



EVO FIXcell  
1550nm  
LASER SYSTEM

FIXcell



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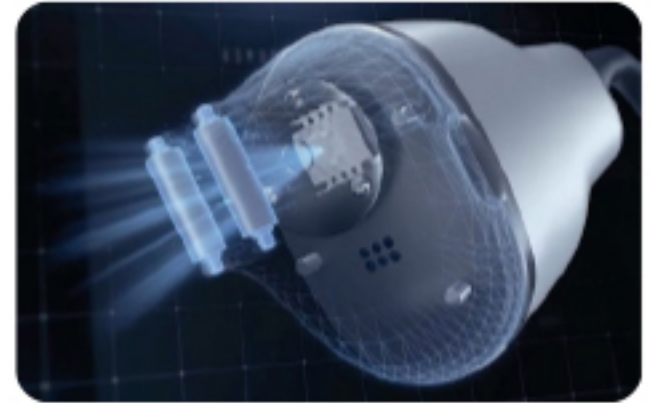


# Laser Characteristics

LASER: Light Amplification by the Stimulated Emission of Radiation.

Features of a laser include:

- Monochromatic (All light produced is at a specific wavelength)
- Collimated waves (All waves of light are parallel)
- Coherence (All peaks and troughs of the wavelength are synchronised)



The wavelength produced by a laser is dependent on the material used to create the light (which may be solid, liquid or gas). An erbium laser generates a wavelength of 1550nm (part of the Infrared B band), this is outside of the visible spectrum (380-780nm) and so the laser is not visible to the eye. A lower power targeting laser (635nm) is included in the Juvium to highlight the treatment area.

When penetrating the skin, certain wavelengths interact with specific structures, such as haemoglobin or melanin. In the case of FIXcell, the target chromophore is water molecules.

# How does it work?

FIXcell uses **fractional** technology, creating tiny dots or Microscopic Thermal Zones (MTZs) within the skin. These microbeams are 110 $\mu$ m in diameter and with an energy up to 70mJ.

The density can be varied from 100-500 microbeams per cm<sup>2</sup>.

Scan mode can be sequential or non-sequential.

**FRACTIONAL DELIVERY** has proven clinical results for a range of indications with no pain and minimal downtime.

Increased metabolism and regeneration of collagen for improved skin quality.





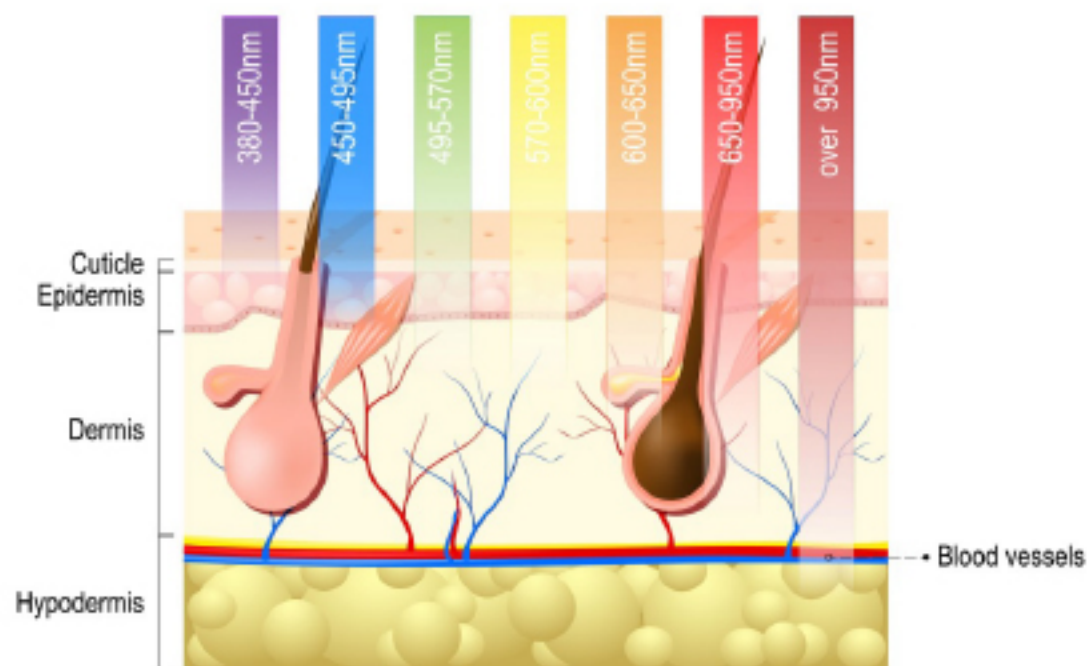
## How does it work?

The Juvium 1550nm Erbium laser works on the principle of **fractional photothermolysis**.

A 1550nm laser of a certain energy and a beam size between 15-150 $\mu$ m can penetrate the epidermis and enters the dermis where it acts specifically on water molecules.

Water within the dermis absorbs the laser energy and produces heat, causing instant controlled trauma within the targeted area. The body's response system then repairs the whole area with the regeneration of new collagen, elastin, and remodelling the skin.

Less than 10% of the targeted area is treated, ensuring the stratum corneum is relatively intact, but healing and repair is stimulated in the whole area.



# Non-Ablative

Non-ablative lasers produce limited thermal damage without causing vaporisation of tissue.

Compared to ablative laser:

- Less side effects
- Less complications
- Less downtime
- Rapid healing
- Little or no pain
- Well tolerated
- Several treatments required
- Results may be different



# Laser Safety

## UK Guidelines

British Standards Institute (TR 60825-8:2006): Safety of laser products. Guidelines for the safe use of laser beams on humans.

MHRA: Lasers, intense light source systems and LEDs - guidance for safe use in medical, surgical, dental and aesthetic practices.

## Manufacturer

Ensure you have a copy of the Juvium User Manual and fully understand its contents.

## Roles

The **laser operator** works under the instruction of the **responsible person/organisation**.

The **responsible person/organisation** appoints a **Laser Protection Advisor (LPA)**.

This is a mandatory requirement in Wales, Northern Island and private hospitals in Scotland.

# Compliance

**Local regulation:** Most London boroughs, Nottinghamshire, Birmingham, Liverpool and several boroughs in Essex require a Special Treatments licence obtained from the Local Environmental Health Department, which entails inspection of the facility, protocols, training, license fee and often Core of Knowledge.

**England:** Care Quality Commission registration mandatory if the laser is being used for the treatment of "disease, disorder or injury".

**Wales:** Class 3B and 4 devices must be registered with Health Inspectorate Wales.

**Scotland:** No national legislation for cosmetic procedures, if used for the treatment of "disease, disorder or injury", registration with Health Improvement Scotland.

**Northern Ireland:** Class 3B and 4 devices must be registered with Quality Improvement Authority Northern Ireland.

**Core of Knowledge:** It is recommended that users of Erbium laser have completed the course.

**Training Certificate:** Insurers and local authority inspectors would expect to see a certificate of training on the safe and correct use of the Juvium erbium laser, endorsed by the manufacturer/distributor.

# Laser Safety

## Warning Signs

Appropriate signage needs to be in place when the laser is in use (illuminated sign connected by interlock is the ideal).

## Door Locks

Laser room doors should be locked from inside during treatment (preferably with a twist lock or combination) to prevent access when the laser is operational.

## Plume Extraction

Surgical masks are not sufficient to block nano-particles in laser plume, which may contain viruses, bacteria and blood. Although risk of harm is low, a plume extractor is recommended with a 0.1 $\mu$ m filter.





# Laser Safety

## **Prevent Specular Reflection**

Matt paint rather than gloss, mirrors stored away, non-reflective surfaces, avoid metal/chrome fittings.

## **Fire Extinguishers**

CO<sub>2</sub> or powder extinguishers available in case of fire affecting electrical equipment.

## **Window Coverage**

Close-fitting blinds to prevent any exposure outside of the laser room.

## **Flammable Material**

Remove flammable material, white towels, moistened if needed.



# Eye Protection

**Only use laser protective eyewear recommended by the manufacturer.**

Goggles are protective against specific wavelengths and optical density, which should be specified on the frame (Juvium requires OD of 5). Greater optical density affords greater protection but may be more difficult to see through. Ensure good, bright lighting to reduce the aperture of the pupil.

They often do not offer 100% protection for laser fired directly at the eyes. They should be replaced if they become scratched or damaged.

The person receiving treatment should have the most appropriate eye protection according to their treatment area:

- Goggles may be worn for treatments not close to the eyes
- Disposable adhesive eye shields
- Re-usable metal opaque eye shields
- Intraocular patient shields for eyelid treatments
- **Nominal Ocular Hazard Distance (NOHD) for Juvium is over 3 miles!**



## Key Benefits



The FIXcell non-ablative fractional erbium fibre laser uses cutting-edge FDA-approved technology to achieve an improvement in acne scars, the reversal of sun damage, the successful reduction of superficial wrinkles, an increase in skin thickness, improvements in skin tone and texture, and the stimulation of collagen and hair follicles.

