



ROBOTIC SCANNING SYSTEM

Automated high intensity
laser at your service.



ROBOTIC SCANNING SYSTEM



Why not take advantage of a **universal therapeutic tool** that covers a range of acute to chronic musculoskeletal conditions and **offer it to patients who:**

Need an immediate alleviation of **back pain**?

Experienced a **muscle or tendon rupture** during sports activity and need to recover faster?

Are looking for a non-invasive and side-effect free pain management for **arthrosis**?

BTL provides you with the automated **HIGH INTENSITY LASER**, so-called **ROBOTIC SCANNING SYSTEM**, that delivers the most gentle and effective pain management to your patients!



ROBOTIC SCANNING SYSTEM

BTL sets a new trend in **HIGH INTENSITY LASER** applications with automated **ROBOTIC SCANNING SYSTEM** which allows you to treat both small and large body areas up to 1200 cm².

ROBOTIC SCANNING SYSTEM is an operator free procedure that:

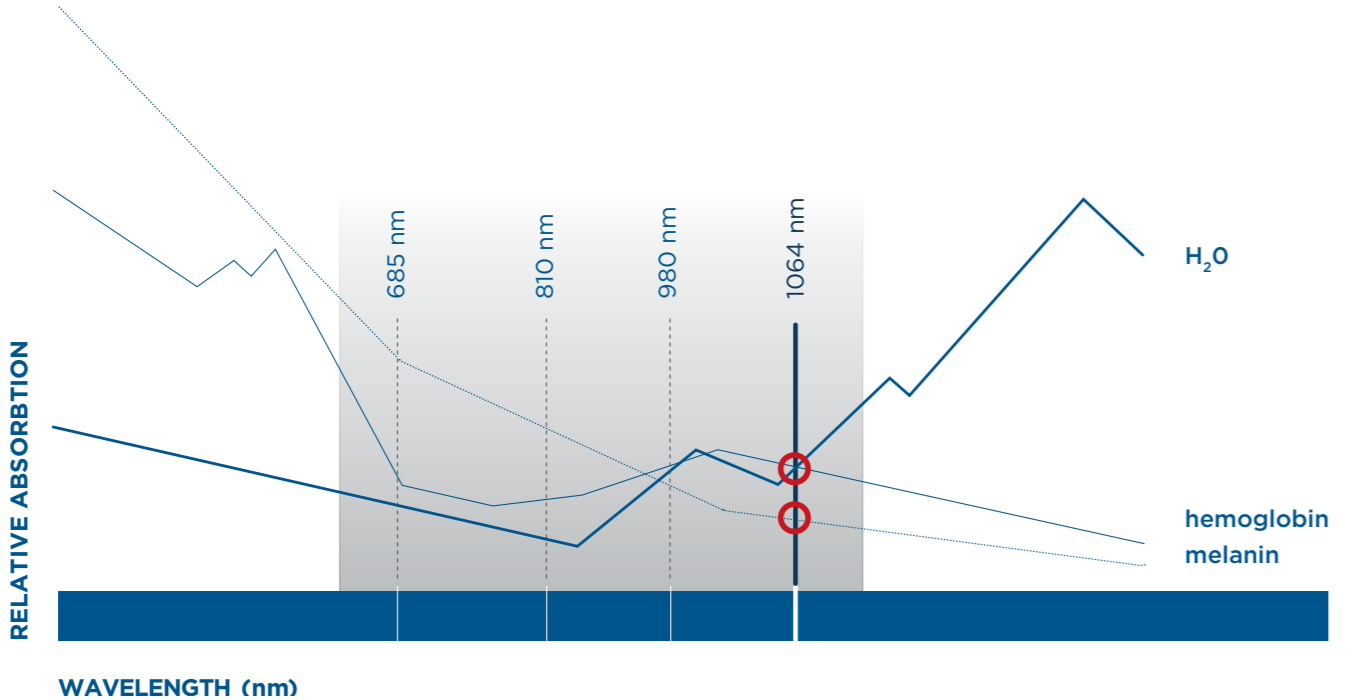
Saves you time and provides an opportunity to cover a wide spectrum of indications:

- acute and chronic back pain
- sport injuries including muscle ruptures, ligament and tendon distensions or ruptures
- hematomas
- arthrosis
- pain and edemas following post-surgical interventions of the musculoskeletal system
- inflammatory conditions of tendons and joints

