Sun Protection, Vitamin D Deficiency, and Management of Cutaneous Oncology in Organ Transplant Recipients (OTR)

To the Editor:

We have read with great interest the excellent article of Carucci (2004) who has carried out a comprehensive review of epidemiology, pathogenesis, and clinical outcome of skin cancer in organ transplant recipients (OTR) and has given recommendations for its medical management. We would like to add to this discussion an important topic that has not been addressed by John A. Carucci, but that we dermatologists must be aware of: the fact that strict sun protection may lead in OTR to the severe health risk of vitamin D deficiency. We know that OTR may develop 25-hydroxyvitamin D deficiency without further increasing their risk of developing squamous cell carcinoma of the skin or other types of UV-induced skin cancer.

To strengthen the fact that careful monitoring of vitamin D status and oral substitution in case of vitamin D deficiency is of high importance for OTR, as we have recommended previously (Reichrath, 2003, 2004). This will protect OTR against the serious health problems of 25-hydroxyvitamin D deficiency without further increasing their risk of developing squamous cell carcinoma of the skin or other types of UV-induced skin cancer.

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Variation in Skin Thickness May Explain Some of the Within-Person Variation in Ultraviolet Radiation-Induced Erythema at Different Body Sites

To the Editor:

We recently reported to this journal results showing a striking variation in erythemal sensitivity to ultraviolet radiation (UVR) at different body sites (Waterston et al., 2004). Briefly, in a UK population, variation within persons was as large as variation between persons. We also noted a smaller variation in inflammatory response to anthralin. In our paper, we failed to explain this variation in terms of resting vascular flow but showed a correlation with site-specific skin pigmentation.

Subsequently, we have become aware of an additional factor that may also explain our results. Although it has been shown that between-person UVR-induced erythema shows a poor correlation with stratum corneum and epidermal thickness (Lock-Anderson et al., 1997), plotting of erythemal sensitivity against stratum corneum or total epidermis thickness shows a suggestive pattern (Figs 1 and 2).

Correlation does not imply causality but we suggest that such variation in stratum corneum or epidermis is a plausible determinant of the biological dose of UVR received by the lower epidermis, and hence of inflammatory response. This explanation does not exclude a role for site-specific variation in pigmentation.

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