

# GUIDED DOLORCLAST THERAPY

YOUR HOLISTIC SOLUTION FOR  
MUSCULOSKELETAL PAIN THERAPY



**EMS**   
MAKE ME SMILE

# **GDT** – MASTERING THE WAVES FOR **PAIN FREE** ACTIVITIES

**“I FEEL  
GOOD”**



# OUR LEGACY, YOUR FUTURE



Dear Practitioners,

More than 20 years after the introduction of the Swiss DolorClast®, we are proud and grateful to be by your side every day to relieve patients from pain and get them back to motion.

The history of the Swiss DolorClast® has its roots in 1997 when our company, which had previously developed innovative products in the fields of dental prophylaxis and urology stone management, decided to embrace a new challenge and patent the first extracorporeal radial shock wave device.

We sensed from the very beginning the great potential of this new technology in pain therapy and rapidly understood the revolution it brought into the treatment of musculoskeletal pathologies.

Often imitated, but never matched, the Swiss DolorClast® Method democratized the use of ESWT around the world. Hundreds of clinical studies, among them many of which meet the highest standards of evidence-based medicine level 1, have demonstrated its efficacy and safety.

**OVER 10'000 EMS UNITS ARE USED TODAY IN PRACTICES AND THANKS TO YOU MORE THAN 100 MILLION PATIENTS HAVE BEEN CURED AND WERE ABLE TO REGAIN AN OPTIMAL QUALITY OF LIFE.**

We always refused to compromise on the efficiency, reliability and quality of our products. "Excellence is our watchword, your satisfaction our priority."

2020 marks an historic milestone, not only for EMS, but for you, practitioners.

Because we want to offer you much more than a product solution,

Because we want to give you all the necessary tools for best patient-care and optimal treatment compliance,

Because pain management should be practiced in a comprehensive, personalized and patient-inclusive manner,

**"THE DOLORCLAST® METHOD MAKES WAY FOR THE GUIDED DOLORCLAST® THERAPY."**

Guided DolorClast® Therapy is your 360° holistic solution for the management of musculoskeletal disorders. It will guide you through every treatment's step from pathology assessment to full patient's recovery.

**"GDT® TAKES PAIN THERAPY TO A WHOLE NEW LEVEL. BE THE GAME-CHANGER IN YOUR PATIENTS' LIVES."**



Bernd BÜHNER  
Chairman of EMS Electro Medical Systems S.A.

**ALWAYS BY YOUR SIDE TO CHANGE PATIENT LIVES**

# GDT – GETS YOU GOING



**GUIDED DOLORCLAST®  
THERAPY CURES  
90% OF ALL MAJOR  
INDICATIONS OF THE  
MUSCULOSKELETAL  
SYSTEM.**



**HERE YOU'LL FIND  
40 OTHER INDICATIONS  
GDT® CAN TREAT**



## **1 TENNIS ELBOW**

► Almost 3% of adults suffer from lateral epicondylitis, which without treatment will take up to two years to heal<sup>1</sup>.

## **2 GOLFER ELBOW**

► Less than 1% of the population will suffer from a medial epicondylitis. However, this condition affects subjects between the ages of 45 and 65, preventing them from living a normal life, working or doing sports<sup>2</sup>.

## **3 ADHESIVE CAPSULITIS**

► Up to 5% of the population with a greater predominance in female, will be affected by a frozen shoulder, usually appearing on the non-dominant hand<sup>4</sup>.

## **4 SUBACROMIAL PAIN SYNDROME**

► This condition accounts for 45% of all shoulder pain which require professional medical care<sup>3</sup>.

## **5 LOWER BACK PAIN**

► N°1 self-reported musculoskeletal pain, its prevalence is about 20% in individuals aged between 20 and 60 years old<sup>6</sup>.

## **6 UPPER BACK PAIN**

► Thoracic spine and neck pain represent the 4<sup>th</sup> leading cause of disability with an annual prevalence rate exceeding 30% of the population<sup>5</sup>.

## **7 PATELAR TYPE SYNDROME**

► Also known as Jumper's knee, this typical overload injury is characteristic of recreational athletes with a prevalence of 8.5% among this population<sup>7</sup>.

## **8 KNEE OSTEOARTHRITIS**

► Almost 13% of women and 10% of men aged 60 years and older suffer from symptomatic knee osteoarthritis<sup>8</sup>.

## **9 ACHILLES TENDINOPATHY**

► One of the most frequent ankle and foot overuse injury, this disorder affects about 9% of recreational runners and causes up to 5% of professional athletes to end their career<sup>9</sup>.

## **10 PLANTAR FASCIOPATHY**

► Very common, this condition accounts for about 10% of runner-related injuries and up to 15% of all foot symptoms requiring professional medical care<sup>10</sup>.

# 6 STEPS, 1 GOAL: PAIN FREE PATIENTS



SIX SYSTEMATIC STEPS TO SIGNIFICANTLY INCREASE YOUR TREATMENT OUTCOME.



01

## ASSESS & ENGAGE

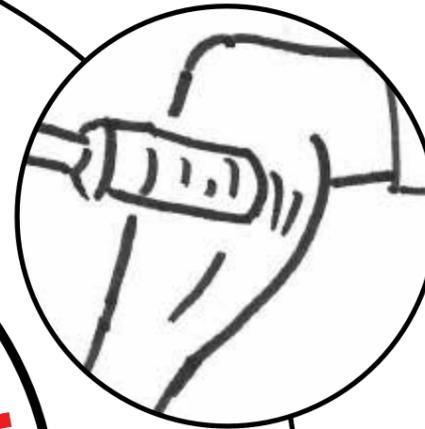
ASSESS YOUR PATIENT'S PATHOLOGY WITH KEY QUESTIONS & TESTS.  
ENGAGE YOUR PATIENT WITH A TREATMENT PLAN & OUTCOMES.



02

## DOLORCLAST® LASER

TREAT WITH HIGH POWER LASER TO REDUCE INFLAMMATION & PAIN OF PATHOLOGY.



03

## DOLORCLAST® RADIAL SHOCK WAVES

TREAT WITH RADIAL SHOCK WAVES TO CURE PATHOLOGY.



04

## DOLORCLAST® FOCUSED SHOCK WAVES

OPTIONAL TREAT WITH FOCUSED SHOCK WAVES TO CURE SPECIFIC PATHOLOGIES.



05

## REHABILITATE

PERFORM COMPLEMENTARY SET OF EXERCISES TO INCREASE FUNCTION RECOVERY.



06

## FOLLOW UP

EVALUATE THE THERAPY EFFICIENCY & PLAN FOR NEXT STEPS.



# 01 ASSESS & ENGAGE



## WELCOME TO THE GUIDED DOLORCLAST® THERAPY

### GUIDED DOLORCLAST® THERAPY (GDT)

► GDT helps patients suffering from musculoskeletal pathologies. GDT guide You in the thorough clinical assessment. Patients feel more confident and know they're in best hands.



### ANAMNESIS

► Start by going through the medical and pathology history of your patient and check on-going medication to rule out possible contra indications to GDT.

### SCREENING TESTS

► consult any available reports of screening tests undergone by the patients, whether they are laboratory tests or medical imaging reports such as CT scans, RX, MRI., ultrasounds etc.

### PHYSICAL EXAMINATION

► Perform a thorough examination, including palpation and functional tests, to confirm or establish a diagnosis, and track the evolution of the range of motion.

### PAIN LEVEL ASSESSMENT

► Use GDT Visual Analog Scale to assess your patient's pain prior to the therapy, to be able to track its decrease through the course of treatment.

### GDT QUESTIONNAIRE

► Refer to the proposed list of questions ranked by pathologies to tailor your protocol to your patient's specific need.

### PATIENT-CENTERED

► Recognizing patients as actors of their recovery ensure their trust and compliance with their treatment journey. It is therefore crucial to take time to explain to your patient the pathology he or she is suffering from and introduce the GDT protocol you have build based on their individual case

### INDIVIDUAL GDT PROTOCOL

► Never assume patients know what to expect ! Let them know in details how their GDT protocol will articulate to diffuse any anxiety and insure treatment compliance. Don't hesitate to explain them the theory behind DolorClast® Shock Waves and DolorClast® High Power Laser treatments, linking it to how it is going to help them overcome their pain. We encourage you to provide your patients with GDT take-home resources.

### SET EXPECTATIONS

► Then take the time to openly discuss and set upfront patient expectations, whether it is related to treatment time, pain release, increase of the range of motion, change in the quality of life etc. Keep in mind, expectations play an important role in patient outcomes, including their satisfaction from their GDT experience.

### EXPLAIN RISKS

► Finally, prior starting treatment, it is of course mandatory to explain to your patient the potential risks associated to their GDT protocol and have them sign a dedicated consent form.



# 02 DOLORCLAST® LASER



## INTELLIGENT PHYSICAL TECHNOLOGY. NO OPIOIDS, NO SEDATIVES, NO PAIN.

► Musculoskeletal injuries are described by patients as highly painful, especially in their acute phase. Unfortunately opioid medication or sedative are still too often prescribed despite the risk of adverse events.

► To avoid any addictive form of pain management, EMS has developed the DolorClast® High Power Laser to offer a non-invasive, effective yet safe solution to patients suffering from acute phase or those having a low-tolerance threshold of pain.