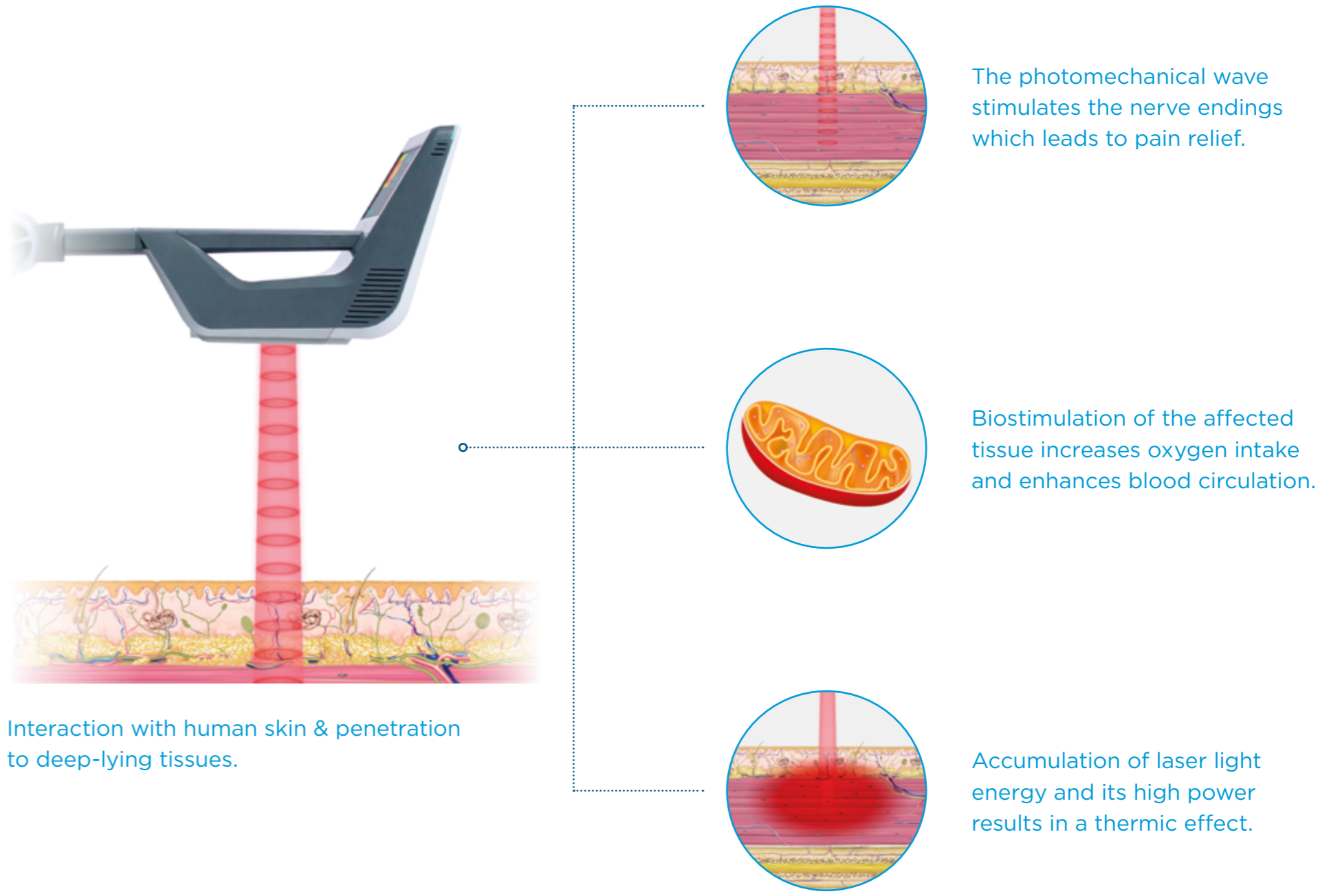
MECHANISM OF ACTION

The healing effect of laser light is based on biostimulation and speeding up cell processes that contribute to pain suppression and faster injury recovery.

- Although originally used in surgery, the laser industry introduced **therapeutic high intensity lasers** that gained its popularity in pain management and injury recovery.
- BTL developed the very first automated **HIGH INTENSITY LASER** delivering **30 W power and using a 1064 nm wavelength**.
- The unique combination of these parameters allows for targeting deep-lying tissues, maximizing pain relief and delivering strong thermic therapies within a short time.



1064 nm wavelength has a 10x lower absorption in melanin. This allows laser light to penetrate into deep-lying tissues.



Interaction with human skin & penetration to deep-lying tissues.

