

Palomar®
ConBio®

CYNOSURE®

Palomar Icon® 1540 Fractional Laser

Fractional Non-Ablative
Skin Resurfacing



- Any treatment guidelines or parameters contained herein are intended for reference only and should not be substituted for sound clinical judgment.
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1540 Fractional Erbium Laser

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Applications

- Skin Resurfacing
- Soft Tissue Coagulation
- Acne Scars and Surgical Scars
- Melasma
- Striae (Stretch Marks)

Wavelength: 1540 nm

Spot Sizes: 15 mm, 12 mm x 12 mm

Max. Energy: 70 mJ/mb

Pulse Width: 10, 15, 20 ms

1540 Components



1540 options and Microbeam Density:

1. **Calibration Tip:** Calibrates output energy of the laser
2. **10mm Tip:** 100 mB/cm² (100 mB per pulse)- *no longer for sale*
3. **XD Microlens™** (or 12 x 12 mm tip): 25 mB/cm²
4. **15mm Tip:** 320 mB/cm² (470 mB per pulse)
5. **XF Microlens™** : microbeam density 115 mB/cm²

1540 Fractional Non-Ablative HP

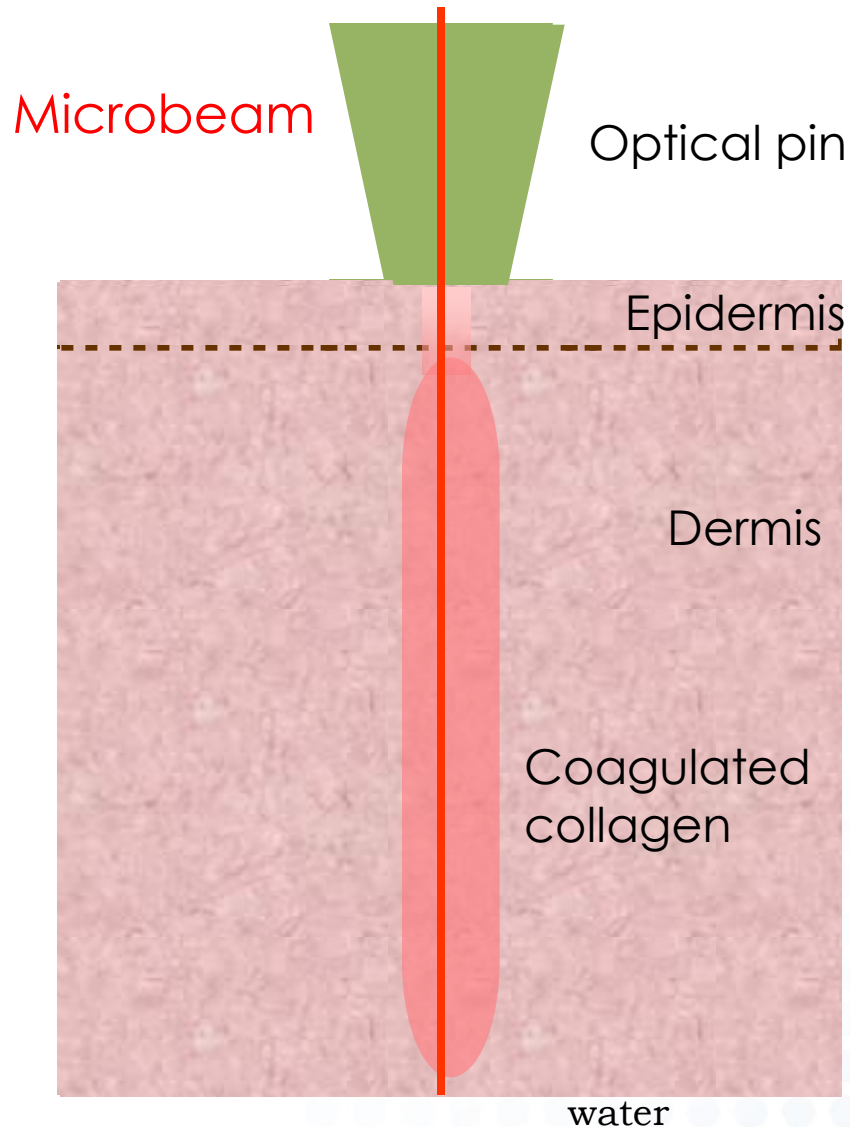


The range of the of thermal damage (depth and width)
based on histology data

Histology Orientation	10 mm Tip 70 mJ/mB	XD Microlens™ 70 mJ/mB	15 mm Tip 10 mJ/mB	XF Microlens™ 50 mJ/mB
Average Column <u>Depth</u> of Thermal Damage	725 microns	1060 microns	600 microns	750 microns
Average Column <u>Width</u> of Thermal Damage	200 microns	230 microns	125 microns	270 microns

Point Compression Approach Using 12 x 12mm XD Microlens

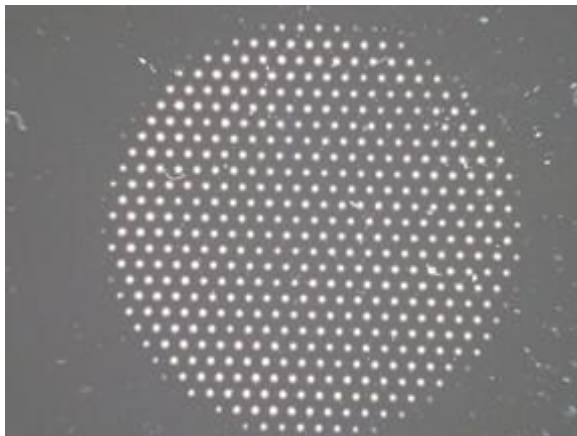
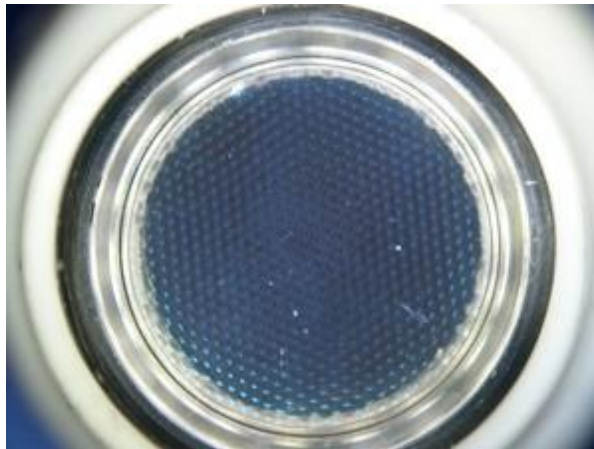
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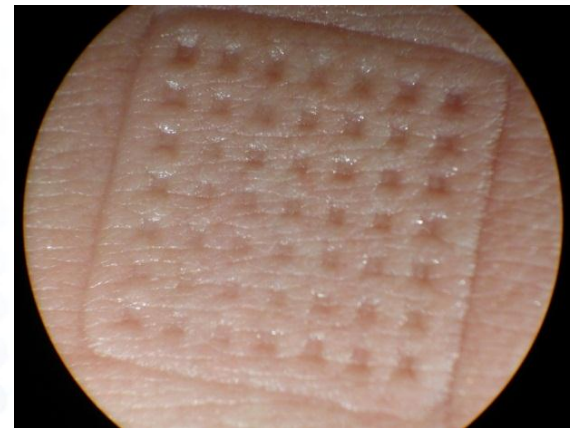
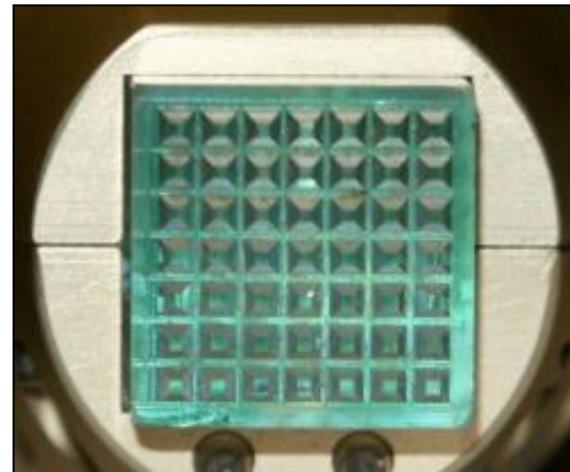
- Decreased heating of D/E junction and papillary dermis
 - Minimize side effect
- Depth
 - Reach deeper targets
 - Decreases scattering
- Flattening of tissue
 - Displaces water and blood
 - Decreases tissue thickness