► DolorClast® High Power Laser uses the near-infrared 905nm monochromatic wavelength, emitted from high intensity diodes, to trigger the body's natural healing process.



► Renown for its safety and capacity to target deep tissues, DolorClast® High Power laser's wavelength triggers three types of effects in the targeted area:

### ANTALGIC EFFECT:

To decrease the pain immediately and up to 72h.

### ANTI-INFLAMMATORY EFFECT:

To reduce post-injury edema.

### REGENERATIVE EFFECT:

To restore tissues functions.

► In manual mode, a session usually lasts about 10 min and can therefore be combined with a shock wave treatment benefiting frands-free mode, a session takes about 30 minutes, thus alloom the immediate pain-relief effect. In automatic hwing practitioner to assist other patients.



# 03 DOLORCLAST® RADIAL SHOCK WAVES



## DOLORCLAST® RADIAL – THE SWISS ORIGINAL IN WORLD WIDE PAIN TREATMENT

► When it comes to finding an alternative to surgery or injections to treat painful chronic musculoskeletal disorders, Extracorporeal Shock Waves Therapy (ESWT) is a treatment of choice. Non-invasive, safe and based on clinical evidences, ESWT has been proven to trigger various molecular and cellular mechanisms in the treated tissues, fostering healing and resulting in immediate and long-lasting pain relief.



### RADIAL SHOCK WAVES

► In 1997, EMS patents the first radial shock wave device, the DolorClast®, based on the ballistic principle. Compressed air sent to the handpiece accelerates a projectile, which strikes a fixed applicator at high speed (up to

90 km/h). The kinetic energy resulting from this movement is converted into a shock wave transmitted in a radial manner to the targeted tissues.



► As DolorClast® radial shock waves propagate up to 4 cm deep-down the tissues, treatment is best suited for superficial pathologies such as plantar fasciopathy, Achilles tendinopathy or muscles pain.

► Shock waves delivery is short in time, usually lasting just a few minutes, thus enabling to be coupled with other therapies within the same session as recommended by the GDT. DolorClast® Shock Wave protocol usually includes a total of three to five sessions, planned at a rate of two sessions per week with an interval of minimum 72h between them.

► Backed up with hundreds of clinical studies, DolorClast® Shock Wave devices have been proven to relieve pain in more than 80% of the cases in just 3 sessions.



# 04 DOLORCLAST® FOCUSED SHOCK WAVES



## DOLORCLAST® FOCUSED – WHEN SHOCK WAVES DELIVER BEST IN CLASS RESULTS

► When it comes to finding an alternative to surgery or injections to treat painful chronic musculoskeletal disorders, Extracorporeal Shock Waves Therapy (ESWT) is a treatment of choice. Non-invasive, safe and based on clinical evidences, ESWT has been proven to trigger various molecular and cellular mechanisms in the treated tissues, fostering healing and resulting in immediate and long-lasting pain relief.



### FOCUSES SHOCK WAVES

► Following a decade of success in Radial Shock Wave Therapy, EMS has broadened its therapeutic arsenal by offering in 2009 Focused Shock Waves Therapy (FSWT). Based on similar acoustic properties of radial shock waves, focused shock waves are generated in such way that they deliver their energy in depth and with accuracy.

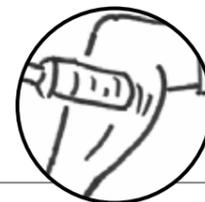
► EMS Focused Shock Waves device uses the piezoelectric principle. High voltage is

discharged in the handpiece across a pattern of thousands piezoceramic crystals that each induces an acoustic wave delivered to the treated tissues. The distinct distribution of crystals causes these multiple waves to converge and steepen into a shock wave towards the target center.



► The convergence of the focused shock wave up to 8 cm deep-down the tissues allows the treatment of specific deep pathologies such as subacromial pain syndrome or nonunion fractures or break down calcification deposits in soft tissues. Focused Shock Waves are as well best suited to address painful enthesiopathy as their propagation in the tissues is more comfortable than radial shock waves.

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# 05

## REHABILITATE



### ENSURE LONG-TERM EFFECTS

► GDT is based on the combination of different therapies aiming at relieving pain and healing musculoskeletal injuries. On top of the DolorClast® Shock Waves / Laser treatments, its strength lies as well in a rehabilitation program that speed up and increase functions recovery.



#### MANUAL THERAPY:

to improve tissue extensibility; increase range of motion; induce relaxation etc.

#### PROGRESSIVE ACTIVE MOBILIZATION EXERCISES:

to work on the strength, flexibility and endurance.

#### PROPRIOCEPTIVE EXERCISES:

to help patients regain their balance and stability.

#### PASSIVE TREATMENTS:

(such as cold/heat or taping therapy) to sustain obtained results.



# 06

## FOLLOW UP



### INCREASE PACE OF SESSIONS

► Patient compliance to treatments that last over few weeks is tricky. GDT helps you keeping patients within your practice and improving your overall success. Here are some quick tricks to retain your patients:



#### TRACK TREATMENT SUCCESS:

via outcome measurement tools to reassure your patients.

#### SCHEDULE NEXT APPOINTMENT:

before patient leaves to establish a treatment pattern.

#### ASK FOR FEEDBACKS

Thanks to our GDT survey.

#### SET UP THE GDT PATIENT REFERRAL PROGRAM

To expand your business.

#### DON'T FORGET!

Patients are often your most passionate ambassadors. Their endorsement to the GDT will represent more than any paid campaign for your practice.



# **GDT** – CHANGES THE GAME IN PAIN THERAPY

**“I FEEL  
GOOD”**



# GDT – TAKES THE PAIN AWAY



## THROUGH A MULTITUDE OF MOLECULAR & CELLULAR RESPONSES

### DOLORCLAST® LASER

### DOLORCLAST® SHOCK WAVES

#### MUSCLES

Anti inflammatory and reparative stimulus

- ▶ Modulation of acute inflammation with oedema reduction<sup>11</sup>
- ▶ Muscle facilitation in contracture syndroms<sup>12</sup>
- ▶ Modulation of the activity of the neuromuscular plaque<sup>12</sup>

- ▶ Removal of substance P from trigger points
- ▶ Functional angiogenesis improved blood circulation
- ▶ Mechanical muscle relaxation

#### NERVES

Antalgic effect

- ▶ Rapid antalgia by nociceptor fiber depolarization<sup>1</sup>
- ▶ Stimulation of Aβ fibers with pain gate control activation<sup>1</sup>
- ▶ Modulation of nerve inflammation<sup>1</sup>

- ▶ Hyperstimulation of nerves, activating the gate control mechanism
- ▶ Removal of substance P from C-fibers
- ▶ Blockade of neurogenic inflammation

#### BONES

Anti inflammatory effect

- ▶ Reduction of bone oedema<sup>2</sup>
- ▶ Modulation of periosteal inflammation<sup>2</sup>

- ▶ Stimulation of proliferation and differentiation of osteoblasts
- ▶ Stimulation of tendon remodeling
- ▶ New bone remodeling thanks to increased microcracks / new bone formation

#### CARTILAGE

Reparative stimulus

- ▶ Chondrocyte protection against interleukin damage in OA<sup>3</sup>
- ▶ Increased chondrocyte production of type II collagen<sup>4/5</sup>
- ▶ Anabolic stimulus with extracellular matrix increase<sup>6</sup>

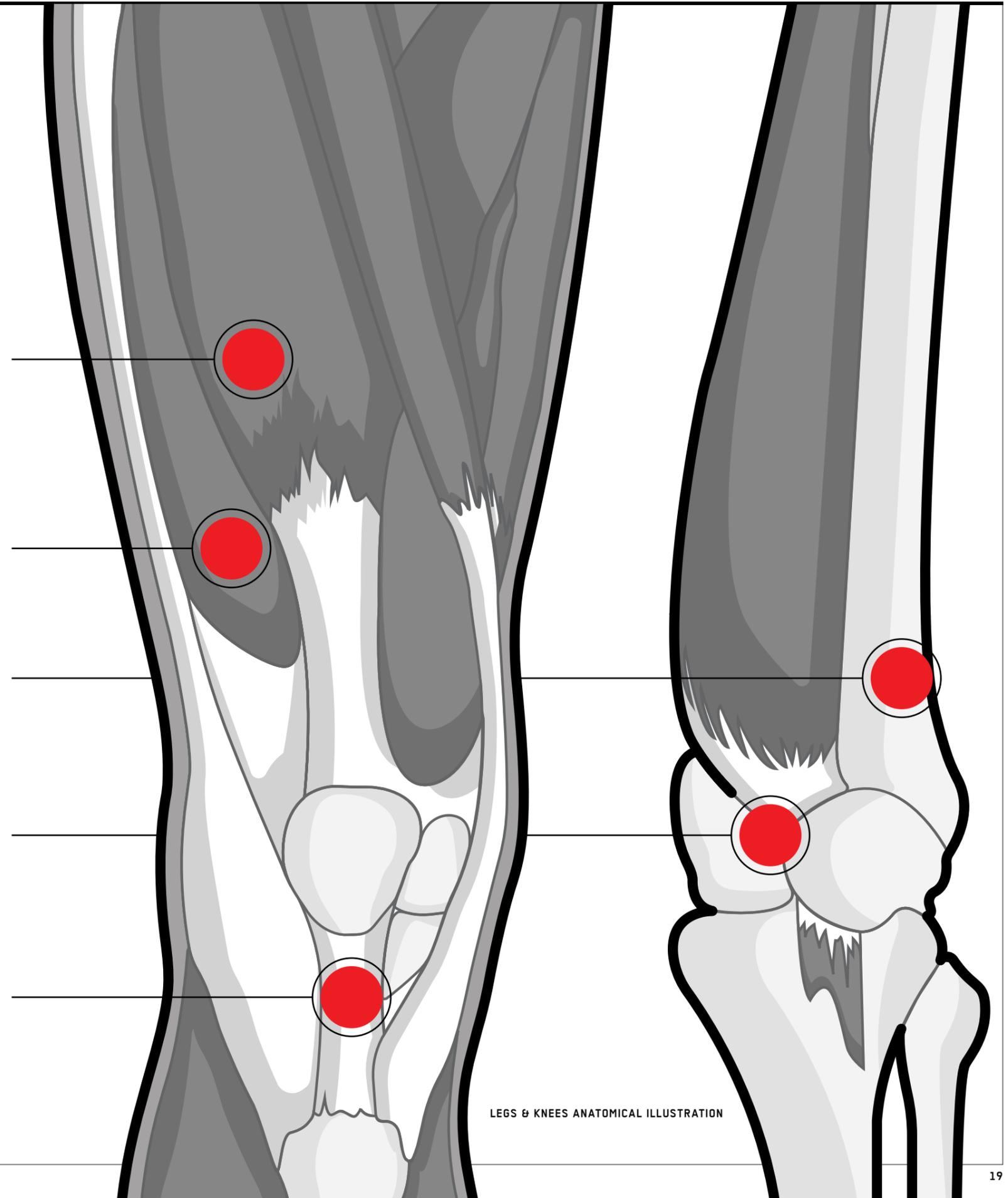
- ▶ Decreased cartilage degradation
- ▶ Reduced progression of osteoarthritis

