



PHOTODYNAMIC THERAPY (PDT) PATIENT INFORMATION

What is Photodynamic Therapy?

Photodynamic Therapy (PDT) is a skin treatment that destroys precancerous spots called **actinic keratoses** (which consist of skin cancer cells affecting keratinocytes) and is performed with a topical photosensitizing medication, called Ameluz or Levulan, also known as 5-aminolevulinic acid (ALA). When applied to the skin, the ALA accumulates inside the precancerous cells and causes them to become sensitive to light. The Ameluz or Levulan treated skin is then exposed to blue light (which provides the highest absorption wavelength for the medication) resulting in destruction of the actinic keratoses.

How is Photodynamic Therapy performed?

The areas being treated on your skin are washed with soap and water to remove surface debris, followed by an acetone or isopropyl alcohol wipe to remove residual oils from the skin. The medication, 5-aminolevulinic acid (ALA) is applied to the sun damaged areas of your skin and left on for between 1 -3 hours, depending on your skin type and the areas being treated, pre-determined by your physician. After the incubation period, you will be seated in front of the blue light source, which is a U-shaped array of light bulbs for 16 minutes and 40 seconds. You may ask why, 16 minutes and 40 seconds? It takes 1000 seconds for the light dose to penetrate into the cells.

How much improvement can I expect? How many treatments can I expect?

Patients with significantly sun damaged skin can experience dramatic reductions in the number of precancerous lesions. Depending on the severity of the sun damage, repeat treatments may be necessary. Most patients require 1-2 treatments, spaced 3 months apart.

What are the Advantages?

PDT treatments are non-invasive and are more time efficient and convenient for most patients than repeated liquid nitrogen treatments or Efudex or Aldara treatments. Most patients tolerate the treatment well and have downtime of 1-2 weeks.

What are the Disadvantages?

Following the PDT treatment, you may not go out into any natural light (sunny or cloudy) or sit where sunlight passes through glass for 48 hours. It is advised to avoid driving or being a passenger in a car; sitting or standing next to an open or closed door or window; sitting in the shade), without covering the treated area or wearing a wide brimmed hat and sunglasses.

Every patient may react differently to PDT treatment. Most patients experience redness, swelling and peeling and describe the treated area as feeling as though they have a severe sunburn. The amount of discomfort our patients experience is generally proportional to the number of precancerous spots being treated. Crusting and weeping of the treated precancerous spots can occur for the first few days. Some darker patches called "liver spots", while generally not affected by the treatment, can become temporarily darker and then peel off, leaving normal appearing skin, if they are adjacent or superimposed on skin cancer cells. The healing time may take up to 4 weeks. While you may be outdoors during the healing process, we recommend protection from excessive sun exposure.

Risks and Complications Specific to Photodynamic Therapy

- Acne-like rash, including a pustular eruption
- Infection
- Pain
- Blistering
- Redness
- Postinflammatory hyperpigmentation (tanning/darkening of skin color) - transient
- Reactivation of cold sores
- Swelling
- Hypopigmentation (lightening of skin color)- rare
- Ulceration- rare
- Infection- rare
- Scarring- rare
- Sensitivity to bright indoor lights and sunlight for 48 hours after treatment
- Crusting
- PDT may trigger Transient Amnestic Episodes (TAE). The incidence was reported as 0.00025 events per cycle or 0.025% of 20,000 PDT cycles carried out in two locations in Germany, spanning 10 years – rare

Contraindications

1. Pregnancy
2. Concurrent use of Accutane (isotretinoin) or other photosensitizing medications
3. History of photosensitivity or photodermatoses
4. History of lupus erythematosus
5. History of porphyria
6. Allergy to 5-aminolevulanic acid and polyethylene glycol.

Preoperative Care

1. Avoid excessive sun exposure 4 weeks prior to and after PDT.
2. If you have a history of cold sores, we recommend oral antiviral prophylaxis. We will provide you with a prescription for Valacyclovir or Acyclovir at the time of your consultation.
3. Discontinue retinoids (e.g. tretinoin, retinol), and other exfoliants including glycolic acid, lactic acid, salicylic acid 5-7 days prior to treatment. While they may cause more skin discomfort during and after treatment, continuous use of these products may enhance the results of PDT.
4. Discontinue any photosensitizing medications (e.g. doxycycline) 2 weeks prior to and after treatment.

Postoperative Care

1. Remain indoors and avoid direct sunlight or bright indoor lights for 48 hours.
2. If you have discomfort (burning or pain), apply cold compress with ice packs or cool water spray mist to treated areas.
3. Apply gentle cleansers and moisturizers as many times daily as needed. Avoid washing in the first 12 hrs.
4. Stay out of the sun and wear sunscreen/sun protection for a minimum of 4 weeks after the procedure.
5. Discontinue any photosensitizing medications (e.g. doxycycline) 2 weeks prior to and after treatment.
6. For patients with acne or being treated for acne- you may experience a worsening of your acne for 1 week. This is self-resolving. You may use non-comedogenic cleansers and moisturizers. A short course of topical and/or oral antibiotics may speed up resolution of a rare pustular eruption post PDT, if needed.
7. Resume use of retinoids or exfoliating products when skin heals completely in approximately 2-4 weeks.
8. More than one PDT treatment is usually needed for optimal results.

If you have concerns about infection (prolonged, severe crusting or development of pustules, redness, swelling, pain or non healing skin) and would like to speak to our Care Team, please call 206-456-4464.

Resources

If you would like more information or would like to watch a patient educational video, please visit www.dusapharma.com.