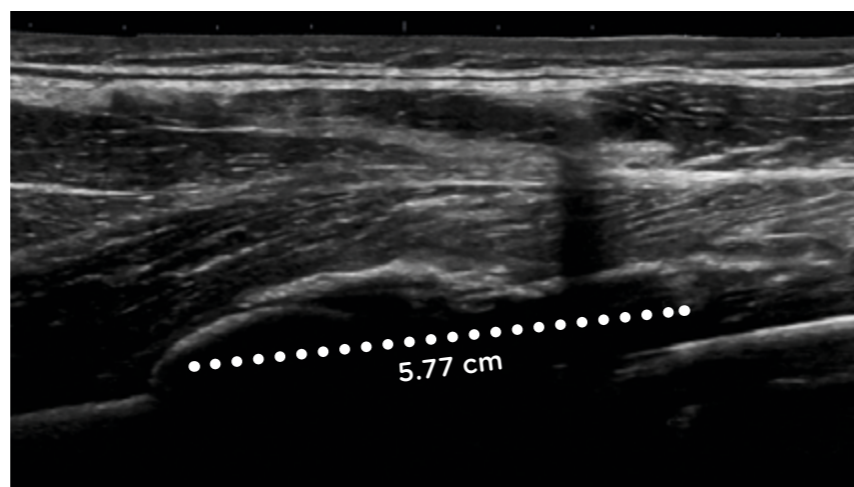
MEDICAL EFFECTS AND INDICATIONS

HIGH INTENSITY LASER is the first-choice treatment in musculoskeletal pain resulting from post-traumatic and chronic conditions, surgical interventions, and inflammatory conditions.

BEFORE



AFTER



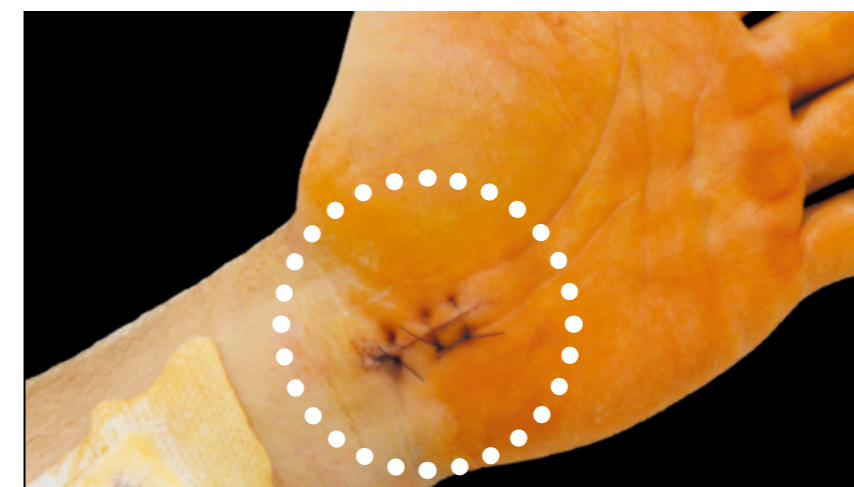
SUBTOTAL RUPTURE OF VASTUS INTERMEDIUS, AFTER 5TH TREATMENT, COURTESY OF: BTL

PAIN RELIEF IN POST-TRAUMATIC CONDITIONS

Immediate pain relief allows patients to take the next step in the recovery process and shorten the immobilization phase. This is very important especially in muscle ruptures or tendon distensions. Pain relief is achieved with the photomechanical wave and explained through gate control theory of pain. When used in a pulsed mode with high power, the photomechanical wave:

- stimulates thick nerve endings
- blocks the pain transmittance
- causes immediate pain relief

BEFORE



AFTER



CARPAL TUNNEL SURGERY, AFTER 5TH TREATMENT, COURTESY OF: BTL

BIOSTIMULATION FOR FASTER RECOVERY

Biostimulation helps to restore the original structures of damaged tissues after traumas or surgical interventions. Biostimulation leads to:

- increased production of ATP and acceleration of the healing process
- enhanced blood perfusion and oxygen uptake to increase cell metabolism
- removal of non-viable inflammatory cells that aids in the regeneration and repair processes

THERAPY PROCEDURE

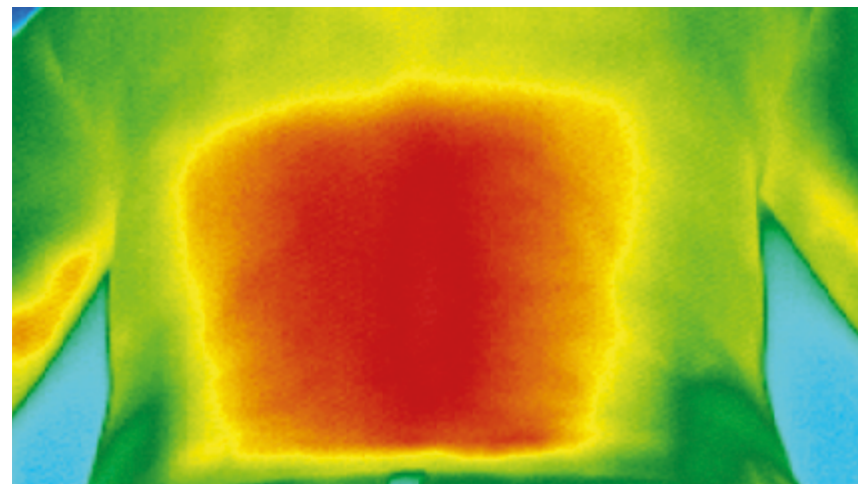
ROBOTIC SCANNING SYSTEM

BEFORE THE THERAPY



The Robotic Scanning System was developed to substitute an operator while spreading the laser light energy in the most homogeneous way, even in large body areas.

