Photodynamic therapy with 630nm laser

Intralesional and percutaneous photodynamic therapy with PDT 630nm laser for benign and precancerous skin lesions
The integral solution in photodynamic therapy (PDT)

INTERmedic, worldwide leader in photodynamic therapy for pulmonology (lung cancer), gastroenterology (Barrett's esophagus, esophageal cancer), urology (prostate cancer) among others, presents Multidiode PDT 630™ Derma, the solution eagerly awaited by dermatologists to treat basal cell carcinoma, basalioma or skin tumors.

This minimally invasive and effective treatment method has many advantages for both physician and patient:

- Selective destruction of the tumor
- No side effects
- Effect localized to the treatment area
- Improved quality of life
- Does not alter adjacent tissue and organs
- Minimally invasive
- Proven clinical effectiveness
- Effectiveness in dermal tumors with great depth and thickness, impossible to obtain with other noninvasive techniques
The photodynamic therapy with Multidiode PDT 630™ Derma from INTERmedic is a minimally invasive treatment using a photosensitizing drug, which is activated by the laser light at a specific wavelength. This causes reactions by producing high energy oxygen molecules. The combination of specific laser, photosensitizer and oxygen results in the necrosis of the tumor cells.

Indications for Multidiode PDT 630™ Derma

- Basal-cell carcinoma
- Hidradenitis suppurativa
- Fistulas
- Basaliomas
- Actinic keratosis
- Bowen's Disease
- Paget's Disease
- Leukoplakia
- Viral warts

“An effective, minimally invasive method for the treatment of basal cell carcinoma.”


Photodynamic therapy with intralesional photosensitizer and laser beam application: an alternative treatment for nodular basal cell carcinoma.
Multiple topical and intralesional treatments

Treatment of skin lesions

Topical treatment
Multidiode PDT 630™ Derma from INTERmedic delivers the laser light onto the tissue in a completely homogeneous way through a percutaneous applicator which generates a flat front spot. The laser light penetrates very deeply.

Intralesional treatment
The photosensitizer is injected into the lesion, and, through an optical fiber is irradiated from the inside. Minimally invasive.

Hidradenitis and fistulas

Intralesional treatment
A fistula is a channel in the tissue which does not heal. The purpose of photodynamic therapy in these cases is to stimulate healing of the canal by removing the epithelial tissue and thus facilitating its closure.

Clinical cases treated with Multidiode PDT 630™ Derma

BASAL CELL CARCINOMA

Before                      After 6 months

NODULAR BASAL CELL CARCINOMA

Before                      After

AXILLARY HIDRADENITIS

Before                      After

FISTULA

Before                      After
Application and illumination systems of PDT fibres

To ensure optimum illumination of the tumors and lesions in different applications, INTERmedic offers a variety of application systems.

Linear diffuser
- 360° homogeneous irradiation. Flat top laser beam
- Fast, comfortable and uniform. Intralobular use through a transparent catheter
- Suitable for fistula, hidradenitis suppurativa and large basal carcinomas

Front shot fiber
- Front laser emission
- Intralobular use through a needle
- Suitable for large basal cell carcinomas, fistulas and hidradenitis suppurativa

Percutaneous applicator
- Front laser emission. Flat top spot of 1cm²
- External use (percutaneously): Higher power density and penetration than LED lamps
- Suitable for basal cell carcinomas and keloids

Types of lighting

**Illumination on the surface**
- Percutaneous handpiece. Equipped with a diffuser with micro lenses to generate a completely homogeneous circular spot in the tissue. Ideal for treatment and lighting of percutaneous surfaces

**Intracavitary illumination (lung, esophagus)**
- Cylindrical and ball diffusers

**Interstitial illumination of solid tumors**
- Short cylindrical diffuser (length: 10 mm). For intralobular usage in thick and massy tumors and fistulas
- Long cylindrical diffuser (length: 30 mm), for use in fistulas
- Frontal shot needle-guided fiber for intralobular use in thin and small tumors
So far photodynamic therapy (PDT) has been severely conditioned by the limitations of the conventional technique: scant penetration of the photosensitizer and low light penetration.

