The Cutera excel V is a dual wavelength (532 nm and 1064 nm) laser system that can be used with two interchangeable handpieces.

- The CoolView (532 nm/1064 nm) handpiece with sapphire cooling window is indicated for treatment of benign vascular, cutaneous and pigmented lesions and mild to moderate inflammatory acne.
- The CoolView handpiece 1064 nm wavelength is also indicated for temporary and permanent hair reduction on all skin types (Fitzpatrick I – VI), including tanned skin. Permanent hair reduction is defined as long-term, stable reduction in hair counts observed at 6, 9 and 12 months after the end of a treatment regime.
- The genesis V (1064 nm) non-ablative skin therapy handpiece is indicated for treatment of wrinkles, rosacea/diffuse redness, scar reduction and Poikiloderma of Civatte.

**MECHANISM OF ACTION**

Using the CoolView handpiece, the excel V treats benign vascular, cutaneous and pigmented lesions by selectively targeting hemoglobin and melanin (selective photothermolysis) without causing thermal damage to the surrounding tissue.

- For benign vascular lesion treatments, laser light is absorbed by hemoglobin in the veins, and the heat produced causes photocoagulation. Heat is transferred to the vessel wall, which ultimately destroys the vessels and prevents recanalization. The laser treats individual veins, but new veins may appear due to an underlying disorder.
- For benign pigmented lesion treatments, the laser light is absorbed by superficial melanin in the lesion. Pigmented cells are denatured, darken, rise to the surface, and flake off over a couple of weeks.

Using the genesis V handpiece, the excel V treats wrinkles and diffuse redness (non-ablative skin therapy) by gently heating the dermis with the 1064 nm wavelength and microsecond pulses, which preferentially heat very fine vasculature. This treatment can be performed without epidermal cooling.
USING THESE TREATMENT GUIDELINES

These treatment guidelines are based on physician feedback and are provided as a guide only. They are not designed to be a substitute for clinical training. The excel V should only be operated by qualified practitioners who have received appropriate training and have thoroughly reviewed the Operator Manual that shipped with the system. When using the laser, always observe laser-tissue interaction and clinical endpoints to determine appropriate settings.

The parameter recommendations in these guidelines are for patients with Fitzpatrick skin types I-VI with the 1064 nm wavelength and skin types I-IV (unless otherwise indicated) with the 532 nm wavelength. In general, longer pulse durations and lower fluence are recommended for darker skin types and tanned skin. The increased melanin content in darker skin increases the risk for side effects.

Test pulses are always advised. Start conservatively, fire a test pulse, and evaluate tissue response before continuing or adjusting parameters. Be advised, however, that potential adverse reactions may take 24-48 hours or longer to appear.

INDICATIONS FOR USE
Refer to the Operator Manual for a complete list of indications for use.

The Cutera excel V is cleared for the treatment of:
- Benign vascular lesions
- Benign pigmented lesions
- Benign cutaneous lesions
- Wrinkles
- Mild to moderate inflammatory acne
- Hair reduction

CONTRAINDICATIONS
- Pregnant patients
- Patients undergoing treatment for skin cancer

WARNINGS
- Do not treat over dysplastic nevi or questionable pigmented lesions.
  - Online Melanoma resources include www.aad.org and www.cancer.org.
- Do not treat over or close to:
  - tattoos or permanent make-up
  - metal or electronic implants
- Hair removal by lasers or intense pulse light sources can cause increased hair growth in some individuals. Based upon currently available data, the highest risk groups for this response are females of Mediterranean, Middle Eastern and South Asian heritage treated on the face and neck

 PRECAUTIONS
- Do not treat patients who have taken Accutane in the past 6 months.
- Anticoagulants may increase the risk of purpura or bruising.
- Gold therapy may cause blue-gray discoloration.
- Vitiligo may cause de-pigmentation.
- Pre-treatment with an antiviral may be indicated for patients with herpes.
- Use caution when treating patients with a history of keloids or hypertrophic scarring.
- Do not treat over open wounds.
- Only treat over known benign lesions.
- Use caution when treating over hair bearing areas, as the laser energy may affect hair growth.

Refer to the Operator Manual for a complete list of contraindications, warnings, and precautions.
PATIENT ASSESSMENT

- Obtain a medical history and signed consent prior to treatment.
- Determine skin type to help guide treatment parameter selection.
  - Re-evaluate patient prior to each treatment.
  - Sun exposure may increase melanin content of the skin; treatment settings may need to be adjusted.
AVOIDING COMPLICATIONS

- Use extreme caution when treating near the eye.
  - Always treat outside the orbital rim of the eye aiming the beam away from the orbit.
  - Always use patient eye protection.
  - Point the sapphire window away from the eye and apply to the skin outside of the orbital rim.
- Sun exposure, tanning beds, and artificial tanning may increase the risk of side effects and adverse events.
  - Patients should avoid sun exposure, including tanning beds, and artificial tanning (spray tans, tanning lotions, etc.) for at least 4 weeks prior to treatment.
  - Patients with any residual sun tan in the treatment area have a higher risk of adverse events.
- Remove all traces of make-up prior to treatment.
- Keep top side of sapphire window clear of gel; wipe periodically with 4x4 gauze if necessary.
  - Excessive top side gel may affect laser beam output, possibly leading to adverse events.
- Darker skin types have an increased risk of complications and/or pigmentary issues.
- Pre and post cooling helps reduce the risk of complications.
- Reaction to treating over fillers and toxins is unknown.
- Reaction to treating over superficial cosmetic implants or threads is unknown.
- Place moist gauze between the lips and teeth to protect tooth enamel.
- Do not use parameters from other 532 nm or 1064 nm lasers.

PRE-TREATMENT PREPARATION

- Topical anesthetic is optional with CoolView treatments. If used, thoroughly remove before treating.
  - CAUTION: Toxicity may result from overuse. Consult the manufacturer’s labeling.
- Do not use topical anesthetic with genesis V procedures. Patient feedback is very important for non-ablative skin therapy.
- Clean patient’s skin, removing all make-up and/or topical anesthetic.
- Shave the treatment site if there is excessive hair.
- Take photographs prior to the initial treatment for future reference.
- To help prevent condensation of the sapphire window when treating with cooler Window Temperatures, place one drop of Anti-fog drops on top of the sapphire window prior to and during treatment when necessary.

SAFETY EYEWEAR

Safety eyewear appropriate for 532 nm and 1064 nm must be worn by ALL people in treatment room.

- The laser ships with opaque stainless steel patient goggles as well as operator goggles.
- Check the wavelength and optical density (OD ≥ 5.89 @ 532 nm and OD ≥5.81 @ 1064 nm) marked on all operator goggles.
- Apply wet gauze over the eye lid when using metal eye shields.
  - CAUTION: Metal eye shields may increase in heat and burn the patient if a protective layer of gauze is not used.
1. **Fluence** is the energy measured in J/cm². Press the Up/Down arrows to adjust.

2. **Pulse Duration** is the length of each pulse measured in milliseconds (ms). Press the UP/Down arrows to adjust. The pulse duration is set to 0.3 ms and cannot be adjusted when using the genesis V handpiece.

3. **Repetition Rate** is the number of pulses per second measured in Hz with foot pedal depressed. Press the Up/Down arrows to adjust.

4. **Temperature** can be adjusted to 5°C, 10°C, 15°C, or 20°C by selecting the Temperature Icon. The real time temperature is also displayed. The temperature cannot be adjusted when using the genesis V handpiece.

5. **Memory Button** saves 3 different settings per wavelength for common indications.

6. **Number of Pulses** is displayed. Press the reset button to reset.

7. **Spot Size** is adjustable from 2 - 12 mm. Press –/+ to adjust. The Spot Size cannot be adjusted when using the genesis V handpiece.

8. **Standby/Ready Button** – Press to toggle between Standby and Ready Mode. Standby/Ready button is yellow and the handpiece cannot be fired when in Standby Mode. Standby/Ready button is green when in Ready Mode. The system will not go into ready mode unless the handpiece is out of the holster. Press the foot pedal to start the pulse after the “flute” sound indicates system is ready.

9. **Wavelength** – Chosen wavelength will be displayed. Select either 532 nm or 1064 nm to select wavelength for treatment. The wavelength cannot be adjusted when using the genesis V handpiece.

10. **Information Screen** – The Information & Adjustment Screen can be accessed to verify system software version or adjust the screen brightness, volume level or beam intensity.

**NOTE:** Treatment parameters are interrelated. Therefore, not all parameter combinations are simultaneously available. If you attempt to select a treatment setting that is not available, the system emits a distinct audible tone. Changing one or more of the other parameters may enable you to select the desired treatment setting.
VASCULAR TREATMENTS WITH 532 NM AND 1064 NM WAVELENGTHS

VASCULAR TREATMENT PROCESS

- The purpose of the treatment is to selectively treat the target of hemoglobin (chromophore) without causing thermal damage to the surrounding tissue.
- Laser light is absorbed by hemoglobin in the veins and the heat produced causes photocoagulation.
- This heat is transferred to the vessel wall which affects the collagen and ultimately helps to destroy the vessel and prevent recanalization.
- The laser treats individual veins but new veins may appear due to an underlying disorder

TYPES OF VEINS

Telangiectasia or spider veins – treat with 532 or 1064 nm wavelength
- Up to 1 mm in diameter
- Superficial, small veins; pink to purple in color

Reticular veins or “feeder veins” – treat with 1064 nm wavelength
- 1 – 3 mm in diameter
- Superficial collecting veins that are blue green

Varicose veins – usually requires surgery, not appropriate for laser therapy
- Vary in diameter
- Bulging and twisting veins of the lower extremity caused by increased venous pressure as a result of venous incompetence
- Bulging varicose veins should be evaluated by a vascular surgeon

REFLUXING OR INCOMPETENT VEINS

- Venous reflux or incompetence is a diseased or abnormal valve that is no longer able to close when subjected to pressure. This failure to close prevents the valve from stopping the backward flow of blood. In response to gravity, blood pours backward (like a waterfall), overloading the vein with volume and pressure which leads to the development of varicose veins.
- Duplex ultrasound may be ordered to diagnose possible reflux of the Greater or Lesser Saphenous Vein which is usually treated surgically.
SELECTING TREATMENT PARAMETERS FOR VASCULAR TREATMENTS

Select parameters in the order listed below. Always start with the least aggressive settings for a specific vessel. Observe laser-tissue interaction and clinical response to determine appropriate settings for each patient.

