FRAC3 applications

▪ Hair removal
▪ Skin tightening
▪ TwinLight rejuvenation
▪ .......
Punctuate bleeding suggests that the papillary dermis has been reached. Generally this indicates that the clinical end-point has been reached in Er:YAG laser resurfacing treatments.

Yellowish coloring of the skin after administering laser pulses generally indicates the Er:YAG laser treatment has reached the deep epidermal level.

Whitish coloring of the skin after administering laser pulses generally indicates the Er:YAG laser treatment has reached the intra-epidermal level.
Ablative Full-Field Applications

Peri-Oral Resurfacing

Before

60 Days After

(Courtesy of dr. Paciolla)
Peri-Ocular Resurfacing

Before

60 Days After

(Courtesy of dr. Paciolla)
Ablative Full-Field Applications

Peri-Oral Resurfacing

Before

40 Days After

Courtesy of dr. Ivano Luppino
Acne Scars Resurfacing

Before

90 Days After

(Courtesy of dr. Luppino)
Ablative Fractional Applications

Skin texture improvement (Lentigo Senilis)

Before  
During the treatment  
1 week after 1 treatment

(Courtesy of dr. L. Volovec)
Light Fractional Peel (Courtesy of dr. C.Pidal)

Antes  |  Post-Op Inmediato  |  Post-Op 60 Días
Test of Downtime at 35 µm ablation depth

Turbo2 at 5 mJ is resulting in cca 35 µm of ablation depth
(LP = 600 µsec)

F-Runner intraoperative detail

Immediately After
Ablative Fractional Applications

Test of Downtime at 35 µm ablation depth

Parameters used: pixel size: 250 µm, pixel energy: 10 mJ, coverage 5%, LP

Erytherma was fully resolved after two days.
Ablative Fractional Applications

Light Fractional Peel  
(Courtesy of dr. C.Pidal)
Ablative Fractional Applications

Peri-Ocular Resurfacing (Courtesy of dr. C.Pidal)

Before

Immediately After Tx1

After Tx2
Rejuvenation of the neck area

I pass: E 600 mJ, LP
II pass: E 550 mJ VLP
spot 4mm, Fr 10 Hz
spot 4mm, Fr 10 Hz, 2 treatments
Ablative Fractional Applications

I pass: E 500 mJ, SP, spot 4mm, Fr 8 Hz
II pass: E 900 mJ, LP, spot 4mm, Fr 8 Hz,
III pass: E 600 mJ, XLP, spot 4mm, Fr 8 Hz, 3 treatments

Traumatic scar

before

after

Courtesy of Dr. Kozarev

The Highest Performance, Best Made Laser Systems in the World
I pass: Q switched NdYAg laser: Fl 4.5 J/c, PW 4ns, Fr 10 Hz
II pass: F runner: Turbo 4 E 600 mJ, PW 600, Fr 10 Hz, 3 treatments
Small pox scars

I pass: E 800 mJ, LP
II pass: E 550 mJ, XLP
spot 4mm, Fr 10 Hz, 3 treatments
Before and After 3 sessions
PRP + LASER
LASER

Courtesy of dr. Kozarev
Before and After 3 PRP and Laser Sessions
Before and After 3 PRP and Laser Sessions

Courtesy of dr. Kozarev
The Highest Performance, Best Made Laser Systems in the World

Courtesy of dr. Kozarev
Before

3 weeks after

The Highest Performance, Best Made Laser Systems in the
Non-Ablative Fractional Applications

Post pregnancy stretch marks and skin flaccidity

Before

After trird monthly treatment

Courtesy of Dr.C.Pidal
Non-Ablative Fractional Applications

Post pregnancy stretch marks and skin flaccidity

Before

1 Year after two treatments

Courtesy of Dr. Dinko Kaliterna
Er:YAG Smooth mode flaccidity in arms

before

After 1 session

Courtesy of Dr. C. Pidal
Combined Fractional Applications
(Non-Ablative Fractional Smooth Mode + Ablative Fractional Light Peel)

Reduction of Stretch Marks
(Courtesy of dr. C.Pidal)

Before

1 week after 1 treatment
PIANO – skin rejuvenation

Before

Immediately after PIANO

Courtesy of dr. Taylor
Piano mode in combination with light resurfacing and LipoDissolve on the cheeks

Courtesy of dr. Mark Taylor
Arthrosis treatment

Pain relief- arthrosis protocol

**Nd:YAG PIANO**
R34, spot size 20 mm

30 s every knuckle, 3 passes
2 x per week
4 weeks

**Results:**
- 40% decreased pain
- Decrease morning stiffness
- Increased hand flexibility

Before

After 4 weeks
Stimulated closure of infected and open cardiac bypass graft site at 3-months post surgery

Before

Patient reported full healing in 30 days.