1540 Fractional Laser Handpiece Tips Cynosure

15mm, 320 mB/cm² &
XF Microlens 115 mB/cm²



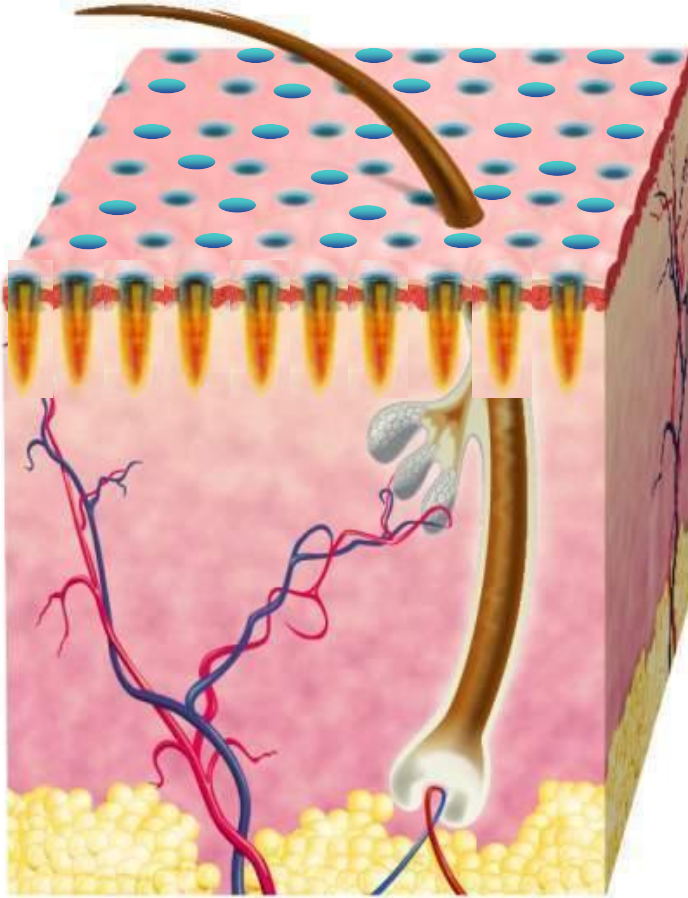
12mm x 12mm XD
25mB/cm²



1540 Fractional Laser

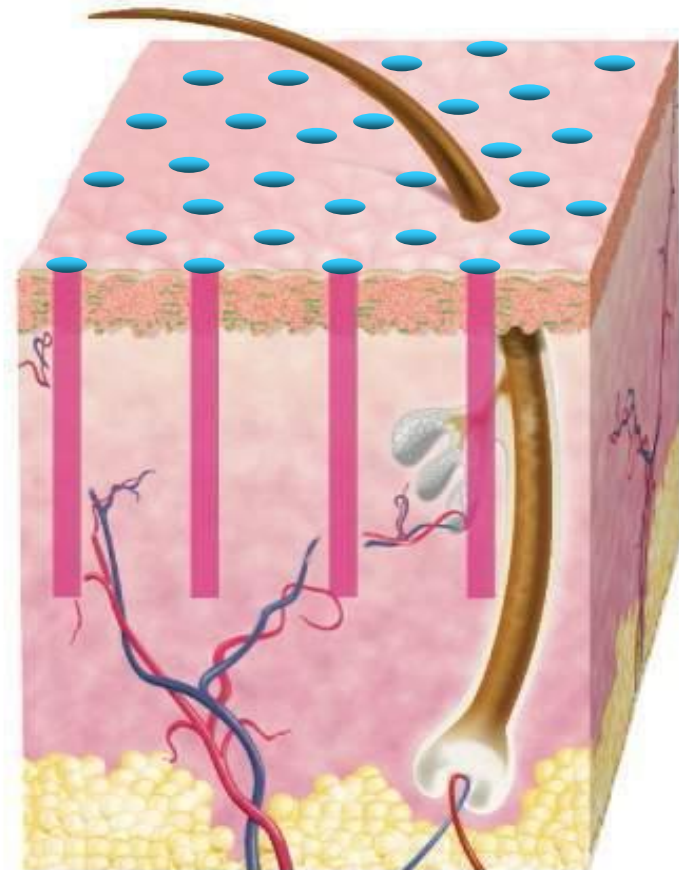
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Goes up to
15 mJ/mB



15mm / 320mB/cm²

Goes up to
70 mJ/mB



10mm / 100mB/cm²

Examples of microbeam delivery per tip

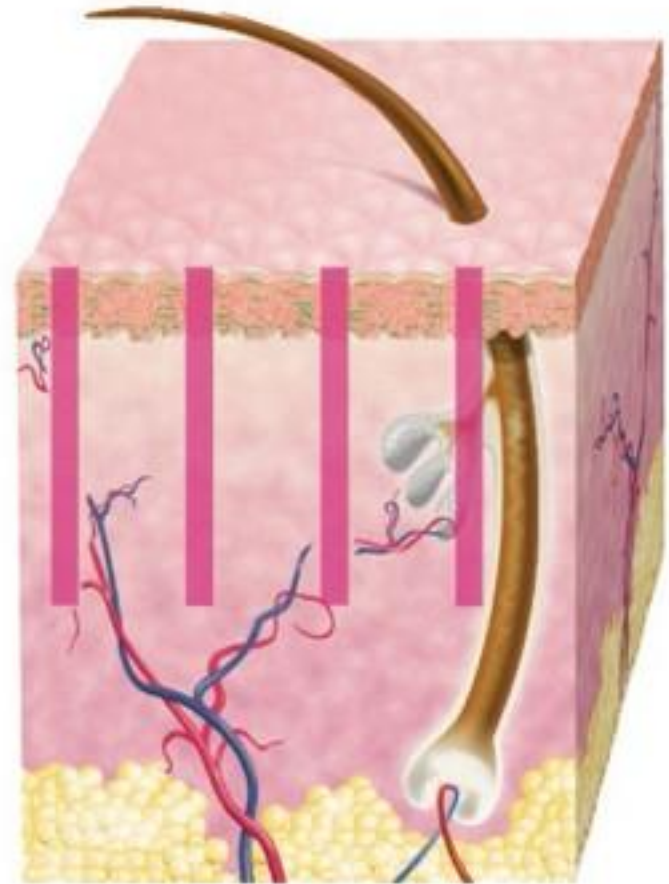
1540 Fractional Laser Treatment

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Stratum corneum remains intact
which allows for rapid healing.

Healing occurs from viable
untreated tissue between the
columns of coagulated zones.



