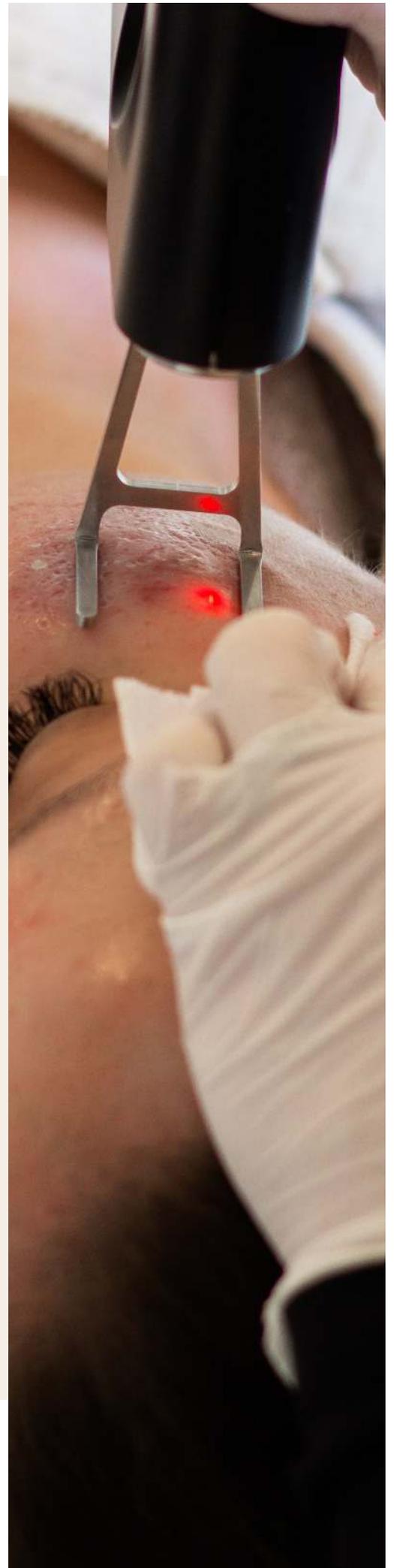


# Client guide

Treatment of acne  
scars with energy  
devices



**Cutis** Clinic



## **Welcome to Cutis Clinic**

Cutis Clinic is led by Dr. Emil Henningsen, board certified dermatologist, who specializes in the treatment of acne scars and is regarded as an expert and key opinion leader in this field. At Cutis Clinic we perform manual procedures, subcision with HA fillers, bio-stimulating fillers and fat, fractional and fully ablative laser resurfacing procedures, non-ablative lasers for pigmentation (PIH) and red scars (PIE), RF microneedling, PRP / PRF, chemical peels, TCA cross / TCA paint, and others.

## **The key to success lie in tailormade scar revision**

Treatment with lasers and energy devices may not be the best treatment option for everyone. Most acne scar patients will have multiple scar types. Scar morphology will change over time. Hence, the best treatment is a bespoke treatment that suits your type of scars. At the initial consultation, we will discuss treatment options based on your skin condition, skin type, time frame, tolerance to downtime, budget, etc. If possible, we will guide you to follow-up treatments in your own country.

## **How many treatments and how much time will I need?**

Scar revision is a complex procedure that requires patience from both the patient and the specialist. Many patients return for treatments every three months or with longer intervals. Most patients treat over 2-3 years.