#### TENDONS

Anti inflammatory and reparative stimulus

- ▶ Inhibition and washout of lymphocyte populations in tendinopathy<sup>7/8</sup>
- ▶ Modulation of acute inflammation of the peritenonium and synovial sheaths<sup>9</sup>
- ▶ Oedema modulation<sup>10</sup>

- ▶ Improved movement of tendon gliding thanks to Lubricin
- ▶ Stimulation of tendon remodeling



LEGS & KNEES ANATOMICAL ILLUSTRATION

# THE GAME CHANGER IN PAIN THERAPY



► In-depth performance

## DOLORCLAST® HIGH POWER LASER

► Empower your practice with the most powerful 905nm diode laser. Benefit from EMS latest innovation to immediately relieve your patients' pain prior DolorClast® Shock Waves treatment, or heal deep acute musculoskeletal pathologies.



► Pure Efficiency

## DOLORCLAST® RADIAL SHOCK WAVES

► Experience RSWT® like never before with the unrivaled performances of latest EMS solution made available in portable device. Benefit from the most powerful and efficient radial shock wave device to offer best clinical outcomes on chronic superficial musculoskeletal pathologies.



► Getting to the point

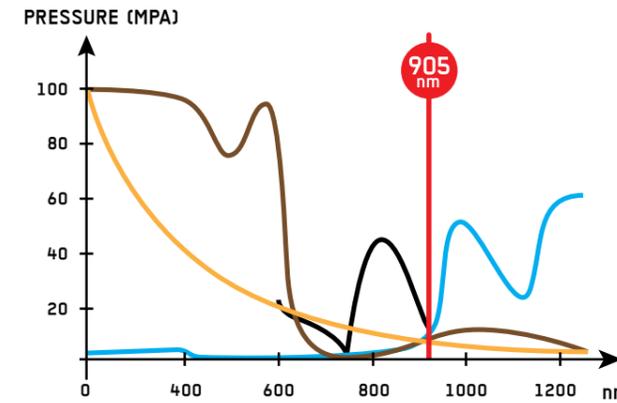
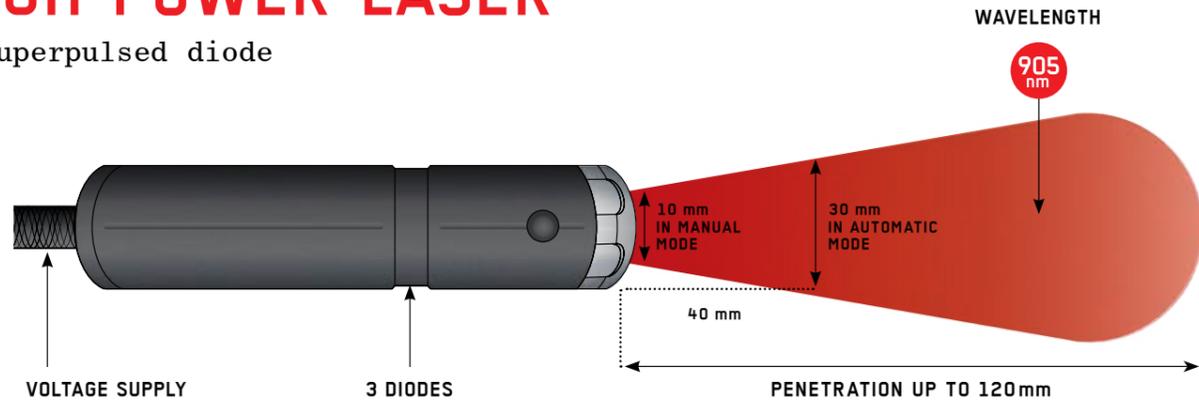
## DOLORCLAST® FOCUSED SHOCK WAVES

► Complete your ESWT therapeutic offer with EMS focused shock waves solution to address deep or calcified musculoskeletal lesions or enthesopathy which are recalcitrant to heal.

# THE RIGHT TECHNOLOGIES...

## HIGH POWER LASER

► Superpulsed diode

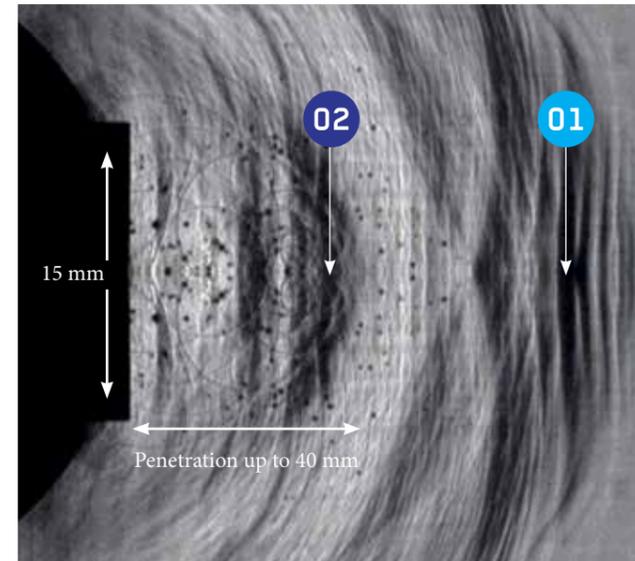
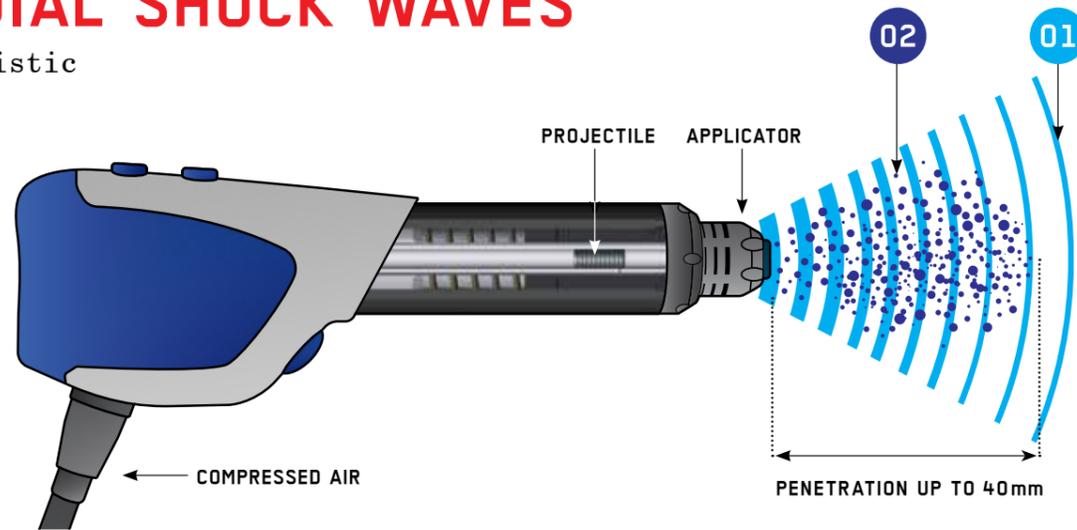


**905 nm** The 905 nm wavelength is unique as it is less absorbed by water, within the near infra-red spectrum, blood and melanin, allowing interactions with deeper tissues and guaranteeing optimal energetic exchanges at the targeted site.