Exclusionary Criteria



- Individuals with a poor healing response
- History of light induced seizures
- During pregnancy
- Treatment of skin cancer
- Active infections/Immunosuppression
- Open lesions
- Blood disorders
- History of keloid formation

See Icon® Treatment Guide for a complete list of Exclusionary Criteria

Exclusionary Criteria



- Use of medications that significantly compromise healing response.
- Use of Isotretinoin (Accutane®) within 6-12 months of treatment (based on the level of treatment)
- Use of systemic steroids
- If currently taking anti-coagulants or blood-thinning medications, at least 2 weeks prior to and throughout a light-based treatment course - only with the approval of the prescribing physician.

See Icon® Treatment Guide for a complete list of Exclusionary Criteria

Cautionary Criteria



- Tretinoin (Retin-A®, Renova®) and exfoliating products – should be discontinued at least 2 weeks before and through course of treatments.
- Unprotected sun exposure or use of tanning beds or creams in areas to be treated.
- Pigmented Lesions
- Allergies
- Medications - Review both prescriptions and non-prescriptions. Be sure to include herbal and natural remedies as some of these may cause photosensitivity. For persons taking photosensitizing medication, perform test spots at least 24 hours before treatment.

Cautionary Criteria



- History of Herpes I or II within treatment area
- Heat Urticaria
- Diabetes
- Cosmetic Dermal Fillers/Implants
- Other conditions: History of vitiligo, eczema, psoriasis, allergic dermatitis, autoimmune diseases, immunocompromised status, any diseases affecting collagen including Ehlers-Danlos syndrome and scleroderma and other skin conditions may affect a person's response to treatment.
- Suitability

- Always administer test spots before every treatment
- Begin testing with lower energy settings
- Immediately and 10 min after - evaluate discomfort and skin reactions (swelling with blanching is an expected reaction)
- Follow up at 24 hours and up to 1 week
 - Signs of blistering or over-treatment at 24 – 48 hours indicate the settings are above skin tolerance
 - Excessive redness may indicate a risk for PIH
- Treat darker skin types (V-VI) below the erythema threshold to help minimize risk of PIH

Cautionary Treatment Criteria



- Do not stack pulses - risk of PIH
- Use extra care while treating scar tissue - risk of blisters
- Use caution when treating near the bony orbital area or 1 cm of the orbit or the outer corner of the eye
- 1540 has not been tested with cosmetic dermal fillers, neurotoxins, or implants
 - Physicians recommend waiting for a minimum of 2 weeks after neuro-toxin injections and 2-4 weeks after fillers before performing facial light-based treatments
 - There is the possibility for diffusion of neuro-toxin, as a result of edema associated with facial light-based treatment, which may result in facial asymmetry
 - Cynosure has conducted no clinical trials and cannot recommend any specific waiting time



See Icon® Treatment Guide for detailed list of Cautionary Criteria

1540 Treatment Guidelines



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- Carefully screen all potential candidates for treatment
- Topical anesthesia may be used
- Clean the HP and shave Tx area prior to treatment
- Coupling agent not required, but LuxLotion™ may be used for irregular or rough areas
- Use firm contact and skin compression
- Excessive power settings or poor contact may increase the risk of injury
- Keep the HP window free from debris throughout treatment
- Between patients, clean the handpiece using an EPA-registered disinfectant/detergent, e.g., SaniCloth® Plus, LpHse®, and Birex®. Follow the cleanser manufacturer's directions

(continued)

1540 Treatment Guidelines



When considering treatment strategy

- Consider both the amount of correction needed and the relative thickness of skin
- Consider using (10 mm), XF or XD on thicker skin requiring deeper correction
- Consider using the 15 mm tip on thinner skin requiring moderate correction
- XD tip should be used with firm compression of 1-5 sec. The longer the compression time, the greater the added depth
- To increase depth and coverage - XD passes can be followed by pass with the (10 mm) or XF tip

(continued)

Multiple passes

- May be needed to achieve the desired density
- Lift and slightly rotate the HP to randomize location of microbeams
- Use overlap to insure even treatment (50/50% overlap recommended for XD, 15mm; 50% overlap for XF).
- Allow time between passes (~2 min) to avoid bulk heating
- Use of Cool Roller[™] or pausing during the treatment may improve comfort

(continued)

Treatment plan

- For lower energy/lower coverage treatments
 - 3-4 treatments 1-4 weeks apart
- For higher energy/higher coverage treatments
 - 1-2 treatments
 - longer intervals between treatments
- Off face
 - longer intervals between treatments

(continued)

1540 Recommended Treatment Parameters

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Refer to the Icon[®] Treatment Guide for recommended parameters for:

- Skin Resurfacing and Coagulation of Soft Tissue
- Acne Scars and Surgical Scars
- Melasma
- Striae

1540 Skin Resurfacing and Coagulation of Soft Tissue				
	15 mm Tip	10 mm Tip	XD microlens™	XF microlens™
Energy (Millijoules per microbeam)	10—15 mJ/mB	40—70 mJ/mB	40—70 mJ/mB	30—50 mJ/mB
Pulse Width	10—15 ms	10—15 ms	15 ms	10—15 ms
Number of Passes (10-50% overlap)	3—4	3—6	3—6	1—2
Number of Treatments	2—5	2—5	2—5	1—2
Treatment Interval	3—4 weeks	3—4 weeks	3—4 weeks	3—4 weeks
For Skin Types IV-VI, use lower energy and pass settings or consider using the 15 mm tip with one to three (1-3) passes with lower energies, increasing energy based on Test Spots. Treating darker skin types below the visible erythema level reduces the risk of post-inflammatory hyperpigmentation (PIH).				
Acne Scars and Surgical Scars				
	15 mm Tip	10 mm Tip	XD microlens™	XF microlens™
Energy (Millijoules per microbeam)	10—15 mJ/mB	40—70 mJ/mB	40—70 mJ/mB	30—50 mJ/mB
Pulse Width	10—15 ms	10—15 ms	15 ms	10—15 ms
Number of Passes (10-50% overlap)	3—4	3—6	3—6	1—2
Number of Treatments	3—7	3—7	3—7	3—7
Treatment Interval	3—4 weeks	3—4 weeks	3—4 weeks	3—4 weeks
For Skin Types IV-VI, use lower energy and pass settings or consider using the 15 mm tip with one to three (1-3) passes with lower energies, increasing energy based on Test Spots. Treating darker skin types below the visible erythema level reduces the risk of post-inflammatory hyperpigmentation (PIH).				

1540 FRACTIONAL LASER

	Tip (mm)	Energy (mJ/mB)	Pulse Duration (ms)	Overlap (%)	Passes	Depth (μ m)	Coverage (%)
Superficial to Moderate Corrections	15	12—15	10—15	50%	2—4	460—590	30—40%
Moderate to Deep Corrections	10	50—70	10—15	50%	2	600—750	30—48%
Deep Corrections With the XD Microlens™	12 x 12	70	10—15	50%	3—5	900	24—36%
XF Microlens™	15	30—50	10—15	50% overlap pulse to pulse, 10% overlap row to row	2—3	675	24—36%