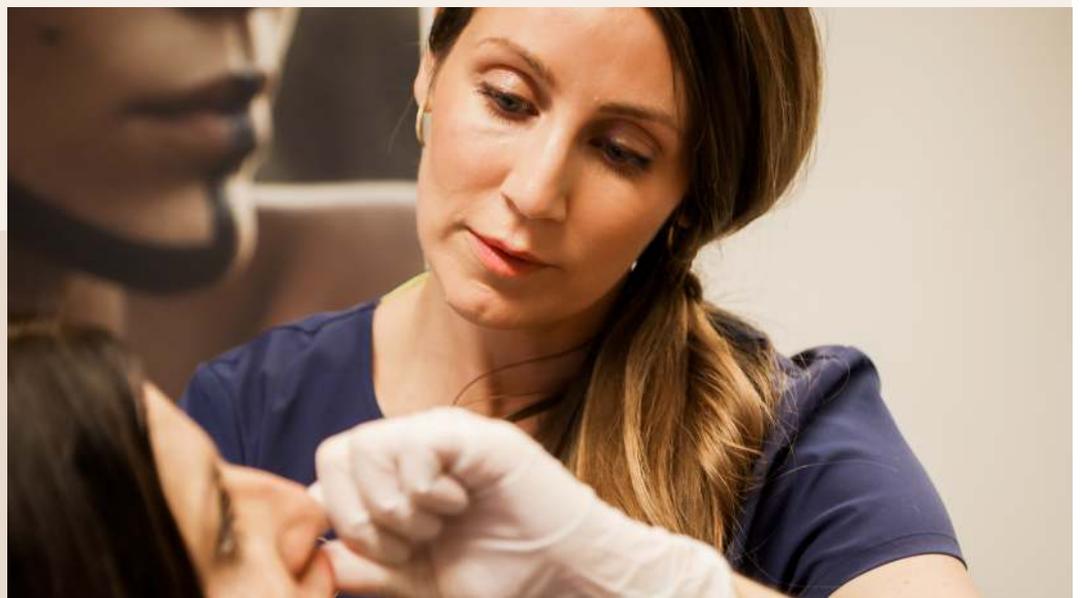
## **What kind of treatment works best for my scars?**

We will guide you through the treatment process to decide which treatment to choose at any particular point in your treatment course. We may combine multiple lasers and non-laser treatments in the same treatment to provide the best outcome. The use of multiple treatment methods form the basis of your individual acne scar revision program.

In the following FAQ-section, you may find useful information and replies to some of your questions. Please do not hesitate to contact us with any questions you may have.

We are looking forward to helping you!

Kind regards,  
Cutis Clinic





## Frequently Asked Questions about Acne Scars

### **May I treat Acne Scars while I am treated with Isotretinoin?**

Most treatments are safely performed on patients treated with Isotretinoin. Newer studies and papers have confirmed this. Have a look at this consensus [report](#).

### **What lasers and energy devices are available in Cutis Clinic?**

#### *Ablative lasers: CO2 (10,600 nm) and Erbium:YAG (2,940 nm)*

The most potent lasers on the market for skin treatments are CO2 and Erbium lasers that are ablative lasers. These are used to remove fractions of skin (fractional ablative laser treatment) or for full skin surface resurfacing (fully ablative). Dr. Emil Henningsen does all of these procedures.

#### *Vascular lasers: KTP laser (532 nm), Pulsed dye laser (585 nm) and Nd:YAG (1,064 nm)*

KTP and Pulsed dye laser are non-ablative lasers, which are very effective for treatment of early, red scars. The laser is highly absorbed in haemoglobin heating the overgrowth of blood vessels in the scar to destroy these. Indications are fresh red scars (PIE), hypertrophic scars and keloids, and redness after ablative laser resurfacing.

Nd:YAG laser penetrates the skin deeper due to the longer wavelength which may be used for large blood vessels in hypertrophic scars and for resistant redness after acne.

#### *Pigment lasers: Picolaser Nd:YAG (1064), Q-switch nano Nd:YAG (1064) and KTP (532 nm)*

1064 nm laser is a good laser for pigmented scars and post-inflammatory hyperpigmentation (PIH). More treatments are needed for better outcomes. 1064 nm targets deeper dermal pigment, whereas 532 nm targets superficial epidermal pigment. There is no downtime after the Nd:YAG laser, but expect one week of downtime after the KTP laser. Both lasers may be combined with bleaching agents such as Hydroquinone for home use.



### *Radiofrequency (RF) microneedling: Genius*

Insulated needles deliver RF energy from each of 49 small encapsulated needle tips that penetrate the skin to a certain depth up to 3.5 mm. This treatment remodels your dermal skin with minimal trauma to the skin surface. Downtime is usually short (3-4 days). This is a very new energy device that has replaced the "Infiniti" by Lutronic. Genius is indicated for a large spectrum of acne scars and is effective for rolling scars and boxcars.