1. **Wavelength** is measured in nanometers (nm). Selection is based on vessel depth and color.
   - superficial vessel (fine to moderate size, pink to red) = 532 nm
   - larger, deeper vessel (very dark red, blue to purple) = 1064 nm

2. **Spot Size** is measured in millimeters (mm). Selection is based on treatment type and vessel depth.
   - linear vessels, superficial = smaller spot size
   - linear vessels, deeper = larger spot size
   - area treatments/diffuse redness = larger spot size
   - larger spot sizes penetrate deeper with the 1064 nm wavelength and are typically more uncomfortable.

3. **Fluence** is the energy, measured in J/cm². Selection is based on vessel size, depth, and skin type.
   - 532 nm: smaller vessels = lower fluence; larger vessels = higher fluence
   - 1064 nm: smaller vessels = higher fluence; larger vessels = lower fluence
   - darker skin types or tan skin = lower fluence

4. **Pulse Duration** is the length of each pulse, measured in milliseconds (ms). Selection is based on vessel size and color.
   - smaller diameter, lighter vessel = shorter pulse duration
   - larger diameter, darker vessel = longer pulse duration
   - darker skin types or tan skin = longer pulse duration
   - Pulse durations shorter than 10 ms increase the likelihood of purpura when treating vascular lesions.

5. **Window Temperature** is measured in ° Celsius. Four options are available: 5°, 10°, 15°, and 20° C.
   - 5° or 10° C is recommended for vascular indications for increased epidermal protection and patient comfort.
   - 5° C is recommended for larger, darker vessels and vascular birthmarks (more hemoglobin).
   - Use the lowest window temperature in which the desired clinical endpoint can be achieved.

6. **Repetition Rate** is the number of pulses per second, measured in Hz, with foot pedal depressed.
   - For increased epidermal safety, use single pulses (0.0 Hz) with pre and post cooling.
   - Low to Moderate Repetition Rate is recommended for the large area Global Treatment.

7. **Contact Cooling** – Sapphire window provides pre, parallel, and post cooling.
   - Pre-cooling protects the epidermis by reducing initial skin temperature.
   - Parallel cooling during the laser pulse protects the epidermis while the laser is firing.
   - Post-cooling extracts heat from tissue to help prevent epidermal injury.
   - Longer pre and post cooling is recommended when treating larger, darker vessels, darker skin types and tan skin.

---

**Spot Size**

- Linear vessels
- Superficial vessels

**Fluence**

- 532 nm: Smaller vessels
- 1064 nm: Larger vessels

**Pulse Duration**

- Smaller vessels
- Larger vessels
- Darker skin types
- Tan skin

---

D1091 Rev.M August. 2016
TREATMENT PARAMETERS – 532 NM VASCULAR WITH COOLVIEW HANDPIECE

These parameters are provided as a guide only for skin types I-IV, unless otherwise stated. Observe laser-tissue interaction and clinical endpoints to determine appropriate settings. 532 nm is NOT recommended for the treatment of unwanted periorbital veins, venous lakes, reticular leg veins, or purple/nodular port wine stains. For these indications, 1064 nm is the preferred wavelength. Darker III and IV skin types, such as Asian, Latino, and Mediterranean, have a higher risk of PIH and other adverse events and should be treated with more conservative settings.

<table>
<thead>
<tr>
<th>Example Picture</th>
<th>Vessel Type</th>
<th>Temp</th>
<th>Spot Size</th>
<th>Fluence</th>
<th>Pulse Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Facial Telangiectasia" /></td>
<td>Facial Telangiectasia</td>
<td>5°</td>
<td>5 mm</td>
<td>8 – 10 J/cm²</td>
<td>8 – 12 ms</td>
</tr>
<tr>
<td><img src="image2" alt="Facial Telangiectasia" /></td>
<td>Facial Telangiectasia</td>
<td>5°</td>
<td>7 mm</td>
<td>7.4 – 9 J/cm²</td>
<td>10 – 20 ms</td>
</tr>
<tr>
<td><img src="image3" alt="Fine Leg Telangiectasia" /></td>
<td>Fine Leg Telangiectasia</td>
<td>5°</td>
<td>5 mm</td>
<td>8.4 – 11 J/cm²</td>
<td>8 – 15 ms</td>
</tr>
<tr>
<td><img src="image4" alt="Matting (Face or Nose)/Rosacea (Global Treatment)" /></td>
<td>Matting (Face or Nose)/Rosacea (Global Treatment)</td>
<td>5°</td>
<td>7 mm</td>
<td>8 – 10 J/cm²</td>
<td>8 – 15 ms</td>
</tr>
<tr>
<td><img src="image5" alt="Matting (Neck or Chest)" /></td>
<td>Matting (Neck or Chest)</td>
<td>5°</td>
<td>10 mm</td>
<td>6 – 9 J/cm²</td>
<td>8 – 15 ms</td>
</tr>
<tr>
<td><img src="image6" alt="Matting (Neck or Chest)" /></td>
<td>Matting (Neck or Chest)</td>
<td>5°</td>
<td>12 mm</td>
<td>5 – 8 J/cm²</td>
<td>8 – 15 ms</td>
</tr>
<tr>
<td><img src="image7" alt="Matting (Neck or Chest)" /></td>
<td>Matting (Neck or Chest)</td>
<td>5°</td>
<td>12 mm</td>
<td>5 – 7.4 J/cm²</td>
<td>10 – 20 ms</td>
</tr>
<tr>
<td><img src="image8" alt="Diffuse Redness (Face)" /></td>
<td>Diffuse Redness (Face)</td>
<td>5°</td>
<td>10 mm</td>
<td>6 – 8 J/cm²</td>
<td>10 – 20 ms</td>
</tr>
<tr>
<td><img src="image9" alt="Diffuse Redness (Face)" /></td>
<td>Diffuse Redness (Face)</td>
<td>5°</td>
<td>12 mm</td>
<td>5 – 8 J/cm²</td>
<td>8 – 12 ms</td>
</tr>
<tr>
<td><img src="image10" alt="Cherry or Spider Angiomas" /></td>
<td>Cherry or Spider Angiomas</td>
<td>10°</td>
<td>3 mm</td>
<td>10 – 14 J/cm²</td>
<td>6 – 12 ms</td>
</tr>
<tr>
<td><img src="image11" alt="Cherry or Spider Angiomas" /></td>
<td>Cherry or Spider Angiomas</td>
<td>10°</td>
<td>5 mm</td>
<td>8 – 12 J/cm²</td>
<td>8 – 15 ms</td>
</tr>
<tr>
<td><img src="image12" alt="Skin Tags or Sebaceous Hyperplasia" /></td>
<td>Skin Tags or Sebaceous Hyperplasia</td>
<td>15°- 20°</td>
<td>2 mm</td>
<td>16 – 20 J/cm²</td>
<td>4 – 10 ms</td>
</tr>
<tr>
<td><img src="image13" alt="Skin Tags or Sebaceous Hyperplasia" /></td>
<td>Skin Tags or Sebaceous Hyperplasia</td>
<td>15°- 20°</td>
<td>3 mm</td>
<td>14 – 18 J/cm²</td>
<td>4 – 10 ms</td>
</tr>
</tbody>
</table>
TREATMENT TECHNIQUE – 532 NM VASCULAR WITH COOLVIEW HANDPIECE

• WARNING: The red diode aiming beam in the sapphire window should be in full contact with the skin before, during, and after the laser pulse.
  - Pay close attention when treating over the nose or curved areas to ensure full contact with the sapphire window where the red aiming beam is present.
  - Consider using a smaller spot size if you cannot ensure full contact with the sapphire window.

• Technique:
  - Apply a thin layer of clear gel (such as ultrasound gel) for increased epidermal protection and patient comfort and seat the sapphire window gently on the skin.
  - Ensure that no large bubbles are present under the aiming beam.
  - Do not apply too much pressure on the skin with the handpiece while treating vessels to avoid compressing the target.
  - Create suction by gently lifting the handpiece slightly while maintaining contact.
  - Pre-cool area with sapphire window, depress the foot pedal to fire a pulse, then glide handpiece to next treatment area and repeat.
  - Ensure that handpiece has complete contact with skin during each pulse.

• Always observe the epidermis during the treatment, watching for signs of damage (blanching or gray coloration).
  - If damage is seen, stop the treatment and apply a cool compress and evaluate the area for possible complications and wound care.

