SHORT PAPER SESSION L2

L2.1 A plan quality comparison between a simple palliative planning technique and an alternative, restricted-VMAT technique for spine metastases: A quantitative retrospective service evaluation and improvement project.

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Background
The standard (STND) planning technique describes the direct and parallel opposed pair fields used for palliative radiotherapy. A restricted-VMAT (RVMAT) technique aims to deliver dosimetric advantages, whilst limiting the resources associated with a complex technique. A retrospective service evaluation and improvement study aims to assess the quality of the current STND technique whilst simultaneously comparing and evaluating RVMAT.
Methods
Retrospective and consecutive selection identified 40 datasets treated with either an 8Gy/1# or 20Gy/5# prescription to vertebral metastases with the STND technique. Each was re-planned using RVMAT and quantitative dosimetric evaluation using statistical and descriptive analysis was undertaken.
Results
25% and 72.5% of STND plans failed to achieve 80% target and target+1 coverage respectively, whereas all RVMAT plans met and exceeded these D98 objectives. 40% of STND plans failed the DMax objective with hotspots of ≥120% and all RVMAT plans met this objective. Whilst V30 increased in 29 RVMAT plans, V50 and V80 decreased significantly in all RVMAT plans. Monitor units for all plans increased with RVMAT, increasing the delivery time on average by 33 seconds from the STND technique.
Conclusion
The STND technique produces plans of varying quality, with many falling below quality standards. RVMAT significantly improves target coverage, reduces hotspots and reduces high dose normal tissue irradiation. A small increase in low dose irradiation may be an expected consequence of RVMAT, however this was not the case for all plans. An increase in monitor units and delivery time is expected with RVMAT when compared to the STND technique.

L2.2 The impact of the Macmillan Consultant Therapeutic Radiographer on the metastatic spinal cord compression pathway

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Background and aims
Metastatic spinal cord compression is an oncological emergency and national and local Trust policies state that radiotherapy should be delivered within 24 hours of diagnosis to prevent worsening of symptoms and improve quality of life. A Macmillan Consultant Therapeutic Radiographer was introduced to streamline the bone metastases pathway including this cohort of patients. The project involved two new processes: the planning and prescribing of the radiotherapy by the Radiographer and the visual prompt of a red wallet for the patient's treatment paperwork to treat ASAP. The aim was to shorten the length of time from radiotherapy referral to delivery.
Methods
Timings for each step of the treatment pathway were collected and calculated for 5 financial years and subdivided according to which professional planned and prescribed the treatment and those patients treated prior to and after the implementation of the red wallet. The data was analysed using a Mann-Whitney U test to compare the timings between a Clinical Oncologist/Specialist Registrar and the Radiographer planning and prescribing and pre- and post-red wallet.
Results
The overall time taken from referral to treatment and the step from the planning scan to sign-off of the treatment was significantly shorter with the Radiographer planning and prescribing. The use of the red wallet had no impact on the overall length of the pathway.
Conclusions
The Macmillan Consultant Therapeutic Radiographer has had an impact on this patient pathway however further investigation is required to identify the barriers to efficacy of the red wallet.

L2.3 Demonstrating the clinical utility of Gallium-68 DOTATATE PET imaging in brain tumour management - three real-world cases highlighting its role in radiotherapy planning, tumour targeting, and normal tissue preservation