FIXcell delivers clinically proven results with significantly less downtime and risk when compared to traditional CO<sub>2</sub> lasers.



# Treatment Indications

## INDICATIONS

Skin tightening/rejuvenation  
Fine lines and wrinkles  
Uneven skin texture  
Large pores  
Scars, acne-scars, stretch marks  
Hair rejuvenation

## SKIN TYPES

All skin types, with reduced  
Energy and Shot Density:

Fitzpatrick Scale

I = 100%

II = 100%

III = 90%

IV = 80%

V = 70%

VI = 60%

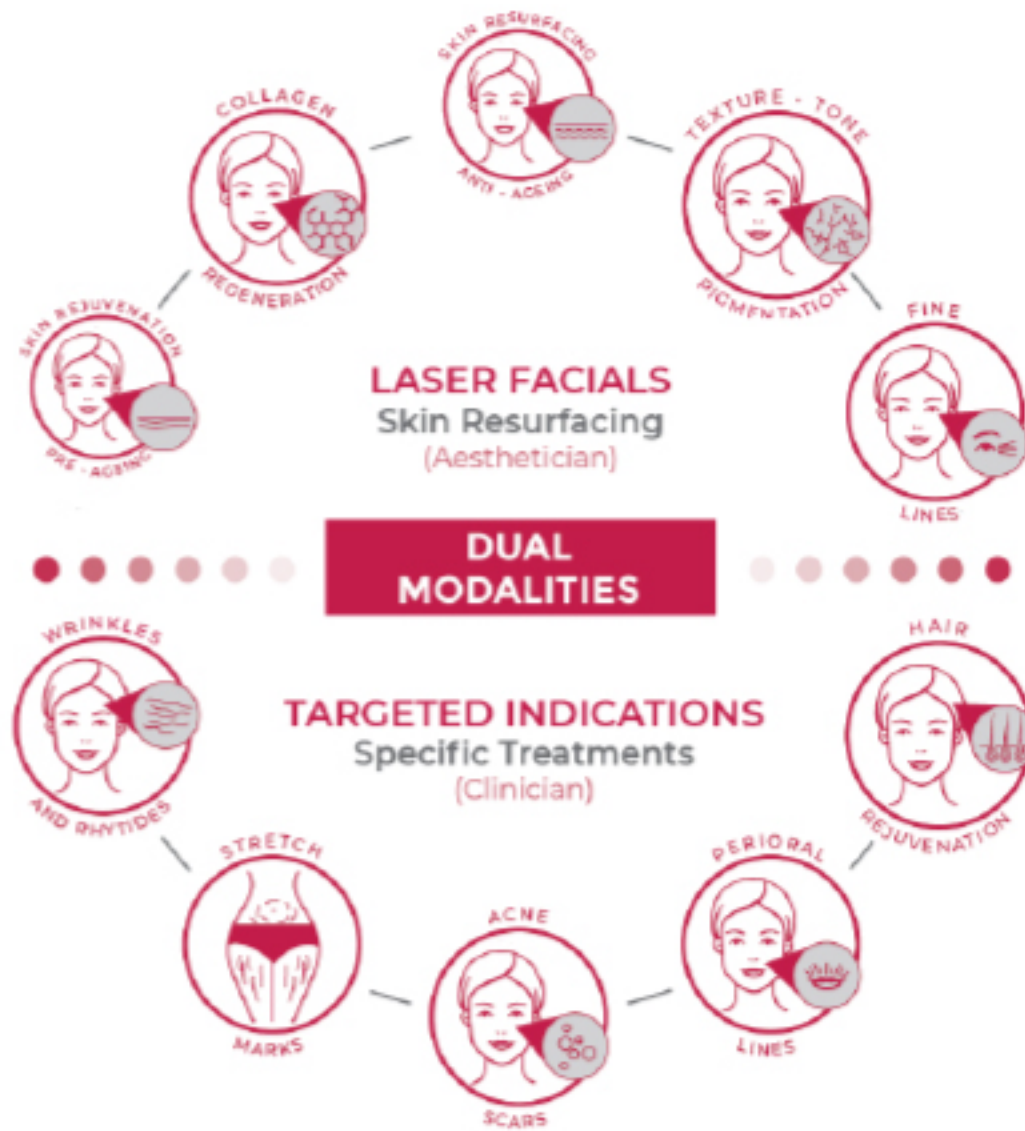
## AREA

Face  
Neck  
Décolletage  
Hands  
Body

## TARGETED

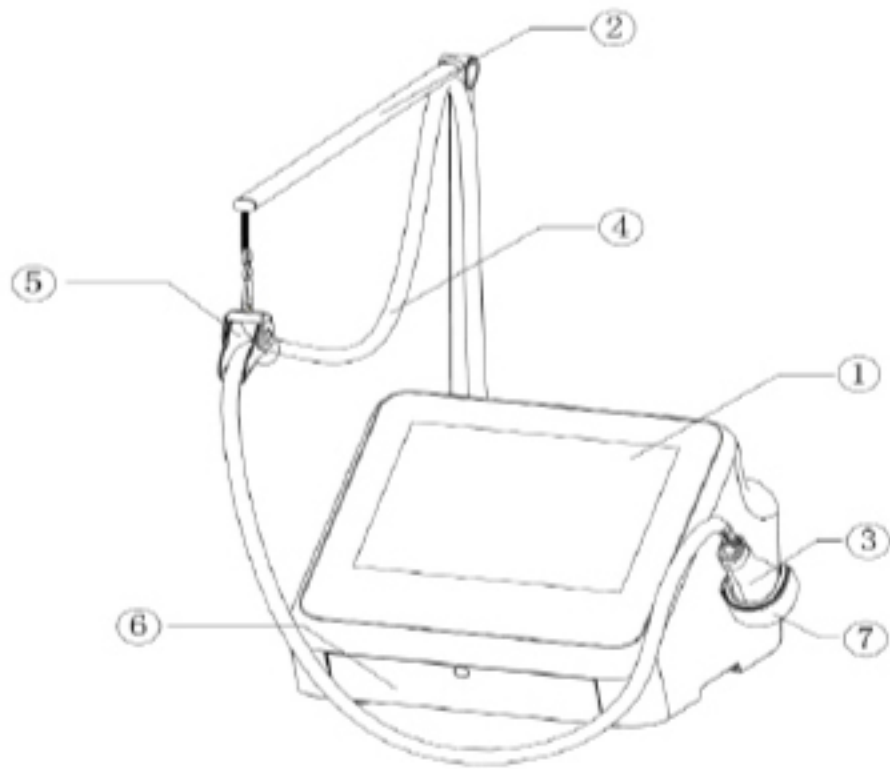
Periorbital  
Perioral  
Scars  
Crow's feet