Suggested 1540 Treatment Technique

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Treatment Zones

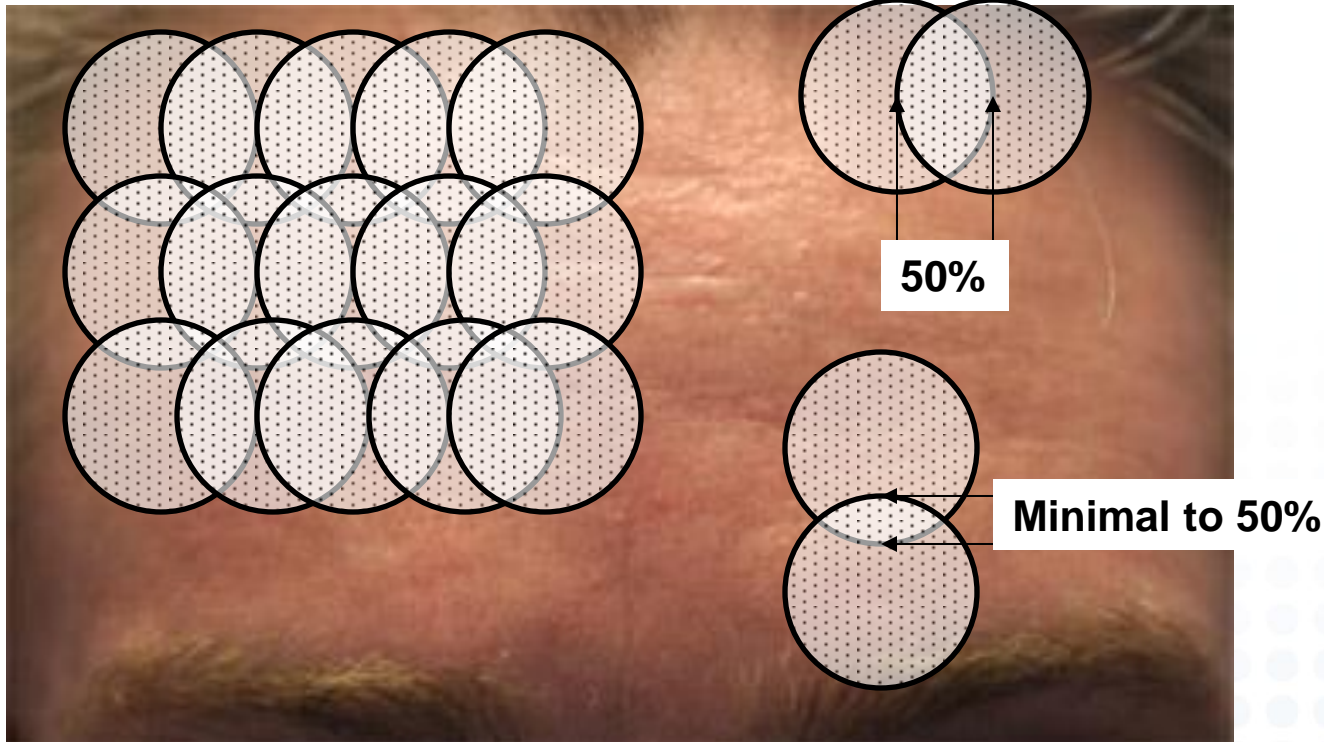
Deliver all passes to a limited area before moving to the next.

This will allow all energy to be delivered before significant edema occurs.

Suggested 1540 TX Technique

Overlap in both directions

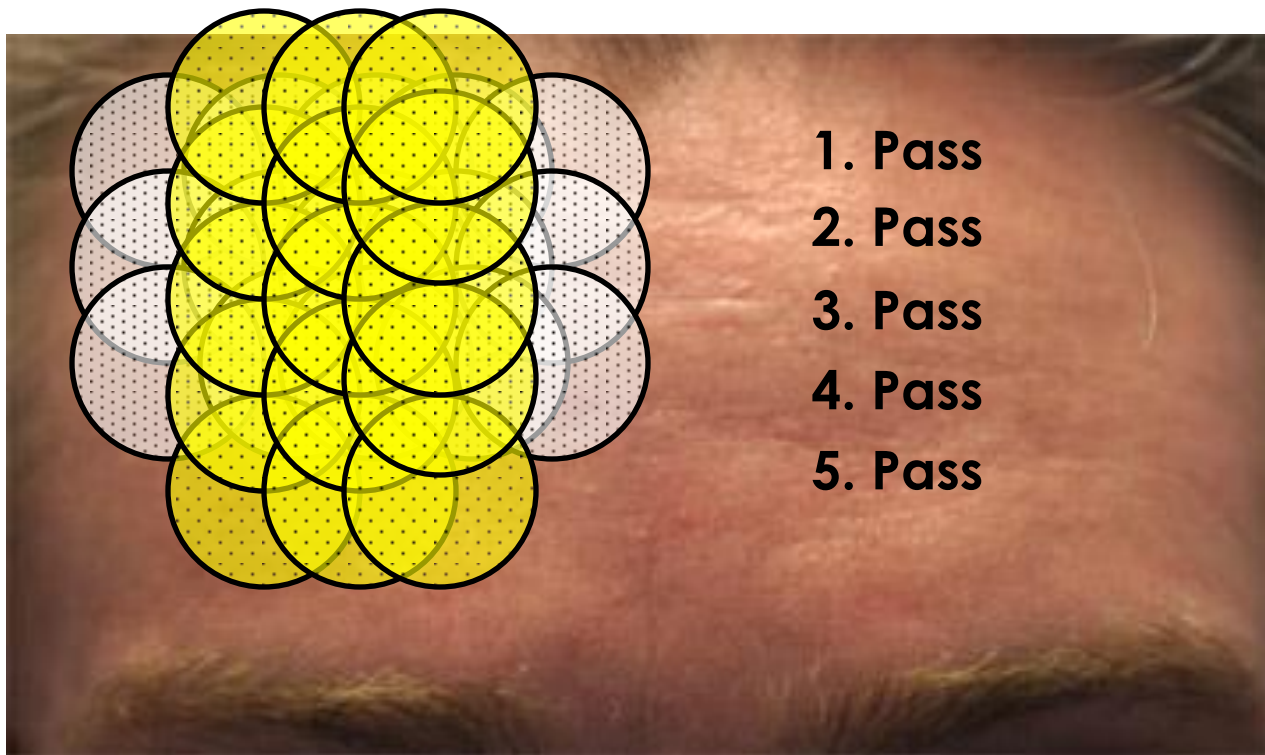
- 50%/50% overlap for XD, 15mm tip
- 50%/minimal overlap for XF tip



Suggested 1540 Treatment Technique

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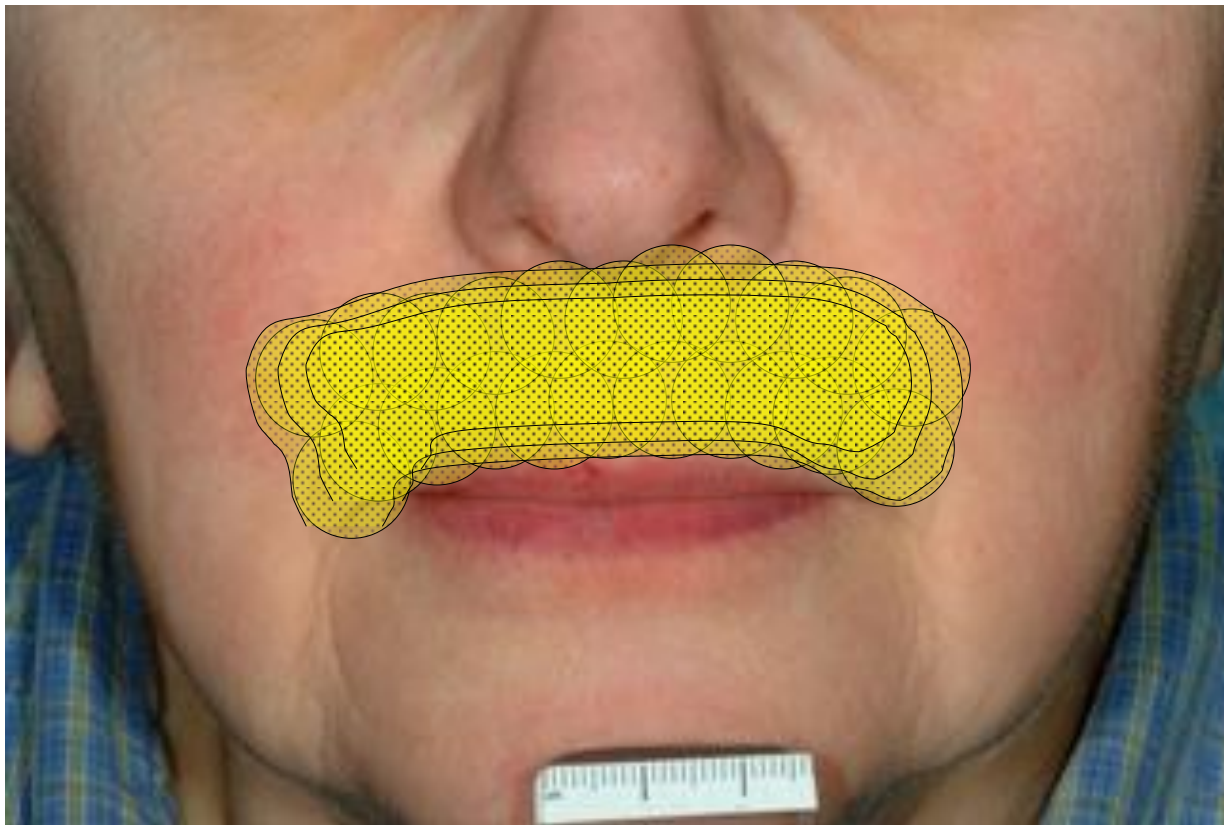


