

CONVENTIONAL PHOTODYNAMIC THERAPY (C-PDT)

Last update on June 1st 2017

Photodynamic therapy is a treatment combining the action of a photo-sensitizing cream (Metvixia * or 5-ALA methylester) ineffective in the dark but able to concentrate in certain cells, especially cancerous cells, and destroy them after activation by the light from a red LED.

C-PDT is reimbursed by health insurance in France for the treatment of certain pre-cancers and superficial skin cancers that are extensive or multiple in the same area and, therefore, difficult to operate.

Over the years, sun damages accumulate in the cells of the photo-exposed areas, especially in patients with light skin (face, neck, scalp, back of hands, forearms, legs, shoulders, back ...). They often begin with small pink patches, granule to the touch, called "solar keratosis", these are symptoms of alarm which indicate that the solar "capital" of repair of the person is reached, at least in this zone, and that it is absolutely necessary to protect themselves from the sun (mainly clothes but also anti-sun products). Skin crusts or horns, persistent bleeding or painful ulcers may also appear and correspond to more or less superficial cutaneous carcinomas which are often biopsied by your dermatologist to choose with you the best therapeutic solution (surgery, PDT, immunomodulatory cream ...).

HOW DOES THE TREATMENT TAKE PLACE?

Your dermatologist often takes pictures of the lesions before starting the treatment to assess with you the benefit and follow-up.

1. **Preparation at home:** The patient is often asked to apply "keratolytic" creams to reduce the thickness of the lesions and to promote the penetration of light.
2. **Preparation at the dermatologist's office:** soft curettage with removal of scales and scabs, and sometimes superficial microperforation of the entire surface of the skin to be treated (lesion and its surroundings) to increase the penetration of the photosensitizer in order to increase the results
 - Either by microneedling (small roller creating micro-holes in the skin)
 - Smooth "sanding" with sterile abrasive paper
 - Either by a laser session or radiofrequency with micro-needle split
3. **Application of Metvixia ***
4. **Incubation:** Under a transparent film so that the cream remains in place, covered with a second opaque dressing to protect the area to be treated from daylight. This dressing should generally remain in place for 3 hours, the incubation period of the cream.

You can then go outdoors or possibly go home but it is advisable to avoid, during this period, any exposure to high temperatures, to a severe cold, or to perspire ...
5. **Red LED illumination at the dermatologist's office:** The dressing is removed and the excess cream wiped. Specific protective goggles against red light are used to protect your eyes. Exposure of treated areas to red LED light can therefore begin. The illumination time can vary from 7 minutes to 30 minutes and depends on the type of device used and the size of the field to be treated. When the irradiation field is too large, it may optionally be divided into smaller areas.

During treatment, you may have a very painful intense burning sensation, especially if there are many lesions, mainly on the face or scalp. To limit this pain, a pain medication may be taken half an hour before illumination. You can also use a cold air pulsing device, a fan or moisten the field with a spray of fresh water, or even carry out local anesthesia.

6. After treatment

After treatment, the skin of the treated area becomes red, swollen and sensitive: this is a sign of efficacy. The pain can last several hours, sometimes until falling asleep in case of severe and

extensive lesions because many "abnormal" cells and tissues have been destroyed.

It is recommended to completely avoid the sun from the treated areas for 48 hours, at best using opaque dressing. This corresponds to the time required for the photo-sensitizing cream to be removed from the surface of the skin.

Adequate healing care will be prescribed to help you manage the healing process.

Local side effects are maximal around the 3rd-4th day: redness, crusts, erosions and sometimes a small bleeding. Then the crusts fall, the skin peels and renews itself as after a peeling.

Sometimes, a single session may be sufficient to achieve an optimal therapeutic outcome, but in other patients several sessions may be necessary. After about a month, you will have to consult again to evaluate the result, and you will eventually have to benefit from a second session.

WHAT ARE THE POSSIBLE SIDE EFFECTS?

- The most annoying side effect is pain, which can be almost unbearable (up to 7-8 on a scale of 10), especially in the case of extensive lesions on the face or scalp. This pain is increased during the illumination session, but it may persist as described previously. This pain can be very disabling, so do not hesitate to talk to your dermatologist.

- The redness can last up to 2 months especially for the light and sensitive skins but it will always fade spontaneously with the time.

- As for brown shadows of pigmentation, they can be observed for several months in people with dark skin (post-inflammatory hyperpigmentation). In the same way, they are always transient and disappear with time.

- Delayed scarring on aged and fragile skin (especially in the lower limbs)

- Allergy to Metvixia or to healing creams or dressings

- Inadequate efficacy and persistence of precancerous or cancerous lesions on the area: it is necessary to combine with other techniques

- Recurrences: more or less rapid according to the patients and the importance of the solar damage. This technique often requires maintenance sessions. It should be monitored regularly, at least once a year for 5 years or longer after all skin cancer even superficial.

The great advantage of photodynamic therapy compared to alternative techniques is the absence of scar with excellent cosmetic results. In addition, this treatment is a good alternative to surgery in patients under anticoagulants, and having multiple and extensive lesions.

This information sheet recommended by the French Laser Society can be given to you by your dermatologist. Even if it is not sufficient to have an estimate, it helps to give the patient a clear information.

The information consultation provides clear explanations on expected outcomes, side effects and possible complications. There are not any reimbursement from social security or medical leave for these aesthetic treatments. Prices are mainly based on the area to be treated. The total cost is to be evaluated with the patient and is the subject of a signed quote.

A post-operative order and an advice sheet are given to the patient with the doctor's contact information.



Laser et Peau: the French-language information site for patients, written by expert dermatologists from the Société Française des Lasers en Dermatologie.

Everything you need to know about laser treatments, pulsed light, radiofrequency and other techniques for skin care or aesthetic applications.



SCAN ME