

**Poster PD-056****PHOS-ISTOS: A new flexible and homogeneous device for photodynamic treatment of actinic keratosis, first clinical results**

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The PHOS-ISTOS device (resulting from the European project “CIP project 621103 PHOSISTOS”) based on light emitting fabric is proposed for the treatment of actinic keratosis. Actinic keratosis is common pre-cancerous skin lesions, which mainly affect the elderly population. Induced by sun damages, these lesions are usually present on the scalp, shoulders or arms of the patients and thus are easily reachable by light, making PDT one of the first line treatment [1].

Optical fibers are knitted to build a flexible structure that produces homogeneous light. The fabrics are embedded within an adjustable plastic helmet and illuminated by a fractionated LASER source. The low delivered irradiance (4 mW/cm<sup>2</sup>) and the shorter photosensitizer application time ensure a significant pain reduction, compared to discomfort levels usually experienced by patients during a conventional PDT. The proposed device delivers a total light dose of 12 J/cm<sup>2</sup>, instead of 37 J/cm<sup>2</sup> which efficiency is being assessed in a bi-centric clinical trial. The first results of the clinical test (assessment of pain, patient’s comfort and PDT action of the device) will be presented.

**Reference**

- [1] C.A. Morton, R.-M. Szeimies, A. Sidoroff, L.R. Braathen, *J. Eur. Acad. Dermatol. Venereol.* 27 (2013) 536–544.

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