1. Pass
2. Pass
3. Pass
4. Pass
5. Pass

Suggested 1540 Treatment Technique

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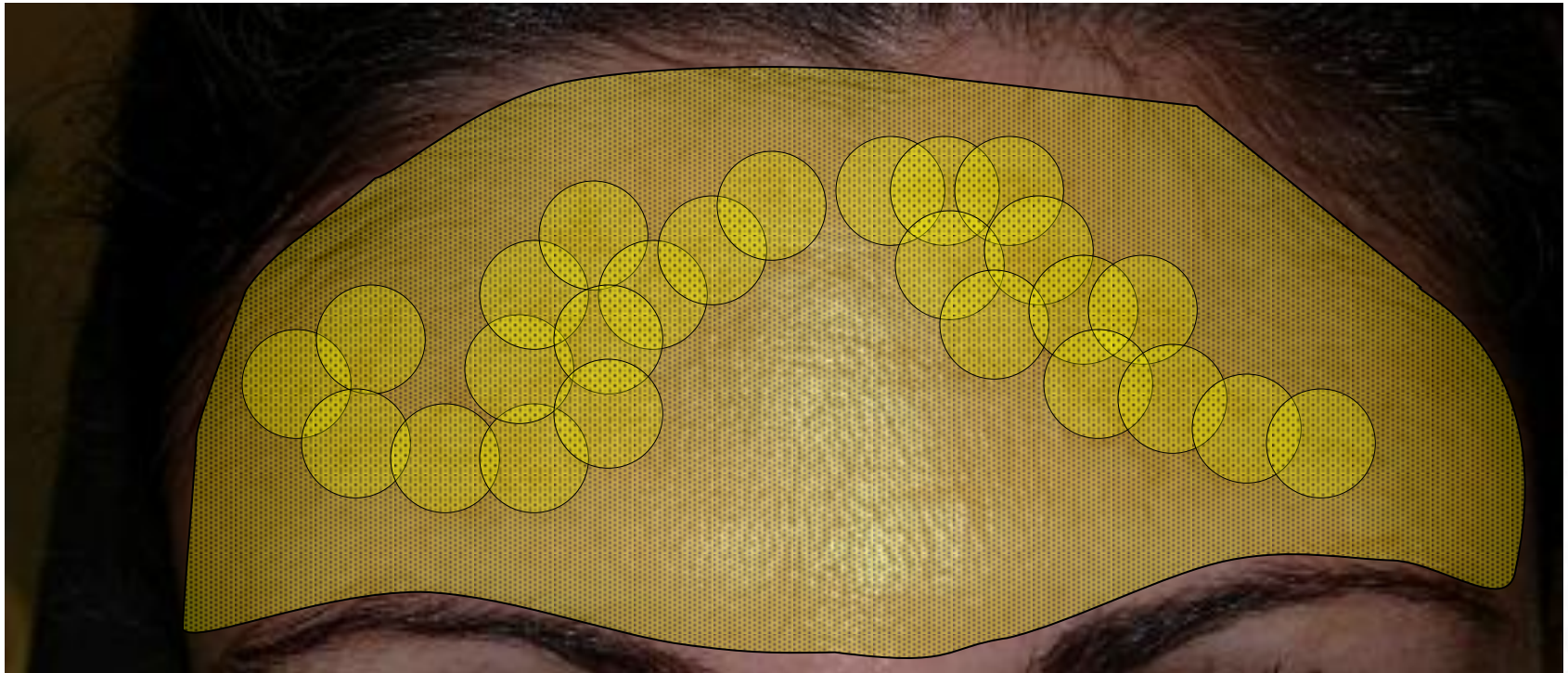


Offsetting passes and pulses will ensure good coverage and prevent over heating

Suggested 1540 Treatment Technique - Melasma

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Melasma with 1540



Pre Treatment



Post 3 Treatments

Photos courtesy of Tiffani K.
Hamilton, M.D.

1540 Clinical Endpoints

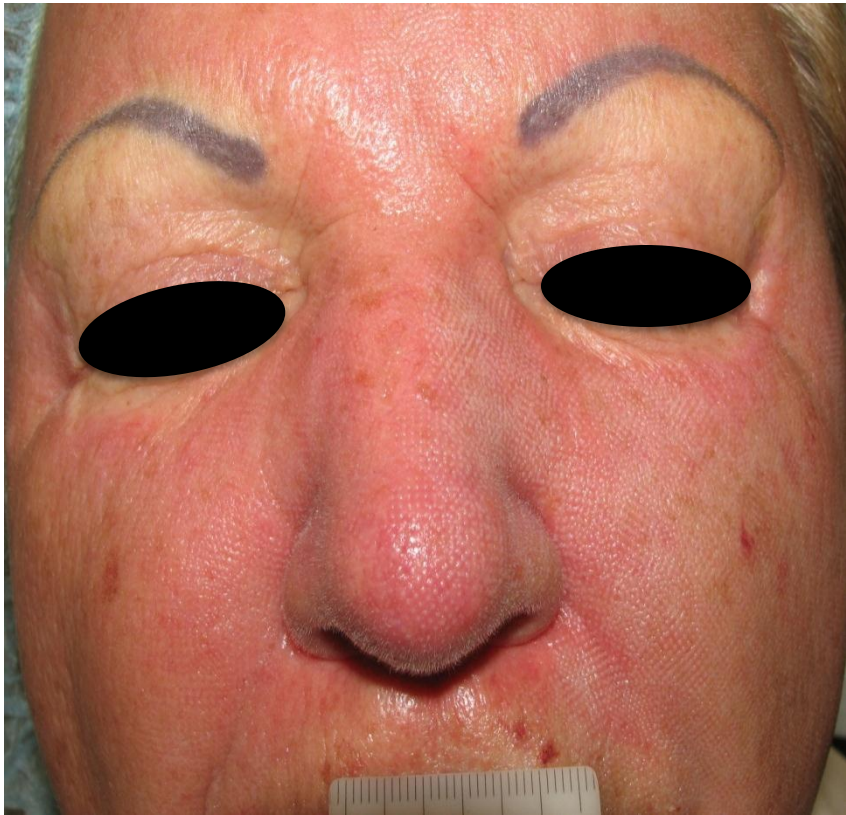


Desirable endpoints that *may* be observed are:

- Transient erythema and/or edema immediately post treatment
- Bronzing (brown debris) may develop a few days post treatment

Immediate Post Treatment XD Optic

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3 Day Post Non-ablative Treatment Cynosure[®]

Aggressive treatment

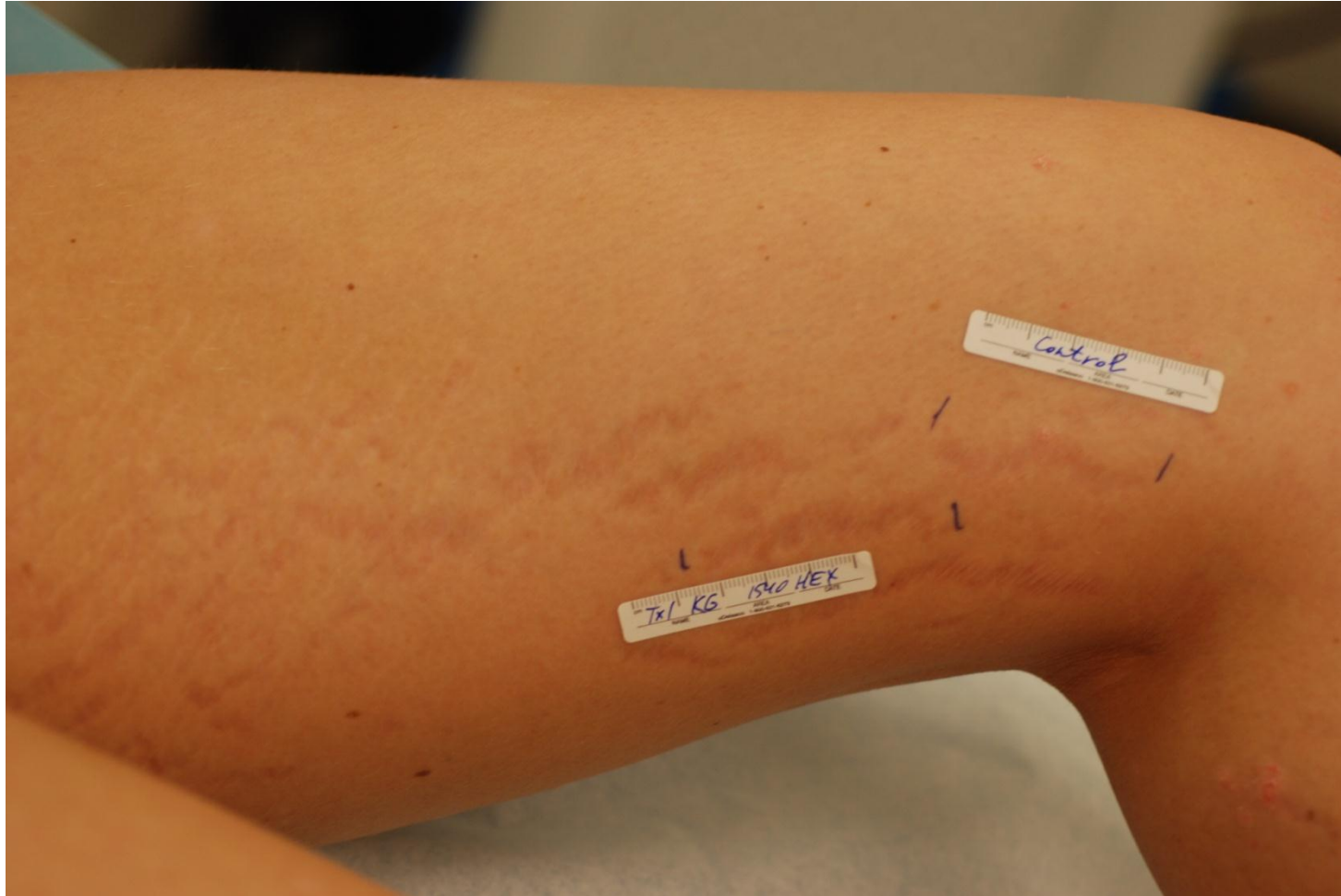


Less aggressive treatment



Striae Left Thigh Pre-treatment

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Striae (Thigh) Immediately Post 1540 Treatment

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1540 Possible Side Effects



- A low risk of prolonged itching, redness, and blistering
- Acne breakouts
- A risk of hyperpigmentation, hypopigmentation, burns, bruising, or blistering may occur, some of which may result in scarring. These complications are usually due to stacking pulses, or utilizing too many passes, at higher energy levels.
- A risk of infection following treatment, potentially resulting in side effects mentioned above.
- Advise clients to call treatment provider if any side effects occur

See Icon® Treatment Guide for details of Possible Side Effects

1540 Post Treatment Guidelines

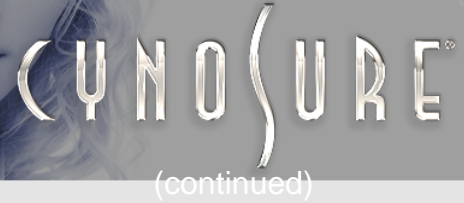


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- CoolRoller™, cool gel packs, immediately post TX
- Avoid make up or moisturizers for at least 24 hours post-treatment (to avoid acne breakouts)
- Gentle cleansing ; non-irritating cosmetics
- No retinoids 2 weeks prior and throughout the course of treatment (prolongs healing)

(continued)

1540 Post Treatment Guidelines



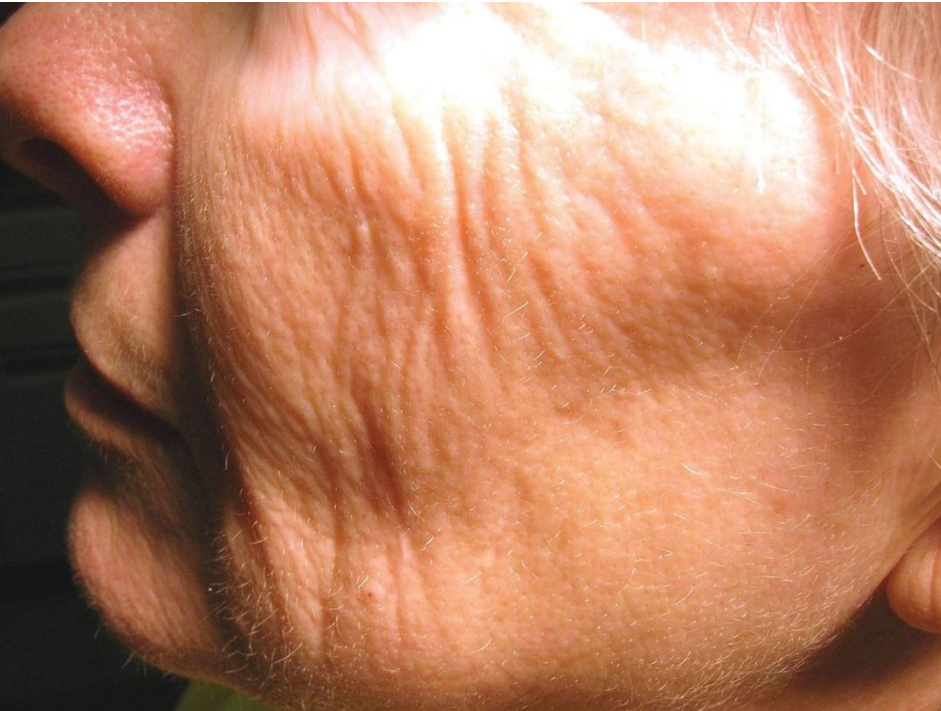
- Thin layer of occlusive ointment during the healing process to help minimize transepidermal water loss
- 10min soaks to gently remove bronzing/debris
- Treated areas should not be picked at or scrubbed
- Avoid unprotected sun exposure
- Avoid excessive exercise for 1 – 3 days after treatment
- Advise patient to contact the treatment provider if there are any issues or concerns following the treatment

See Icon® Treatment Guide for details of Post Treatment Guidelines

Fractional Non-Ablative Laser Skin Resurfacing

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Photos courtesy of Dwight
Scarborough, MD

Acne Scar Treatment



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Pre-Treatment



Post 4th Treatment

Photos courtesy of Stan Kovak, MD

Acne Scar Treatment

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Pre-Treatment



Post Treatment

Photos courtesy of Michael Sinclair, MD

Melasma



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Pre-Treatment



Post Treatment

Photos courtesy of Michael Sinclair, MD

Scars



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Pre-Treatment



Post Treatment

Photos courtesy of David B. Vasily, M.D.

