

BC Cancer Protocol Summary for Topical Therapy for Skin Cancer with PDT (Photodynamic Therapy)

Protocol Code

SMPDT

Tumour Group

Skin and Melanoma

Contact Physician

Dr. Harvey Lui

ELIGIBILITY:

- **Actinic keratoses (AK), multiple*** (patients who have difficulty to manage AKs, or patients with AKs who are prone to developing multiple in situ or invasive cutaneous squamous cell carcinoma [SCC], i.e. patient has a history of multiple in situ or invasive SCC)
- **Bowen's disease** (in situ squamous cell carcinoma), **multiple***
- **Superficial basal cell carcinoma, multiple***
- **Low-risk small nodular basal cell carcinomas, multiple***

* Examples of patients with multiple skin tumors: excess sun exposure, immunosuppression (from any cause), cancer-prone genodermatoses (eg. nevoid basal cell carcinoma syndrome)

In exceptional cases, the following conditions will also be eligible for treatment as judged on a case by case basis:

- Superficial in situ cutaneous epidermal malignancies (e.g. Extramammary Paget's disease)
- Only reimbursable when prescribed by physicians in the Skin Tumour Group within the Skin PDT Program of BC Cancer.

EXCLUSIONS:

- Methyl aminolevulinate is contraindicated in patients with allergies to peanut or almond oil
- Photodynamic therapy with methyl aminolevulinate or aminolevulinic acid is contraindicated in patients with porphyria

TESTS:

- A skin biopsy is customarily (but not always) required to establish the diagnosis prior to treatment

TREATMENT:

DRUG	DOSE	BC Cancer Administration Guideline
methyl aminolevulinic acid (METVIX™) cream	One treatment session followed by a second treatment in 7-21 days. (maximum of 2g per treatment session)	To be done by Health Care Professional. Use Nitrile Gloves. Note: Store in refrigerator. Stable 24 hours out of refrigerator.

OR

DRUG	DOSE	BC Cancer Administration Guideline
aminolevulinic acid (LEVULAN KERASTICK®) for topical solution 20%	One treatment session followed by a second treatment in 7-21 days.	To be done by Health Care Professional. Note: Once reconstituted, stable for 2 hours. Note: Store at room temperature.

1. Identification of lesions to be treated.
2. Gentle curettage of lesions to remove excess keratin.
3. Application of topical photosensitizer (METVIX™ or LEVULAN®), followed by occlusion with TEGADERM™ or equivalent dressing.
4. Patient to wait indoors for 3 hours.
5. Removal of topical photosensitizer. Confirmation of photosensitizer localization in the skin with Woods lamp examination. Treatment sites should appear red under the Woods lamp.
6. Expose treatment site to red light from a light-emitting diode array, 37 J/cm² per lesion.
7. Discharge patient, and repeat treatment one to three weeks later to same sites.

PRECAUTIONS:

1. **Photosensitivity:** The treatment site will become photosensitive after application. Avoid exposure of the photosensitive treatment site to sunlight or bright indoor light for at least 48 hours.

Call Dr. Harvey Lui or tumour group delegate at (604) 877-6000 or 1-800-663-3333 with any problems or questions regarding this treatment program.

References:

General:

1. Braathen LR, et al. Guidelines on the use of photodynamic therapy for nonmelanoma skin cancer: An international consensus. *J Am Acad Dermatol* 2007; 26:125-43.

Actinic keratoses:

2. Kurwa HA, Yong-Gee SA, Seed PT, et al. A randomized paired comparison of photodynamic therapy and topical 5-fluorouracil in the treatment of actinic keratoses. *J Am Acad Dermatol* 1999;41:414-8
3. Dragieva G, Hafner J, Dummer R, et al. Topical photodynamic therapy in the treatment of actinic keratoses and Bowen's disease in transplant recipients. *Transplantation* 2004;77:115-21.

Bowen's disease:

4. Morton C, Horn M, Lehman J, et al. A 24-month update of a placebo controlled European study comparing MAL-PDT with cryotherapy and 5-fluorouracil in patients with Bowen's disease. *J Eur Acad Dermatol Venereol* 2005;19(Suppl 2):237-8.
5. Morton CA, Whitehurst C, Moseley H, et al. Comparison of photodynamic therapy with cryotherapy in the treatment of Bowen's disease. *Br J Dermatol* 1996;135:766-71.

Superficial basal cell carcinomas:

6. Wang I, Bendsoe N, Klinteberg CA, et al. Photodynamic therapy vs. cryosurgery of basal cell carcinomas: results of a phase III clinical trial. *Br J Dermatol* 2001;144:832-40.
7. Freeman M, Vinciullo C, Francis D, et al. A comparison of photodynamic therapy using topical methyl aminolevulinate (Metvix) with single cycle cryotherapy in patients with actinic keratosis: a prospective, randomized study. *J Dermatolog Treat* 2003;14:99-106.

Nodular basal cell carcinomas:

8. Wang I, Bendsoe N, Klinteberg CA, et al. Photodynamic therapy vs. cryosurgery of basal cell carcinomas: results of a phase III clinical trial. *Br J Dermatol* 2001;144:832-40.

Other neoplasms:

9. Mikasa K, Watanabe D, Kondo C, et al. 5-Aminolevulinic acid-based photodynamic therapy for the treatment of two patients with extramammary Paget's disease. *J Dermatol* 2005 32(2):97-101.