### *Plasma exeresis*

Plasma exeresis is rarely used in acne scar revision. Plasma is capable of removing areas of elevated tissue by evaporation and ablation, but the penetration depth is poorly controlled by the operator and the risk of PIH is quite high in dark skin.

### **What is the difference between CO2 and Erbium lasers?**

The main difference is the wavelength of the laser. Erbium lasers produce 2,940 nm wavelength light and CO2 lasers produce 10,600 nm wavelength light. The wavelength determines the effect on the skin. Both Erbium and CO2 lasers are ablative. This means that CO2 and Erbium lasers remove fractions of the skin (fractional setting) or the entire surface of the skin (re-surfacing). Erbium lasers are strongly absorbed in water, so the Erbium laser does not produce as much heat in the skin and Erbium laser has shorter downtime and less risk of side-effects compared to CO2 lasers that are not absorbed in water. CO2 lasers produce more heating and, in general, are slightly more effective in skin remodelling due to collateral heating of tissue. Both wavelengths are considered safe for acne scar revision. This results in smoother skin with less scarring. Final results are seen months after the treatment.

### **What brands do we have on stock?**

- CO2 laser: MedArt Intenz (10,600 nm) - fully ablative and fractional ablative
- Erbium YAG laser: Fotona Dynamis SP (2,940 nm) - fully ablative and fractional ablative
- Pulsed dye laser: Regenlite Transform (585 nm) - non-ablative
- KTP laser: Derma V, Lutronic (532 / 1064 nm) - non-ablative
- Q-switched laser: Fotona QX max (1,064 nm) - non-ablative
- PicoLaser: Pico Plus, Lutronic (1064 / 532 nm) - non-ablative
- Long-pulsed nd:YAG laser: Fotona Dynamis SP (1,064) and Clarity 2, Lutronic - non-ablative
- RF microneedling: Genius, Lutronic - fractional ablative
- Plasma: PlexR, GMV - ablative

All energy devices are between 0-5 years old. All our lasers are continuously maintained according to the recommendations of the manufacturer. Danish Health authorities ([www.stps.dk](http://www.stps.dk)) do regular inspection visits at our clinic.

### **What is fractional laser treatment?**

Fractional laser resurfacing treats 'fractions' of skin enabling quicker recovery and shorter downtime for patients. Most patients will benefit from a series of fractional laser treatments.

Facts on fractional laser for scar treatment:

- Fractional CO2 and Erbium lasers are effective for acne scar treatments
- Fractional resurfacing treats a portion of your skin
- Using a scanner the doctor can control the percentage of skin treated
- Fractional lasers have shorter recovery time and lower risk of complications compared to fully ablative laser resurfacing
- Up to 70% improvement of superficial and textural scars can be seen after four treatments
- Side effects are generally rare and laser procedures are very well tolerated
- Recovery time may be tailored according to your preferences, typically 3-5 days
- Erbium fractional laser has shorter downtime compared to CO2
- Erbium fractional lasers are safer in darker skin compared to CO2
- CO2 fractional lasers have longer downtime, however they deliver slightly better outcomes
- Pulsed dye lasers are brilliant for treating fresh / red scars and typically two treatments are needed spaced 3-4 weeks
- Everyone will have an individual pattern of acne scarring, and a bespoke treatment program will give superior results
- RF microneedling (Genius) is not a laser but it is also fractional in the way that it

penetrates fractions of skin and delivers radiofrequency (heat) to the dermis

### **What does 'ablative laser' mean?**

Ablation means skin removal. Ablative lasers (CO2 / Erbium) remove a percentage of the skin surface. Ablative lasers are the most potent lasers for treatment of acne scars.