• Common endpoints are transient or persistent color change within the vessel, vessel disappearance or constriction, erythema, or purpura.
  - If the clinical endpoint is not reached, shorten the pulse duration or increase the fluence.

• Treating small vessels
  - Place the treatment pulses sequentially with a slight overlap.
  - Do not stack pulses or double pulse.

• Treating diffuse redness/matting
  - 10 – 12 mm spot size (Global Treatment) recommended.
  - Overlap pulses by no more than 10-20%.
  - Only 1 pass recommended.

• Treatment of Diffuse Redness with Discreet Vessels –
  - If a patient wants fewer treatments with more downtime:
    - Option 1: Combine small and large spot sizes.
      - Use a 3 - 5mm spot size to trace smaller vessels
      - Follow with 10 – 12 mm spot size treatment covering the entire area (Global Treatment).
      - Overlap pulses by no more than 10-20%.
      - Only 1 pass recommended.
      - The risk of edema is high.
      - Fewer treatments may be required.
      - Lowering the fluence can decrease downtime but increases number of treatments
    - Option 2: Use large spot size only.
      - Treat the entire area with large 10 – 12 mm spot size (Global Treatment)
        - Overlap pulses by no more than 10-20%.
        - Follow with additional pulses on areas that did not respond with the same spot size.
        - It is not recommended to do a full second pass with the 10 – 12 mm spot size.
      - The risk of edema is high.
      - Fewer treatments are usually required.
      - Lowering the fluence can decrease downtime but increase number of treatments
  - If a patient wants more treatments with less downtime per treatment:
    - Treat discreet vessels with 3 – 5 mm spot size.
    - Follow with genesis V to treat the diffuse redness.
    - The 3 – 5 mm spot size may cause localized edema.
    - More treatments may be required with this technique.
• Treating off the face:
  o Use conservative parameters when treating large areas.
  o Lower the fluence, lengthen the pulse duration, and slow the repetition rate.
  o More treatments may be required.
  o Risk of an adverse event is higher.
• Treating skin tags or sebaceous hyperplasia:
  o Pulse 2-3 times, pre and post cooling in between in pulse, until endpoint is reached.
  o Treat only the lesion and not the surrounding tissue.
  o Common endpoints for skin tags and sebaceous hyperplasia are a dusky or slightly frosty look.
• Common treatment intervals are every 4-6 weeks.

POST TREATMENT CARE VASCULAR LESIONS
• Cold compresses or chilled gel packs may be applied post treatment.
• If a blister develops, treat as a wound.
• Retreatment of vessels is not recommended prior to 4-6 weeks.
• Avoid sun exposure and use a broad spectrum (UVA/UVB) sunscreen to minimize the risk of PIH (Post Inflammatory Hyperpigmentation).
• Bruising, redness, and swelling are common and resolve with time.
• Urticarial reaction (hive-like/bug-bite look) is common and usually resolves in 1-2 days.
• Avoid heat (hot tubs, saunas, etc.) for 1-2 days post-treatment.
• Avoid skin irritants (i.e., products containing tretinoin, retinol, benzoyl peroxide, glycolic/salicylic acids, astringents, etc.) a few days post-treatment.
• Request that the patient contact your office with any concerns, such as blistering, excessive redness/swelling, etc.
TREATMENT PARAMETERS – 532 NM OTHER WITH COOLVIEW HANDPIECE

These parameters are provided as a guide only for skin types I-IV, unless otherwise stated. Observe laser-tissue interaction and clinical endpoints to determine appropriate settings.

<table>
<thead>
<tr>
<th>Example Picture</th>
<th>Vessel Type</th>
<th>Temp</th>
<th>Spot Size</th>
<th>Fluence</th>
<th>Pulse Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Red Scar</td>
<td>5°</td>
<td>7 mm</td>
<td>5.4 – 7.0 J/cm²</td>
<td>3 – 10 ms</td>
</tr>
<tr>
<td>(Skin Types I-IV)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Bruising</td>
<td>5°</td>
<td>8 mm</td>
<td>8 – 10 J/cm²</td>
<td>6 – 10 ms</td>
</tr>
<tr>
<td>(Skin Types I-V)</td>
<td></td>
<td></td>
<td>(Lighter)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5°</td>
<td>10 mm</td>
<td>5 – 7 J/cm²</td>
<td>8 – 15 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(Darker)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TREATMENT TECHNIQUE – 532 NM OTHER WITH COOLVIEW HANDPIECE

- **WARNING:** The red diode aiming beam in the sapphire window should be in full contact with the skin before, during, and after the laser pulse.
  - Pay close attention when treating over the nose or curved areas to ensure full contact with the window where the red aiming beam is present.
  - Consider using a smaller spot size if you cannot ensure full contact with the sapphire window.
- Apply a thin layer of clear gel (such as ultrasound gel) for increased epidermal protection and patient comfort.
- Ensure that there are no large air bubbles underneath the sapphire window.
- Always observe the epidermis during the treatment, watching for signs of damage (blanching or gray coloration).
  - If damage is seen, stop the treatment and apply a cool compress and evaluate the area for possible complications and wound care.

Scar Treatments

- Only one pass is recommended.
- 3+ treatments spaced 4 weeks apart are recommended.
- Treat to the minimal clinical response.
- Common endpoints are momentary flush or a slight blue tinged in the vessels.
  - Minimal change or even temporary change in color is expected.
  - Never double-pulse, even if clinical endpoint is not seen.

Bruising

- Ideally, treatment should be performed soon after the bruise is stabilized (typically 24-36+ hours) and well before yellowing.
  - 18-24 hours for superficial bruises
  - 36+ hours for traumatic bruises
- Double-pass using a basket-weave pattern recommended for lighter bruises with less target.
- One pass recommended for darker bruises with more target.
- The endpoint is typically not visible.
  - There may be a softening of the bruise color immediately post-treatment.
- The bruise will typically begin to fade within a few hours after treatment.
TREATMENT PARAMETERS – 1064 NM VASCULAR WITH COOLVIEW HANDPIECE

These parameters are provided as a guide only for skin types I-V, unless otherwise stated. Observe laser-tissue interaction and clinical endpoints to determine appropriate settings. 1064 nm is NOT recommended for the treatment of pigmented lesions, poikiloderma, diffuse redness, matting, or pink port wine stains. For these indications, 532 nm is the preferred wavelength.

<table>
<thead>
<tr>
<th>Example Picture</th>
<th>Vessel Type</th>
<th>Temp</th>
<th>Spot Size</th>
<th>Fluence</th>
<th>Pulse Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Purple/Blue Facial Telangiectasia" /></td>
<td>Purple/Blue Facial Telangiectasia</td>
<td>5°</td>
<td>5 mm</td>
<td>90 – 130 J/cm²</td>
<td>15 – 50 ms</td>
</tr>
<tr>
<td><img src="image" alt="Periorbital Blue Veins" /></td>
<td>Periorbital Blue Veins</td>
<td>5°</td>
<td>5 mm</td>
<td>90 – 130 J/cm²</td>
<td>25 – 50 ms</td>
</tr>
<tr>
<td><img src="image" alt="Red Spider Leg Veins 1 - 2 mm" /></td>
<td>Red Spider Leg Veins 1 - 2 mm</td>
<td>5°</td>
<td>4 mm</td>
<td>100 – 170 J/cm²</td>
<td>10 – 30 ms</td>
</tr>
<tr>
<td><img src="image" alt="Purple Spider Leg Veins" /></td>
<td>Purple Spider Leg Veins</td>
<td>5°</td>
<td>4 mm (Target &lt; 2 mm)</td>
<td>110 – 160 J/cm²</td>
<td>15 – 45 ms</td>
</tr>
<tr>
<td><img src="image" alt="Purple Spider Leg Veins" /></td>
<td>Purple Spider Leg Veins</td>
<td>5°</td>
<td>6 mm (Target ≥ 2 mm)</td>
<td>110 – 155 J/cm²</td>
<td>25 – 45 ms</td>
</tr>
<tr>
<td><img src="image" alt="Reticular Leg Veins 2 - 4 mm" /></td>
<td>Reticular Leg Veins 2 - 4 mm</td>
<td>5°</td>
<td>6 mm</td>
<td>110 – 160 J/cm²</td>
<td>35 – 60 ms</td>
</tr>
<tr>
<td><img src="image" alt="Cherry or Spider Angioma" /></td>
<td>Cherry or Spider Angioma</td>
<td>5°</td>
<td>3 mm (Target ≤ 2 mm)</td>
<td>130 – 170 J/cm²</td>
<td>8 – 30 ms</td>
</tr>
<tr>
<td><img src="image" alt="Cherry or Spider Angioma" /></td>
<td>Cherry or Spider Angioma</td>
<td>5°</td>
<td>5 mm (Target ≥ 2 mm)</td>
<td>90 – 150 J/cm²</td>
<td>15 – 40 ms</td>
</tr>
<tr>
<td><img src="image" alt="Venous Lake" /></td>
<td>Venous Lake</td>
<td>5°</td>
<td>5 mm (Target &lt; 4 mm)</td>
<td>70 – 120 J/cm²</td>
<td>20 – 50 ms</td>
</tr>
<tr>
<td><img src="image" alt="Venous Lake" /></td>
<td>Venous Lake</td>
<td>5°</td>
<td>6 mm (Target &gt; 4 mm)</td>
<td>70 – 120 J/cm²</td>
<td>30 – 50 ms</td>
</tr>
</tbody>
</table>
TREATMENT TECHNIQUE – 1064 NM VASCULAR WITH COOLVIEW HANDPIECE