HOMOGENOUS ENERGY SPREAD WITH **ROBOTIC SCANNING SYSTEM**



BACK, COURTESY OF: BTL



MANUAL LASER THERAPY

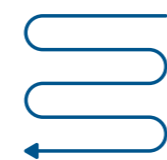
BEFORE THE THERAPY



THERAPY TECHNIQUES



1st The pulsed laser emission applied in a spiral shape is used in pain management.



2nd The continuous laser emission applied in a scanning motion is used for biostimulation.



PRODUCT HIGHLIGHTS

HIGH INTENSITY LASER

Parameters

- The most powerful **30 W** high intensity laser for maximized effect of pulsed analgesia, as well as delivering strong thermic therapies
- **1064 nm** wavelength for the most effective energy delivery to deep-lying tissues

Intelligent features

- **Body Condition Screen** for personalized therapy tailored to suit every patient's condition
- Equipped with continuous **multi-level control** of power

Additional features

- Intuitive colour **touch screen**
- **Presets** with a therapeutic encyclopedia

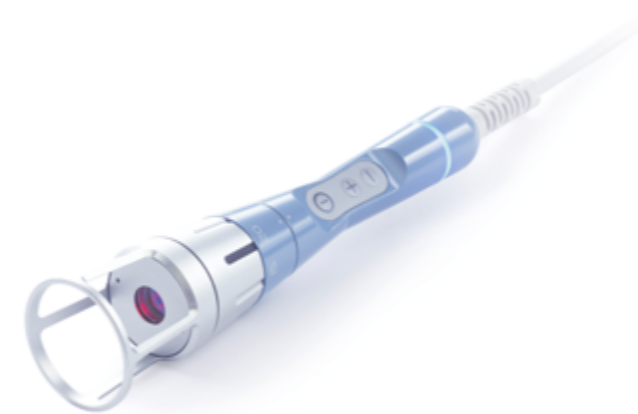
1200 cm²

treat from small to large body areas



ROBOTIC SCANNING SYSTEM

- The very first **intelligent** Robotic Scanning System covering body areas up to 1200 cm²
- Ideal for back area, **large** muscle groups, and joints
- **Temperature monitoring** of homogenous energy spread and maximized therapeutic efficiency
- Equipped with **Thermal Perception Scan** for personalized therapy
- **Continuous control** of a safe distance between the patient and the Robotic Scanning System



MANUAL LASER THERAPY

- The most powerful manual laser therapy delivering **the power of up to 30 W**
- **Intelligent applicator** with therapy control buttons and therapy indicator light
- **The optical system** for setting spot size within the range of 10-30 mm

KNEE PAIN MANAGEMENT WITH ROBOTIC SCANNING SYSTEM

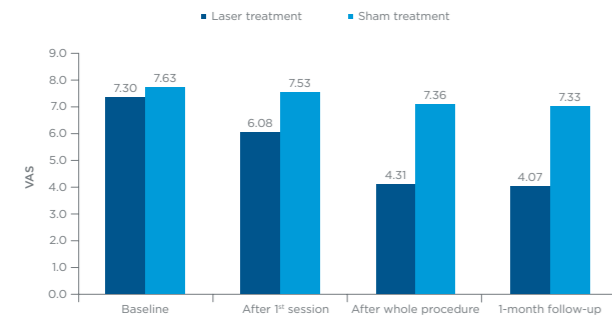
ANALGESIC EFFECT OF CLASS IV LASER IN KNEE OSTEOARTHRITIS

In the publishing process

HIGHLIGHTS

- To evaluate the effects of a 1064 nm wavelength, 30 W powered Class IV laser.
- 60 patients with knee osteoarthritis were randomly assigned into two groups.
- 7 treatment sessions every other day.
- 30 patients were treated with a semiconductive Class IV Laser with Scanning System applicator with a maximal power of 30 W and 1064 nm wavelength.
- 30 patients were treated with the same device without emission from the laser diode (placebo).
- Visual Analogue Scale (VAS) was evaluated prior to beginning treatment (baseline), following the first session, after the 7 therapies, and 1 month following the last treatment.
- The Mann-Whitney test revealed there was a significant reduction in pain according to the VAS results for the laser group.

PAIN REDUCTION



AUTOMATED SCANNING SYSTEM VERSUS MANUAL LASER THERAPY

COMPARISON OF HOMOGENEITY ENERGY SPREAD DELIVERED BY THE MANUAL HANDPIECE AND AUTOMATED SCANNING SYSTEM APPLICATIONS

In the publishing process

HIGHLIGHTS

- To evaluate the homogeneity of the spread of energy delivered by the manual handpiece and automated Scanning System applications.
- Maximal power of 30 W and single wavelength of 1064 nm.
- 70 patients with skin type I-V according to the Fitzpatrick scale.
- Each patient received initial treatment with the manual applicator and one week later received treatment with the automated Scanning System applicator.
- The automated application provided a more homogeneous spread of energy compared to the manual application using the handpiece.