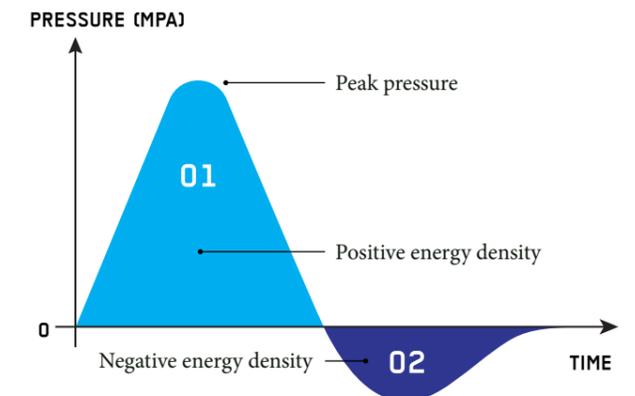


## RADIAL SHOCK WAVES

► Ballistic



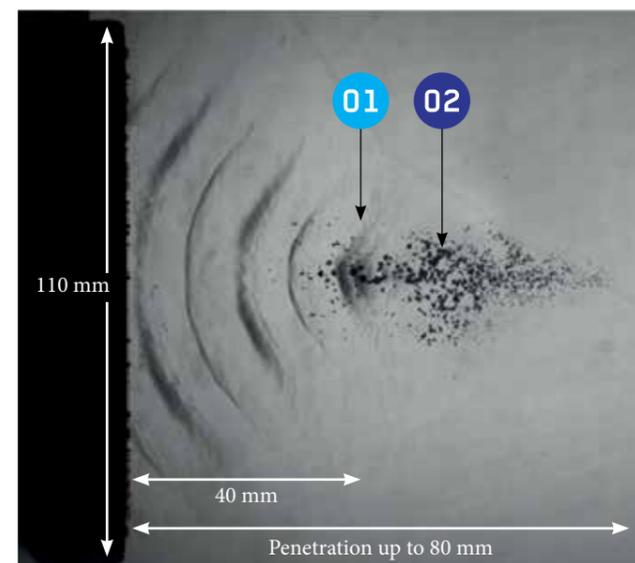
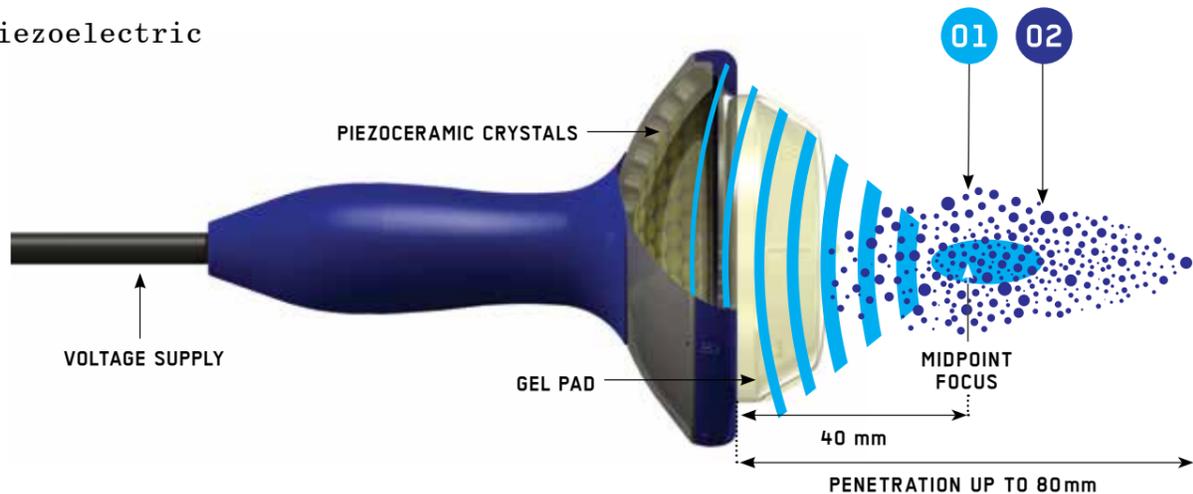
**01** A shock wave begins by a compression phase. The peak pressure creates shear stress in the tissues. In focused shock-waves, the peak pressure is usually shorter than in radial shock waves, but the energy density are equivalent.



POSITIVE ENERGY DENSITY	+	NEGATIVE ENERGY DENSITY	=	TOTAL ENERGY DENSITY
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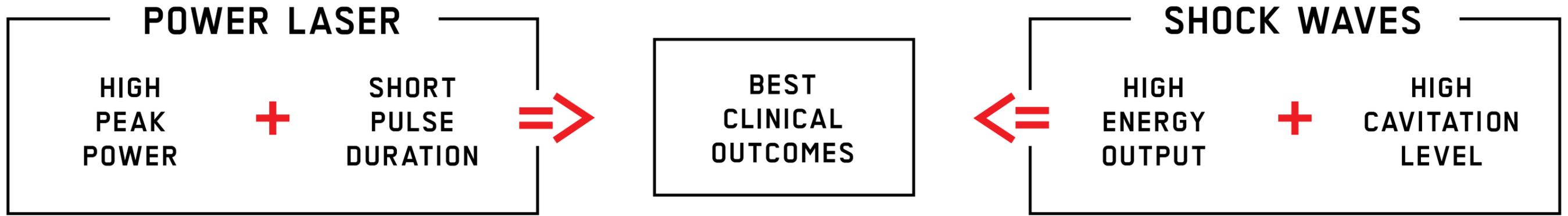
## FOCUSED SHOCK WAVES

► Piezoelectric

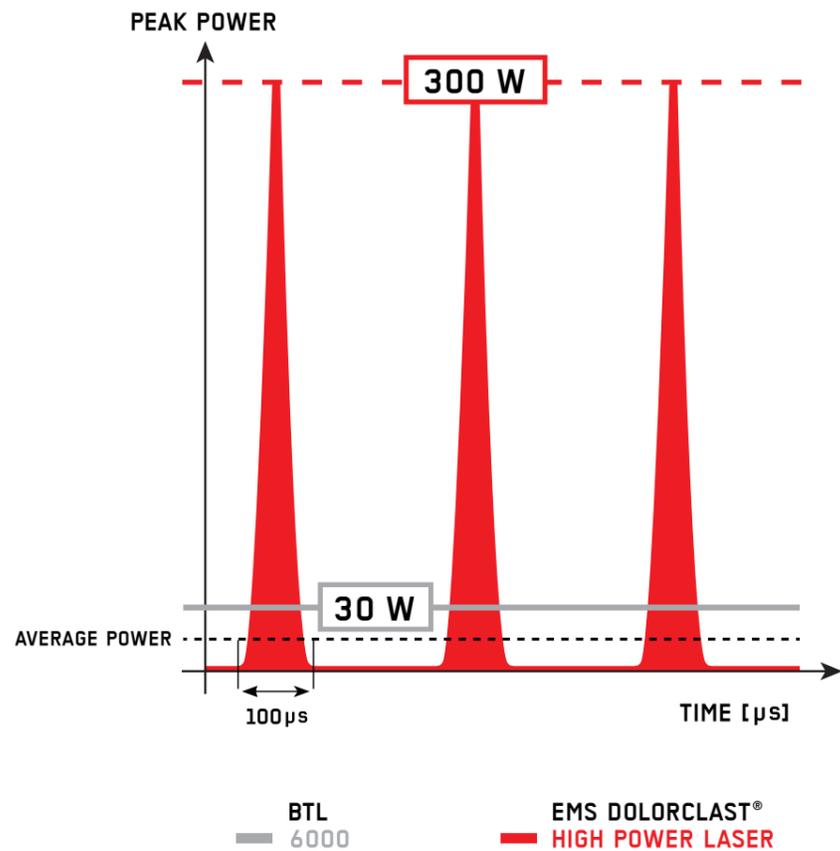


**02** A tensile phase follows and generates cavitation bubbles. A high cavitation level is a result of a high amount of energy density delivered by the shock wave device.

