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↑  
email me if you have  
any questions about how  
the treatment is going or  
any concerns

## AMINOLEVULINIC ACID PHOTODYNAMIC THERAPY

(ALA PDT) | Field Treatment of Actinic Keratosis

### Why are we treating Actinic Keratosis (AK)?

- AK, also known as sunspots, are a skin condition caused by too much sunlight. They affect areas of the skin that are often exposed to the sun.
- Both visible and hidden sunspots can form in these areas, and they can sometimes turn into skin cancer.
- There are many treatments available for AK.
- ALA PDT, has been shown to work just as well as other treatments while being easier to tolerate and more convenient.

### How does ALA PDT work?

- ALA is a naturally occurring compound which converts to a photosensitiser Protoporphyrin IX (PpIX) when applied to the skin.
- PpIX accumulates in sun-damaged (and some cancer) cells.
- The absorption of red light at the cell level interacts with PpIX to cause a reaction which destroys AK (and some forms of skin cancer).

### What is involved in treatment?

- **Pre-treatment:** In some situations you may be given a pre-treatment cream to break down rough skin 2 weeks prior the treatment day.
- **Day 0 (Treatment Day):** The 5-ALA cream is applied to the face. You might feel a brief, mild stinging when the cream is applied. After that, there will be a 15-minute wait as the cream soaks in. If a free room is available, you may wait in the clinic, otherwise you need to stay out of the sun for 3 hours either at home or



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perhaps seeing a movie at Garden City. Covering the affected skin as much as possible, even for a short drive home is essential. That means sunglasses, a big hat and a mask are the minimum requirement. Exposure to intense light will activate the treatment early and cause pain.

- After the 3 hr soak in you go under a very bright LED light. This can take between 8 and 16 minutes depending on the intensity of the light tolerated. If we are treating a skin cancer at the same time we are treating AKs then the light duration will be 16-32 minutes – this generally leads to larger reactions.
- While the light is activating the 5-ALA your face will be quite prickly and hot. This is generally quite painful and often the light intensity is halved to make the treatment more bearable. I also use a household fan to blow cool air directly onto the treated area.
- While you are under the light a nurse will be constantly checking in on you
- **Day 1-2 and up to Day 7:** The treated area may feel like a mild to moderate sunburn. This can include skin tightness, pink-red colour, warmth or heat to the touch, peeling, and pain usually rated as 2-4 out of 10. It is essential to avoid sunlight during the first 3 days after treatment.
  - **Usual management:** Use topical creams (e.g. QV intensive, CeraVe healing balm) to relieve discomfort, take oral paracetamol for pain and stay hydrated.

### **What are the unwanted side effects of the treatment?**

- Severe reactions are relatively common and can occur depending on the sensitivity of the skin, the degree of sun damage, number sebaceous glands in the skin and the duration that the light could be tolerated. Effects can feel and look like a severe sunburn with blistered skin, intense redness, hot swelling, increased pain, peeling, headache, chills, nausea and dehydration.
- Severe symptoms can take longer to resolve, up to 14 days is not unheard of.
- Severe symptoms can interfere with sleep



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- **Management:** Topical steroid and healing creams can shorten the healing duration and lessen pain. Oral paracetamol-codeine, oral hydration, extended daylight avoidance and taking it easy in cool surroundings and help with discomfort.

#### **Who should not be considered for ALA PDT?**

- Personal history of Porphyria
- Known light sensitivity
- Known allergy or sensitivity to porphyrins and components used in 5-ALA
- Pregnancy or breastfeeding
- Medications including griseofulvin, thiazide diuretics, sulfonylureas, phenothiazines, sulphonamides, quinolones and tetracyclines.
- Avoid retinoids one week prior to PDT unless instructed otherwise. Can restart 1 month after.