Palliative radiation therapy is a mainstay in the management of symptoms among patients with advanced and metastatic cancers. However, there is a latent period between the delivery of therapy and the hoped for response to it. As such, patients should not receive therapy unless an estimate of their expected survival is first made. Acute side effects cannot be justified unless there is a reasonable expectation that patients may live long enough to benefit from therapy. This presentation will summarise the difficulties radiation oncologists have had historically with predicting survival for their patients, it will highlight studies of palliative radiation therapy among patients nearing the end of life, it will present prognostic models from the literature that are most applicable to those practicing palliative radiation therapy, and it will focus on topics that are in need of and are well suited to future research in this important area of study.

SP-0099
Role of supportive care to improve QoL in patients treated with radiotherapy
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Abstract not received.

SP-0100
Screening for metastases in high risk patients
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The primary goal of screening is the early detection of asymptomatic, previously unrecognized malignancy when treatment is more effective than if it were instituted after development of signs or symptoms. Screening for metastatic disease has historically been used to narrow therapeutic options and avoid futile interventions. But in the oligometastatic era - where the separation between curative- and palliative-intent radiotherapy is becoming less distinct - case-finding for the purposes of radical treatment of low volume distant metastases is increasingly common, despite the lack of clarity regarding the impact on clinical outcomes, quality of life and health care costs. Systematic risk-stratification would ideally enable the selective utilization of scarce resources, avoiding test-related complications along with delays in initiation of treatment awaiting results which have little likelihood of altering management in the majority of patients. Potential benefits of different modalities will be reviewed, as well as issues to be considered in defining both an appropriate target population and screening approach.

SP-0101
The importance of palliative care in radiation oncology training programmes
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In most departments, up to 40% of all radiation treatments are given with palliative intent. This includes treatment of metastatic sites of disease and locally advanced primary disease. Over the last 10 years with the availability of new technologies, we have seen an increasing complexity of palliative radiation treatments particularly in the setting of oligometastatic disease. Coupled with this, advances in systemic therapies in many disease sites have translated into patients with metastatic disease living longer. Unlike curative intent treatment which is largely protocol driven, palliative intent treatment requires knowledge of a multitude of patient, disease and treatment factors and the ability to accurately predict prognosis in order to individualise fractionation and treatment technique. Palliative radiotherapy is becoming recognised internationally as a sub speciality and it is becoming increasingly important that we recognise the need for formalised palliative care training within our speciality. Through international collaboration we can develop core competencies for our trainees, encourage palliative radiotherapy rotations and fellowship opportunities, and foster enthusiasm for palliative radiotherapy research in the future striving to deliver evidence-based, convenient and effective treatment for patients with the fewest possible side effects.

Symposium with Proffered Papers: Adaptive radiation therapy

SP-0102
On-board MR image guidance for adaptive therapy
R. Kashani 1, J. Victoria 1, D. Yang 1, T. Zhao 2, O. Green 1, V. Rodriguez 2, L. Olsen 1, H. Wooten 1, H. Li 1, L. Santanam 1, J. Michalski 1, J. Dempsey 2, S. Mutic 1, J. Olsen 1
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The concept of magnetic resonance image-guided radiation therapy (MR-IGRT) has been under development for the past few years, with the first clinical system implemented and in use since January of 2014. This system consists of a split 0.35T MR scanner straddled by three 60Co sources mounted on a ring gantry. The on-board MR shares an isocenter with the RT system and is capable of capturing high resolution volumetric images of the patient in the treatment position, as well as real-time planar cine images during treatment delivery.

The availability of on-board MR images offers the capability to visualize soft tissue for better localization, as well as potential treatment adaptation based on the geometry of the day. The MR-IGRT system implemented in our clinic has an integrated treatment planning system with fast dose re-optimization, and dose calculation which allows modification of structure contours, followed by re-planning while the patient remains in the treatment position.

While the topic of online adaptive therapy has been of significant interest in research studies over the past two decades, the clinical implementation has been struggling behind due to the stringent system requirements necessary to make the process clinically realistic.

Here we report on the clinical implementation of the first online adaptive therapy system, the workflow and staffing considerations, patient specific quality assurance, and the achievable overall treatment times from initial patient setup to completion of the treatment.

SP-0103
Morphological adaptation in cervix cancer
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