- **WARNING:** The red diode aiming beam in the sapphire window should be in full contact with the skin before, during, and after the laser pulse.
  - Pay close attention when treating over the nose or curved areas to ensure full contact with the window where the red aiming beam is present.
  - Consider using smaller spot size if you cannot ensure full contact with the sapphire window.
- Test pulses are always advised. Observe laser-tissue interaction before proceeding.
- Apply a thin layer of clear gel (such as ultrasound gel) for increased epidermal protection and patient comfort.
- When treating skin types IV-VI, use a longer pulse duration.
- Ensure each pulse receives both pre and post cooling.
  - Pre-cooling the skin prior to each pulse helps to prevent epidermal damage.
  - The length of pre and post cooling time required will vary according to size, color, and depth of vessel.
    - Larger, darker vessels require longer pre and post cooling.
  - The crystal precools the next pulse when using smaller spot sizes.
- Always observe the epidermis during the treatment, watching for signs of damage (blanching or gray coloration).
  - If damage is seen, stop the treatment and apply a cool compress and evaluate the area for possible complications and wound care.
- **Tissue response**
  - Start with a test pulse, pre-cooling well.
  - Gradually shorten the pulse duration until desired pulse duration is reached, then increase the fluence.
  - Experienced practitioners may treat an area with more than one pulse after cooling, but be aware of stacking the energy/heat and the increased likelihood of tissue injury.
  - Consider returning to the area in 10 minutes to re-evaluate tissue response.
- **Leg Veins vs. Facial Telangiectasia**
  - Increased hydrostatic pressure
  - Lower extremity vessels are larger and have increased basal lamina compared to facial telangiectasia
  - Difficult access due to deeper location of lower extremity vessels
  - Altered cytokine patterns upon vessel injury
- **Venous Response to Laser Pulse**
  - 1064 nm used on vessels greater than 1 mm
  - Complete and irreversible stenosis after one pass
  - Immediate disappearance of vessel followed by sliver like thread
  - Constriction from heated collagen "relaxes" with cooling
  - Inflammation and intravascular thrombosis occurs
  - Even without complete thrombosis, vein wall is damaged
    - Thrombus begins to organize over next day
- Do not stack pulses or double pulse.
  - For smaller vessels, place pulses adjacent to one another or with a slight overlap.
  - For larger vessels, leave at least one spot size untreated between pulses.
- "Popping" and extravasation may occur when a vessel is ruptured.
  - Cool and compress the area; purpura may develop.
  - Lengthen the pulse duration and/or reduce the fluence or leave space on subsequent pulses.
- **Use extreme caution when treating near the eye.**
  - Only experienced practitioners should treat periorbital vessels.
  - Always use patient eye protection.
  - Always point the laser beam away from the eye, and never treat near or within the orbital rim.
- When treating venous lake, treat only the lesion and not the surrounding tissue
  - Do not double-pulse.
  - Common endpoints for a venous lake are a dusky or deflated look, it should not turn black.
  - The venous lake may feel firm a few minutes after treating, the firmness should dissipate within a few days.
- Endpoints will vary based on type, size, color, volume, pressure, and location of vein.
  - Common endpoints are color change, vein disappearance, or constriction.
  - If the clinical endpoint is not reached, shorten the pulse duration. If clinical endpoint still not reached, then increase the fluence.
  - The endpoint may not be evident or may be very subtle when treating larger reticular leg veins.

---

Telangiectasia prior to pulse

Telangiectasia endpoint
• Expectations
  o 2-3 treatments are usually required for 70% resolution on patients with no underlying conditions.
  o Redness surrounding vessels is expected.
  o Urticarial reaction (hive-like/bug-bite look) is common with superficial veins.
  o Bruising may occur and usually resolves in a few weeks.
  o Small mild blisters are undesirable but may occur.
  o Thrombosis (hardening and darkening of vessels) is expected for larger veins and will be absorbed over time.
  o Hemosiderin (hyperpigmentation from iron leaking into skin due to vein breakdown) can occur and will usually slowly fade over many months.

POST TREATMENT CARE VASCULAR LESIONS
• Cold compresses or chilled gel packs may be applied post treatment.
• If a blister develops, treat as a wound.
• Retreatment of vessels is not recommended prior to 4-6 weeks.
  o Larger reticular vessels may take longer to resolve and should not be re-treated prior to 2-3 months.
• Avoid sun exposure and use a broad spectrum (UVA/UVB) sunscreen to minimize the risk of PIH (Post Inflammatory Hyperpigmentation).
• Bruising, redness, and swelling are common and resolve with time.
• Urticarial reaction (hive-like/bug-bite look) is common and usually resolves in 1-2 days.
• Avoid heat (hot tubs, saunas, etc.) for 1-2 days post-treatment.
• Avoid skin irritants (i.e., products containing tretinoin, retinol, benzoyl peroxide, glycolic/salicylic acids, astringents, etc.) a few days post-treatment.
• Request that the patient contact your office with any concerns, such as blistering, excessive redness/swelling, etc.
• For leg vein treatments only:
  o Compression stockings (20-30 mm/hg) are optional.
  o Avoid high impact activity for 3-5 days.
  o Large leg veins may take many months to resolve and should not be re-treated before then.
PORT WINE STAIN TREATMENTS WITH 532 NM AND 1064 NM WAVELENGTHS

PORT WINE STAINS: 532 NM OR 1064 NM WITH COOLVIEW HANDPIECE

These parameters are provided as a guide only. Observe laser-tissue interaction and clinical endpoints to determine appropriate settings. The treatment of Port Wine Stains (PWS) is an advanced procedure and should only be performed by experienced practitioners. PWS and their composite vessels vary greatly in size and depth. 532 nm is recommended for pink or red PWS. 1064 nm is recommended for purple or nodular PWS.

<table>
<thead>
<tr>
<th>Vessel Type</th>
<th>Wave-length</th>
<th>Example Picture</th>
<th>Temp</th>
<th>Spot Size</th>
<th>Fluence</th>
<th>Pulse Duration</th>
<th>Skin Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PWS – Pink FACE</td>
<td>532 nm</td>
<td><img src="image1.png" alt="Example Picture" /></td>
<td>5°</td>
<td>7 mm</td>
<td>6 – 8 J/cm²</td>
<td>3 – 8 ms</td>
<td>I – IV</td>
</tr>
<tr>
<td>PWS – Red FACE</td>
<td>532 nm</td>
<td><img src="image2.png" alt="Example Picture" /></td>
<td>5°</td>
<td>7 mm</td>
<td>6 – 8 J/cm²</td>
<td>5 – 10 ms</td>
<td>I – IV</td>
</tr>
<tr>
<td>PWS – Pink BODY</td>
<td>532 nm</td>
<td><img src="image3.png" alt="Example Picture" /></td>
<td>5°</td>
<td>7 mm</td>
<td>5 – 7 J/cm²</td>
<td>4 – 8 ms</td>
<td>I – IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 mm</td>
<td>5 – 7 J/cm²</td>
<td>5 – 10 ms</td>
<td></td>
</tr>
<tr>
<td>PWS – Red BODY</td>
<td>532 nm</td>
<td><img src="image4.png" alt="Example Picture" /></td>
<td>5°</td>
<td>7 mm</td>
<td>5 – 7 J/cm²</td>
<td>6 – 12 ms</td>
<td>I – IV</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10 mm</td>
<td>5 – 7 J/cm²</td>
<td>8 – 15 ms</td>
<td></td>
</tr>
<tr>
<td>PWS – Purple Hypertrophic nodule components only</td>
<td>1064 nm</td>
<td><img src="image5.png" alt="Example Picture" /></td>
<td>5°</td>
<td>5 mm</td>
<td>60 – 120 J/cm²</td>
<td>25 – 55 ms</td>
<td>I – VI</td>
</tr>
<tr>
<td>PWS – Purple BODY</td>
<td>1064 nm</td>
<td><img src="image6.png" alt="Example Picture" /></td>
<td>5°</td>
<td>5 mm</td>
<td>60 – 120 J/cm²</td>
<td>25 – 55 ms</td>
<td>I – VI</td>
</tr>
</tbody>
</table>
• **WARNING:** The red diode aiming beam in the sapphire window should be in full contact with the skin before, during, and after the laser pulse.
  - Pay close attention when treating over the nose or curved areas to ensure full contact with the window where the red aiming beam is present.
  - Consider using smaller spot size if you cannot ensure full contact with the sapphire window.
• Apply a thin layer of clear gel (such as ultrasound gel) for increased epidermal protection and patient comfort.
• Test pulses are always advised. Observe laser-tissue interaction before proceeding.
  - Ask the patient to return in 6 weeks to fully assess test pulse results
• Pre-cooling the skin is required to help prevent epidermal damage
• Ensure each pulse receives both pre and post cooling.
• The length of pre and post cooling time required will vary according to size, color, and depth of the PWS.
  - Larger, darker PWS require longer pre and post cooling.
• Always observe the epidermis during the treatment, watching for signs of damage (blanching or gray coloration).
  - If damage is seen, stop the treatment and apply a cool compress and evaluate the area for possible complications and wound care.
• **Tissue response**
  - Start with a test pulse, pre-cooling well.
  - Gradually shorten the pulse duration or increase the fluence over a few pulses on different spots.
  - Consider returning to the area in 10 minutes to re-evaluate tissue response.
• Use the 532 nm wavelength for flat regions.
• When using 532 nm, it is okay to use a slight overlap of 10-15%.
• Use the 1064 nm wavelength for nodular regions.
• When using 1064 nm, do not place pulses adjacent to one another. Leave at least a full spot size gap in between each pulse.
• Choose 5°C window temperature.
  - Additional pre and post cooling and anesthetic for darker lesions may be used.
• When treating skin type VI, use a longer pulse duration.
• Do not double-pass.
• Common endpoint is purpura which may be delayed.
  - Minimal purpura is desired when using 1064 nm.
• Several treatments, spaced at least 6-8 weeks apart are typically required.