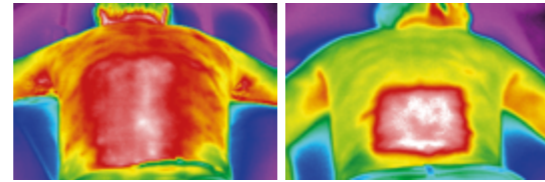


Figure 1. Thermal images for manual (left) and automated (right) application for skin type II

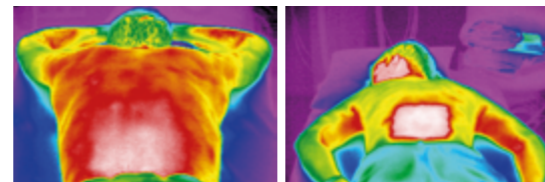


Figure 2. Thermal images for manual (left) and automated (right) application for skin type IV

WAVELENGTHS BEYOND 1000 NM CAN ALLOW PENETRATING HIGHER AMOUNT OF ENERGY INTO THE TISSUE

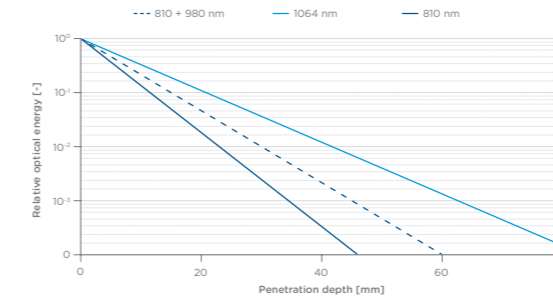
SPECTRAL DEPENDENCE OF LASER LIGHT ON LIGHT-TISSUE INTERACTIONS AND ITS INFLUENCE ON LASER THERAPY - SCIENTIFIC REVIEW

In the publishing process

HIGHLIGHTS

- Laser light on specific wavelength is widely used in medicine for diagnostic and therapeutic purposes.
- Research shows different studies which are analyzing the wavelength dependency on human tissue interaction.
- In this paper, various articles about the spectral influence to the reflection, refraction, and absorption are reviewed.
- The results show decreasing absorption and refraction index in the melanin for the longer wavelengths, as well as reduction of hemoglobin absorption.
- Longer wavelengths increase the probability of the interaction with water particles and its (own) light absorption.
- We conclude that for wavelengths beyond 1000 nm reflection and melanin absorption are negligible which can allow penetrating higher amount of energy into the tissue.
- Water absorption increases with the longer wavelengths.
- Refraction index and hemoglobin absorption are reduced.

MEASUREMENT OF WAVELENGTHS



CHRONIC PAIN TREATMENT WITH HIGH INTENSITY LASER

EFFECT OF HIGH-INTENSITY LASER TREATMENTS ON CHRONIC PAIN RELATED TO OSTEOARTHRITIS IN FORMER PROFESSIONAL ATHLETES: A CASE SERIES

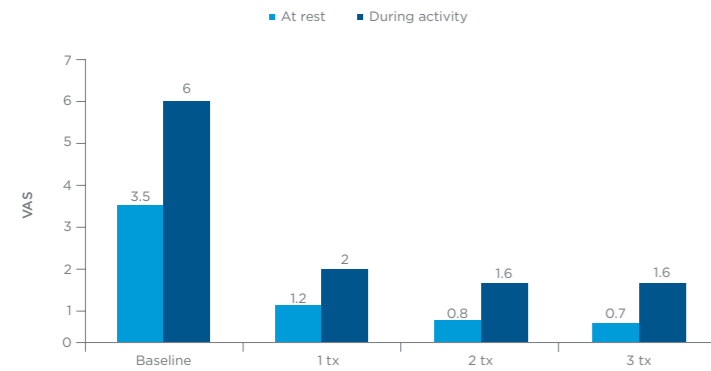
White PF, Cao X, Elvir-Lazo L, Hernandez H.

White Mountain Institute, The Sea Ranch, CA, USA
Published: Journal of Molecular Biomarkers & Diagnosis, 2017, 8(4)

HIGHLIGHTS

- 39 patients with osteoarthritis.
- To achieve pain relief.
- 3 tx every other day, power of 10.5 W.
- VAS was taken at the baseline, after each therapy, at rest and during activity.
- Significant chronic pain reduction after each therapy.