Scars



Pre-Treatment



6 Weeks Post Treatment 3

Photos courtesy of David B. Vasily, M.D.

Scars



Pre 1540 Treatment



3 Months Post Treatment 3

Photos courtesy of David B. Vasily, M.D.

1540 Treatment for Striae

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Pre-treatment



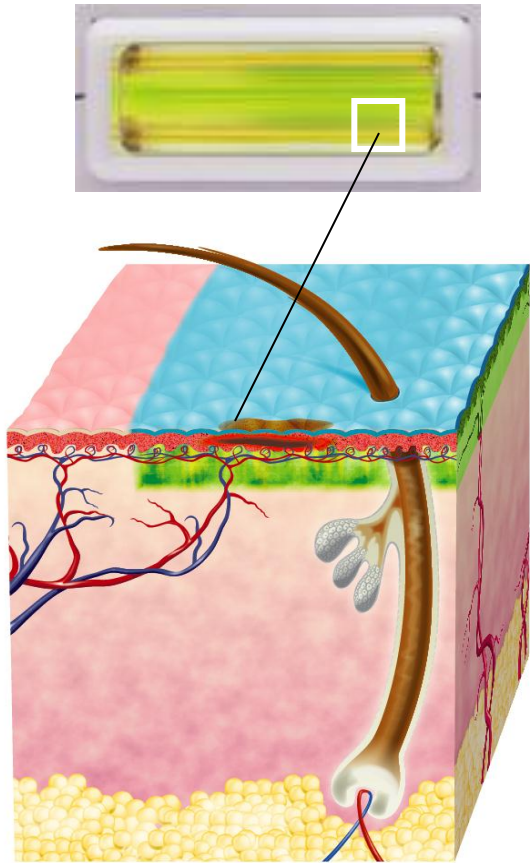
Post-treatment

Photos courtesy of Meditech

Example of Layered Approach to Photorejuvenation

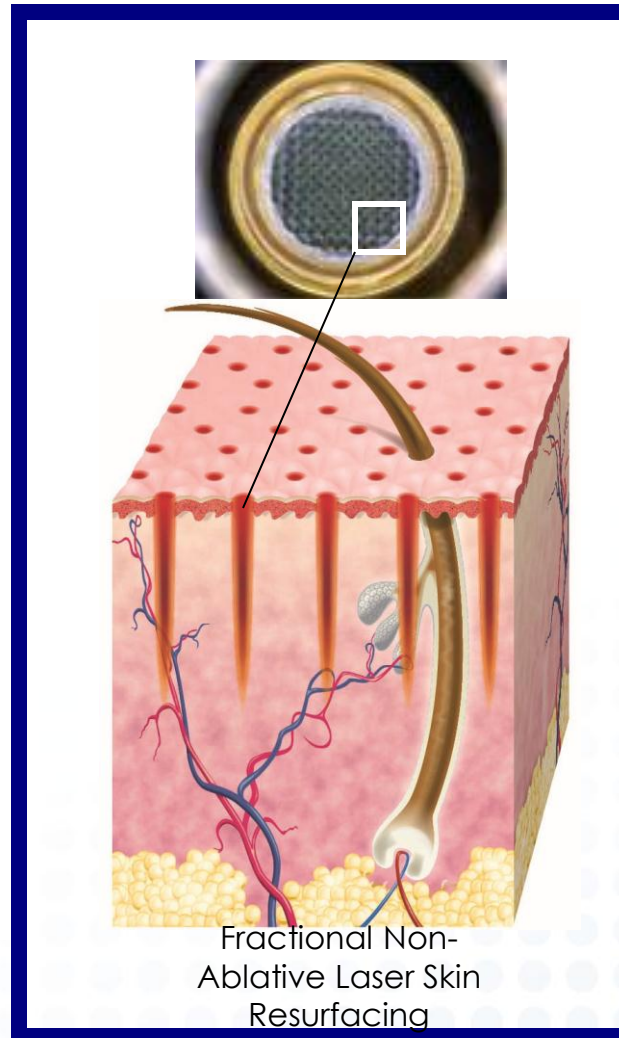
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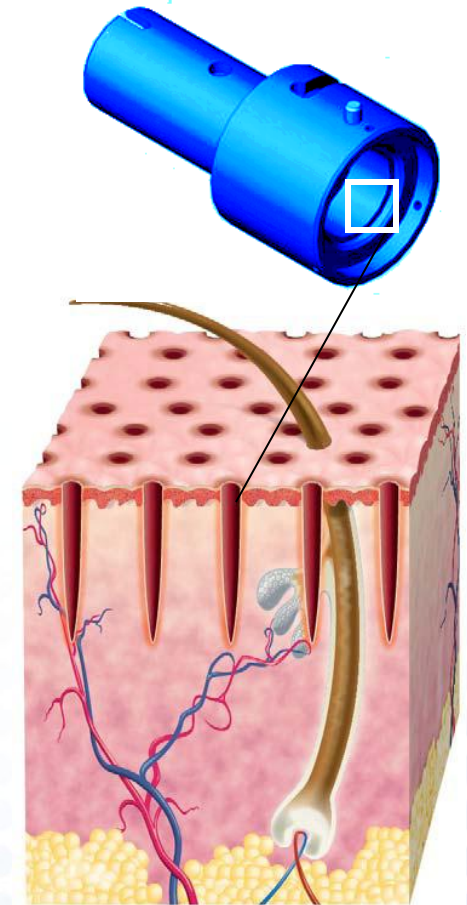