**Post Treatment Care**
- Erythema usually resolves within 24-48 hours.
- Edema usually resolves within 24-72 hours.
- Purpura usually resolves within 7-10 days.
- Cold gel packs or cool compresses are recommended post-treatment.
- If a blister develops, treat as a wound.
- Request that the patient contact your office with any concerns, such as blistering, excessive redness/swelling/bruising, etc.
WART TREATMENTS WITH 532 NM AND 1064 NM WAVELENGTHS

TREATMENT PARAMETERS – WARTS: 532 NM OR 1064 NM WITH COOLVIEW HANDPIECE

These parameters are provided as a guide only for skin types I-VI. Observe laser-tissue interaction and clinical endpoints to determine appropriate settings. Warts (or verrucae) can be treated with vascular lasers – typically at higher energy settings and shorter pulse durations than veins or telangiectasia.

<table>
<thead>
<tr>
<th>Indication</th>
<th>Wave-length</th>
<th>Example Picture</th>
<th>Temp</th>
<th>Spot Size</th>
<th>Fluence</th>
<th>Pulse Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smaller, Flatter Wart or Bony/thinned skinned areas (cuticles, knuckles, etc.)</td>
<td>532 nm</td>
<td><img src="image" alt="Example Picture" /></td>
<td>20°</td>
<td>3 mm</td>
<td>14 – 20 J/cm²</td>
<td>4 – 6 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20°</td>
<td>5 mm</td>
<td>12 – 20 J/cm²</td>
<td>6 – 10 ms</td>
</tr>
<tr>
<td>Larger Wart or Thick skinned area</td>
<td>1064 nm</td>
<td><img src="image" alt="Example Picture" /></td>
<td>20°</td>
<td>3 mm</td>
<td>170 – 190 J/cm²</td>
<td>6 – 15 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>20°</td>
<td>5 mm</td>
<td>140 – 190 J/cm²</td>
<td>6 – 15 ms</td>
</tr>
</tbody>
</table>
TREATMENT TECHNIQUE – WARTS: 532 NM OR 1064 NM WITH COOLVIEW HANDPIECE

- Smoke evacuator and laser plume masks (filters to 0.1 µm) are recommended when treating.
- Warts may need to be debrided (pared down) prior to treatment.
- Do not use gel.
- Use the warmest window temperature (20°).
- Do not place the excel V handpiece in contact with the skin when pulsing the wart.
  - Hold the handpiece approximately 1 cm away from the wart.
  - Wipe the sapphire window after each treatment.
  - Cooling with the sapphire window prior and post-pulse is recommended.
- Warts can be successfully treated with both 532 nm and 1064 nm wavelengths.
  - For smaller (superficial) warts, start with the 532 nm wavelength and evaluate response.
  - Larger (deeper) warts may respond better with the 1064 nm wavelength.
- Treat within the wart border.
- The wart may spark when treated.
- Some warts may require more than one pulse.
  - Do NOT stack pulses (i.e., place one pulse directly on top of another with no cooling time).
  - Pause for a few seconds between pulses.
  - Cool with ice/frozen gel pack in between pulses.

Individual Warts

- Pulse over the wart.
- Do not treat outside the wart border.
- Cool the treatment area in between pulses.
- If the wart is smaller than the laser beam, assess the surrounding tissue before placing additional pulses to avoid over-treatment of normal tissue.
- If the wart is larger than the laser beam:
  - Use less aggressive parameters.
  - Multiple treatments may be required (treat small sections over multiple visits).
  - For 532 nm treatments, place pulses with approximately 50% overlap.
  - For 1064 nm treatments, place pulses with approximately 10%-50% overlap.
    - lighter/smaller warts = more overlap
    - larger/darker warts = less overlap
Mosaic Warts

- Mosaic warts typically require multiple treatments and less aggressive parameters.
- Do NOT treat the entire mosaic wart area in one session.
  - Only treat the darker/thicker area, usually near the center of the wart.
  - Do NOT overlap pulses. Place pulses adjacent to one another or spaced out.
  - Cool the treatment area in between pulses.
- At each subsequent visit, repeat the treatment steps.

Endpoint

- Check for the endpoint after the first pulse.
- The desired endpoint is a slight ashen color that should occur immediately after the pulse.
  - The color change may be subtle.
  - If the surrounding area becomes white or edematous, it was probably over-treated and should be treated as a wound.
- If the endpoint is not reached:
  - Increase the fluence by 5 J/cm² and shorten the pulse duration by the minimum amount until you reach the endpoint.
  - Cool the treatment area in between pulses.
  - Repeat the treatment steps detailed above.
- Immediate post cooling with a cold gel pack, Zimmer, etc. may be used for patient comfort.

POST-TREATMENT CARE

- Warts usually have a black or crusty appearance within 24 hours after treatment.
- You may apply an ointment of choice and non-stick dressing for patient comfort.
- If a blister develops, treat it as a wound.
- Treated tissue usually sloughs within 1-4 weeks.
- Deep tissue injury and prolonged wound healing may occur.
- More than 1 treatment may be required (4-6 weeks apart).
BENIGN PIGMENTED LESION TREATMENTS WITH 532 NM WAVELENGTH

BENIGN PIGMENTED LESION TREATMENT PROCESS

- Laser light is absorbed by superficial melanin in the lesion
- Pigmented cells are denatured, darken, rise to the surface and flake off over a couple of weeks.

SELECTING TREATMENT PARAMETERS FOR BENIGN PIGMENTED LESION TREATMENTS

Select parameters in the order listed below. Always start with the least aggressive settings for a specific lesion. Observe laser-tissue interaction and clinical response to determine appropriate settings for each patient.

1. **Wavelength** is measured in nanometers (nm).
   - 532 nm wavelength recommended for benign pigmented lesion treatments

2. **Fluence** is the energy, measured in J/cm². Selection is based on lesion color and location.
   - lighter lesion = higher fluence
   - darker lesion = lower fluence
   - For neck and chest treatments, reduce fluence by 15-20%.

3. **Pulse Duration** is the length of each pulse, measured in milliseconds (ms). Selection is based on lesion color and skin type.
   - When possible, shorter pulse durations are generally preferred for treating benign pigmented lesions.
   - lighter lesion = shorter pulse duration
   - darker lesion = longer pulse duration

4. **Window Temperature** is measured in °Celsius. Four options are available: 5°, 10°, 15°, and 20°.
   - 10-20° is advised for many pigment indications.
   - 5° is recommended for darker skin types.
   - 15°-20° is recommended for lighter lesions on lighter skin types.

5. **Repetition Rate** is the number of pulses per second, measured in Hz, with foot pedal depressed.
   - For increased epidermal safety, use single pulses (0.0 Hz) with pre and post cooling.
   - When treating a global area, experienced practitioners may use higher repetition rates.

8. **Contact Cooling** – Sapphire window provides pre, parallel, and post cooling.
   - Pre-cooling protects the epidermis by reducing initial skin temperature.
   - Parallel cooling during the laser pulse protects the epidermis while the laser is firing.
   - Post-cooling extracts heat from tissue to help prevent epidermal injury.
TREATMENT PARAMETERS – 532 NM BENIGN PIGMENTED LESIONS WITH COOLVIEW HANDPIECE

These parameters are provided as a guide only for skin types I-IV, unless otherwise stated. Observe laser-tissue interaction and clinical endpoints to determine appropriate settings. Do NOT treat over tattoos, hyperpigmentation, dysplastic nevi, or questionable pigmented lesions.