PAIN SCORE



KNEE PAIN REDUCTION WITH HIGH INTENSITY LASER

EFFECTIVENESS OF HIGH INTENSITY LASER THERAPY FOR REDUCTION OF PAIN IN KNEE OSTEOARTHRITIS

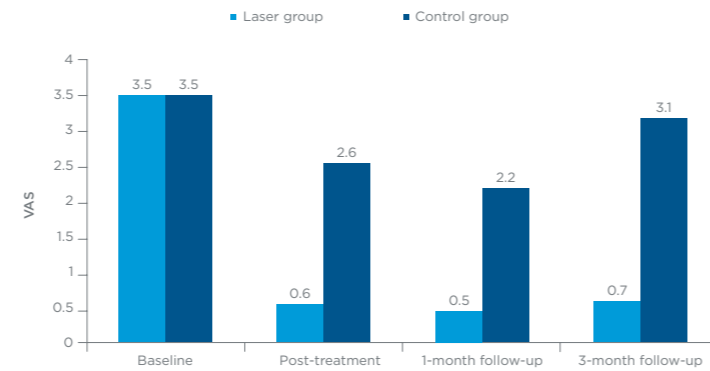
Angelova A, Ilieva EM.

Medical University of Plovdiv, Plovdiv, Bulgaria
Published: Pain Research and Management, 2016, Volume 2016

HIGHLIGHTS

- 72 patients with knee osteoarthritis.
- Determining the effect of high intensity laser therapy.
- 7 treatments scheduled every other day, laser group parameters were 3 treatments using pulsed emission of 5 W and 4 treatments using continuous emission of 5 W; control group received sham stimulation.
- VAS was taken at the baseline, after 7 treatments, during 1- and 3-month follow-ups.
- Laser group showed significant pain relief maintained during follow-up compared to control group.

PAIN SCORE



EPICONDYLITIS PAIN REDUCTION WITH HIGH INTENSITY LASER

LONG-TERM EFFECTS OF HIGH INTENSITY LASER THERAPY IN LATERAL EPICONDYLITIS PATIENTS

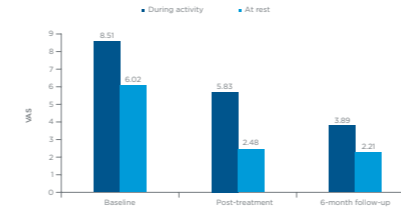
Akkurt E, Kucuksen S, Yilmaz H, Parlak S, Salli S, Karaca G.

Department of Physical Medicine and Rehabilitation,
Konya Education and Research Hospital, Hacı Şaban Mah., Turkey
Published: Lasers Med Sci. 2016, 31(2), 249-53.

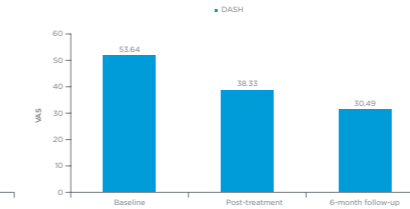
HIGHLIGHTS

- 30 patients with lateral epicondylitis.
- Investigate short- and long-term effects of laser therapy.
- 10 treatments scheduled every other day, 4 treatments using pulsed emission of 4 W and dosage 6 J/cm²; 6 treatments using continuous emission 6 W and dosage 100-150 J/cm².
- VAS, Disability of the arm, shoulder and hand questionnaire (DASH) were taken at the baseline, after 10 treatments, after 6-month follow-up.
- Statistically significant decrease in the VAS and DASH evaluations were maintained during 6-month follow-up.

PAIN SCORES



DASH SCORES



MAXIMIZE YOUR PATIENTS DATABASE!

To boost your patients' interest in **HIGH INTENSITY LASER** treatment, BTL provides its customers with promotional materials. These materials include prints (banners, patient brochures) for placement in the waiting room or to hand out, as well as online materials.



IN-OFFICE BRANDING

Learn how to implement HIGH INTENSITY LASER branding in high-traffic areas in your office by using patient brochures, roll-up banners and videos.



IN-OFFICE COMMUNICATION

We will provide you with documents that will help you effectively communicate the treatment to your patients. Train and support all personnel who will be responsible for phone and face-to-face communication on how to effectively talk about HIGH INTENSITY LASER.



MAXIMIZING YOUR PATIENT DATABASE

BTL will provide you with ready-made e-blast template you can send to inform everybody that you now offer the HIGH INTENSITY LASER for fully non-invasive and side-effect free pain management and faster injury recovery!



SOCIAL MEDIA STRATEGY

Start promoting HIGH INTENSITY LASER on your social media account including Facebook, Instagram and Twitter from day 1. Let your patients know that you have something new and revolutionary for them!



WEBSITE PROMOTION

Optimize your practice's website by promoting HIGH INTENSITY LASER to generate leads.



CLINICAL TRAINING

Our trainers will help you to become a clinical expert on HIGH INTENSITY LASER. This is the key to successful patient outcomes and satisfaction.

THEIR WORD MATTERS



Salvatore Galasso
Italy

"I chose the BTL High Intensity Laser 30W with Robotic Scanning System based on BTL's reputation for synonymous quality and therapeutic results."



Jiří Neumann
The Czech Republic

"Indeed, the optimal wavelength allows for penetration into relatively deep-lying tissues and treating them effectively."