6-months After

Fluence: 50 J/cm², pulse duration 14 msec, spot size 6 mm (S11 Scanner – top hat beam profile)
Frequency: 1 Hz. Cold air cooling. Patient had no discomfort with treatment

Single session (no pre-treatment)

The Highest Performance, Best Made Laser Systems in the World
Self-induced “back lashing”

Nd;YAG: Fluence: 50 J/cm², pulse duration 14 msec, spot size 6 mm (scanner)
Frequency: 1.5 Hz. Cold air cooling. Weekly Treatments
**Nd:YAG treatment: Pilonidal Cyst Wound Closure**

Before

Settings: Fluence: 2 sessions: 45 J/cm², pulse duration 23 msec, 6 mm (S11 Scanner – top hat beam profile). Frequency: 1.5 Hz. Cold air cooling. 3 scanning patterns over entire area.

Remaining sessions 65 J/cm², pulse duration 14 msec Frequency: 1.5 Hz

11 sessions 1-2 weeks apart

After

Courtesy of R. Sult, USA
FRAC3 does cause bulk heating along with the specific fractionated heating of imperfections.

A 3-D fractional micro-damage pattern within the skin is formed.

Dermal layers are targeted.

Result is a "rejuvenated" skin tissue due to new collagen and elastic fiber formation.
FRAC3® – Skin tightening Cases

Mouth line; pre-treatment (top); post-treatment (bottom) - after 3 treatment sessions;

Neck; pre-treatment (top); post-treatment (bottom) - after 3 treatment sessions;

PARAMETERS:
- 6 mm
- 30 J/cm²
- 4 passes
- FRAC3 1 ms

Courtesy of Dr. Gansel

Courtesy of Dr. Gansel
Full face non-ablative skin rejuvenation

Using LP Nd:YAG

BEFORE

SPOT
6mm
50 J/cm2
50 ms
2-3 Hz

12 MONTHS AFTER

10mm
24J/cm2
50 ms
2-3 Hz

5 sessions / year

dr. Jasna Blaha

The Highest Performance, Best Made Laser Systems in the World
Full face non-ablative skin rejuvenation

Using LP Nd:YAG T3

Before

After 4 years

Courtesy of dr. Jasna Blaha

The Highest Performance, Best Made Laser Systems in the World
Before

Courtesy of dr. Jasna Blaha

5 years after

The Highest Performance, Best Made Laser Systems in the World
TwinLight Rejuvenation

Resurfacing for Acne Scars

Before

After 6M

The Highest Performance, Best Mad
TwinLight Rejuvenation
Resurfacing for Acne Scars

20-25% overall improvement in skin texture, tone and pigment uniformity
15-20% of post-acne scar improvement
TwinLight Rejuvenation

Immediately post-op

5 days post-op

30 days post-op

(Courtesy of dr. Marini)
TwinLight Rejuvenation

Before (right cheek)

90 days post-op (right cheek)

(Courtesy of dr. Marini)
TwinLight Rejuvenation

Before

90 days post-op

(Courtesy of dr. Marini)
TwinLight Rejuvenation

Before (left cheek)

90 days post-op (left cheek)

(Courtesy of dr. Marini)
Hair Removal (HR) Examples: Back

before

after

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Courtesy of Robin Sult
HR Examples: Neck

before

after

The Highest Performance, Best Made Laser Systems in the World

Courtesy of Robin Sult
HR Examples: Eyebrows

before

after

The Highest Performance, Best Made Laser Systems in the World
HR Examples: Chin

before

after

The Highest Performance, Best Made Laser Systems in the World
**FRAC3 hair removal FACTS**

- Pulse duration **0.1 - 1.6 ms**
- **S11 3 mm spot, max frequency is 25 Hz** – very fast

![Images of FRAC3 and LP treatments](image)

3 mm, FRAC3  
3 mm, LP

**The Highest Performance, Best Made Laser Systems in the World**
FRAC3 clinical studies

- Successful hair removal with FRAC3

BEFORE

AFTER

FRAC3

LP Nd:YAG
FRAC3 HR cases

Case no. 1

- Better efficacy of FRAC3 hair removal

Before & After FRAC3

Before & After LP

Maša Goršič, IFW 2012

Fotona®
choose perfection
FRAC3 HR cases

Case no. 2

Before FRAC3

Before LP
Vascular lesions
Leg veins

Before

After

Courtesy of R. Sult

Fotona
choose perfection

The Highest Performance, Best Made Laser Systems in the World
Vascular Lesions (VL)

Treatments with LP Nd:YAG 1064 nm alone

Before

After

Courtesy of R. Sult
Vascular Lesions (VL)

Treatments with LP Nd:YAG 1064 nm alone

Before

After

Courtesy of R. Sult
Vascular Lesions (VL)

Treatments with LP Nd:YAG 1064 nm alone

Before

After

Courtesy of R. Sult
Treatment of resistant PWS with Fotona S11 fractional Nd:YAG scanner

- A pattern of deeply penetrating small spots that effectively coagulate the blood vessels in PWS and hemangiomas to a deep and more effective level while sparing tissue in between for a safer and more permanent cure.