<table>
<thead>
<tr>
<th>Example Picture</th>
<th>Indication</th>
<th>Temp</th>
<th>Spot Size</th>
<th>Fluence</th>
<th>Pulse Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1.png" alt="Light Lentigines (Face)" /></td>
<td>Light Lentigines (Face)</td>
<td>20°</td>
<td>3 mm</td>
<td>9 – 14 J/cm²</td>
<td>3 – 6 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20°</td>
<td>5 mm</td>
<td>7 – 12 J/cm²</td>
<td>6 – 10 ms</td>
</tr>
<tr>
<td><img src="image2.png" alt="Medium Lentigines (Face)" /></td>
<td>Medium Lentigines (Face)</td>
<td>15°</td>
<td>3 mm</td>
<td>7.2 – 12 J/cm²</td>
<td>4 – 10 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15°</td>
<td>5 mm</td>
<td>6.6 – 12 J/cm²</td>
<td>7 – 12 ms</td>
</tr>
<tr>
<td><img src="image3.png" alt="DPN / Dark Lentigines (Face) (Skin Types I-VI)" /></td>
<td>DPN / Dark Lentigines (Face) (Skin Types I-VI)</td>
<td>10°</td>
<td>3 mm</td>
<td>6 – 9 J/cm²</td>
<td>8 – 10 ms</td>
</tr>
<tr>
<td><img src="image4.png" alt="Light Lentigines (Body)" /></td>
<td>Light Lentigines (Body)</td>
<td>20°</td>
<td>3 mm</td>
<td>7 – 14 J/cm²</td>
<td>4 – 10 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>20°</td>
<td>5 mm</td>
<td>6.4 – 10 J/cm²</td>
<td>6 – 12 ms</td>
</tr>
<tr>
<td><img src="image5.png" alt="Medium Lentigines (Body)" /></td>
<td>Medium Lentigines (Body)</td>
<td>15°</td>
<td>3 mm</td>
<td>6.4 – 10 J/cm²</td>
<td>5 – 10 ms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15°</td>
<td>5 mm</td>
<td>5 – 9 J/cm²</td>
<td>6 – 12 ms</td>
</tr>
<tr>
<td><img src="image6.png" alt="Brown/Red Dyschromia (Diffused Sun Damage)" /></td>
<td>Brown/Red Dyschromia (Diffused Sun Damage)</td>
<td>10° (mostly red) 15° (mostly brown)</td>
<td>10 mm Face 12 mm Body</td>
<td>6.6 – 9 J/cm²</td>
<td>10 – 15 ms 5.4 – 8.4 J/cm²</td>
</tr>
<tr>
<td><img src="image7.png" alt="Poikiloderma" /></td>
<td>Poikiloderma</td>
<td>5° (mostly red) 10 - 15° (mostly browns)</td>
<td>10-12 mm 10-12 mm</td>
<td>6 – 8.4 J/cm²</td>
<td>8 – 15 ms 6 – 8.4 J/cm²</td>
</tr>
</tbody>
</table>
TREATMENT TECHNIQUE – 532 NM BENIGN PIGMENTED LESIONS WITH COOLVIEW HANDPIECE

- **WARNING:** The red diode aiming beam in the sapphire window should be in full contact with the skin before, during, and after the laser pulse.
  - Pay close attention when treating over the nose or curved areas to ensure full contact with the window where the red aiming beam is present.
  - Consider using smaller spot size if you cannot ensure full contact with the sapphire window.
- Test pulses are always advised.
  - Small adjustments in fluence can have a big effect. Adjust in 1 or 2 J/cm² increments.
  - Pigment is often slow to react.
  - The endpoint is typically reached 24-48 hours post-treatment.
  - Adverse reactions can take up to 48-72 hours to appear.
- Gel is optional when treating benign pigmented lesions.
  - Gel is recommended for darker skin types.
  - Gel is recommended when treating with ≥ 10 mm spot size to facilitate gliding.
  - If treating individual lesions, efficacy is better without gel.
- Reduce the fluence and lengthen the pulse duration for darker or tanned skin.
- Place extra pressure on the handpiece when using short pulse durations to help prevent purpura.
- Always observe the epidermis during the treatment, watching for signs of damage (blanching or gray coloration).
  - If damage is seen, stop the treatment and apply a cool compress and evaluate the area for possible complications and wound care.
- When using a 10 – 12 mm spot size for global treatment of large areas, overlap pulses by about 10 – 20%.
- When treating smaller lentigines, choose the best spot size to treat the pigment only and spare the surrounding skin.
  - If parameters were selected using the Navigation Screen, remember to decrease the fluence if increasing the spot size.
- Lighter lesions may require a second pass.
- If using a small spot size on a large lesion, use a repetition rate such as 1 Hz, trace the periphery, and then fill in the center.
- To prevent purpura, apply pressure to the handpiece into the skin to help to remove the hemoglobin chromophore.
- For off the face treatments, reduce the fluence by 15-20%.
- Less cooling and shorter pulse duration help potentiate the effects on epidermal melanin.
- Warmer temperature of 15-20°C may increase efficacy of lighter pigment.
- The desired endpoint is a slight darkening of pigment, do not over-treat
  - Localized erythema (halo) may appear up to 15 minutes or longer after treatment and should resolve within 24-48 hours.
    - If erythema is prolonged, reduce the fluence at the next treatment.
  - Pigment reacts slowly and becomes darker (i.e., coffee ground appearance) 24 – 48 hours post-treatment.
- Pigment typically sloughs in 1-3 weeks depending on the body part.
- Common treatment intervals are 4 weeks.

POST-TREATMENT CARE – BENIGN PIGMENTED LESIONS

- Cold compresses or chilled gel packs may be applied post treatment.
- If a blister develops, treat as a wound.
- Retreatment of lentigines is not recommended prior to 4-6 weeks.
- Avoid sun exposure, and use a broad spectrum (UVA/UVB) sunscreen to prevent further sun damage.
- Bruising, redness, and swelling are common and resolve with time.
- Treated pigment will turn darker (brown to black) within 24-48 hours.
  - Do not pick at treated areas.
  - Treated pigment will exfoliate off the face in approximately 1 week.
  - Treated pigment will exfoliate off the body in approximately 2-3 weeks.
- Avoid heat (hot tubs, saunas, etc.) for 1-2 days.
- Avoid skin irritants (products containing tretinoin, retinol, benzoyl peroxide, glycolic/salicylic acids, astringents, etc.) a few days post-treatment.
ACNE TREATMENTS WITH 1064 NM WAVELENGTH

TREATMENT PARAMETERS – ACNE: 1064 NM WITH COOLVIEW HANDPIECE

The following parameters are for the treatment of mild to moderate inflammatory acne. These parameters are provided as a guide only for skin type I-III on the face. Treatment protocols have not been developed for skin types IV-VI or off the face treatments. Observe laser-tissue interaction and clinical endpoints to determine appropriate settings.

<table>
<thead>
<tr>
<th>Indication</th>
<th>Treatment Location</th>
<th>Skin Type</th>
<th>Temperature</th>
<th>Spot Size</th>
<th>Fluence</th>
<th>Pulse Duration</th>
<th>Repetition Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mild to Moderate Inflammatory Acne</td>
<td>Face</td>
<td>I - III</td>
<td>5°C</td>
<td>10 mm</td>
<td>40 – 60 J/cm²</td>
<td>40 – 60 ms</td>
<td>0 – 1 Hz</td>
</tr>
</tbody>
</table>

TREATMENT TECHNIQUE – ACNE: 1064 NM WITH COOLVIEW HANDPIECE

- **WARNING:** The red diode aiming beam in the sapphire window should be in full contact with the skin before, during, and after the laser pulse.
  - Pay close attention when treating over the nose or curved areas to ensure full contact with the sapphire window where the red aiming beam is present.
- **WARNING:** Do not treat patients who have taken Accutane (isotretinoin capsule) in the past 6 months.
- **Technique:**
  - Apply a thin layer of clear gel (such as ultrasound gel) for increased epidermal protection and patient comfort and seat the sapphire window gently on the skin.
  - Ensure that no large bubbles are present under the aiming beam.
  - Do not apply too much pressure on the skin.
  - Pre-cool area with sapphire window, depress the foot pedal to fire a pulse, then glide handpiece to next treatment area and repeat.
  - Ensure that handpiece has complete contact with skin during each pulse.
- Always observe the epidermis during the treatment, watching for signs of damage (blanching or gray coloration).
  - If damage is seen, stop the treatment and apply a cool compress and evaluate the area for possible complications and wound care.
- Treat the individual lesions and surrounding area. This is not a full global treatment so surrounding area should be limited to affected areas only.
  - Overlap pulses by no more than 10 – 20%.
  - Only 1 pass recommended.
- Treat to endpoint of mild erythema.
- Treating off the face is not recommended.
- As with other 1064nm treatments, hair reduction in treatment area is a possible reaction to treatment.
- Common treatment intervals are every 2-4 weeks. Number of treatments varies by patient.
POST TREATMENT CARE ACNE

- Cold compresses or chilled gel packs may be applied post treatment.
- If a blister develops, treat as a wound.
- Avoid sun exposure and use a broad spectrum (UVA/UVB) sunscreen to minimize the risk of PIH (Post Inflammatory Hyperpigmentation).
- Bruising, redness, and swelling are common and resolve with time.
- Avoid heat (hot tubs, saunas, etc.) for 1-2 days post-treatment.
- Avoid skin irritants (i.e., products containing tretinoin, retinol, benzoyl peroxide, glycolic/salicylic acids, astringents, etc.) a few days post-treatment.
- Request that the patient contact your office with any concerns, such as blistering, excessive redness/swelling, etc.
HAIR REMOVAL TREATMENTS WITH 1064 NM WAVELENGTH

- The purpose of the treatment is to selectively treat the hair follicle without causing thermal damage to the surrounding tissue.
  - The sapphire window provides epidermal cooling and protection.
- Permanent hair reduction is achieved by using heat to disable the hair follicle and prevent re-growth.
  - The bulb and bulge of the hair follicle, which are responsible for hair re-growth, are targeted by the excel V laser.
  - Because the bulb and bulge of the hair follicle must be present, do not pluck or wax targeted hair in between treatment sessions.
- The excel V laser targets the melanin in the hair bulb and bulge; therefore, hair must be brown or black.
  - The excel V laser does not target and cannot be absorbed by white, gray, or red hair.