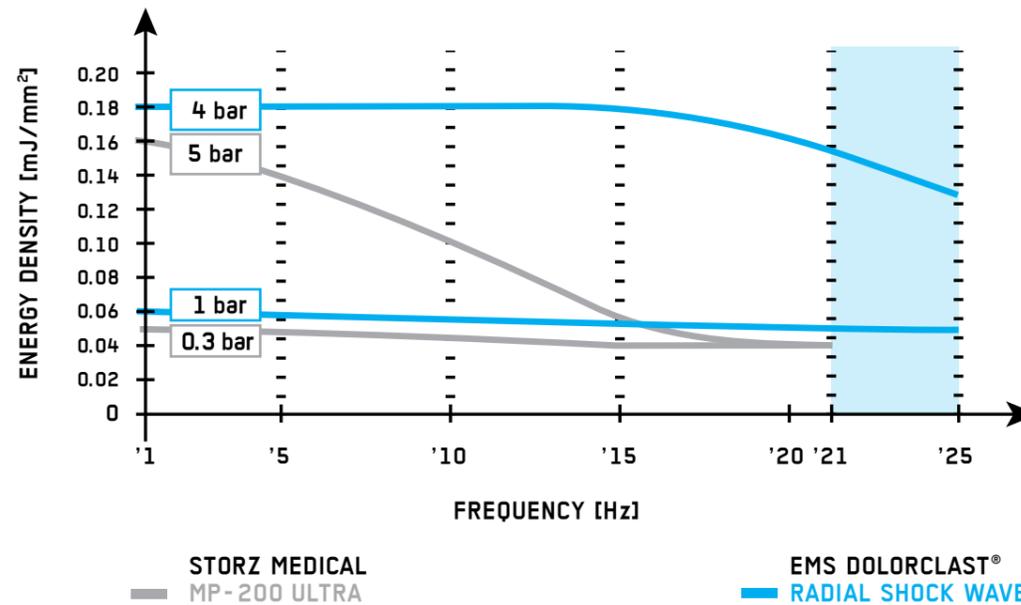
# ...FOR BEST TREATMENT OUTCOME



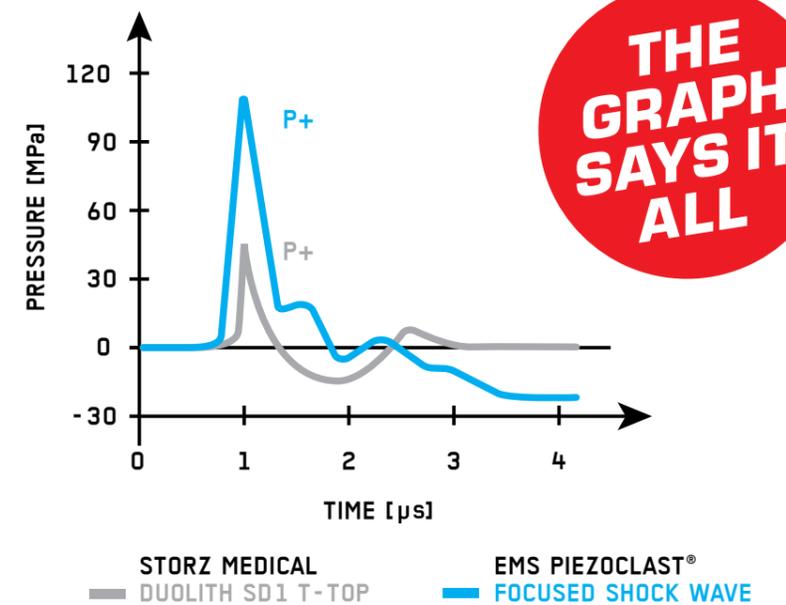
## DOLORCLAST® HIGH POWER LASER



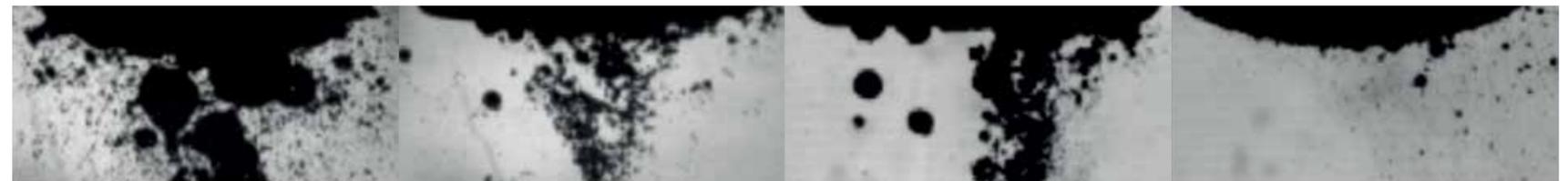
## DOLORCLAST® RADIAL SHOCK WAVES



## DOLORCLAST® FOCUSED SHOCK WAVES



**THE GRAPH SAYS IT ALL**



EMS DOLORCLAST® AT 4 bar / 15 Hz

STORZ MEDICAL D-ACTOR 200 AT 5 bar / 15 Hz

BTL 5000 SWT AT 5 bar / 15 Hz

ZIMMER EN PULSE V.2.0 AT 100mJ / 15 Hz

The pictures represent the maximum level of cavitation (black dots) generated with different radial shock waves handpieces at maximum pressure settings at 15Hz.<sup>(1)</sup>

(1) Nikolaus B. M. Császár et al., "Radial Shock Wave Devices Generate Cavitation", 2015.

(2) Katharina Sternecker et al., Exposure of zebra mussels to extracorporeal shock waves demonstrates formation of new mineralized tissue inside and outside the focus zone. *Biology Open* 2018; doi: 10.1242/bio.033258.

(3) Perez et al., Acoustic field characterization of the Duolith: Measurements and modeling of a clinical shock wave therapy device. *J Acoust Soc Am.* 2013 Aug; 134(2): 1663-1674.

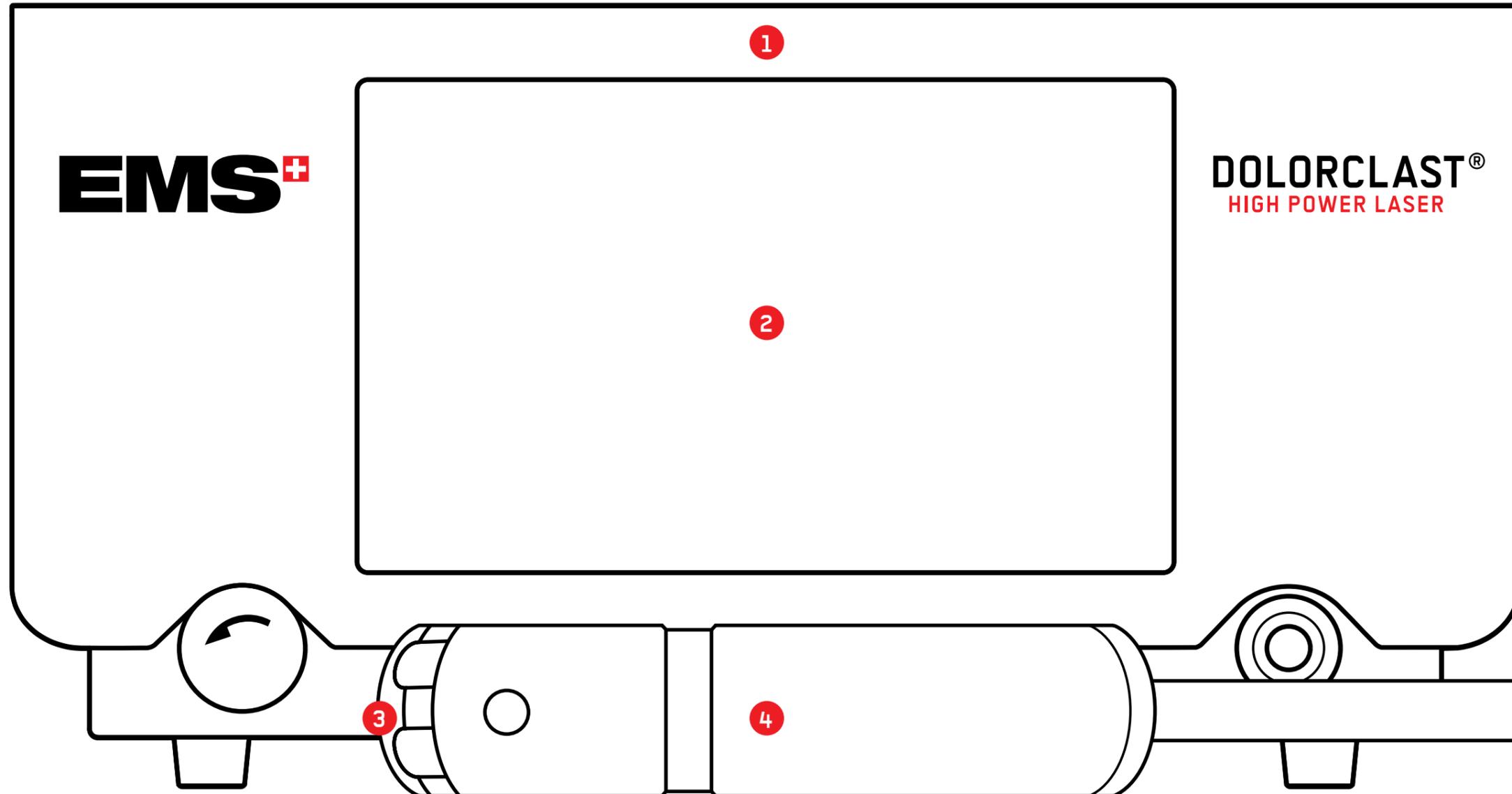
# “WOW” POWER AGAINST INFLAMMATION



## HEALING AT THE SPEED OF LIGHT WITH YOUR HIGH POWER LASER SOLUTION

### TREAT WITH AGILITY

- ▶ Get it right the first time ! Each indication comes with its preset protocol for a no-brainer use of high power laser therapy.
- ▶ For experts, customize your protocol by modulating the laser emission (from 10 to 100%) or the pulse repetition rate (from 5 to 80 kHz).
- ▶ Monitor your treatment delivery with accuracy thanks to the clear display, in real time, of frequency and modulation values, remaining time and energy delivered.



1 SUPERPULSED HIGH POWER LASER: TREAT DEEP INTO THE TISSUES

2 38 INTEGRATED PROTOCOLS AND 7 ACTION MODES TO COVER MOST OF PATHOLOGIES

3 IMMEDIATE ANTALGIC EFFECT: REDUCE SIGNIFICANTLY YOUR PATIENTS PAIN IN 5MIN

4 MANUAL OR HANDSFREE APPLICATION, YOU DECIDE

### SHED LIGHT - BLIND THE PAIN - HEAL THE BODY

▶ When it comes to reaching therapeutic effects with a laser, the energy rule does not fail. Delivering high power short pulses to the painful area decreases nerve sensitivity and acts on endorphin release to produce an immediate analgesic effect. Thanks to the 300W peak power pulses - 10x higher than conventional lasers - and very short pulses lasting 100 ns, you will hear the “WOW” effect from your patients within just a few minutes !

