

In this Issue

To introduce this issue of the Journal, Syed Akber presents a thought provoking guest editorial on the implications of the introduction of airport whole body X-ray scanners. Dr Akber, a physicist from Cleveland, Ohio, supports the case that on the introduction of airport whole body X-ray scanners human beings have embarked on an experiment of massive proportions in which humans of all races and ages will be irradiated for years to come.

In the first original articles, Needham, Hutton and Baker present their paper on the introduction of lung stereotactic body radiotherapy (SBRT) as a novel and effective technique for the treatment of early stage NSCLC, which is rapidly becoming the radiotherapy regime of choice for patients unable or unwilling to undergo surgical resection. Although introduced almost 20 years ago, it was not until the wider establishment of image guided radiotherapy (IGRT) techniques that many UK departments first considered and then succeeded in implementing Lung SBRT. Many have been assisted in this through membership of the national UK SBRT consortium which aims to facilitate local introduction and to provide guidelines and practical support for the wider radiotherapy community. In the article, the authors seek to place the introduction of SBRT within a broad historical context, and outline basic principles for safe and effective practice and describe how such principles are currently being pursued in an era of IGRT. Additionally the role of the UK SBRT consortium in implementation is reported alongside the results of its first national survey on the subject.

In the second paper Gez et al., report on their experience with 181 patients who received

transperineal I-125 implants for prostate cancer. In low-risk prostate cancer, the target volume for radiotherapy is the prostate gland only and prostate brachytherapy with an I-125 implant is the best conformal radiotherapy. Patients underwent a pre-implant prostate volume study and implant planning two weeks before the implant. Dosimetry study was done 1 month later. The prescription dose was 145Gy and the 95% isodose covered the entire volume. The maximal dose to the urethra was less than 210 Gy. Follow-up included serum PSA and IPSS evaluation every 3 months during the first year and every 6 months after that. The authors concluded that I-125 implant is an effective and well tolerated treatment and should be recommended for patients with good risk prostate cancer.

In the next original article Merchant, Halkett and O'Connor, explore the factors affecting ethnographic study in radiation therapy, the aim of their paper is to outline the hidden factors that may be experienced when undertaking qualitative research. The research process is a series of stages necessary to establish the integrity, value and feasibility of a proposal. Part of the preparation is in understanding the process and factors that can contour a study. Although the participants are the main players of the study additional influences also require recognition to allow transparency of the project and the researcher's stance. The significance of this paper is to provide novice researchers, an understanding of the influence hidden factors play on the results of qualitative research with particular reference to ethnography.

The next three papers are based on a review of the literature, the first is by Boothroyd and Hodgson who explore the detection methods

used to detect clinical depression in cancer patients. Clinical depression is the most prevalent psychiatric disorder amongst cancer patients and is associated with significant functional impairment, although often under-diagnosed and untreated. In one study, only 6% of patients with clinical depression were identified by their oncologists. The detection of and intervention for anxiety and depression in oncology is widely debated in the literature. Diagnosing clinically significant distress amongst cancer patients requires sensitivity as many symptoms of depression are very similar to those of some cancers themselves. The two detection methods discussed in the literature are either self report questionnaires or diagnostic clinical interviews. There are several techniques described in the literature that have shown to be effective in reducing anxiety and depression in oncology. The effective management of anxiety and depression is dependent on the ability of health professionals to establish a rapport with patients and pick up on cues, regardless of whether intervention is necessary. However, an obvious lack of time and resources within the NHS can be a limiting factor, thus all healthcare professionals must take more responsibility for the detection of anxiety and depression, followed by the appropriate referral.

In the second review paper, Butcher and Williamson undertake a systematic review on the management of erythema and skin preservation; advice for patients receiving radical radiotherapy to the breast. The aim of the paper was to systematically review and critically appraise all evidence on skin care advice and products tailored for patients receiving radical radiotherapy for breast cancer and to determine evidence based conclusion regarding the most effective products. Major healthcare databases were searched with additional efforts made to hand-search current journals. All relevant literature fulfilling the inclusion and exclusion criteria was subjected to quality assurance checks. Those that passed underwent a more rigorous appraisal and were included in the review. The results suggest that there is a place for creams in the management and delay of radiation induced skin toxicities, however research fails to highlight one product which has a dem-

onstrable benefit over others whilst still being cost effective and free from adverse effects. Patients should not be discouraged from washing with water or mild soaps and results suggest that the restriction of aluminium-free deodorant during treatment is unnecessary however more research in this area is needed with larger sample sizes.

In the final review paper, Jenna Leman asks the question 'in vivo dosimetry: essential or unnecessary? The author sets the context and contrasts the arguments for and against the use of IVD. Arguments for IVD: a lot of effort goes into field verification and it is just as vital that dosimetry is verified. Overdose to normal tissue can cause devastating side effects, even death, whilst tumour underdose may compromise control. Without IVD, there is no way of knowing that a patient is receiving an overdose until it is too late. Underdoses are unlikely to manifest without IVD. IVD allows radiotherapists and physicists to correct for dose errors in a timely manner. The counter argument, why IVD is unnecessary: radiotherapy accidents are rare. Implementing IVD is expensive, time consuming and takes resources away from developing techniques which will improve patient outcomes. Current IVD methods are not suitable for modern techniques such as intensity modulated radiotherapy (IMRT). Discussion: IVD appears to be a useful QART tool, particularly as dose escalation techniques develop allowing a higher dose to be delivered to the tumour. Departments may be unwilling to spend time on money on an IVD system that is costly and time consuming if it cannot perform IVD on modern techniques. Electronic portal imaging devices (EPIDs) can be utilised to perform IVD on complex techniques, such as IMRT and arc therapy, which current IVD methods cannot, however there is currently no EPID IVD system available commercially.

In the final paper, Trombetta, Kotinsley and Julian present a case study and a review of the literature to discuss the role of breast conservation and radiation in patients with BRCA1 or BRCA2 genetic mutations. The authors reviewed the role of breast conservation in

patients expressing BRCA1 and BRCA2 genetic mutations is controversial and evaluated a patient who was found to have bilateral synchronous breast cancers and expressed a BRCA genetic mutation. The patient had a strong desire for breast preservation.

To complete this issue, there is a commentary provided by Dr Syed Akber on 'Imaging tumor hypoxia by magnetic resonance methods'.

Professor Angela Duxbury