TREATMENT INTERVALS

- Only the hair follicle in the anagen growth phase can be effectively targeted and disabled.
- Each hair goes through the 3 growth phases independently of the neighboring hairs, so not all hairs will be in the same phase at the same time. Therefore, multiple treatments are required to achieve sufficient reduction in hair growth.
- Treatment Interval recommendations are a general guideline only and are a compilation of intervals used by successful operators.
  - Facial hair: 6-8 week intervals between treatments
  - Body hair: 8-10 week intervals between treatments
  - Back or Leg hair: 10-12 week intervals between treatments
- Hormones, diseases, medication, and other factors can affect the treatment outcome.
- Treatments that are spaced too closely together may appear to be more successful within the first few treatments. However, more treatment sessions may be required for the desired final outcome, because a smaller percentage of regrown hairs may be available as targets.
- Patients should be assessed before each treatment to determine treatment intervals and settings.
  - Hair may grow back lighter and finer, and settings may need to be adjusted to target this new hair.
  - If the patient returns for treatment and there is minimal hair, it may be in a transitional or resting phase.
  - Wait until hair is actively growing to resume treatment cycle.
- Facial skin has significantly more hair follicles per cm² than the body, which is why you can see results within the first three to four treatments with shorter interval times.
- When in doubt, it is better to space the treatments farther apart than closer together.
SELECTING TREATMENT PARAMETERS FOR HAIR REMOVAL TREATMENTS

Select parameters in the order listed below. Always start with the least aggressive settings for a specific lesion. Observe laser-tissue interaction and clinical response to determine appropriate settings for each patient.

Skin Type
- CAUTION: When treating darker skin types, additional pre-cooling and lower repetition rates or single pulses are recommended to maximize epidermal protection.

Hair Color and Thickness
- For darker, coarser hair, use lower fluence and longer pulse duration.
- For lighter, finer hair, use higher fluence and shorter pulse duration.

Hair Density
- For dense hair, extended pre-cooling, lower fluence, lower repetition rates, and less overlap are recommended.
- Parameters may need to be adjusted as density decreases, skin type permitting.
  - Use caution when transitioning from lower density areas to higher density areas such as men’s’ necks approaching the hairline and the bikini line.

Actinic Bronzing Patients
- Actinic bronzing is chronic “tan-like” pigmentation damage resulting from long-term sun exposure.
- Patients with actinic bronzing are at higher risk for crusting and other adverse events.
- Patients with actinic bronzing should be treated as though they are one skin type darker than their underlying ethnicity would suggest.
  - For example, treat a skin type II patient with skin type III settings.

TREATMENT PARAMETERS – 1064 NM HAIR REMOVAL WITH COOLVIEW HANDPIECE

The following parameters are provided as a guide only and are based on practitioner feedback. Start at the lowest fluence and observe laser-tissue interaction and clinical endpoints to determine appropriate settings.

It is important to note that though the 1064 nm wavelength can effectively treat hair removal, the excel V system was not designed as a hair removal system; therefore faster treatments at high repetition rates may not always be possible. Use slower repetition rates whenever possible or treat smaller areas.

<table>
<thead>
<tr>
<th>Skin Type</th>
<th>Fluence</th>
<th>Pulse Duration</th>
<th>Spot Size</th>
<th>Window Temperature</th>
</tr>
</thead>
<tbody>
<tr>
<td>I-II</td>
<td>45-60 J/cm²</td>
<td>10-20 ms</td>
<td>10 mm</td>
<td>10°C</td>
</tr>
<tr>
<td>III</td>
<td>40-55 J/cm²</td>
<td>15-25 ms</td>
<td>10 mm</td>
<td>10°C</td>
</tr>
<tr>
<td>IV</td>
<td>35-50 J/cm²</td>
<td>15-30 ms</td>
<td>10 mm</td>
<td>10°C</td>
</tr>
<tr>
<td>V</td>
<td>25-40 J/cm²</td>
<td>25-35 ms</td>
<td>10 mm</td>
<td>10°C</td>
</tr>
<tr>
<td>VI</td>
<td>15-40 J/cm²</td>
<td>30-60 ms</td>
<td>10 mm</td>
<td>10°C</td>
</tr>
</tbody>
</table>

Treatment parameters are interrelated. Therefore, not all parameter combinations are simultaneously available. If you attempt to select a treatment setting that is not available, the system emits a distinct audible tone. Changing one or more of the other parameters may enable you to select the desired treatment setting.

CAUTION: It is important that the operator not use a fast repetition rate. A slow repetition rate is advised to ensure adequate precooling of the skin prior to each pulse.
PREPARING THE PATIENT FOR HAIR REMOVAL TREATMENT

- Clean the skin by removing all make-up and/or topical anesthetic.
- Ensure that the treatment area is clean shaven.
- Take photographs prior to the initial treatment for future reference.
- Topical anesthetic is optional and must be removed before treatment.
  - CAUTION: Toxicity may result from overuse. Consult the product labeling for any anesthetic used.
- Ensure that ALL people in the treatment room are wearing safety eyewear.

SELECTING TREATMENT PARAMETERS FOR HAIR REMOVAL TREATMENT

- The recommended parameters are provided as a guide only.
- Perform and observe test spots prior to treatment. Potential adverse reactions may take 24-72 hours to appear. Pigmentation changes for darker skin type patients may develop up to several weeks following treatment.
  - Test spot fluence settings are determined by evaluating skin type and, for hair removal procedures, hair color, thickness, and density.
  - Treatment settings should be selected based on test spot clinical response.
  - Perform test spots on the same area as being treated.
  - Deliver single pulses to assess clinical response and potential adverse reactions.
  - Deliver 3 to 4 adjacent pulses to assess skin’s reaction to bulk heating.
- Start with conservative settings, and observe laser-tissue interaction and clinical endpoints to determine appropriate settings for each patient.
- Fluence and/or pulse duration adjustments should be performed gradually.
  - Adjust by 5 J/cm² or 5 ms at a time, while watching for epidermal response.
    - Adjust only one parameter (fluence OR pulse duration) at a time.
    - Shortening the pulse duration by 5 ms is more aggressive than increasing the fluence.
- Patients should be re-assessed prior to each treatment to determine sun exposure and hair density and coarseness.
  - Parameters may need to be adjusted.
- Mild to moderate erythema and/or perifollicular edema are desired endpoints.
  - IMPORTANT: Clinical endpoints are not always required for an effective treatment. It is possible for a treatment to be effective without seeing these reactions.
- If treated area darkens or develops significant erythema or edema, the fluence should be decreased or the pulse duration should be increased.
- Repetition rate should be adjusted according to patient comfort, skin type, hair density, and user experience.
  - Single pulses or low repetition rate are recommended on areas where additional cooling is desired (such as higher energy settings, sun exposed areas, coarse/dense hair, darker skin, curved or bony areas, etc.).
  - Higher repetition rates are only recommended for experienced practitioners and only when treating larger treatment areas that allow for easy handpiece motion.
  - If using a higher repetition rate, the fluence may need to be lowered.
- CAUTION: When treating darker skin types, additional pre-cooling and lower repetition rates or single pulse modes are recommended to maximize epidermal protection.
- Re-evaluate the patient prior to each treatment to determine sun exposure and treatment target.
  - Parameters may need to be decreased if increased melanin content due to sun exposure is observed.
- Treatment ranges are wide due to significant variations in patient response.
- CAUTION: Sun-exposed areas have a higher risk of adverse events.

- CAUTION: Do not use clinical settings taken from other 1064 nm laser guideline documents. Technology and performance differences can significantly affect clinical response.
  - Excel V contact cooling technology provides refractive index matching improving energy coupling into skin. Skin compression from the contact handpiece also blanches the skin and reduces the distance to the hair target reducing losses.
  - These effects, for the same displayed settings, result in excel V achieving higher effective intradermal fluence than seen with other cooling technologies.
  - As a result, the same levels of efficacy will be achieved with lower system settings.
  - If equivalent displayed settings are selected, the higher effective intradermal fluence will result in higher follicular and perifollicular temperatures which can improve efficacy but may increase treatment sensations.
HAIR REMOVAL TREATMENT STEPS

- Inspect the handpiece to ensure the sapphire window and metal surfaces are free of debris and ejected hair prior to and during treatment.
  - It may be necessary to periodically wipe the bottom of the handpiece with a gauze to remove ejected hair.
- Perform and observe test spots prior to treatment. Potential adverse reactions may take 24-72 hours to appear. Pigmentation changes for darker skin type patients may develop up to several weeks following treatment.
- Large areas may be easier to treat if divided into smaller grids.
  - Mark with a white eyeliner pencil.
  - Use only WHITE pencil as it will not be absorbed by laser light.
  - Because eyeliner pencil components are not standardized, test the pencil before using on patients.
- Apply a thin layer of clear gel (such as ultrasound or aloe vera gel) for increased epidermal protection, for easy gliding of the handpiece, and to determine placement of adjacent rows.
- To prevent fogging of the treatment window, place one drop of the Anti-fog drops provided with the system on top of the window prior to each treatment or when window develops condensation.
- Sapphire window must be in full contact with skin during treatment.
  - Pay particular attention when treating rounded/bony areas.
- Pulses should be spaced with 10-20% overlap.
  - Use a maximum of 10% overlap on darker skin.
- Consider precooling for patients with darker skin or areas of dense hair.
- Precool area with sapphire window, depress the foot pedal to fire a pulse, then glide handpiece to next treatment area and repeat.
  - If using a repetition rate, keep foot pedal depressed as the laser fires each pulse. Ensure that handpiece has complete contact with skin during each pulse.
- Do not stack pulses (“double-pulse”) or retreat an area within a single visit.
- Common endpoints are mild to moderate erythema and/or peri-follicular edema, which may be delayed. However, these endpoints are not required for a successful treatment.
  - If desired clinical endpoint is not achieved, consider increasing fluence or shortening the pulse duration.
- Always observe the epidermis during the treatment, watching for signs of damage (blanching or gray coloration).
  - If damage is seen, stop the treatment and apply a cool compress and evaluate the area for possible complications and wound care.
- Be extra cautious when treating delicate or highly sensitive areas (knuckles, genitalia, ears, upper lip, etc.).
  - Provide extra cooling with handpiece and/or frozen gel pack.
  - Thinner skin is more easily damaged.
  - Insert damp cotton ball inside ear canal when treating the ear.
  - Pull skin away from testes to treat.
  - When treating near the mouth, a moist gauze can be placed between the lips and teeth to protect teeth from discomfort.
HAIR REMOVAL POST-TREATMENT CARE

