

### Advances in treatment of actinic keratosis and non-melanoma skin cancer prevention in healthy and immune suppressed patients: Role of photodynamic therapy

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Actinic keratosis (AKs) and superficial non-melanoma skin cancers (NMSC) are very common in elderly, and even more prevalent in immune suppressed and solid organ transplant patients. ALA photodynamic therapy (ALA-PDT), as well as topical applications of imiquimod 5% or topical 5-FU, comprise effective and safe field modalities for treatment and prevention of actinic keratosis, and consequently, squamous cell skin cancers. ALA-PDT and application of imiquimod, applied according to a split body technique, have showed comparable efficacy in AK clearance, during 12-18 month follow up. Clinical responses (erythema, edema, scaling, pruritus) are pronounced on post-treatment days 1-5 following ALA-PDT, and resolve in 12-15 days, with complete skin recovery. Topical imiquimod results in redness, scaling and crusting of lesional skin, with late onset of symptoms (7-10 days of initiation) and treatment duration much longer (up to 12 weeks) than PDT. Treatment compliance and reproducibility are better following ALA-PDT clinic protocols, versus topical imiquimod. 4-5 ALA-PDT sessions, every 3-4 weeks, may be necessary to achieve complete clearance of AKs. Immuno suppressed patients, nonresponsive to topical imiquimod showed remarkable responses to ALA-PDT for AKs treatment. Pre treatment with 5-FU followed by single session of ALA-PDT, has achieved complete clearance of AKs, without recurrence in 12 month follow up, in patients that would have required 3-4 ALA-PDT sessions as single modality, to reach similar result. ALA-PDT may become first line "field" treatment in dermatology practice for AK therapy, comprising a modality of choice for chemoprevention in patients under chronic immune suppression.

#### Biography

M. Tsoukas, MD, PhD, is Assistant Professor of Medicine, Section of Dermatology at the University of Chicago, Pritzker School of Medicine, and specializes in skin cancer therapy and prevention with particular focus on high-risk patients. She is an expert of skin photodynamic therapy, cutaneous laser surgery and aesthetic therapies. She has been principal investigator in several research studies. She is member of the American Academy of Dermatology, European Academy of Dermatology and Venereology, American Society for Laser Medicine and Surgery, Women's Dermatologic Society and many others.