan shaped pattern with energy applied retrograde, periodic cooling, **followed by 1470nm at 1-3 watts to tighten smile lines, marionette lines, crepe and general laxity. Total 800 joules combined maximum, per side.**

I've found 1470nm at lower watts (1-2 watts) with pulsed energy and more passes to be highly effective for deeper lines. Terrific at lower watts with more passes for crepe, and older, thinner skin.

It's crucial to spread energy evenly without over treating any one area, avoiding heat build up around vulnerable nerves and where skin is thinner.

- ❏ The endpoint, reached before max recommended joules, is a visible and palpable change where the tissue looks more robust and has a springy, responsive feel. Not sure how to say this — but it crinkles less when pinch tested. There is a noticeable improvement in tissue, physically to the touch and visibly.

Submentum Treatment



Entry and Approach

- Enter via a port created midline at the submental crease.
- Treatment is done in the deep subdermal plane, above the platysma, treating laterally, either side of midline where tissue is thicker. Avoid heat stacking midline where tissue is the thinnest.

Primary Tightening Protocol

Pulsed 1470nm at 2-3 watts for tightening with max 300–450 joules. 2-3 fanning passes; keep the fiber moving; avoid heat stacking and avoid the mandibular nerve.

Optional Contouring

Add a light contour pass of 980nm at 4-6 watts, 50-150 joules if there is unwanted excess volume. Overtreating fat in this area in one treatment (too high of joules) can result in ecchymosis and encapsulation that delays recovery.

The Neck Treatment Protocol

01

Entry Point

Entry point is placed high and lateral, just behind the mandibular angle. This gives direct access to the lateral neck where the tissue is thick enough to treat safely.

02

Treatment Zone

The midline of the neck cannot be treated because of potential injury to the thyroid and due to the thinner midline tissue.

03

Technique

Treatment is done in the lateral neck, in the superficial subdermal plane over the platysma. The goal is even heating and tightening without stacking energy. All passes remain lateral to the midline and stay clear of the thinner central skin.

04

Primary Wavelength

1470nm is the primary tightening wavelength for this area. I start at 2-3 watts, pulsed energy.

Total energy for the neck (not including the submentum) is generally 500-800 joules per side, depending on tissue quality. I keep the fiber moving in long, fanning sweeps, being careful to stay at a consistent depth. Two to three passes per vector is usually enough.

I add 980nm if there is hypertrophic fat along the sides of the neck (common in menopause). There can also be small fat pads or bulges that detract from the appearance of the neck that need light contouring / smoothing. Treatment in the neck with 980nm is typically 5-6 watts, pulsed energy, and 50-100 joules per side.

The endpoint is visual and tactile. The tissue should feel springy and more resilient. Hard to describe, but it just feels and looks thicker and healthier.

Upper Arm (Crepey Skin) Treatment

Entry and Approach

- Entry is made laterally in the upper third of the arm to access the medial and posterior upper arm.
- Crepey skin responds surprisingly quickly to shallow heat in the superficial subdermal plane, by hugging the dermal undersurface.

Treatment Protocol

Thin, crepey upper arm tissue responds quickly to 1470nm at 2-3 watts, pulsed energy, for shallow dermal tightening without overheating. Total joules needed per arm is usually 1800-2400 joules, depending on size of area covered, crepe severity and skin thickness.

Use slow, even, fanning passes, three or so fans per vector, with no stacking in a single tunnel.

- ❏ An additional pass (50-150 joules) can be done with 980nm at 4-6 watts posteriorly to assist with a small amount of excess volume and to help control bruising if needed.

Energy Dosage: Research-Based Guidelines

Moderate Energy (5 and 20 J/cm²)

5 J/cm² Dose

5 and 20 J/cm² both produced significant increases in dermal thickness and collagen deposition compared with control.

20 J/cm² Dose

The 20 J/cm² dose gave the strongest effect, with dense, organized collagen bundles consistent with active neocollagenesis.

High Energy (40 J/cm²)

Starting at 40 J/cm², histology showed collagen fragmentation and reduced elastin coherence, suggesting thermal damage rather than regenerative remodeling.

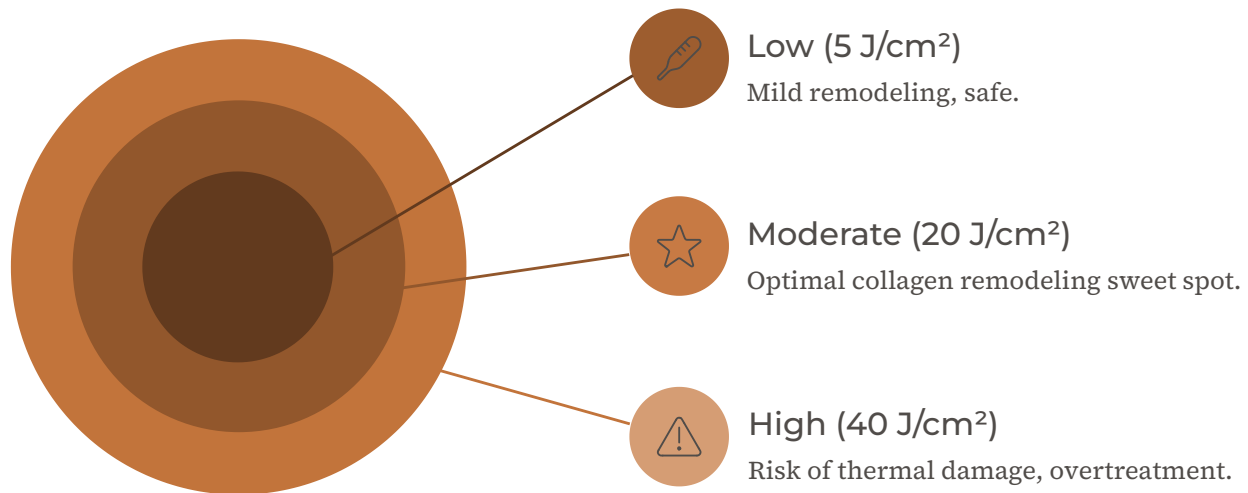
Overall Conclusion

Subdermal 1470 nm laser at moderate energy densities ($\sim 5\text{-}20\text{ J/cm}^2$) promotes dermal thickening, collagen neosynthesis, and more organized elastin – a true skin-tightening and remodeling effect.

At higher energy density ($\sim 40\text{ J/cm}^2$), the tissue begins to shift toward over-treatment and damage, underscoring a non-linear dose-response and the existence of a "sweet spot" window for tightening.

Evidence-Based Protocol

Energy dosages determined using available published research combined with clinical experience treating 100 patients.



This protocol represents a synthesis of scientific evidence and extensive clinical practice, providing a framework for safe and effective subdermal laser treatment across multiple anatomical areas.