Solutions used were topical creams which penetrate the tissue on the surface and LED lamps, which stimulate percutaneously with low penetration.

INTERmedic has developed a specific PDT laser technology which allows for accurately transducing the energy into the interior of the lesion.

Multidiode PDT 630™ Derma works at a spectrum of 630nm with adjustable fluence for intralesional and percutaneous use.

INTERmedic presents its new photodynamic therapy: the Multidiode PDT 630™ Derma system for the treatment of carcinomas, hidradenitis, fistulas and skin lesions.

How it works

The new and exclusive Multidiode PDT 630™ Derma is designed for selective treatment through photodynamic therapy of different precancerous and cancerous skin lesions as well as other conditions such as hidradenitis and fistulas.

The system allows for working both topically and intralesionally, while treating large and deep lesions in a safe, effective and minimally invasive way.

Administration photosensitive compound 5-aminolevulinic acid (5-ALA)

Irradiation with light of appropriate wavelength

Formation of free radicals

Bactericidal effect Anti-inflammatory effect

SELECTIVE NECROSIS

IMMUNOMODULATION

CONTROL OF INFLAMMATION

TUMOR

INFLAMMATION
Benefits and work modes

Multidiode PDT 630™ Derma
The new photodynamic therapy

Multidiode PDT 630™ Derma provides a wide range of advantages to both physicians and patients. The equipment has preprogrammed settings for different applications.

Benefits of Multidiode PDT 630™ Derma

- External calibration module for verification of the optical fibers. Ensures the application of an accurate dose to the patient
- Choice of activation method: pedal or hand switch (optional)
- Intuitive software
- Safe, includes dosimetric controls
- Portable, light and compact system
- Fast, comfortable procedures without downtime
- Compatible with other photosensitizers for oncological applications (lung, esophagus, cholangiocarcinoma and other) Optional software

Work modes

- Preset programs for:
  - Basal cell carcinoma
  - Hidradenitis suppurativa
  - Fistula
  - Topical application (external use on skin lesions)

Expert mode available, which allows the power, duration and energy to be selected individually.

Why INTERmedic?

INTERmedic is the leading manufacturer established worldwide as supplier of equipment and solutions for photodynamic therapies and a wide range of surgical applications.

Training and support

INTERmedic products are sold worldwide through an exclusive network of distributors committed to the mission of providing clinical training and education for proper use and reference centers.

Technical specifications

- Type of laser: semiconductor laser
- Wavelength: 630nm
- Generator power: Output of up to 2W
- Accessories: Frontal fibers, diffusors, external illuminators (flat top handpiece)
  - Internal power meter for fiber test
  - External sphere for diffusor calibration (optional)
- Color touchscreen
- Activation: pedal or hand trigger (optional)
- Dimensions: 34 x 40 x 20 cm (width x depth x height)
- Weight: 12 kg
Worldwide reference in laser and health solutions

**INTERmedic** has vast experience in the development and manufacturing of high-tech laser, radiofrequency and ultrasound solutions for medical applications as well as a firm and steady commitment to innovation and the pursuit of the most advanced medical therapies for improving people’s health and quality of life. Distributors, clinics and medical doctors all over the world put their trust in our medical platforms thanks to their efficiency, security and versatility.

**Barcelona. Vallès Technology Park**
Boters 8-10
08290 Cerdanyola del Vallès, Barcelona (Spain)

**Madrid**
Av. General Fanjul 2B, Floor 2, Office 4
28044 Madrid (Spain)

Tel.: (+34) 93 245 66 61
Fax: (+34) 93 245 48 06
intermedic@inter-medic.net

[www.inter-medic.net](http://www.inter-medic.net)

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