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Background
Accurate delineation of gross tumour volume (GTV) is critical for radiotherapy planning in meningeal-based tumours, such as meningiomas. Although contrast-enhanced MRI is standard, it may fail to clearly define tumour boundaries, particularly in the post-surgical setting. Gallium-68 DOTATATE PET imaging, which targets somatostatin receptor overexpression in meningiomas, offers improved tumour visualisation and planning accuracy.
Methods
A retrospective analysis of three patients undergoing radiotherapy for recurrent meningeal-based tumours post-surgery was conducted. This study evaluates the impact of incorporating Gallium-68 DOTATATE PET in radiotherapy planning and its effect on clinical decision-making and patient outcomes.
Results
Case 1: Recurrent WHO grade 2 meningioma in the upper cervical spine. Gallium-68 DOTATATE PET showed low-grade uptake, indicating inflammatory post-surgical change, leading to a shift from radiotherapy to surveillance, sparing the patient unnecessary treatment.
Case 2: Recurrent haemangiopericytoma in the posterior fossa. Gallium-68 DOTATATE PET identified a discrete recurrence, enabling precise stereotactic radiosurgery, maximising tumour control while minimizing radiation exposure to healthy tissue.
Case 3: Recurrent WHO grade 2 parasagittal meningioma in a patient unable to undergo MRI due to neurosurgical clips. Gallium-68 DOTATATE PET allowed accurate tumour delineation, minimising the risk of radiation damage to healthy tissue and identifying a second, previously undetected intracranial meningioma.
Conclusion
The combination of MRI and Gallium-68 DOTATATE PET enhances tumour detection and delineation, improving radiotherapy planning and patient outcomes by optimising tumour control while minimising radiation exposure to healthy tissue. These findings support the integration of Gallium-68 DOTATATE PET into radiotherapy protocols for complex meningeal tumours.

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L2.4 Comparing the clinicopathologic and radiologic features of early and later-onset breast cancer in a resource-limited setting: Is it time to rethink screening guidelines?

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Background
Although the increasing incidence of early-onset breast cancer (EOBC) is a global trend, racial/ethnic variations have been reported with most cases occurring in younger black women who have more invasive disease and higher mortality.[1] Treatment is often hampered by a lack of comprehensive guidelines for early BC detection in average-risk young women coupled with limited resources for diagnosis. We aim to compare the features of BC in young women and those with later onset breast cancer (LOBC) in a cohort of Nigerian women and propose suggestions for early detection.
Methods
This retrospective, descriptive study was done with data from 104 women who were managed for breast cancer over 15 months in a hospital in Abuja, Nigeria. Data included patient demographics, clinical findings, ultrasonography, mammography, and histopathology reports.
Results
EOBC occurred in 36/104 (34.1 %) women with a significant difference (p-<0.001) in the mean ages of the two groups. Six (5.8%) participants with positive family history were reported in only women with EOBC. Advanced disease (T3, T4) was

predominant in 88.8% and 70.6% of EOBC and LOBC respectively. The ultrasound and mammographic assessments were mostly BI-RADS V. IDC was the most common histological type (90.4%) in both groups. Triple- negative BC occurred in 28.6% of EOBC and 15% of LOBC.

Conclusion

Early-onset BC in Nigerian women tends to be advanced at presentation, with more aggressive biological characteristics. There is a need for targeted education as well as re-evaluation of screening guidelines for young average-risk women with considerations for racial/ethnic differences.

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L2.5 Advocating for world-class radiotherapy in the UK

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Purpose

Radiotherapy is crucial for curing and controlling cancer, alleviating symptoms, and improving quality of life. Access to radiotherapy is linked to improved survival and positive outcomes for many cancers. Despite its cost-effectiveness, significant regional disparities in access exist across the UK.

In 2023, the All-Party Parliamentary Group for Radiotherapy tasked Radiotherapy UK to facilitate a vision for world-class radiotherapy in the next decade, leading to the report: World-class Radiotherapy in the UK: Right Patient, Right Treatment, Right Time.

Methods

Radiotherapy UK runs a comprehensive advocacy campaign, collaborating with radiotherapy professionals, patients, radiotherapy stakeholders, campaigners, and other cancer charities. The charity spotlights radiotherapy needs in the media and government, proposing short- and long-term solutions, the need for sustained investment and long-term strategic planning.

Results

Radiotherapy was a headline investment in the Autumn 2024 budget, with funding for radiotherapy machines ringfenced. In December 2024, the Secretary of State confirmed the development of a dedicated cancer plan. Over 100 MPs attended a radiotherapy-focused drop-in session on World Cancer Day 2025, engaging with the frontline workforce, patients, and academics. A Westminster Hall debate on 'accessibility to radiotherapy' was held on World Cancer Day, with the responding Health Minister committing to include radiotherapy in the cancer plan and collaborate with Radiotherapy UK.

Conclusion

The radiotherapy community is stronger when working together to describe solutions and influence decision-makers. Radiotherapy is key to improving cancer patient outcomes, and it is essential to effectively communicate these solutions to those with the power to fund and implement change.