

## In this issue

In this issue, there are three papers concerned with furthering the evidence base into radiotherapy treatment reactions in breast cancer patients and improved patient information and a further paper on radiation safety and the implementation of fingerprint recognition to assist daily identification of radiotherapy patients. There are two further papers on the subject of radiation dosimetry, one concerned with the optimum technique for treatment of spinal metastasis and the other examines the methods used for deriving target volumes in external beam radiotherapy and the implications of technological developments, in imaging and treatment delivery. This issue is completed by a book review on a new publication on the subject of diagnostic and surgical imaging anatomy of the knee, ankle and foot.

### **RADIOTHERAPY TREATMENT REACTIONS AND PATIENT INFORMATION**

In the first paper, Claire Bennett presents her findings on an investigation into the use of non-metallic deodorant during radiotherapy of the breast after undertaking a randomised controlled trial on 192 breast cancer patients. The aim of this research was to establish whether patients having a course of radiotherapy for breast cancer could use a deodorant as part of their daily routine. The study was designed with two groups, group 1 used no deodorant and group 2 a specific deodorant. The results demonstrate that the majority of patients in both groups experienced no reaction or mild erythema and dry desquamation in the axilla, therefore the findings of this study indicate that future breast cancer patients should be given the choice of using this deodorant.

In the second paper, Cumming and Routis discuss the importance of supporting breast cancer patients post-radiotherapy when they are more likely to suffer acute radiation skin reactions. They argue that the emphasis of radiotherapy skin care advice is often during treatment with less attention given to post-radiotherapy skin care. In this paper they highlight the gap in service provision at one centre and demonstrate the difficulties encountered when there is an inadequate support system. Possible options are discussed for the management of skin reactions post-radiotherapy and the potential implications of adopting these strategies.

Neil Mc Parland examines the importance of information to the psychosocial well-being of cancer patients in general, with specific emphasis on patients with prostate cancer. The information services at a large Canadian cancer facility are also reviewed to gain some insight into how the needs of patients with prostate cancer are addressed at the author's workplace.

Mc Parland argues that the provision of quality information in a timely and effective manner cannot be taken for granted. Access to appropriate information resources can be impeded because of poorly designed information material, inadequate communication, ineffective signposting, resource constraints and lack of knowledge/comprehension on the part of frontline health-care workers dealing with the patient. Radiation therapists are encouraged to be advocates for their patients' information needs and to be involved in initiatives that will improve the quality, dissemination and efficacy of information.

## **RADIATION AND PATIENT SAFETY**

In the fourth paper, Palmgren and Lahtinen present their findings of a survey evaluating the system they have introduced to assist the daily identification of radiotherapy patients to prevent accidental exposures to mis-identified patients. A fingerprint-based biometric system was chosen because of its high sensitivity in identification and its suitability for hospital use. In a 6-month survey, 85.7% of the daily treatment fractions were identified successfully; 5.5% of the unsuccessful identifications were overridden by the staff and the remaining 8.8% were due to poor-quality fingerprints. The authors describe the success of this method in the enhancement of patient safety and its operator friendliness.

## **RADIATION DOSIMETRY**

In the paper presented by Pedrosa, Lucena and Sainz, the authors examine radiotherapy techniques used in the treatment of spinal metastasis and present their study to compare conventional dosimetry of posterior and anterior fields with an optimised three-dimensional conformal plan using oblique fields. The authors report that the dosimetric parameters of organs at risk were not found to be significantly different from one trial to another and conclude that in contrast with the anterior–posterior configuration, oblique fields improve dose conformity and limit high dose to all of the body except the spinal cord.

In the review undertaken by Mzenda et al. the authors examine the methods used for

deriving target volumes in external beam radiotherapy and the implications of technological developments, in imaging and treatment delivery. The authors assess the influence of new techniques and technologies in radiotherapy on the derivation and applicability of the margins currently used for treatment planning. They also review the validity of the continued use of the recommendations of International Commission on Radiation Units and Measurements (ICRU) and other recommendations as a result of the additional information derived from these emerging techniques. The authors conclude that the ICRU formulations still remain fundamental in the derivation of target volumes in radiotherapy; however, revisions to these have been recommended through various experimental and modelling techniques leading to the publication of various margin recipes. These recipes are used for margin definitions in new radiotherapy techniques including intensity-modulated radiotherapy (IMRT).

The use of image-guided radiotherapy (IGRT) techniques leads to the reduction in organ motion uncertainties and setup errors, allowing for the adjustment of margins and treatment plans as well as dose escalation. Clinical trials are still needed to validate most of the new techniques in radiotherapy, particularly in IGRT techniques leading to adaptive radiotherapy. The authors recommend that well-devised clinical trials should be conducted to investigate fully the efficacy of these new techniques, particularly in radiotherapy image guidance and adaptive radiotherapy.