- ▶ As a result of exposure to the 905nm wavelength, a cascade of photochemical effects occurs into the treated tissues, restoring the body’s normal function in just a few sessions.
- ▶ the level of inflammatory protein is reduced leading to a quick absorption of the oedema
- ▶ Nitric Oxide is released boosting the vascular activity for better tissue oxygenation and drainage of waste
- ▶ the production of ATP is increased providing energy to damaged cells to accelerate their regeneration.

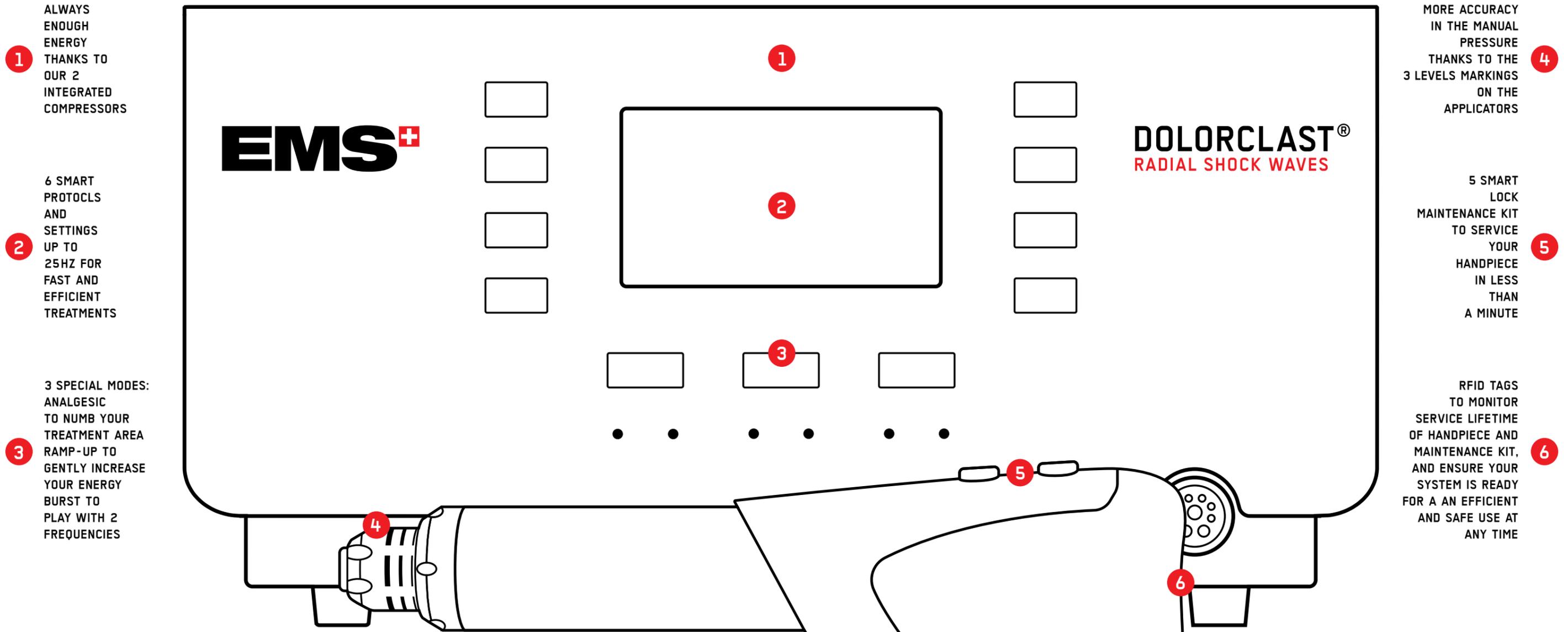
### LASE WITH SAFETY

- ▶ Treat in total safety without risks of over-heating the tissues thanks to short duration impulses (100 ns) which allow to maintain the treated zone below the thermal threshold.
- ▶ The wide spot size - 1 cm in manual mode and 3 cm in handsfree mode - allows to deliver the right dose of light without risks of burns
- ▶ Save time without compromising patient safety thanks to the handsfree mode. The spacer clipped on the handpiece keeps the patient’s skin at a safe distance, for a burn risk-free treatment.

# BOOM, BOOM, GOOD-BYE CHRONIC PAIN



## THE SOUND OF HEALING WITH YOUR RADIAL SHOCK WAVES SOLUTION



**1** ALWAYS ENOUGH ENERGY THANKS TO OUR 2 INTEGRATED COMPRESSORS

**2** 6 SMART PROTOCLS AND SETTINGS UP TO 25HZ FOR FAST AND EFFICIENT TREATMENTS

**3** 3 SPECIAL MODES: ANALGESIC TO NUMB YOUR TREATMENT AREA RAMP-UP TO GENTLY INCREASE YOUR ENERGY BURST TO PLAY WITH 2 FREQUENCIES

**4** MORE ACCURACY IN THE MANUAL PRESSURE THANKS TO THE 3 LEVELS MARKINGS ON THE APPLICATORS

**5** 5 SMART LOCK MAINTENANCE KIT TO SERVICE YOUR HANDPIECE IN LESS THAN A MINUTE

**6** RFID TAGS TO MONITOR SERVICE LIFETIME OF HANDPIECE AND MAINTENANCE KIT, AND ENSURE YOUR SYSTEM IS READY FOR A AN EFFICIENT AND SAFE USE AT ANY TIME

### DELIVER THE RIGHT DOSE

- Quickly & efficiently cover all pathologies thanks to 6 smart protocols. Their preset settings in function of the nature of damaged tissues help you deliver shock waves with optimum efficiency.
- It's a fact that clinical success is energy-dose dependent. To help you reach your therapeutic goals, the DolorClast® Radial Shock Waves features a RAMP-UP Mode that delivers incrementally the maximum energy to the tissues.
- For an accurate tracking of the treatment performances, the console displays the total amount of energy delivered at the end of each treatment.

### EVERYWHERE

- Delivering the highest energy is one unequaled technical feat. Ensuring such level of performances in a portable device is a tour de force. Years of unceasing engineering researches have enabled to miniaturized DolorClast® historical external compressor without impairing its performances. Patented design of new air management system ensures the highest airflow to generate energetic shocks waves and thus best clinical outcomes.

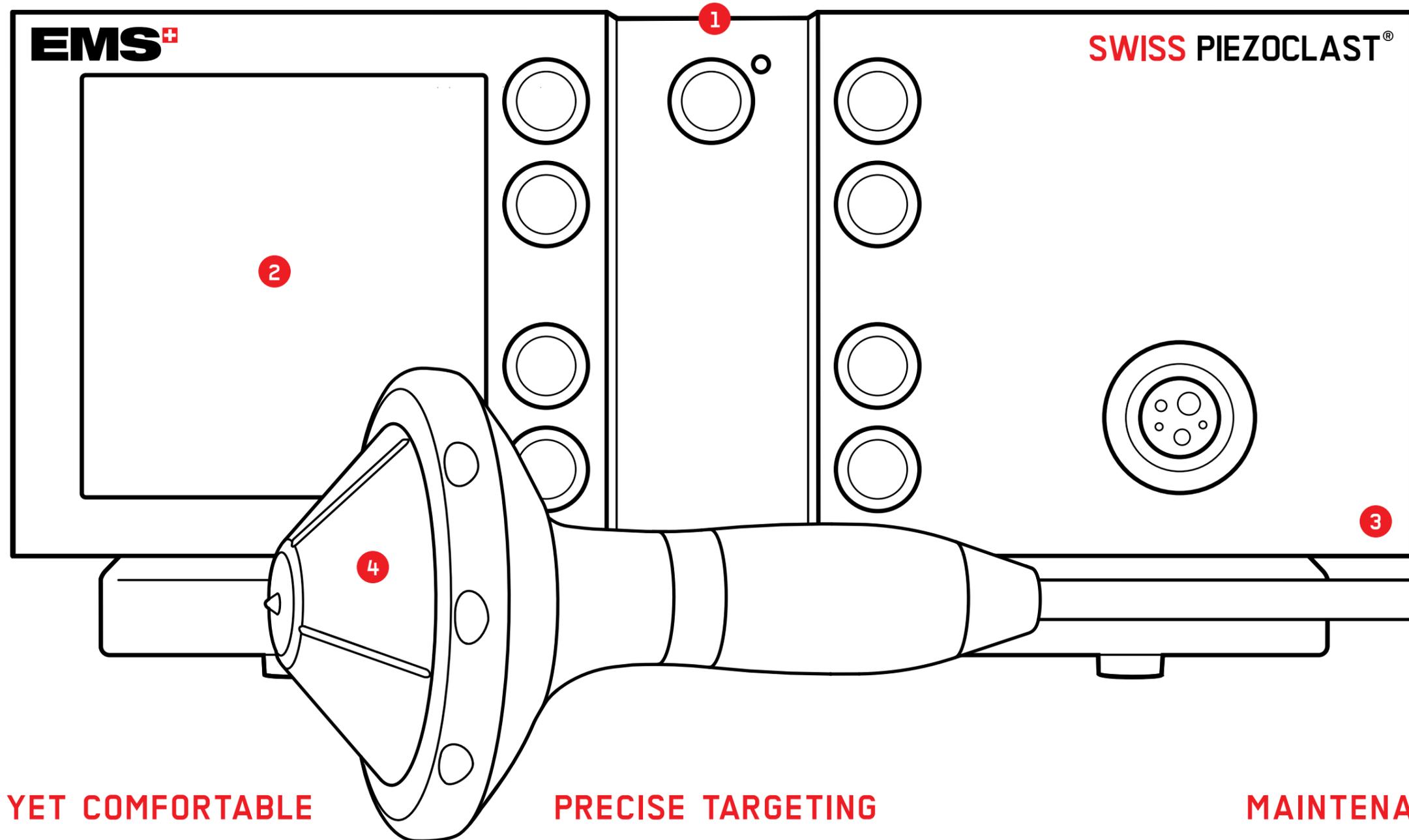
### OVERCOME PAIN

- New analgesic protocol facilitate the application of ESWT even on painful conditions such as enthesopathies. It delivers shock wave at a high frequency of 25 Hz and a low pressure, to dramatically in-crease the level of tolerance and alleviate quickly the feeling of pain.

