

Machine Learning Augmented Feedback and Training of Medical Professionals in Skin Cancer Diagnostics (P-2019-1-02)

Resume:

The worldwide incidence of skin cancer is rising, especially the mole cancer incidence. Skin lesion diagnostics and screening is handled by primary care physicians, dermatologists, plastic surgeons and trainees in all three settings. There is no standard education in skin cancer diagnostics and the current workflow provides no visual feedback, thus clinicians' learning curves are stalled and reach an arrested development within a few years.

We propose a new solution for cross-sectorial education and training of doctors through direct visual feedback and deliberate practice training guided by artificial intelligence. During the project, we will perform a validation trial of a multiple choice questionnaire on 80 residents in general medicine and five departments of dermatology and plastic surgery. We will also initiate a cross sectorial randomized controlled clinical trial measuring the effect of the feedback system on 30 residents in general medicine and clinicians from the above mentioned departments.

Our aim is to create a more efficient, accurate and safe diagnostic workflow for skin cancer, benefitting patients and doctors and reducing the societal costs associated with delayed skin cancer diagnoses and removal of benign skin lesions.