### **How is fractional ablative laser treatment for acne scars performed?**

All acne scar treatment procedures are performed by Dr. Emil Henningsen at our Cutis Clinic in Odense. A strong local anaesthetic cream is applied minimum 1 hour prior to treatment. We offer you painkillers as well (Paracetamol and Ibuprofen). Just before the laser procedure, the cream is wiped off and the skin is disinfected with an antibacterial solution. A computer-guided scanner is placed on the treatment area and the laser is applied. Each laser treatment takes 10 to 20 minutes to perform. After laser, we apply an antibiotic ointment to the treated areas. Cooling is used during and after the procedure to minimize discomfort.

When combined with subcision, fractional ablative laser treatment may be done in tumescent anaesthesia with zero to minimal discomfort for the patient.

### **What kind of acne scars respond to fractional CO2 / Erbium lasers?**

In general, poor skin texture with superficial / textural scarring responds well to fractional ablative laser treatment. In general, deeper rolling scars are tethered (anchored) and should be treated with subcision for optimal results. In order to lift scars to the same level, deeper icepeak scars and boxcars may be treated with TCA cross or punch excision before laser treatment.

### **How many treatments are needed for optimal results?**

The number of treatments for acne scars will depend on your starting point and factors such as the treatment method, the device used, the skill sets of the practitioner,

the depth and type of your scars, your healing response, your tolerance to downtime, your skin colour etc. Results vary between patients.

In most cases, 4 treatments will lead to 60 - 70% improvement of acne scars when spaced 3+ months. Some patients aim for the best possible outcomes and do more treatments over time.

### **How do fractional lasers work?**

Fractional laser produces thousands of tiny 'ablation' holes in the skin. Each hole is the diameter of a shaft of hair, however these columns extend up to 2 mm into the skin where the scars lie. The laser targets the scarred areas and stiff collagen, but also leaves areas of healthy tissue to regenerate. This fractional treatment allows your skin to heal much quicker than if the entire surface was treated at once.

### **How does fully ablative laser resurfacing work?**

Erbium and CO2 laser resurfacing is used for the treatment of superficial acne scars that lie in the same level of the skin. We use numbing cream and nerve block (Lidocaine injection) for anaesthesia. Most often, we use Erbium resurfacing to remove the upper layer of the skin, usually we ablate 200-400 micrometres deep. As we reach the papillary dermis, some pinpoint bleeding will be seen. This is followed by fractional Erbium or fractional CO2 laser treatment for additional effect. Fractional laser creates deep columns of ablation (tissue removal and coagulation) in the deeper dermis.

### **Which energy device is best for acne scars?**

The correct treatment method for your scars will give you the best results - not necessarily a laser. Lasers are only one of the tools used for revision of acne scars. In general, RFM (the Genius) or a fractional CO2 laser would be the most effective device for scar revision.

#### *Different lasers and treatment indications*

- RFM (Radiofrequency microneedling) or "The Genius" or a newer device that

delivers high energy in a controlled way to the dermis to break down scar tissue and stimulate collagen production. The surface is relatively spared from the energy and heating, and the downtime may be as short as 24h.

- Fractional CO2 laser – a very good fractional laser for all grades of textural scars. CO2 laser suits fair (Caucasian) skin types, but may even treat darker skin types (with adjusted settings, lower density). Downtime is controlled by the operator. Your skin will usually heal in 3-6 days.
- Fractional Erbium laser – a very good laser for all grades of textural scars. Suits fair AND darker skin types with less risk of skin darkening (PIH) compared to fractional CO2 laser. The effect on acne scars is almost equal. Your skin will heal in 2 - 4 days.
- Erbium laser resurfacing is very often followed immediately by a fractional ablative laser. This is the most effective treatment for skin texture and superficial acne scars at the same level. Downtime varies between 8-10 days. Erbium resurfacing is very safe on Caucasian / fair skin and the risk of pigmentation (PIH) after treatment is higher on dark skin compared to fractional. The risk of infection and new scar formation is higher compared to fractional. Antibiotic tablets are recommended (we will prescribe or deliver these at the initial consultation).
- Pulsed dye laser (PDL) - gold standard laser for red (early) scars. Safe on Caucasian / fair skin, but can also treat type 3 skin types. Darker skin may have treatments with lower settings (fluence). In fair skin, PDL treatment may convert redness to purple spots that will fade in about one week. PDL may be combined with other energy devices such as CO2 or Erbium laser if intense skin remodelling is indicated. PDL is also used after ablative lasers to speed up healing or immediately after radiofrequency microneedling (Genius) for the same purpose.
- Q-switched nano- or picosecond laser - an effective laser for pigmented lesions and scars (PIH). Safe on every skin type and short downtime.

