Conclusions: 18F-FAZA PET scans provide a feasible non-invasive method to assess NSCLC tumour hypoxia. A hypoxic volume, as detected by 18F-FAZA PET, was present in the majority of NSCLC patients in our study. Ongoing trial accrual and follow up of our patient cohort will provide more information with regards to the imaging and clinical value of 18F-FAZA PET, and we hope to correlate these imaging metrics with clinical outcomes.

Purpose: Radiotherapy (RT) practice variability in the palliative setting is well-documented. Clinical practice guidelines inform standardized, evidence-based, beneficial practice, while simultaneously discouraging unnecessary or potentially harmful practices. The process of creating provincial palliative RT clinical practice guidelines is associated with multiple challenges. We describe the unique approach required in aligning multidisciplinary goals as compared to traditional tumour site-specific guidelines.

Methods and Materials: Radiation oncologists from the provincial Palliative Care Tumour Team, along with guideline specialists from the Guideline Resource Unit, formed the primary guideline working group tasked with updating the Palliative RT guidelines. Tumour site specific representatives (ex. Central Nervous System Tumour Team) were incorporated as needed, as well as experts in supportive care, on a guideline by guideline basis. For each guideline, a systematic literature review was conducted to identify relevant evidence. Recommendations were initially developed within the primary working group, then revised in collaboration with experts from other disciplines. Once working group consensus was reached, guideline recommendations were circulated to all radiation oncologists and Palliative Tumour Team members for input. After several rounds of feedback and modifications, provincial consensus was reached.

Results: Initially, one RT guideline had been created for all provincial palliative RT recommendations. These guidelines have since been split into smaller, more functional palliative RT guidelines: 1) Brain Metastases; 2) Bone Metastases and Spinal Cord Compression; 3) Bleeding and Gastrointestinal Obstruction; and 4) Superior Vena Cava Obstruction, Dyspnea, and Hemoptysis. The majority of recommendations were either modified or new due to advancements in research or changes in consensus based approaches. In total, 70 recommendations were approved. Recommendations were supported by a range of evidence from high (level one evidence) to low quality (consensus opinion).

Conclusions: By combining the newly updated palliative RT guidelines with an educational intervention, variations in practice may be mitigated. Using our model, similar efforts can be undertaken in other jurisdictions.

Purpose: Stereotactic ablative body radiotherapy (SABR) is an emerging modality in patients with liver cancer who are ineligible for other local therapies. It has been shown to be effective with respect to long-term tumour control with minimal toxicity. However SABR for liver cancer is not current standard of practice despite its potential promise. In order to validate increased offering of this promising therapy, objective systematic data regarding impact on quality of life (QOL) is required. No systematic reviews to date have been performed to analyze QOL for primary or metastatic liver cancers. QOL metrics are a critical part of therapy evaluation, particularly in disease states with short life expectancy. The purpose of this study was to conduct a systematic review of evidence surrounding QOL for liver SABR.

Methods and Materials: MEDLINE and EMBASE databases from 1996 to October 2015 were queried to obtain English language studies analysing QOL following SABR for liver cancers. Included studies involved patient-reported QOL as either a primary or secondary endpoint, along with analysis of QOL change over time. Studies were screened by three reviewers, while relevant data were abstracted and analyzed by a single reviewer. Results: Of 2181 initially screened studies, five met all inclusion criteria and were analyzed. Extracted study dates ranged from 2008 to 2015, included a total of 388 eligible patients, and 4/5 studies were prospective in design. All were published studies, with the exception of one conference abstract. Studies included patients with hepatocellular carcinoma, liver metastases and intrahepatic cholangiocarcinoma. Extracted studies were heterogeneous in dose prescription used (11-70 Gy in 3 – 30 fractions), as well as in QOL metrics (EORTC QLQ C-15, PAL,/C-30/LM-21, Euroqol 5D, FACT-Hep, FLIC) and final endpoints (range: six weeks to 12 months). Despite this there were few clinically or statistically significant declines in QOL scores following SABR. Four studies demonstrated increased fatigue transiently in the first 1-4 weeks, while two studies showed transient worsening of appetite at one month; both metrics returned to insignificance from baseline by the final endpoints. All studies showed no significant decline in QOL at their respective endpoints. In studies with overlapping QOL tools, estimates of three-month post-SABR global QOL were similar.

Conclusions: Results of this systematic review demonstrate well-preserved post SABR QOL in patients with otherwise untreatable liver cancer, despite heterogeneity amongst the individual studies themselves. These findings merit further research to increase data collection, to validate QOL tools specific to SABR for liver cancers, and to support comparative effectiveness trials of SABR with other local modalities in liver cancer including surgery, chemoembolization and radiofrequency ablation, with a focus on QOL outcomes as an important endpoint.

A SYSTEMATIC REVIEW OF METHODOLOGIES, ENDPOINTS AND OUTCOME MEASURES IN PHASE III RANDOMIZED TRIALS OF INTERVENTIONS FOR RADIATION THERAPY-INDUCED NAUSEA AND VOMITING

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