Field cancerisation and radiotherapy: a case of treatment complications

In reply: We thank Fogarty and colleagues[1] for their interest in our article.[2] We presented a rare, life-altering complication of field volumetric modulated arc therapy (VMAT) of the skin. Given the active promotion of VMAT to both clinicians and the public, and the paucity of long term efficacy and safety data, this case illustrates the need for multidisciplinary evidence-based guidelines for its use.

Solar damage is a chronic disease requiring long term management. One author (JM) is a member of a multidisciplinary team including radiation oncology, dermatology, and plastic surgery.

The suggestion our patient was developing "hundreds" of lesions is inaccurate. In the ten years before VMAT, he had 20 keratinocyte carcinomas, including six squamous cell carcinomas, all treated in his dermatologist's rooms. He did have numerous actinic keratoses, which rarely progress to frank malignancy.

After VMAT, development of keratinocyte carcinomas accelerated aggressively, with larger, rapidly growing lesions occurring in greater numbers. Irradiation fibrosis required referral to a plastic surgeon for complex skin closures. Fogarty and colleagues' claim that scarring from previous treatments significantly contributed to diffuse post-VMAT fibrosis is unfounded. The ten years before VMAT saw one basosquamous carcinoma and one intra-epidermal carcinoma on his upper limbs. The 3.5 years after VMAT, his skin produced ten invasive squamous cell carcinomas. Subsequently, opinion was sought from a medical oncologist. Cemiplimab was trialled but ceased due to lack of response and side effects.

Solar-related skin disease is common. The majority of affected patients die "with" rather than "of" this condition.[3] In a population where longevity is increasing and sun damage abounds, what degree of field cancerisation justifies the morbidity, expense, and side effects of VMAT?

A tenet of medicine is "first do no harm". Currently, our view is there is no clear-cut indication for VMAT in skin field cancerisation.[2,4] Long term efficacy, safety data, and cost–benefit analysis are missing. Adequately powered controlled trials are the bedrock of evidence-based medicine. As radiation side effects continue to develop for many years and recurrence rates for keratinocyte carcinoma are typically measured at least five to ten years after treatment,[5] shorter trials would not meaningfully inform efficacy and safety; hence, our suggestion for prospective controlled trials over at least ten years.

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