MaxG

Pigmented Lesions + Vascular Lesions



Fractional Non-Ablative Laser Skin Resurfacing

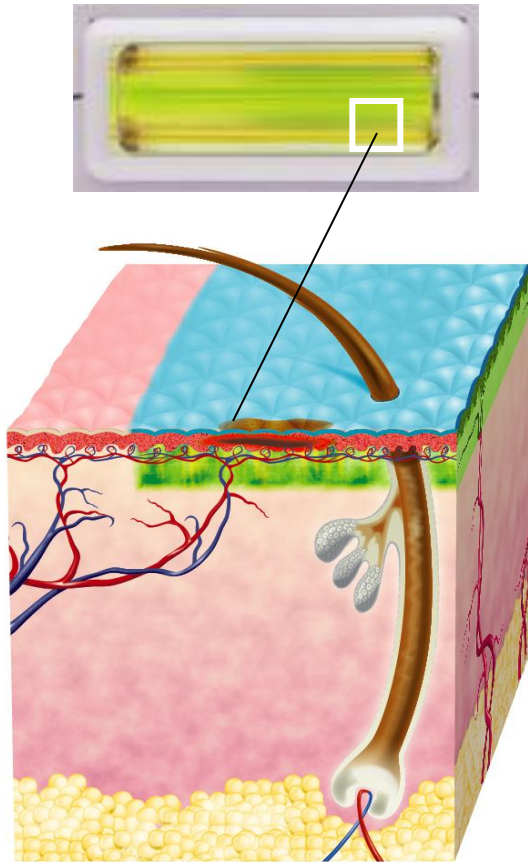


Fractional Ablative Laser Skin Resurfacing

Example of Layered Approach to Photorejuvenation

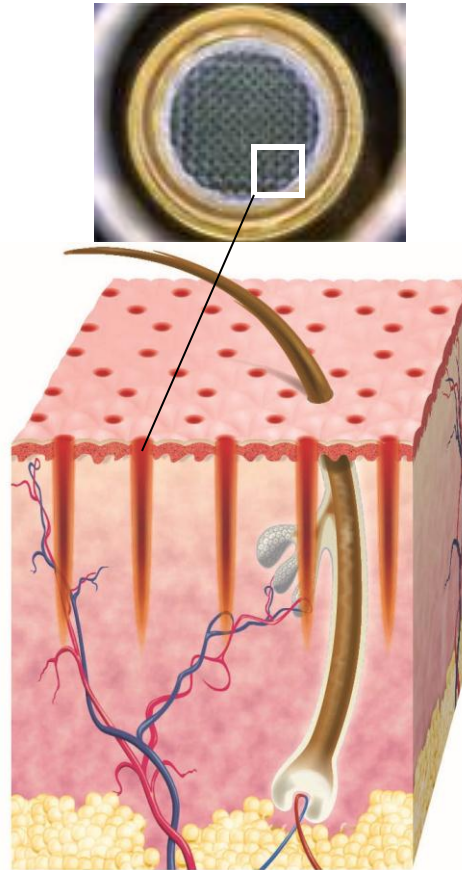
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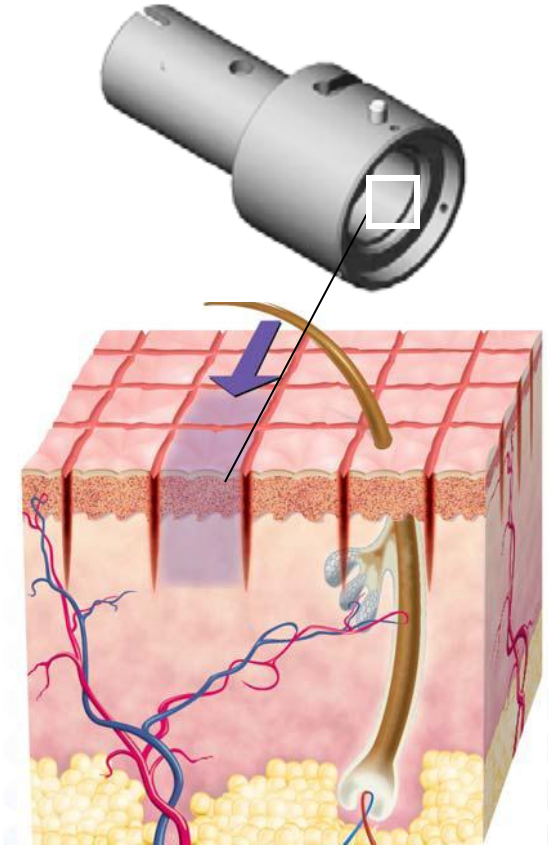


MaxG

Pigmented Lesions + Vascular Lesions



Fractional Non-Ablative Laser Skin Resurfacing

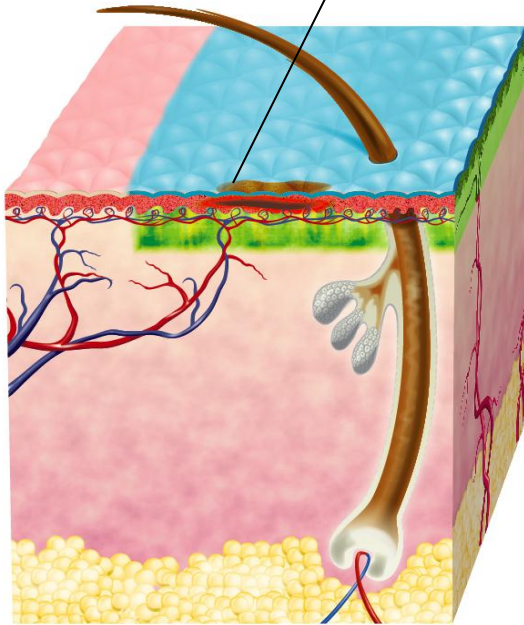
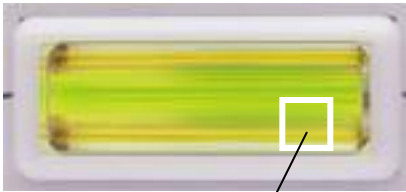


Groove™ Ablative Laser Skin Resurfacing

Example of Layered Approach to Photorejuvenation

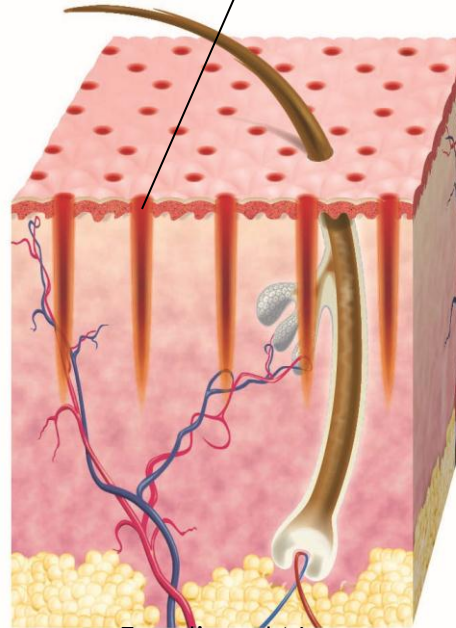
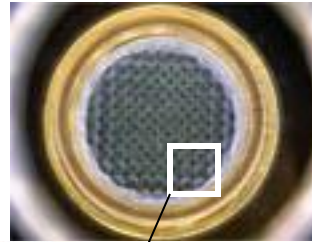
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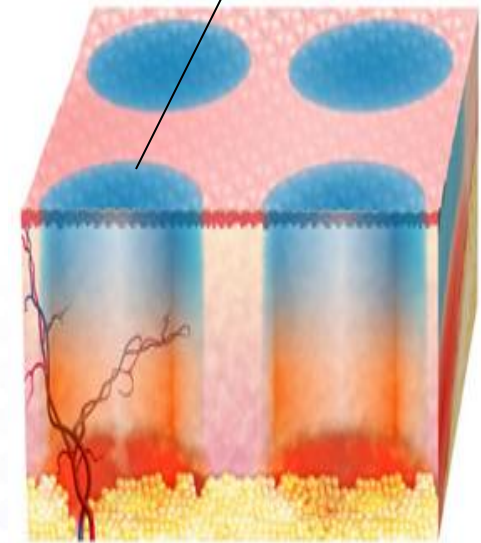
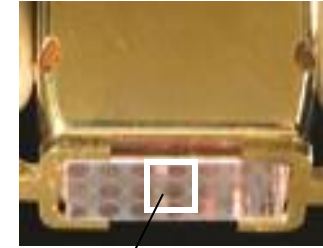


MaxG

Pigmented Lesions + Vascular Lesions



Fractional Non-Ablative Laser Skin Resurfacing



MaxIR

Soft Tissue Coagulation

1540 Fractional Laser



Q & A