# FOCUS ON GETTING BACK TO MOTION



## HEALING TO THE DEEP WITH YOUR FOCUSED SHOCK WAVES SOLUTION



**1** HIGH PEAK PRESSURE TREAT EFFICIENTLY EVEN DEEP MSK PATHOLOGIES

**2** RELIABLE TECHNOLOGY VIRTUALLY MAINTENANCE FREE

**3** NO DISPLACEMENT: COMFORTABLE TREATMENT EVEN FOR ENTHESTOPATHIES

**4** 8 GEL PADS TO ACCURATELY SET THE DEEPNESS OF YOUR TREATMENT

### FOCUSED, YET COMFORTABLE

► Piezoceramic generated focused shock waves avoid mechanical displacements of the handpiece on the skin, thus preventing treatment area to be under unnecessary pressure. EMS focused shock waves therapy provides you an effective solution to treat painful entesopathy, but also address patients with low-tolerance threshold of pain who would not be ideal candidate to radial shock wave therapy in primary care.

### PRECISE TARGETING

► Again, energy is key to act on therapeutic level. EMS' piezoceramic technology enables to reach high peak power up to 82 Mpa to produce very high positive energy output. And thanks to distinct distribution of piezoceramic crystals, the shock wave high energy is focused in depth and limited to a precise treatment perimeter. It is therefore the treatment of choice to address pathologies located from 4 to 8 cm deep, such as rotator cuff tendinopathy or non-unions bone fractures.

► A complete range of gel pads is available to adjust the penetration depth of the shock wave to the targeted tissues.

### MAINTENANCE FREE

► The piezoceramic handpiece and the electronic generator do not require any maintenance or service.

► The PiezoClast® can run for more than 5 millions impulses. This reduce a lot your running cost compared to other focused technologies.

# PEDro ENDORSES GDT SHOCK WAVES



## THE PHYSIOTHERAPY EVIDENCE DATABASE DEMONSTRATES GDT'S SUPERIORITY

► The PEDro is a freely available database of over 37,000 randomized controlled trials (RCTs, evidence based medicine level 1), systematic reviews and clinical guidelines published in the field of physiotherapy.

It was developed by The George Institute for Global Health affiliated with the University of Sydney, Australia, and is currently the largest independent database on topics related to physical and rehabilitation medicine. Its goal is to provide best insights into the scope of evidence that can be used to guide decision about the effect of a therapy. The PEDro database is unique in that it offers an independent assessment (PEDro score) of the quality of the RCTs it indexes, thus helping practitioners to rely on best evidence to reach their therapeutic goals.

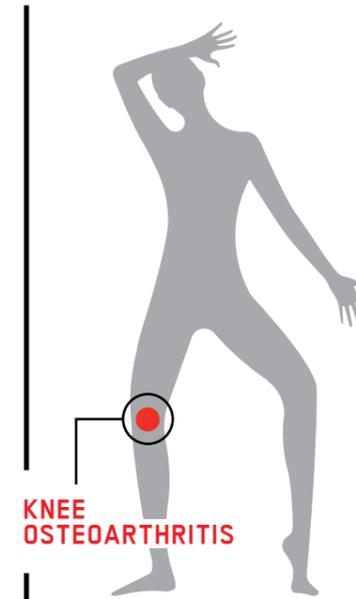
**30/45 RCTS LISTED IN THE PEDRO WERE PERFORMED WITH GDT.**



HERE YOU'LL FIND MORE TOP GDT® PEDro RESULTS

### THE JOURNAL OF SURGICAL RESEARCH

#### ZHAO, ZHE ET AL. 2013



#### GOAL

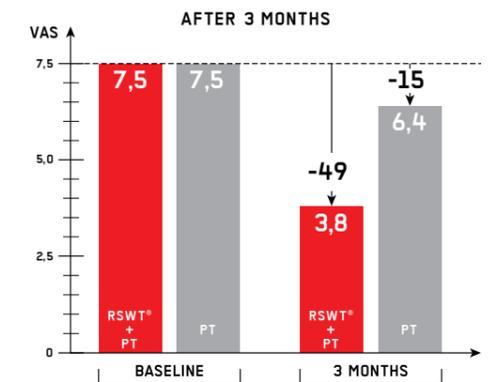
► Demonstrating the efficacy on Knee Osteoarthritis of RSWT® versus placebo shock waves treatment.

#### PROTOCOLS

**GROUP 1** VS **GROUP 2**  
 ► RSWT®: 4 sessions at 4000 impulses x 6 Hz x 0.25mJ/mm2.  
 ► RSWT® Placebo sessions

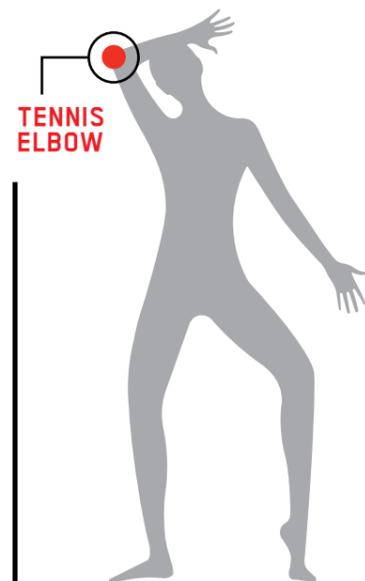
#### RESULTS

► RSWT® is effective to significantly reduce pain and improve knee function over 3 months of patients suffering from Osteoarthritis (OA).  
 ► A significant pain reduction of almost 50% over 3x better than placebo group.



### AMERICAN JOURNAL OF PHYSICAL MEDICINE & REHABILITATION

#### YANG ET AL. 2017



#### GOAL

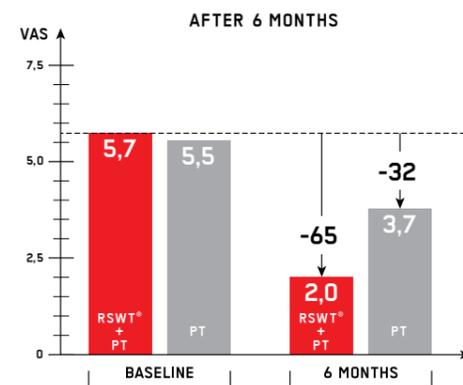
► Comparing the efficacy on Tennis Elbow of RSWT® combined with physical therapy versus physical therapy alone.

#### PROTOCOLS

**GROUP 1** VS **GROUP 2**  
 ► RSWT®: 3 Weekly sessions at 2000 impulses x 10 Hz x maximum tolerated pressure (average 3.1 bar).  
 ► Physical Therapy (PT): 3 sessions per week over 3 weeks.

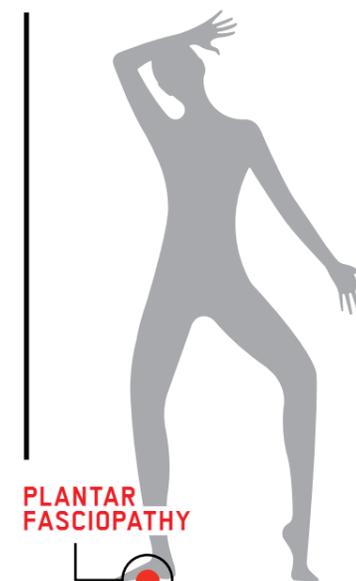
#### RESULTS

► RSWT® combined with physical therapy enables better and faster pain reduction, grip strength increase, functional improvement and tendon tear healing, than physical therapy alone.  
 ► A significant pain reduction of 65%, more than 2x better than controlled group.



### INTERNATIONAL JOURNAL OF SURGERY

#### ROMPE, JAN D. ET AL. 2015



#### GOAL

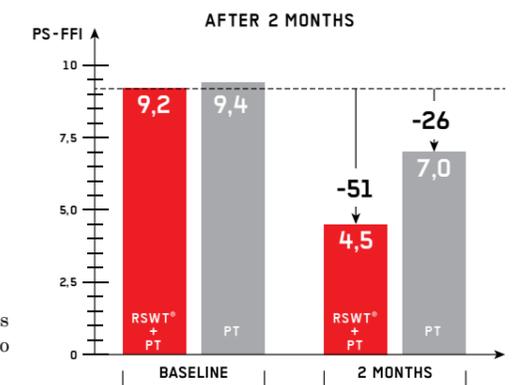
► Comparing the efficacy on plantar fasciopathy of RSWT® combined with stretching exercises versus RSWT® versus alone.