# Treatment Indications

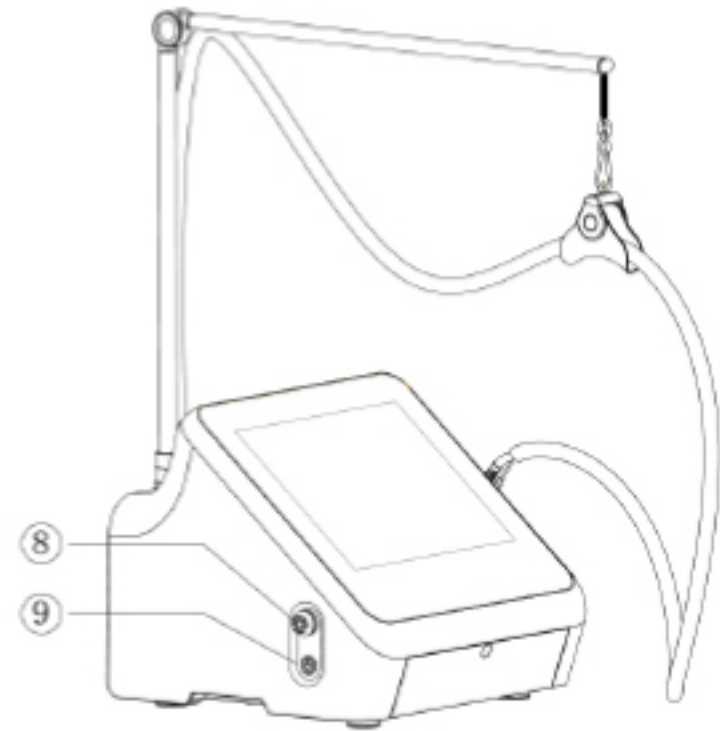




# FIXcell 1550nm Laser System Components

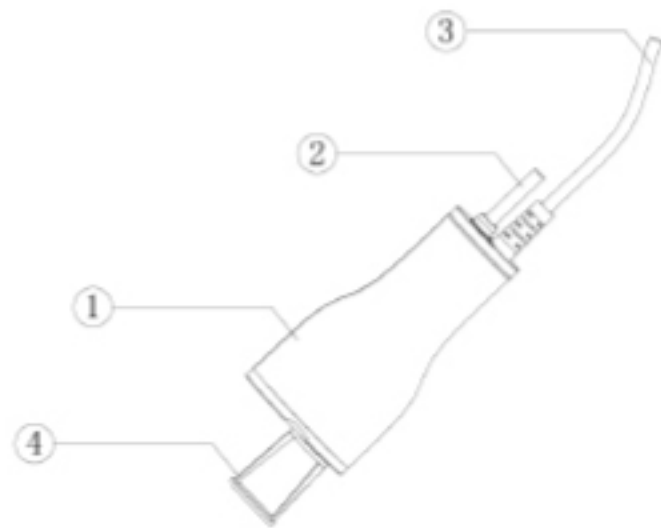


- 1) 15" Touch Screen
- 2) Handpiece umbilical bracket
- 3) Handpiece (Changeable heads)
- 4) Handpiece umbilical
- 5) Umbilical support
- 6) Head storage
- 7) Handpiece holster



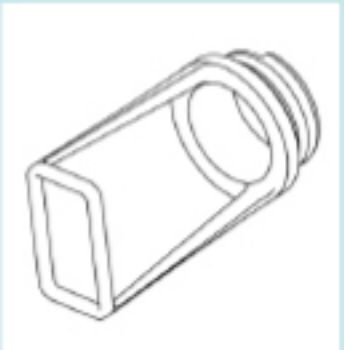


- 8) Emergency stop button
- 9) On/Off switch

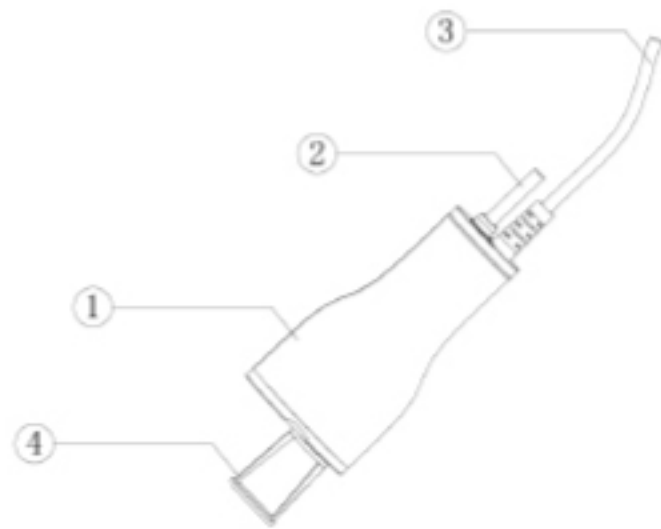
# FIXcell Components





- 1) Handpiece
- 2) Optical fibre
- 3) Signal cable
- 4) Applicator tips

| AccuTip  | EffiTip   | GrowTip   |
|--|---|---|
|  |  |  |
| 10x10mm  | 20x20mm   | 10x20mm   |
| Orbital, nasal   | Cheeks, body  | Hairline  |

# FIXcell 1550nm laser system



- 1) Handpiece
- 2) Optical fibre
- 3) Signal cable
- 4) Applicator tips

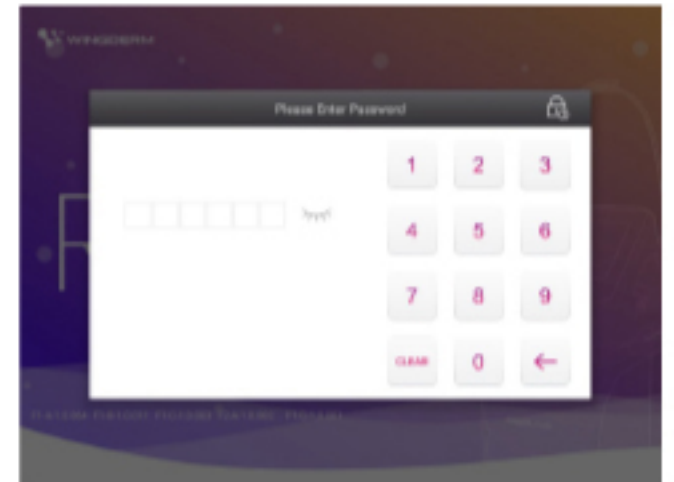
| OST-15   | OST-7   |
|--|---|
|  |  |
| Scanning 15mm  | Scanning 7mm  |
| Larger areas   | Smaller areas   |

## Optical Scanning Technology

"Roll and Scan" technology for FIXcell Laser Facials.

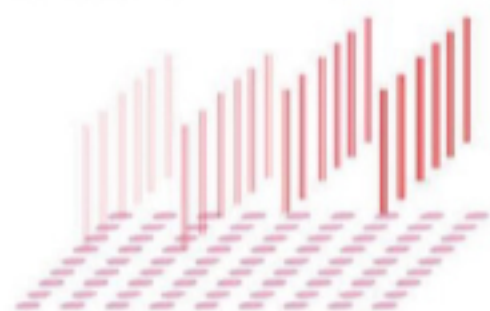
# FIXcell 1550nm laser system

- Ensure the device is fully installed and there are no signs of damage or leakage prior to use.
- The FIXcell is powered on by pressing the "On/Off" switch.
- The screen will display the FIXcell logo and you will be prompted to enter a password (the default setting is 123456).
- Ensure the treatment room is secured (windows obscured, doors locked, eye protection worn, flammable materials removed and all mirrors/reflective surfaces removed where possible).

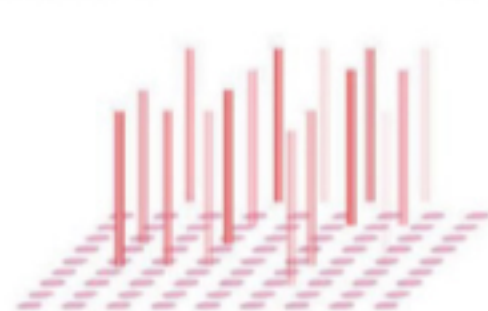


# FIXcell 1550nm laser system

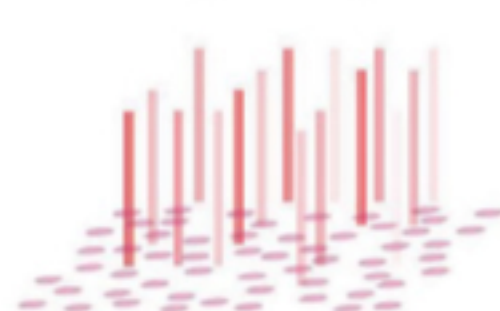
Sequential and random scanning combined, over multiple patterns, for improved treatment efficacy and client comfort.



Normal Scan



Random Scan



CCM ( Controlled Chaos Mode )



## Scan Mode: Targeted Treatments

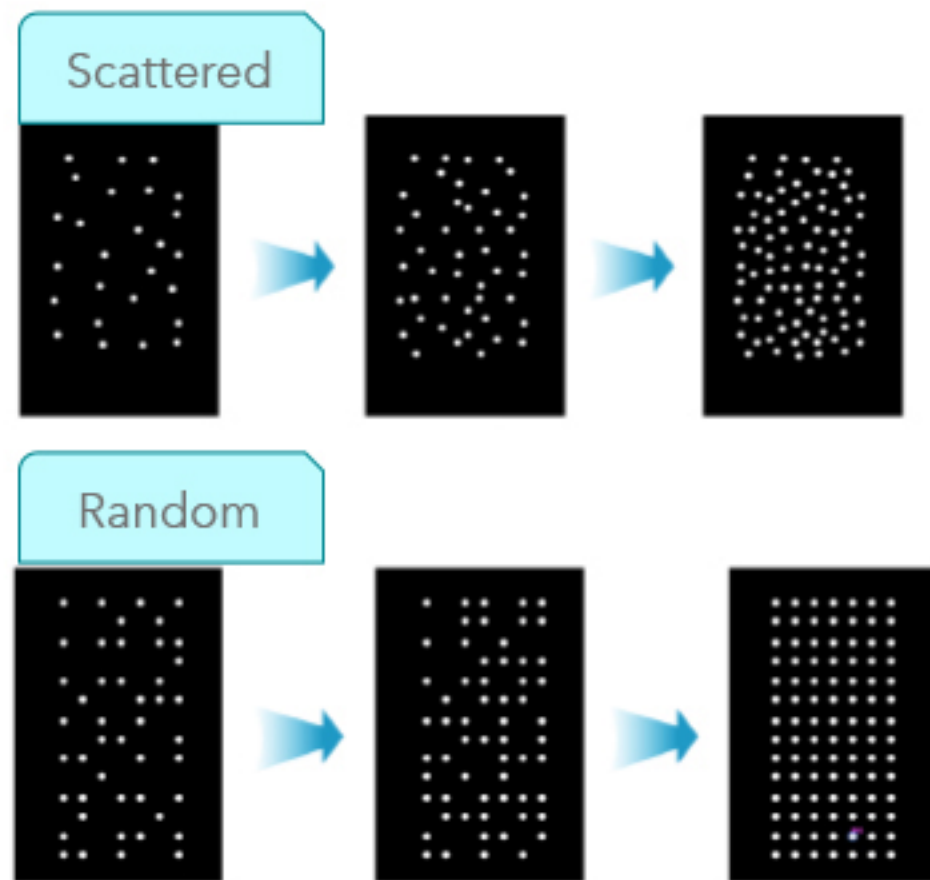
The FIXcell device has several scan modes, which dictates the order of shots fired in a particular treatment zone:

**Scattered:** Shots are fired in a scattergun approach. They can be fired anywhere in the treatment zone. The pattern created is always different and disorganised.

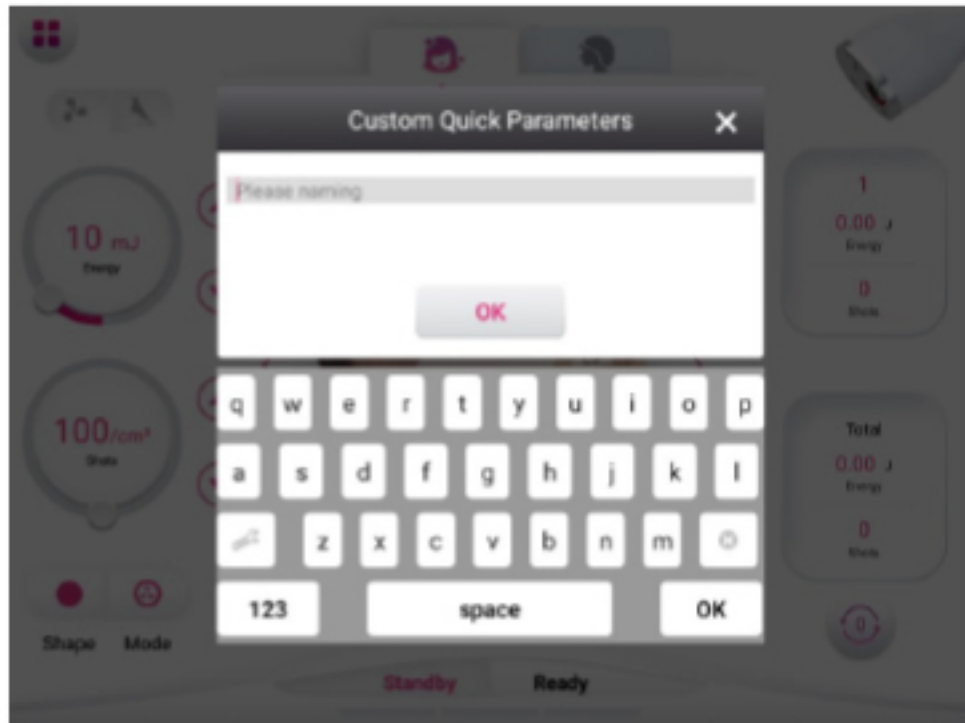
**Random:** The shots are fired randomly anywhere in the treatment area but in an organised final pattern. A random pattern is generally less painful as non-consecutive areas of skin are treated but results more predictable as a defined grid is always treated.

**Horizontal:** The laser shots complete the grid in an organised horizontal fashion starting from top to bottom.

**Vertical:** Similar to horizontal, but the laser shots are fired up to down rather than left to right.



# FIXcell 1550nm laser system

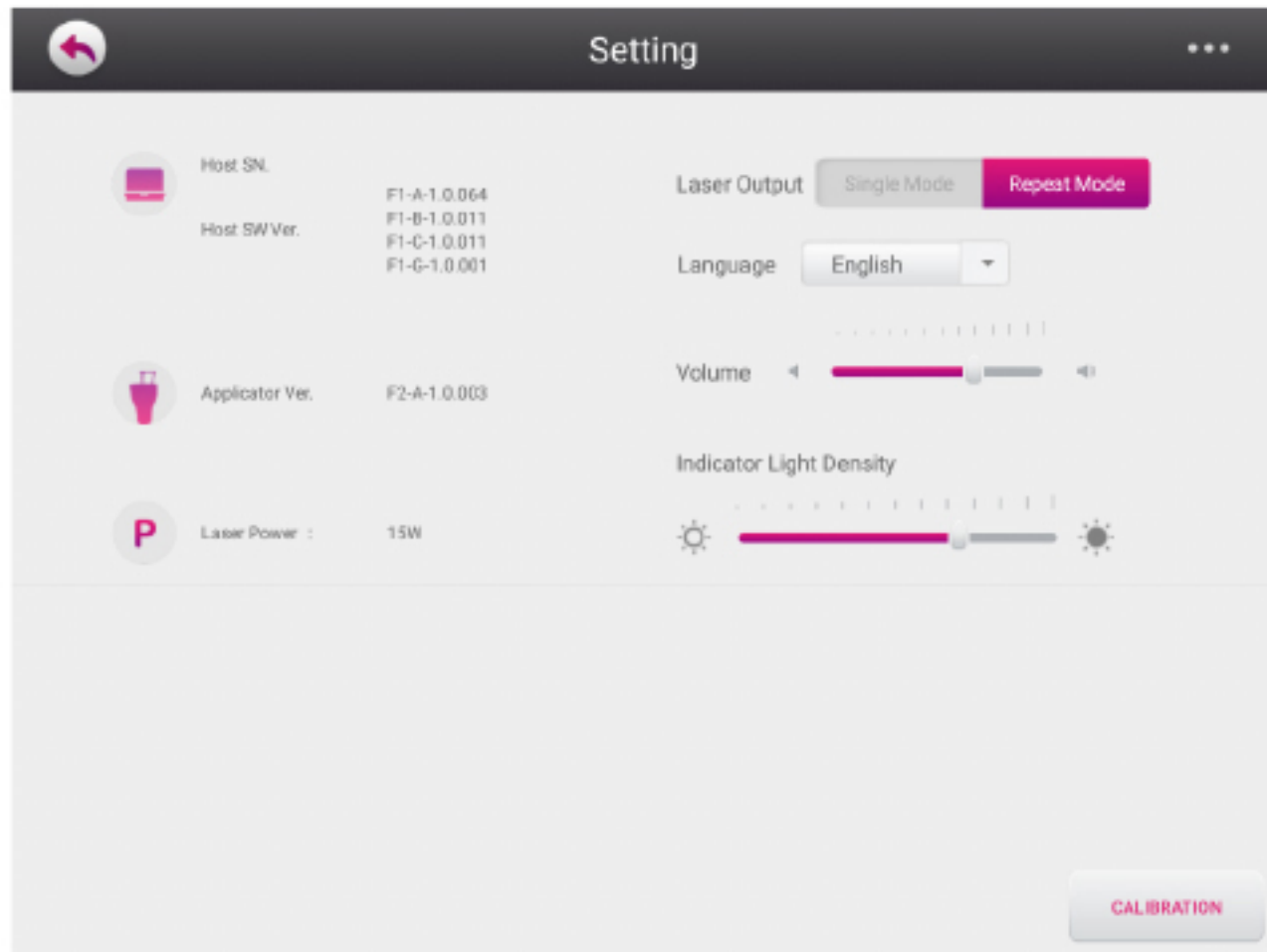


Custom parameters can be stored if used regularly.



View saved parameters.

# FIXcell 1550nm laser system



Settings will show information about the FIXcell device.

It also allows you to change:

- Language
- Volume
- Indicator light density

# COOLSKIN

COOLSKIN is often combined with the FIXcell Erbium Fibre Laser as a package and is a great device for improving patient satisfaction and reducing any discomfort experienced during treatment.



## COOLSKIN **ADVANCED COOLING TECHNOLOGY**

Exceptional client comfort is realised through precise, intelligent auto-adaptive in-treatment cooling of the skin. Capable of delivering to  $-10^{\circ}\text{C}$  to protect and maintain the skins structural integrity and maximise treatment results.



# COOLSKIN

CoolSkin can be turned on or off when needed and operates when the FIXcell laser is in "Ready" mode.