This laser is often combined with Hydroquinone cream for home use 2-5 nights per week. Improvement of skin texture in dark skin patients may be prominent.

- Long-pulsed nd:YAG laser - used for non-ablative skin treatments to reduce inflammation and for gentle remodelling of skin texture and very superficial scars on all skin types. No downtime.

### **How to perform post-procedure skin care?**

We will thoroughly go through the post-procedure skincare with you. You have the option of purchasing a “post treatment treatment kit” from Cutis Clinic. This includes everything you need. The kit may be carried in your hand luggage if you fly out.

#### ***Aftercare for TCA cross and CO2 and Erbium laser resurfacing***

For the first week after each treatment:

- Gently wash your skin at least two times daily using a mild facial cleanser
- Rinse or shower your face, wash your hair with shampoo and conditioner as needed
- Apply Fucidin Ointment in a rich layer three times per day for 5 days
- After 5 days you may apply a mild and non-irritating moisturizer, e.g. Cicalfate cream (Avène) or Cicaplast cream (La Roche-Posay), as needed. Your skin may be dry and will absorb the cream easily
- Makeup can be used when the skin has healed, usually after 4-5 days
- Keep your skin cool - but not cold. Avoid hot showers and saunas for the first couple of days
- Keep your skin clean. Avoid dust, dirt, and contaminated skin contact
- No picking, let crusts peel off by themselves

#### ***Aftercare for subcision and RF microneedling (the Genius)***

For the first week after each treatment:

- Gently wash your skin at least two times daily using a mild facial cleanser
- Rinse or shower your face, wash your hair with shampoo and conditioner as needed
- Apply generous amounts of a mild cream, e.g. Cicalfate cream (Avène) or Cicaplast cream (La Roche-Posay) more times daily. These creams are developed for post-laser skin care
- Makeup can be used when the skin has healed after 24 hours
- Keep your skin cool - but not cold. Avoid hot showers and saunas
- Keep your skin clean. Avoid dust, dirt, and contaminated skin contact
- No picking, let crusts peel off by themselves

To reduce the risk of skin infection, we may deliver antibiotic tablets (Azithromycin 500 mg) for you. You should take one tablet daily for three days.

If you have a history of recurrent cold sore (herpes labialis), we will deliver you antiviral tablets (Valaciclovir 500 mg). You should take one tablet twice daily for 5 days.





### **Potential complications to treatment with energy devices**

We strive to achieve optimal results with paramount safety and follow-up. However, there is a risk with any procedure involving energy devices.

When laser treatments are performed by an experienced specialist, complications are very rare.

Potential complications include:

- Infection. Less than 2% of cases.
- Scarring is rare and may follow secondary infection.
- Grids or marks from the laser in the skin are seen in less than 20% of cases, however this is reversible and will fade in 2-3 months.
- Needle marks from RF micro-needling (Genius) in the skin are seen in most cases, however this is reversible and will fade in 1-2 months.
- Post-inflammatory skin pigmentation changes are uncommon in fair skin, but may be seen in 10% or more of cases in ethnic skin. Bleaching creams (Hydroquinone 5%) used one month before and after laser treatment reduces the risk of skin colour changes in dark patients. Hydroquinone is sold over the counter in some countries. We cannot prescribe HQ abroad, but you could speak to a local dermatologist about a prescription or seek at Amazon.
- Erythema (PIE or redness) and swelling is commonly seen after Genius, Erbium and CO2 laser treatments. Redness and swelling gradually fades over 7-14 days following Genius treatment and fractional laser treatment. Prolonged redness may persist for 2 months after laser resurfacing.

## Clinics

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## Revision of client guide

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