- Avoid sun exposure, and use a broad spectrum (UVA/UVB) sunscreen.
- Avoid heat (hot tubs, saunas, etc.) for 1-2 days.
- Avoid skin irritants (products containing tretinoin, retinol, benzoyl peroxide, glycolic/salicylic acids, astringents, etc.) for a few days post-treatment.
- Do not wax or pluck between treatments.
- Redness and perifollicular edema are common and will resolve with time.
- Bruising and swelling are uncommon but may occur and will resolve with time.
- Hair may take up to two weeks to fall out.
GENESIS V TREATMENTS WITH 1064 NM WAVELENGTH

GENESIS V TREATMENT PROCESS

- Gently heats the dermis
- 1064 nm wavelength and micro second pulses (0.3 ms)
- Preferentially heats very fine vasculature
- No epidermal cooling

TREATMENT PARAMETERS – LASER GENESIS ND:YAG NON-ABLATIVE SKIN THERAPY WITH GENESIS V HANDPIECE

These parameters are provided as a guide only for skin types I-VI. Observe laser-tissue interaction and clinical endpoints to determine appropriate settings. Laser Genesis is recommended for scar revision, diffuse redness, fine lines, and wrinkles.

<table>
<thead>
<tr>
<th>Area</th>
<th>Spot Size</th>
<th>Skin Type</th>
<th>Fluence</th>
<th>Pulse Duration</th>
<th>Repetition Rate</th>
<th># of Pulses</th>
<th># of Tx</th>
<th>Treatment Intervals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Area (face or neck or chest)</td>
<td>8 mm</td>
<td>I – VI</td>
<td>4 – 7 J/cm²</td>
<td>0.3 ms</td>
<td>7 – 10 Hz</td>
<td>6,000 – 8,000</td>
<td>4 – 6</td>
<td>2 – 3 weeks</td>
</tr>
<tr>
<td>Small Area (toes or fingers)</td>
<td>8 mm</td>
<td>I – VI</td>
<td>6 – 7 J/cm²</td>
<td>0.3 ms</td>
<td>2 – 3 Hz</td>
<td>Based on area</td>
<td>1 – 5</td>
<td>4 weeks</td>
</tr>
<tr>
<td>Scars</td>
<td>8 mm</td>
<td>I – VI</td>
<td>4 – 5 J/cm²</td>
<td>0.3 ms</td>
<td>5 – 7 Hz</td>
<td>Based on area</td>
<td>4 – 6</td>
<td>2 – 6 weeks</td>
</tr>
</tbody>
</table>

Temperature Monitoring

The genesis V handpiece features an integrated sensor that monitors the temperature approximately 4 cm from the skin and displays the temperature on the console screen. The 6 LED indicators on the handpiece correspond with temperatures as shown. Target temperature of the skin during treatment should be between 39° - 43° C (yellow LEDs).

<table>
<thead>
<tr>
<th>LED Color</th>
<th>Temperature Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Red</td>
<td>47 – 50° C</td>
</tr>
<tr>
<td>Yellow</td>
<td>43 – 46° C</td>
</tr>
<tr>
<td>Yellow</td>
<td>39 – 42° C</td>
</tr>
<tr>
<td>Green</td>
<td>35 – 38° C</td>
</tr>
<tr>
<td>Green</td>
<td>31 – 34° C</td>
</tr>
<tr>
<td>Green</td>
<td>26 – 30° C</td>
</tr>
</tbody>
</table>
TREATMENT TECHNIQUE – 1064 NM GENESIS V TREATMENT

- Do not use topical anesthetic. Patient feedback is important.
- Start with low fluence and slow repetition rate to observe laser-tissue interaction. Adjust to patient tolerance.
- Sensitive areas, darker skin types, and areas of dense hair or recent sun exposure may require lower fluences or lower repetition rates.
- To create heat to target the microvasculature, divide the face into multiple regions (see example on right).
  - Divide the forehead in half.
  - Divide the cheeks into 2-3 sections.
  - Do NOT treat upper lids.
  - The vermillion border may be treated, but ensure that it is completely clean of lipstick and that there is no tattoo or permanent makeup in the area.
  - Place moist gauze between lips and teeth to protect enamel.
- Hold the handpiece approximately 3-4 cm from the skin’s surface.
  - Ensure that the distance beam is centered in the aiming beam.
  - Move the handpiece continuously in an even, zig-zag motion.
  - Adjust the speed according to the patient’s tolerance.
  - Treat each region to the point of discomfort and erythema
  - Try to maintain 39° – 43° C for 1 – 2 minutes per region.
  - Then move to adjacent regions using multiple passes.
- Dark skin, scars, or hot spots may need a short break during treatment.
  - Pause treatment or use a frozen gel pack or wet 4x4 between passes to cool the skin.
- Treating a scar:
  - Check with a surgeon before starting treatment on fresh scars.
  - Always include the tissue surrounding the scar, observing for erythema of the scar as an endpoint.
  - The scar will absorb more energy than the surrounding skin.
  - Do not rely on heat in surrounding skin as an endpoint.
  - Decreased or no sensation of the scar tissue increases the risk of a burn.
  - Treat in a zig-zag movement across the scar (see example on right).
  - Do not treat linearly.
  - Pause occasionally or use a frozen gel pack to cool scar between passes.
  - Several treatments may be required.
- Use extreme caution when treating near the eye.
  - Only experienced practitioners should treat periorbital vessels.
  - Always use patient eye protection.
  - Always point the laser beam away from the eye, and never treat near or within the orbital rim.

Post Treatment Care

- Avoid sun exposure, and use a broad spectrum (UVA/UVB) sunscreen to prevent further sun damage.
- If a blister develops, treat as a wound.
- Bruising, redness, and swelling may occur and resolve with time.
- Urticarial reaction (hive-like/bug-bite look) may occur and usually resolves in 1-2 days.
- Avoid heat (hot tubs, saunas, etc.) for 1-2 days.
- Avoid skin irritants (products containing tretinoin, retinol, benzoyl peroxide, glycolic/salicylic acids, astringents, etc.) for a few days post-treatment.
# SKIN TYPE CLASSIFICATION QUESTIONNAIRE

<table>
<thead>
<tr>
<th>SCORE</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What is the natural color of your hair?</strong></td>
<td>Sandy red</td>
<td>Blond</td>
<td>Chestnut, dark blond</td>
<td>Dark brown</td>
<td>Black</td>
</tr>
<tr>
<td><strong>What is the eye color?</strong></td>
<td>Light blue, Gray, Green</td>
<td>Blue, Gray, Green</td>
<td>Brown</td>
<td>Dark Brown</td>
<td>Brownish Black</td>
</tr>
<tr>
<td><strong>What is the color of sun unexposed skin areas?</strong></td>
<td>Reddish</td>
<td>Very pale</td>
<td>Pale with beige tint</td>
<td>Light brown</td>
<td>Dark brown</td>
</tr>
<tr>
<td><strong>How many freckles on unexposed skin areas?</strong></td>
<td>Many</td>
<td>Several</td>
<td>Few</td>
<td>Incidental</td>
<td>None</td>
</tr>
<tr>
<td><strong>What happens when you are in the sun TOO long without sunblock?</strong></td>
<td>Painful redness, blistering, peeling</td>
<td>Blistering followed by peeling</td>
<td>Burns, sometimes followed by peeling</td>
<td>Rarely burns</td>
<td>Never had a problem</td>
</tr>
<tr>
<td><strong>How well do you turn brown?</strong></td>
<td>Hardly or not at all</td>
<td>Light color tan</td>
<td>Reasonable tan</td>
<td>Tan very easily</td>
<td>Turn dark very quickly</td>
</tr>
<tr>
<td><strong>Do you turn brown within one day of sun exposure?</strong></td>
<td>Never</td>
<td>Seldom</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
<tr>
<td><strong>How does your face respond to the sun?</strong></td>
<td>Very sensitive</td>
<td>Sensitive</td>
<td>Normal</td>
<td>Very resistant</td>
<td>Never had a problem</td>
</tr>
<tr>
<td><strong>When did you last expose yourself to the sun or artificial sun treatments?</strong></td>
<td>More than 3 months ago</td>
<td>2-3 month ago</td>
<td>1-2 months ago</td>
<td>Less than 1 month ago</td>
<td>Less than 2 weeks ago</td>
</tr>
<tr>
<td><strong>Do you expose the area to be treated to the sun?</strong></td>
<td>Never</td>
<td>Hardly ever</td>
<td>Sometimes</td>
<td>Often</td>
<td>Always</td>
</tr>
</tbody>
</table>

- 00-07 points = Skin type I  
- 08-16 points = Skin type II  
- 17-25 points = Skin type III  
- 25-30 points = Skin type IV  
- 30-40 points = Skin types V and VI