There are 3 modes of operation for CoolSkin, the cooling handpiece:

- Can be attached to the Juvium handpiece to cool the area being treated
- Can be directed to the point of treatment from its adjustable arm
- Can be handed to the patient to allow them to cool any warm areas during treatment

The amount of cooling is easily set on a turn dial on the CoolSkin machine.

The CoolSkin needs draining on a regular basis (depending on usage), the drainage port is at the bottom of the rear of the machine (drainage tubes are supplied by Smart Group). If any water is found beneath the CoolSkin device, please ensure it is drained and all water spills are completely dried before operating the machines.





# FIXcell 1550nm laser system

## PATCH TEST

Patch testing should be completed at least 48 hours prior to treatment.

Complete a medical history and consent form prior to patch testing.

The patch test should be repeated if there is any change in circumstance or prior reaction.

Patch tests should also be repeated if 6 months has elapsed or machine changes occur.

It should be performed on an area of skin similar to the area being treated but a more discrete position.

The skin just below the ear is often used for laser facial treatments.

Prior to patch testing, ensure laser safety guidelines have all been met.

## Settings (Reduce for darker skin types)

HANDPIECE: OST 7

SHOT DENSITY: 150 and ENERGY 15 mJ

SINGLE PASS and DOUBLE PASS next to each other



# FIXcell 1550nm laser system

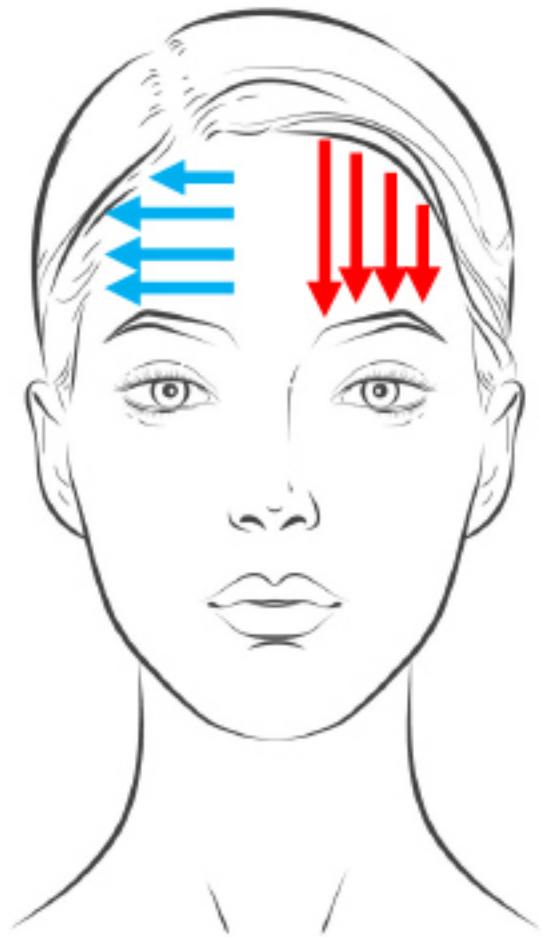
Check medical history has not changed, ensure no adverse reaction to patch test or previous treatment, answer any further questions, complete consent form, take photographs.

- Cleanse and disinfect the skin (caution with alcohol based preparations)
- Use appropriate eye protection
- Enter treatment parameters
- Foot pedal not required for OST 7 or OST 15 handpieces
- Topical anaesthetic not required for laser facial

The Juvium laser will fire when the handpiece is in READY mode, the handpiece applied to the skin and movement is detected. Sound is produced by the Juvium device when the laser is firing.

If there is poor contact with the skin, the Juvium may not fire and no sound will be heard.

# FIXcell 1550nm laser system



Divide the face (or treatment area) into smaller zones (e.g. left forehead, right forehead, upper cheek, lower cheek, jawline, chin, top lip, nose).

Apply the handpiece to the skin and roll to the end of the treatment zone. Lift the handpiece and repeat next to the area just treated. Complete this for the whole face (adjusting handpiece and settings).

Once the whole face has been treated, according to the appearance of the skin and patient's tolerability, a second pass may be completed.

The second pass would normally be done perpendicular to the first pass to ensure a comprehensive treatment. A third pass is optional.

The smaller roller is more suitable for smaller areas or greater contours.

# FIXcell 1550nm laser system

Start with OST 15, 15mJ energy and density of 150, treat forehead, cheeks and chin.

Change to OST 7, 15mJ energy and density of 200, treat the nose.

Reduce energy to 10mJ and treat above the lip.

Repeat for further passes.

*Subsequent treatments, if no adverse skin reactions, can increase these by maximum of 50%.*

Recommended settings (For Fitzpatrick I and II, reduce for darker skin types)

| Area      | Tip    | Energy | Density | Passes | Interval | Amount |
|-----------|--------|--------|---------|--------|----------|--------|
| Forehead  | OST 15 | 10-15  | 100-150 | 1-3    | 2wks     | 3-6    |
| Cheeks    | OST 15 | 10-15  | 100-150 | 1-3    | 2wks     | 3-6    |
| Chin      | OST 15 | 10-15  | 150-200 | 1-3    | 2wks     | 3-6    |
| Above lip | OST 7  | 5-10   | 150-200 | 1-3    | 2wks     | 3-6    |
| Nose      | OST 7  | 10-15  | 150-200 | 1-3    | 2wks     | 3-6    |

# FIXcell Targeted Treatment

## PATCH TEST

Patch testing should be completed at least 48 hours prior to treatment.

Complete a medical history and consent form prior to patch testing.

The patch test should be repeated if there is any change in circumstance or prior reaction.

Patch tests should also be repeated if 6 months has elapsed or machine changes occur.

It should be performed on an area of skin similar to the area being treated but a more discrete position.

The skin just below the ear is often used for laser facial treatments.

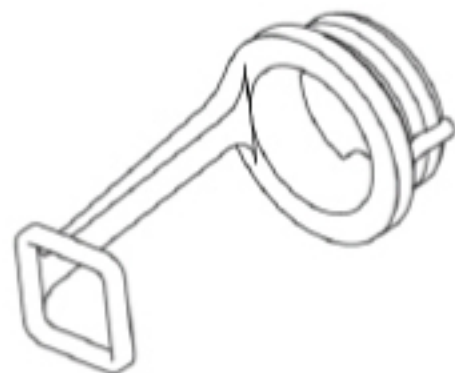
Prior to patch testing, ensure laser safety guidelines have all been met.

## Settings (Reduce for darker skin types)

HANDPIECE: AccuTip (Select a 10 x 10mm square shape)

SHOT DENSITY and ENERGY: Same as to be used for treatment

SCANNING: Scattered



# FIXcell Targeted Treatment

Check medical history has not changed, ensure no adverse reaction to patch test or previous treatment, answer any further questions, complete consent form, take photographs.

- Cleanse and disinfect the skin (caution with alcohol based preparations)
- Topical anaesthetic applied for suitable amount of time
- Use appropriate eye protection
- Enter treatment parameters

The FIXcell laser will fire when the handpiece is in READY mode and the foot pedal is depressed. Sound is produced by the FIXcell device when the laser is firing.



# FIXcell Targeted Treatment



Select the appropriate size and shape to best treat the area, ensuring whole area is treated with no overlap.

Larger sizes are more painful as the laser is firing for longer - it is often better to use a smaller size and move the handpiece more. The COOLskin should be used for greater comfort.

The second pass would normally be done perpendicular to the first pass to ensure a comprehensive treatment. A third pass is optional for less delicate areas.

Recommend scattered scan mode for targeted treatments.

Targeted treatment can be carried out on larger areas instead of laser facial.