Coagulated, darker dots are clearly visible.
Treatment of resistant PWS with Fotona S11 fractional Nd:YAG scanner

Before

After several treatments

Treatment of PWS – Courtesy of dr. Taylor
Active acne

- Reduces acne inflammation by photoselective absorption and heating of overactive sebaceous glands
- Accelerates the healing process
- Reduces the possibility of developing new acne inflammation
- Thermally and selectively destroys large sebaceous glands
- Stimulates collagen remodeling

Nd:YAG
Active acne – clinical experiences

Treatments:
2 x week, 4 week
Maintenance treatments:
1 x week / 1 x 2 weeks, 3 months

Before

5.5 months after

Courtesy of: Dr. Radulaški, Nada Diva Clinic, Belgrade, Serbia
Acne Treatment
LP Nd:YAG for Acne treatments

Wavelength and Absorption
1064 nm

Spot size / Scattering and Depth of penetration
6 mm

Pulse duration
10 – 50 msec

Pulse Energy and Fluence
20 – 70 J/cm²

Before

After

Courtesy of R. Sult
Acne Treatment

LP Nd:YAG for Acne treatments

Before

After

Courtesy of R. Sult
Nd:YAG Treatment of Acne

Fluence: 50 J/cm², pulse duration 14 msec, spot size 6 mm (S11 Scanner)
Frequency: 1.5 Hz,
Single session (3 years, no reoccurrence)
Cystic Acne Treatment

Combined Er:YAG + Nd:YAG treatment

**Nd:YAG**
- Wavelength: 1064 nm
- Spot size: 6 mm
- Pulse duration: 35 msec
- Pulse Energy / Fluence: 50 J/cm²

**Er:YAG**
- Wavelength: 2940 nm
- Spot size: 0.45 mm
- Pulse duration: MSP (100 μsec)
- Pulse Energy / Fluence: 100 mJ
Er:YAG treatment of Acne

Before

1st pass: VSP 140 mJ, 5mm R11 handpiece.
followed by 2 passes SP 1300 mJ, 5mm

Application of BLT anesthetic cream for 20 minutes
No reoccurrence in 6 months 1 Treatment

After 8 Weeks

 Courtesy of R. Sult, USA

The Highest Performance, Best Made Laser Systems in the World
Nd:YAG: Treatment of Rosacea

(Presented after 15 years of failed Standard medical treatments)

Fluence: 50 J/cm², pulse duration 14 msec, spot size 6 mm (S11 Scanner – top hat beam profile)
Frequency: 1 Hz. Cold air cooling

Single Session

12 weeks after 1-Tx

3 Years & 2 months later with no further treatment
Introduction

Onychomycosis (NAIL FUNGUS)

Onychomycosis is a fungal infection of the toenails and fingernails that results in thickening, discoloration, splitting of the nails, as well as lifting of the nails from the nail bed.

Courtesy of dr. Kozarev
Great before and after

Trichophyton rubrum

before

after 12 months

1.0-1.8 mm/month

Courtesy of dr. Kozarev
Treatment of all types of onychomycosis

Very efficient method for treating all types of onychomycosis caused by various fungal species.

Courtesy of dr. Kozarev
Nd:YAG Treatment of Warts

Case No.2: NdYAG treatment of Warts

19. aug.2011

Before

After Tx 2

15. dec.2011


4 monthsAfter last Tx

Courtesy of Dr. Katja Semprimožnik

The Highest Performance, Best Made Laser Systems in the World
Nd:YAG Treatment of Warts

Fluence: 240 J/cm², pulse duration 14 msec, spot size 4-6 mm (R33)
Intractable Plantar Keratosis (IPK)

Corns (or seed corns)

other names:
- Plantar Keratosis, Plantar Callus, Clavus, Clavus durus, Clavus mollis, Heloma durum, Heloma molle

( Courtesy of Dr. Koltaj )
IPK treatment

Average healing time is 3 weeks, for the heaviest cases 4-5 weeks (much quicker than with any of traditional methods)

5 Days After 18 Days After 26 Days After 52 Days After

(Courtesy of Dr. Koltaj)