Lise Lotte Buch
Denmark

"I already see many good results that would have taken longer to resolve without the BTL High Intensity Laser. I am highly satisfied."



Luis E. Rojas Landívar
Ecuador

"In different pathologies we achieved pain relief in 3 - 4 sessions without using any consumables which helped us with a faster return on investment of our center."



Martin Janousek
The Czech Republic

"BTL High Intensity Laser helped us in prevention and treatment of acute disorders..."



Predrag Jovicic
Serbia

"BTL High Intensity Laser gives excellent results in both acute and chronic conditions."



Jaroslav Vetvicka
The Czech Republic

"I can say that the most effective was the High Intensity Laser. Because its therapeutic effect can be seen almost immediately just after a few applications."



Eugene Wong
Malaysia

"BTL High Intensity Laser is useful in treating deep musculoskeletal pathologies. Patients are happy as they recover rapidly."

THE BEST SOLUTION FOR

TR-THERAPY

Constantly hearing from your patients that they are tired and their muscles feel very stiff? TR-THERAPY:

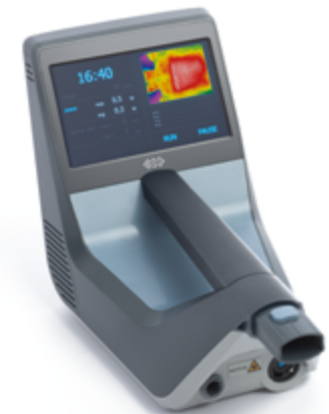
- Relieves muscle pain and soreness
- Eliminates muscle fatigue
- Regenerates muscles



HIGH INTENSITY LASER

Are your patients shortly after surgery or injured? Do you want to help them recover faster? Did you know that our HIGH INTENSITY LASER and ROBOTIC SCANNING SYSTEM speed up healing through a natural process of energy transfer on a cellular level called biostimulation? This contributes to healing and tissue regeneration in:

- Acute pain
- Muscle strain
- Joint sprain
- Muscle injury



ANY OF YOUR PATIENTS



SUPER INDUCTIVE SYSTEM

Nerve damage can significantly decrease your patients' quality of life. Help them restore nerve function and overcome their pain with the SUPER INDUCTIVE SYSTEM using the high-intensity electromagnetic field energy.

- Blocked back
- Muscle strengthening
- Fractures
- Recovery after a stroke



SHOCKWAVE THERAPY

Chronic pain will not limit your patients anymore. Degenerative processes in tendons lead to their stiffness which is hard to address with manual techniques or stretching. SHOCKWAVE THERAPY provides fast pain relief and mobility restoration through mechanical stimulation in:

- Shoulder pain
- Tennis elbow
- Runner's knee
- Achilles tendon
- Heel pain



A SOLUTION FOR ANY OF YOUR PATIENTS

| EXPLANATION | RADIAL SHOCKWAVE THERAPY | FOCUSED SHOCKWAVE THERAPY | HIGH INTENSITY LASER | TR-THERAPY | SUPER INDUCTIVE SYSTEM |
|------------------------------|---|--|--|--|--|
| Energy | divergent acoustic wave | convergent acoustic wave | laser light | radiofrequency current | electromagnetic field |
| Mechanism of action | superficial mechanical stimulation | deep mechanical stimulation | laser biostimulation | thermic effect | nerve depolarization |
| Key tissue | tendon | tendon, bone | cellular repair | muscle | nerve |
| Medical effect | healing start-up in superficial tendinopathies, chronic pain management | elimination of calcifications, healing of bone non-unions and tendinopathies at tendon-bone junction | healing of acute injuries anti-inflammatory effect acute pain management | muscle spasm relaxation muscle regeneration oedema removal | joint mobilization muscle stimulation and relaxation pain management |
| Penetration depth | up to 5 cm, maximum intensity spread superficially | adjustable depth of focal zone within range 0-35 mm, 15-50 mm, 30-65 mm | up to 10 cm | anywhere between electrodes | up to 10 cm |
| Application | manual | manual | operator free/manual | manual | operator free |
| Patient perception | pressure sensation up to mild discomfort | pressure sensation up to mild discomfort | intense heat | intense heat | muscle contraction or tingling |
| Medical branch | orthopaedics, PRM*, PT** | orthopaedics, PRM | orthopaedics, PRM, PT, sports medicine | PT, sports medicine | orthopaedics, PRM, neurology, PT |
| Application limits | any acute stage, spine area, head area | any acute stage, spine area, head area, organs with gas content | sensory deficit, safety requirements | sensory deficit, experienced manual therapist | head area, metal and electronic implantable devices |
| Disposables | shell, gel | pads, gel | none | cream, single-use electrode (optional) | none |
| Number of treatments | 10 sessions | 5 sessions | 5-10 sessions | 5-10 sessions | 5-10 sessions |
| Application frequency | up to twice a week | once a week | up to daily | up to daily | up to daily |
| Treatment duration | 10 min | 5 min | 5-15 min | minimally 15 min | up 10 min |