# FIXcell 1550nm laser system

*Subsequent treatments, if no adverse skin reactions, can increase energy by maximum of 30%. Spot density can be increased to 400 if well tolerated.*

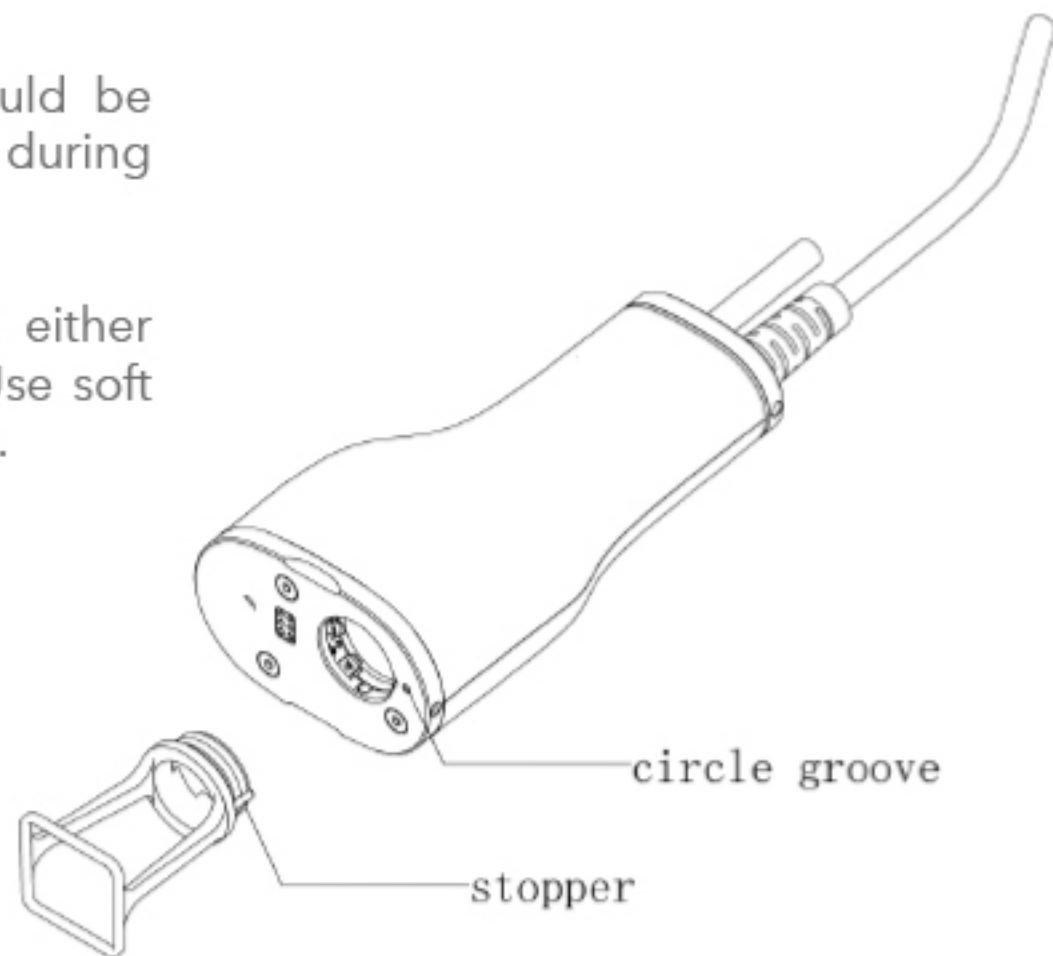
Recommended settings (For Fitzpatrick I and II, reduce for darker skin types)

| Area          | Tip     | Energy | Density | Passes | Interval | Amount |
|---------------|---------|--------|---------|--------|----------|--------|
| Upper eye     | AccuTip | 25     | 350     | 1-2    | 4wks     | 3-6    |
| Lower eye     | GrowTip | 30     | 350     | 1-2    | 4wks     | 3-6    |
| Above lip     | GrowTip | 30     | 350     | 1-3    | 4wks     | 3-6    |
| Crow's feet   | EffiTip | 25     | 350     | 1-2    | 4wks     | 3-6    |
| Scarring      | AccuTip | 35     | 350     | 1-3    | 4wks     | 3-6    |
| Stretch marks | GrowTip | 40     | 350     | 1-3    | 4wks     | 3-6    |
| Hair growth   | EffiTip | 8      | 300     | 1      | 4wks     | 6      |

# FIXcell 1550nm laser system

After treatment, any tips that have been used should be cleaned with alcohol solution (Do not do this during treatment due to risk of fire!).

The focusing lens also needs cleaning periodically, either with water or mild alcohol solution or a lens cloth. Use soft non-woven gauze to wipe clean to avoid any scratches.



# Consumables

## Required per treatment:

- Medical history form
- Consent form
- Aftercare leaflet
- Camera
- Latex-free gloves
- Topical anaesthetic (such as EMLA or LMX-4)
- Surgical face mask
- Plume extractor
- Cleanser
- Disinfectant
- Gauze or tissue for makeup removal and cleansing
- Eye protection
- SPF 50 to apply post-treatment
- Cold packs
- Baum if needed

## Required per machine:

- Photographic paper for calibration

## Pre-Treatment

- Avoid sun tanning for 4 weeks (including tanning beds and self-tan products)
- Use a high-factor SPF 50 sunscreen
- Avoid exfoliating products (such as glycolic acid) and retinol for 7 days
- Avoid exfoliating treatments and mild to moderate skin peels for 7 days
- Avoid deep chemical peels for at least 6 weeks prior to treatment
- Do not plan treatment before an important social event or holiday
- A test patch should be performed at least 48 hours prior to treatment
- Complete a medical history and consent form
- Ensure all questions are answered





# Medical History

Prior to treatment it is essential to take a general medical history history to ensure that Juvium is an appropriate treatment for the patient and that there are no contra-indications.

**Medication:** General health, underlying medical conditions, immunosuppressants, blood thinners, photo-sensitising agents.

**Allergies:** Anaesthetic agents.

**Medical conditions:** General health, cancer or previous cancer treatments, immunosuppression, auto-immune disease.

**CLIENT EVALUATION**

Name: \_\_\_\_\_ DOB: \_\_\_\_\_  
Address: \_\_\_\_\_ Phone (if): \_\_\_\_\_  
Email: \_\_\_\_\_ Date: \_\_\_\_\_

Consultation by: \_\_\_\_\_

**AREAS TO BE TREATED**

Which area(s) are you interested in having treated?  
continued for further areas: \_\_\_\_\_

Skin Type: \_\_\_\_\_

**HEALTH / MEDICAL**

GP name, address & phone: \_\_\_\_\_

Please indicate any health conditions you have had previously, or are now experiencing:

|   |   |   |
|---|---|---|
| <input type="checkbox"/> Allergies                  | <input type="checkbox"/> Viral or Bacterial Infection | <input type="checkbox"/> Recent Illness                     |
| <input type="checkbox"/> High / Low Blood Pressure  | <input type="checkbox"/> Anticoagulant Medication     | <input type="checkbox"/> Metal Implants / Screws            |
| <input type="checkbox"/> Heart problems/Pacemaker   | <input type="checkbox"/> Epilepsy                     | <input type="checkbox"/> Poor circulation/loss of sensation |
| <input type="checkbox"/> Diabetes                   | <input type="checkbox"/> Hypoglycaemia                | <input type="checkbox"/> Lupus or Auto Immune Condition     |
| <input type="checkbox"/> Fillers / Botox Injections | <input type="checkbox"/> Keloid Scarring              | <input type="checkbox"/> Eczema or Psoriasis                |
| <input type="checkbox"/> Cancer                     | <input type="checkbox"/> Hormonal Conditions          | <input type="checkbox"/> Pregnancy / Breast Feeding         |
| <input type="checkbox"/> Alcoholism                 | <input type="checkbox"/> Thyroid Disorders            | <input type="checkbox"/> Skin Disorders / conditions        |
| <input type="checkbox"/> Transplant                 | <input type="checkbox"/> Systemic Diseases            | <input type="checkbox"/> Immunosuppression                  |
| <input type="checkbox"/> Previous Surgery           |   |   |
| <input type="checkbox"/> None of the above          |   |   |

Please list all medication(s) you are currently taking or have been prescribed by your GP: \_\_\_\_\_

Please list any non-prescriptive medicine: \_\_\_\_\_



## Contra-Indications



- Pregnancy/Breastfeeding
- Pacemaker/Implantable cardioverter defibrillator (ICD)
- Superficial metal implants in treatment area
- Systemic illness/Cancer
- Infection at the treatment site/Open wounds
- Skin disease at the treatment site (such as active acne, eczema, psoriasis)
- Ablative laser resurfacing or deep chemical peels within 3 months
- Active suntan or use of sun-beds or tanning creams within 4 weeks
- Immunosuppression (including treatment with chemotherapy agents, steroids or immunosuppressive drugs)
- Uncontrolled diabetes
- Certain skin conditions that may be affected by laser
- Hypertrophic/Keloid scarring
- Oral isotretinoin (current or within 6 months) (Roaccutane®)
- Allergy to anaesthetic agent being used

## Relative Contra-Indications



- Mental health issues/Body dysmorphia
- Oral photosensitising medication/over the counter products
- Past medical history of skin cancer
- Co-morbidities (such as cardiovascular, respiratory, renal or hepatic disease)
- Auto-immune disease
- Severe or recurrent outbreak of herpes simplex (use prophylaxis)
- Dry, fragile and sensitive skin
- Blood coagulopathies or blood-thinning medication

# Photosensitising Medication

- Certain antibiotics (tetracyclines, ciprofloxacin)
- Non-steroidal anti-inflammatory drugs (ibuprofen, naproxen, diclofenac, indomethacin)
- Water tablets/Diuretics (furosemide, bumetanide, bendroflumethiazide)
- Anti-diabetic drugs (gliclazide)
- Anti-depressants (amitriptyline, citalopram, fluoxetine, paroxetine, sertraline)
- Others (amiodarone, diltiazem, quinine, hydroxychloroquine, enalapril)
- Over the counter preparations (St. John's Wort)



# Consent

Prior to treatment, ensure the patient:

- Has had adequate time to consider the treatment
- Understands the treatment and expected outcomes
- Aware of the risk of side-effects and complications
- Aware of alternative treatment options
- Aware of the pre and post treatment instructions
- Has had a cooling off period

A consent form should be completed.

