COMMENTARY

Commentary to Shetty A, Janda M, Fry K et al. Clinical utility of skin cancer and melanoma risk scores for population screening: TRoPICS study

Skin cancers including melanoma, basal cell carcinoma (BCC) and squamous cell carcinoma (SCC) represent a major disease burden and health care expenditure, especially in white populations.

The impact of population-based skin cancer screening programs is still a matter of debate since increasing rates of thin melanomas have been clearly detected despite robust data about actual benefit in terms of decreased mortality are limited.1-3 The development of a tool which can reliably select high-risk individuals in a rapid and practical manner is urgently needed to maximize cost-effectiveness of screening strategies and provide a clinical benefit to a selected target population.

In the May issue of the Journal, Shetty et al.4 prospectively investigated the clinical utility of risk assessment tools derived from the QSkin Study5 to identify individuals with skin cancers, at an outpatient clinic on Hamilton Island, Queensland (Australia), during the annual yachting race. 507 of 789 (64%) patients, including both competitors with high sun exposure and subjects of the island community, completed a paper-based self-assessment questionnaire consisting of 16 items derived from the Melanoma Risk Stratification Tool and the Keratinocyte Cancer Risk Stratification Tool.6-7 Each participant was then stratified into one of the 5 categories of skin cancer risk (ie. very much below average, below average, average, above average and very much above average), for both melanoma and for keratinocyte cancers, according to the answers provided. Subsequently, dermatologists performed a full-body skin examination of each patient and any suspicious lesion was biopsied and histopathologically examined. Participants were mostly older than 45 years, evenly distributed for sex and almost all of European heritage with fair skin. It is interesting to note that the authors found a significant association between the predicted risk of keratinocyte cancers, including BCC, SCC, keratoacanthoma and intraepidermal carcinoma, and the actual prevalence of these skin lesions in their cohort. In contrast, no association was reported for the melanoma risk groups, likely because the study was underpowered. The authors conclude that the risk prediction model for keratinocyte cancers can reliably identify individuals with a significant skin cancer burden prior to skin examination in a community setting.

We must acknowledge that in the study of Shetty et al., a high-risk population was selected on the basis of fair skin individuals with a high level of sun exposure. Nevertheless, study limitations include the recall bias due to a self-reported questionnaire and the fact that participants are not representative of the general Queensland population. The reproducibility of the survey items was already explored in a study by Morze et al.8 yielding fair to good results.

Numerous skin cancer risk prediction models have been developed for research purposes9; however, only a few of them have been validated in a real-life clinical setting. The results reported in the study of Shetty et al.4 provide a starting point for real-life implementation of one of them, and support its clinical utility, at least for selecting patients for high risk of keratinocyte cancers. Larger population-based studies are needed to confirm the clinical utility of the proposed risk assessment tool; results of this study may provide significant implications for health policymakers. In a broad public health perspective, the delivery of self-assessment skin cancer risk prediction questionnaires could reshape the access to the dermatological clinics, maximizing cost-effectiveness of health resources and prioritizing high-risk individuals.

Funding sources
None.

Conflicts of interest
None.

K. Peris1,2,*
1Dermatology, Università Cattolica del Sacro Cuore, Rome, Italy,
2Fondazione Policlinico Gemelli – IRCCS, Rome, Italy
*Correspondence: K. Peris. E-mail: katy.peris@unicatt.it

Linked article: A. Shetty et al. J Eur Acad Dermatol Venereol 2021; 35: 1094–1098. https://doi.org/10.1111/jdv.17062.

References
1 Stratigos A, Nikolaou V, Kedicoglou S et al. Melanoma/skin cancer screening in a Mediterranean country: results of the euromelanoma screening day campaign in greece. J Eur Acad Dermatol Venereol 2007; 21: 56–62.
2 van der Leest RJ, de Vries E, Bulliard JL et al. The Euromelanoma skin cancer prevention campaign in Europe: characteristics and results of 2009 and 2010. J Eur Acad Dermatol Venereol 2011; 25: 1455–1465.
3 Preventive Services Task Force US, Bibbins-Domingo K, Grossman DC et al. Screening for skin cancer: US preventive services task force recommendation statement. JAMA 2016; 316: 429–435.

4 Shetty A, Janda M, Fry K et al. Clinical utility of skin cancer and melanoma risk scores for population screening: TRoPICS study. J Eur Acad Dermatol Venereol 2021; 35: 1094–1098.

5 Olsen CM, Green AC, Neale RE et al. QSkin study. Cohort profile: the QSkin sun and health study. Int J Epidemiol 2012; 41: 929–929i.

6 Olsen CM, Pandeya N, Thompson BS et al. Risk stratification for melanoma: models derived and validated in a purpose-designed prospective cohort. J Natl Cancer Inst 2018; 110: 1075–1083.

7 Whiteman DC, Thompson BS, Thrift AP et al. A model to predict the risk of keratinocyte carcinomas. J Invest Dermatol 2016; 136: 1247–1254.

8 Morze CJ, Olsen CM, Perry SL et al. QSkin Study. Good test-retest reproducibility for an instrument to capture self-reported melanoma risk factors. J Clin Epidemiol 2012; 65: 1329–1336.

9 Vuong K, McGeechan K, Armstrong BK et al. Risk prediction models for incident primary cutaneous melanoma: a systematic review. JAMA Dermatol 2014; 150: 434–444.

DOI: 10.1111/jdv.17267