#### PROTOCOLS

**GROUP 1** VS **GROUP 2**  
 ► RSWT®: 3 sessions at 2000 impulses x 8 Hz x 4 bar  
 ► Physical Therapy (PT): stretching exercises 3x daily over 8 weeks

#### RESULTS

► RSWT® combined with physical therapy enables better and faster pain reduction, grip strength increase, functional improvement and tendon tear healing, than physical therapy alone.  
 ► Pain reduction had decreased overall by almost 70%, 24 months after treatments, for patients who received GDT® protocol.



## EDUCATING TOMORROW'S EXPERTS IN ESWT

- ▶ The Swiss DolorClast® Academy – SDCA – offers flexible shock wave training programs globally to spread knowledge about the Swiss DolorClast® Method with a view to improving patient care. Wherever you are, working from a remote location, in a small town or a big city, you can access our high-quality tailored courses in your area and in your language.
- ▶ The SDCA has a large network of shock wave experts encouraging users and future trainers to popularize the Swiss DolorClast® Method worldwide.

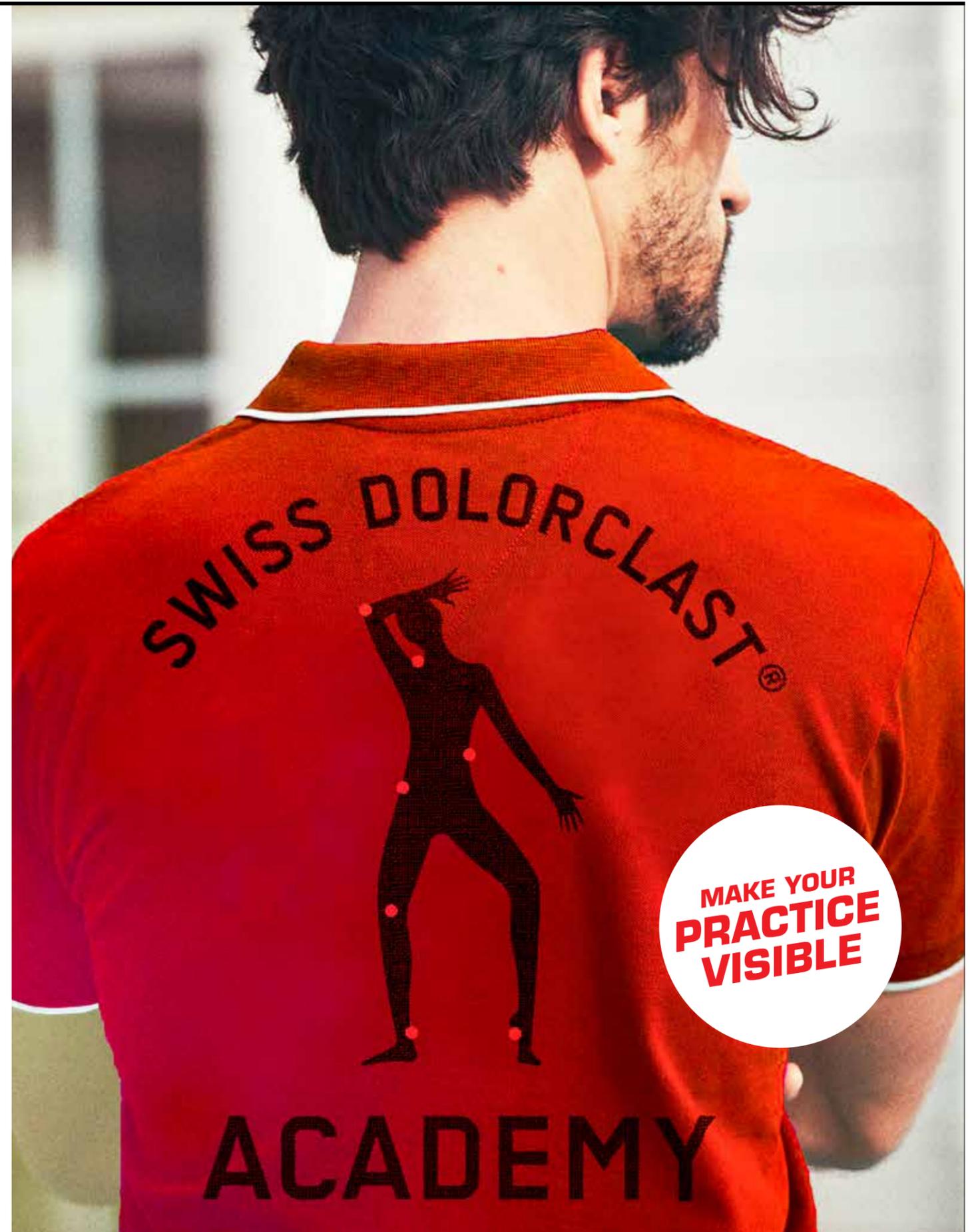
## INCREASING YOUR EXPOSURE

- ▶ The SDCA helps you increase your exposure and drive business for your practice by adding you to the online directory of certified shock wave centers.
- ▶ The SDCA is the perfect organization to keep you up to date on the latest clinical advances.



HERE YOU'LL  
FIND THE MOST FREQUENT  
QUESTIONS & ANSWERS

[SDC-ACADEMY.COM](http://SDC-ACADEMY.COM)



# FC LIVERPOOL PLAYERS



## FROM LEFT TO RIGHT

- ▶ Sadio Mané (19)
- ▶ Jordan Henderson (14)
- ▶ Alex Oxlade-Chamberlain (21)
- ▶ Joe Gomez (12)
- ▶ Mohamed Salah (11)



# 100 MILLION PATIENTS CAN'T BE WRONG



EVERYONE WHO'S INTO SPORTS AND GOT TO KNOW THE ADVANTAGES OF DOLORCLAST® AND GDT WILL APPROVE.



“This treatment helped me to be able to take part in the World Cup races... Thanks for the help.

It was worth its weight in gold!”

## AKSEL LUND SVINDAL

ALPINE SKIER, OLYMPIC GOLD MEDALIST

Photo credit: "Aksel\_Lund\_Svindal" by Kristin Danielsen used under CC-BY-SA-3.0 Unported ([https://fr.wikipedia.org/wiki/Aksel\\_Lund\\_Svindal#/media/File:Aksel2.jpg](https://fr.wikipedia.org/wiki/Aksel_Lund_Svindal#/media/File:Aksel2.jpg))



“After 3 sessions I had recovered from my Plantar Fasciitis, and could train again.”

## ZANE ROBERTSON

2016 OLYMPIC LONG DISTANCE RUNNER

Photo credit: "Zane Robertson Rio 2016" by Tim Hipps used under CC-BY-SA-2.0 Unported ([https://commons.wikimedia.org/wiki/File:Zane\\_Robertson\\_Rio\\_2016.jpg](https://commons.wikimedia.org/wiki/File:Zane_Robertson_Rio_2016.jpg))



“Thank you for helping me keep my World Championship dreams alive!”

## KRISTIN STØRMER STEIRA

NORWEGIAN CROSS-COUNTRY SKIER

Photo credit: "Kristin Størmer Steira" by Slawek used under CC-BY-SA-2.0 Unported ([https://en.wikipedia.org/wiki/Kristin\\_Størmer\\_Steira#/media/File:Kristin\\_Størmer\\_Steira\\_2012-02-18.jpg](https://en.wikipedia.org/wiki/Kristin_Størmer_Steira#/media/File:Kristin_Størmer_Steira_2012-02-18.jpg))



“Now I can get on with being an athlete again thanks to the GDT!”

## MARILYN OKORO

2008 OLYMPIC 4 X 400M BRONZE MEDALIST



“I was struggling with my back...”

On my third and fourth treatments with the shock wave I was seeing real big improvements!”

## STUART APPELBY

PGA GOLF PLAYER, WINNER OF A MAJOR CHAMPIONSHIP



“This treatment is an important tool as it allows me to recover quickly in between hard training sessions and competitions.”

## SUZANN PETERSEN

TOP NORWEGIAN GOLFER

Photo credit: "Suzann Pettersen" by Keith Allison used under CC-BY-SA-2.0 Unported ([https://fr.wikipedia.org/wiki/Suzann\\_Pettersen#/media/File:2009\\_LPGA\\_Championship\\_-\\_Suzann\\_Pettersen\\_\(2\)\\_cropped.jpg](https://fr.wikipedia.org/wiki/Suzann_Pettersen#/media/File:2009_LPGA_Championship_-_Suzann_Pettersen_(2)_cropped.jpg))

**GOOD-BYE  
PAIN, HELLO  
FREEDOM**

**“I FEEL  
GOOD”**



“ IT TAKES PROFOUND  
KNOWLEDGE TO DO THINGS IN  
A SIMPLE MANNER ”

Anne Robert Jacques TURGOT  
General controller of finance, France, 1774



@SwissDolorClastint

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