These are available from Smart Group.

**CLIENT RELEASE**

I, ..... have been advised and have fully discussed the treatment(s) that I will be receiving, including the listed side effects. I am fully satisfied that I have completed the questionnaire, with regard to any medical conditions or medicines that I am taking truthfully and confirm that I am suitable to proceed with the above-mentioned treatment. I completely understand the implications of the treatment that I will be receiving, and at no time have I been misled or badly informed by the consulting therapist or company. I have had adequate time for my questions to be answered and feel well informed.

Any falsifications of information submitted by myself could be detrimental to my health, and affect the success of my treatment, for which the company will not be held liable.

I hereby authorize and direct you to administer the prescribed process and perform such procedures as many deemed to be necessary or advisable. My signature below constitutes my acknowledgement that:

1. I have read, understood and fully agree to the foregoing and I have received and read the relevant post care treatment information document.
2. Give consent to the proposed treatment process and that this has been satisfactorily explained to me and I have all the information I desire
3. I hereby give my consent and authorization voluntarily and release the establishment and its agents of any claims that I have or may have in the future in connection with the described treatment.

Customer Signed ..... Print ..... Date .....

Clinician Signed ..... Print ..... Date .....

# Photography

Before and after photographs should be taken.

Keep contemporaneous records.





## Aftercare

After treatment, the skin may feel warm and tight and there may be some redness. Cold compresses can be applied if required immediately after treatment and in the subsequent days.

There may be some swelling after treatment or this may develop the following day, particularly in delicate areas, such as around the eyes. Swelling may be quite pronounced and anti-inflammatories or anti-histamines may be recommended to help reduce this.

There may be some flaking or dustiness of the skin, it is important that the skin is not picked or scratched as this may result in an infection or scarring.

- Use a high factor SPF 50 sunscreen for 6 weeks post-treatment
- Gently wash with tepid water and mild soap until any inflammation has settled
- Apply a gentle moisturiser whilst healing occurs
- Avoid retinol and exfoliating products until the skin has healed
- A balm may be recommended if the skin is inflamed
- Aciclovir may be prescribed in certain situations
- **Most patients experience very little or no inflammation or swelling**





## Aftercare



Most people will notice results after one treatment but often a course is required (usually between 3-6 depending on the desired outcome and starting point).

Although some results will be noticed within the first few days due to micro-ablation and shrinkage, collagen production and rejuvenation will take several months to appear but then produces lasting results.

Periodic maintenance treatments with Juvium will ensure results continue.

# Side-Effects

Certain side effects may be experienced during treatment or shortly afterwards. Although these side effects are usually rare and temporary, they should be correctly identified and managed accordingly.

Side-effects and complications are more likely to occur due to:

- Incorrect settings
- Too many passes during treatment
- Poor patient selection
- Poor technique of the laser operator
- Failure to assess the test patch
- Lack of adherence to pre and post treatment instructions



# Side Effects & Complications

## **Pain**

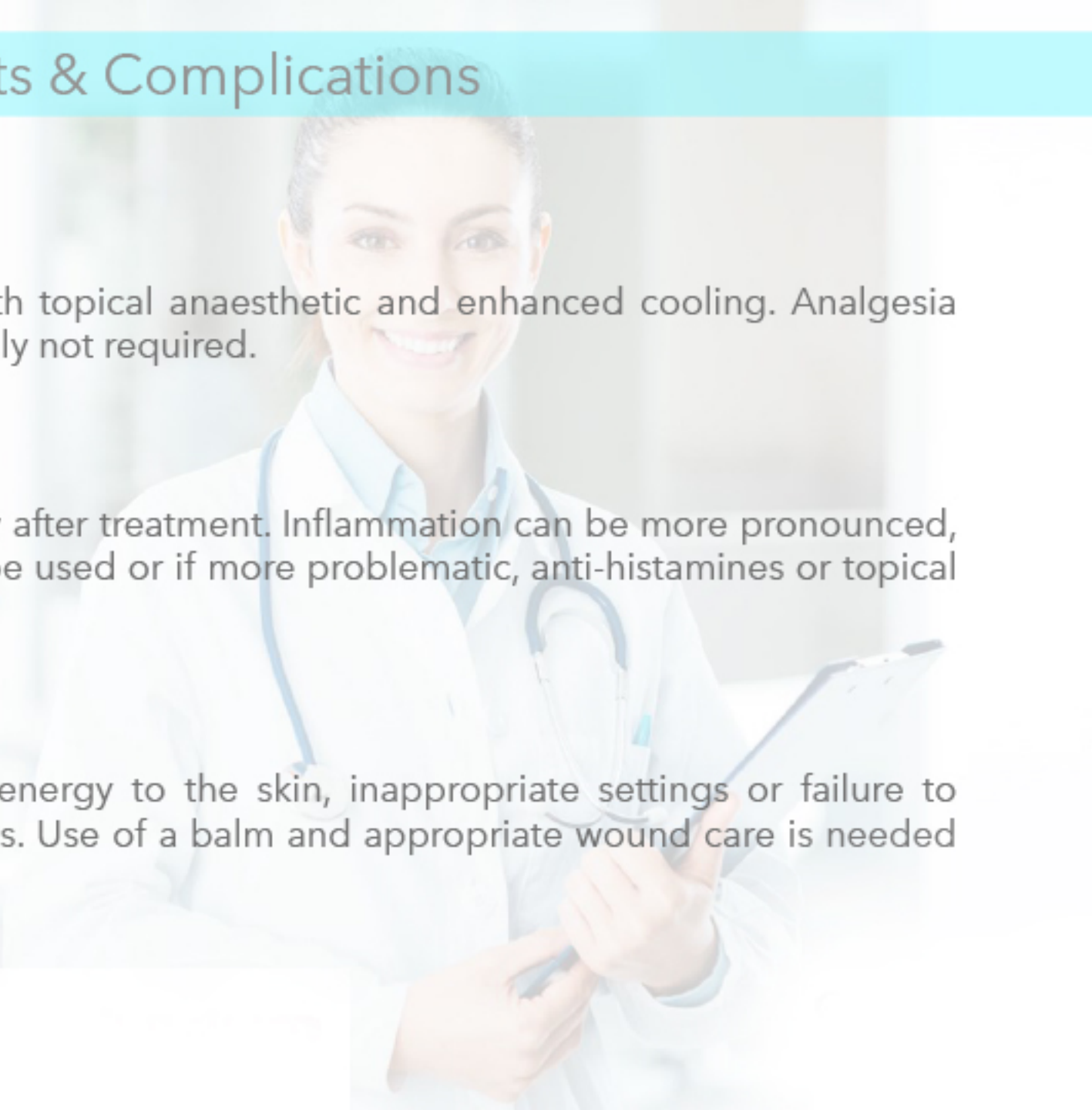
Usually minimal during treatment, eased with topical anaesthetic and enhanced cooling. Analgesia can be taken after the procedure, but generally not required.

## **Redness, inflammation and irritation**

May have some minor erythema immediately after treatment. Inflammation can be more pronounced, particularly if sensitive skin. Cool packs can be used or if more problematic, anti-histamines or topical steroid.

## **Burns, blisters and crusting**

Burns are caused by delivering too much energy to the skin, inappropriate settings or failure to adhere to pre and post treatment instructions. Use of a balm and appropriate wound care is needed to try and prevent any scarring.



# Side Effects & Complications

## **Hyperpigmentation**

Often temporary, but postpone further treatment until it has resolved. Tyrosinase inhibitors may be used pre-treatment if the patient is more susceptible to this complication and bleaching creams may be used if it has developed. Judicious use of SPF 50 sunscreen will lessen the risk of hyperpigmentation considerably.

## **Hypopigmentation**

Rare and may be temporary or permanent, camouflage makeup may be needed.

## **Eye injury**

Erbium 1550nm laser is able to penetrate the eye and cause damage to the cornea, including permanent blindness if the fovea is affected. Eye protection is essential. Treatment close to the eye should involve additional eye protection such as intraocular shields.