*PRM (Physical and rehabilitation medicine)

**PT (Physical therapist)

NO 2 PATIENTS ARE ALIKE

| INDICATION | RADIAL SHOCKWAVE THERAPY | FOCUSED SHOCKWAVE THERAPY | HIGH INTENSITY LASER | TR-THERAPY | SUPER INDUCTIVE SYSTEM |
|--|--------------------------------|---------------------------------|------------------------------|------------------------------|------------------------------|
| Acute back pain | N/A* | N/A | 1st CHOICE | OPTIONAL | 2nd CHOICE |
| Chronic back pain | OPTIONAL | OPTIONAL | OPTIONAL | 1st CHOICE | 2nd CHOICE |
| Degenerative joint disorder | 2nd CHOICE | 1st CHOICE | OPTIONAL | OPTIONAL | OPTIONAL |
| Joint sprains | N/A | N/A | 1st CHOICE | OPTIONAL | 2nd CHOICE |
| Degenerative disorder of spine | N/A | N/A | 2nd CHOICE | OPTIONAL | 1st CHOICE |
| Rheumatoid diseases | N/A | N/A | 1st CHOICE | OPTIONAL | 2nd CHOICE |
| Calcifications | 2nd CHOICE | 1st CHOICE | OPTIONAL | OPTIONAL | OPTIONAL |
| Enhancement of fracture healing | N/A | 2nd CHOICE | OPTIONAL | N/A | 1st CHOICE |
| Bone non-union | N/A | 1st CHOICE | N/A | N/A | N/A |
| Joint blockage | N/A | N/A | OPTIONAL | 2nd CHOICE | 1st CHOICE |
| Muscle atrophy | N/A | N/A | N/A | 2nd CHOICE | 1st CHOICE |
| Muscle hypertonus | 2nd CHOICE | OPTIONAL | OPTIONAL | 1st CHOICE | OPTIONAL |
| Muscle regeneration | OPTIONAL | OPTIONAL | 2nd CHOICE | 1st CHOICE | OPTIONAL |
| Muscle injury | N/A | N/A | 1st CHOICE | 2nd CHOICE | OPTIONAL |
| Myofascial syndrome | 2nd CHOICE | OPTIONAL | OPTIONAL | 1st CHOICE | OPTIONAL |
| Spasticity | 2nd CHOICE | 2nd CHOICE | OPTIONAL | OPTIONAL | 1st CHOICE |
| Tendinopathy | 1st CHOICE** | 1st CHOICE*** | OPTIONAL | OPTIONAL | OPTIONAL |
| Nerve damage | N/A | N/A | 2nd CHOICE | OPTIONAL | 1st CHOICE |
| Sports injuries | N/A | N/A | 1st CHOICE | 2nd CHOICE | OPTIONAL |
| Post-traumatic oedemas | N/A | N/A | 2nd CHOICE | 1st CHOICE | OPTIONAL |

*N/A (Not applicable)

** 1st choice in superficial tendinopathies

***1st choice in deep tendinopathies

BTL: OVER 25 YEARS OF INNOVATION



More than 55 offices
around the globe



1,500 employees
worldwide

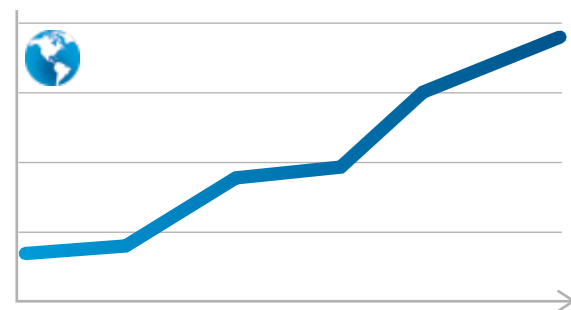


More than
300 engineers

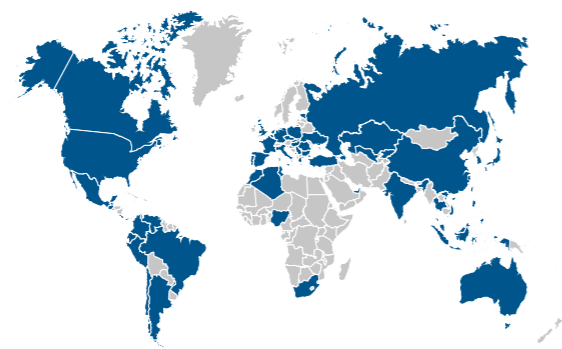


2 focused divisions:
medical and aesthetics

Growing to meet your needs



1993 Continuous growth worldwide



OUR COMMITMENT TO YOU

BTL will:

- Provide safe and efficacious solutions of the highest quality
- Offer technology with NO costly consumables
- Continue to offer an affordable upgrade programs

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sales@btlnet.com
btlnet.com