## Side Effects & Complications

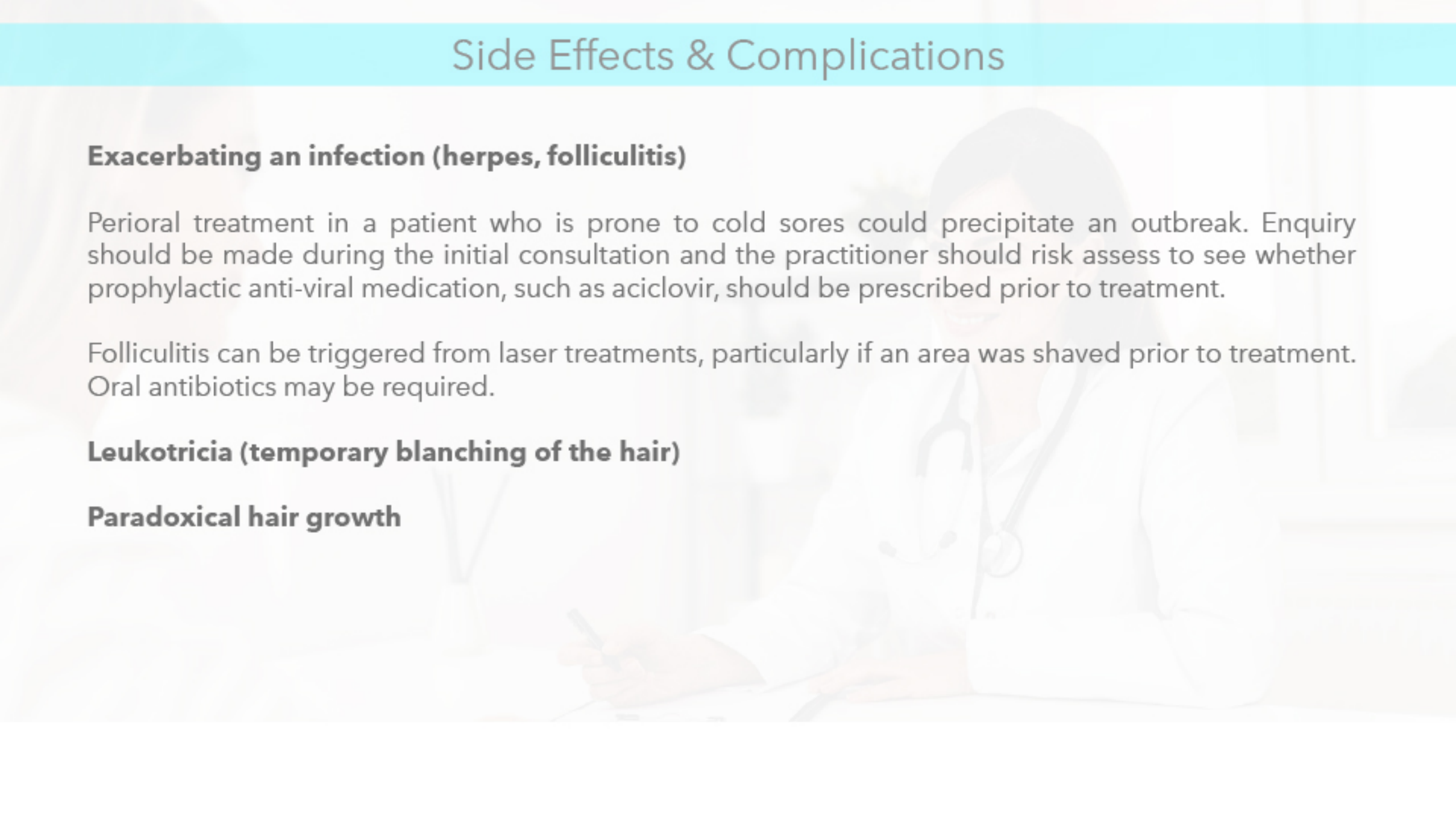
### **Exacerbating an infection (herpes, folliculitis)**

Perioral treatment in a patient who is prone to cold sores could precipitate an outbreak. Enquiry should be made during the initial consultation and the practitioner should risk assess to see whether prophylactic anti-viral medication, such as aciclovir, should be prescribed prior to treatment.

Folliculitis can be triggered from laser treatments, particularly if an area was shaved prior to treatment. Oral antibiotics may be required.

### **Leukotricia (temporary blanching of the hair)**

### **Paradoxical hair growth**

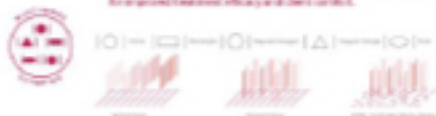




# Marketing



Sequential treatment settings combined over multiple passes to be improved treatment efficacy and client comfort.



Think SMART. Be SMART. Work SMART | Smart Joules

|   |   |   |
|---|---|---|
| <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p> | <p>The device uses bipolar active air-cooling technology before, during and after treatment.</p> <p>Energy penetration for subcutaneous treatment.</p> <p>Specialized treatment heads for various skin types.</p> <p>Automatic skin temperature monitoring.</p> | <p>CC FDA</p>   |
| <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p>                   | <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p>   | <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p> <p><b>NEW</b></p> |

Smart Joules Active Fractional Laser has proved to be one of the most popular devices in our clinic, loved by staff and patients alike. We have already completed the cost for the machine, it has been a real success with patients seeing immediate results from treatments, another reason to love it is the ease of use and the safety. We selling points are you will receive the most advanced and effective laser treatment in your clinic, it is quite unique because, you will see results and it is safe to use throughout the whole treatment area.

| TECHNICAL SPECIFICATIONS |                         |                |                |
|--------------------------|-------------------------|----------------|----------------|
| Laser Type               | Active Fractional Laser | Output Energy  | 0.5 to 100J    |
| Wavelength               | 1550nm                  | Pulse Duration | 0.5 to 100ms   |
| Spot Size                | 0.5 to 10mm             | Spot Depth     | 0.5mm          |
| Intensity                | 0.5 to 100J/cm²         | Spot Area      | 0.2 to 78.5cm² |
| Spot Size                | 0.5mm                   | Spot Depth     | 0.5mm          |
| Spot Area                | 0.2 to 78.5cm²          | Spot Area      | 0.2 to 78.5cm² |
| Spot Area                | 0.2 to 78.5cm²          | Spot Area      | 0.2 to 78.5cm² |

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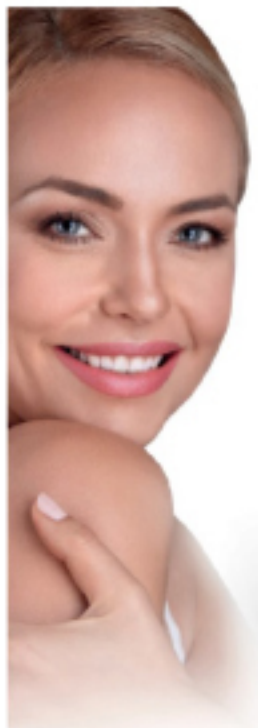
**INTELLIGENT OPERATING SYSTEM**

Intelligent software allows for adjustable treatment settings and parameters for both Clinician and client safety.

**NON-ABLATIVE FRACTIONAL DELIVERY**

The fractional delivery of the Smart Joules Active Fractional Laser provides a non-ablative, non-invasive treatment.

Producing proven results with minimal downtime and no need for aggressive CO2 lasers.



**COOL, LAMINATE FACIALS - Aesthetics**

Unique "Roll and Treat" heads with Optimal Cooling Technology (OCT) for heat and after-treatment application.

Incorporating IPL and CO2 technology for both:

- Anti-aging, repair, regenerate and protect
- Resurfacing, stimulate, regenerate and extend

Roll and Treat technology delivers "The Ultimate Laser Facial"

**TARGETED INDICATIONS - Eczema**

Multiple guide frames and heads made using technology allows for the delivery of higher energy levels for the treatment of specific conditions.

Works for fine, sun-damaged, stretch marks, pigmentation, redness, rhytids, uneven skin texture and hair restoration.

**BEFORE AND AFTER - Results | Smart Joules**

**CRYOGENIC ADVANCED COOLING TECHNOLOGY**

Essential skin comfort is achieved through precise, intelligent active adaptive temperature cooling of the skin. Capable of delivering to -80°C to protect and soothe the skin at each and every treatment.

Smart Joules Active Fractional Laser technology produces rapid and deeper penetration of laser energy, minimizes skin damage, naturally increases collagen production, increases skin thickness, improves skin tone and texture while stimulating collagen and elastin production.

A Joules treatment provides measurable results without the downtime associated with aggressive CO2 lasers.

**FRACTIONAL DELIVERY** has proven clinical results for a range of indications with no pain and minimal downtime.

Increased metabolism and regeneration of collagen for improved skin quality.