0.12), whereas 2-5 fx was 0.26 (IQR 0.10-0.44) and 10 fx was 0.14 (IQR 0.08-0.27) (p=0.003).

Conclusion: Patients with post-obstructive pneumonia have poor outcomes with a median OS of <2 months and a low likelihood of improving malignant obstruction (21%). Patient characteristics associated with mortality within 4 weeks included performance status, <10 fx, and acute obstruction. Patients spent a median of 12% of their remaining life receiving RT, which was significantly higher for patients receiving >1 fx. These data should be used to guide treatment decisions in the palliative setting.

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Contemporary Practice Patterns for Radiotherapy of Bone Metastases: Preliminary Analysis of Prospective Data from a Statewide Consortium Focusing on Extended Fractionation

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Purpose/Objective(s): National guidelines recommend various effective dose and fractionation schemes for palliative radiotherapy (RT) of bone metastases, including noninferior outcomes with single fraction regimens. For Choosing Wisely, ASTRO advocated against use of extended fractionation schemes with greater than 10 fractions. We previously reported a retrospective assessment of heterogeneity in RT management of bone metastases. Herein, we sought to prospectively analyze current practice patterns of palliative RT in the treatment of bone metastases in diverse clinical settings. Specifically, we investigated possible predictors of extended treatment courses.

Materials/Methods: Within a statewide radiation oncology quality consortium, patients were consecutively enrolled between March 2018 and February 2019 in both academic and non-academic facilities. Data on patient characteristics, provider and facility characteristics, dose and fractionation schedules, treatment planning and delivery techniques and image guidance were collected. Multivariable binary logistic regression was employed to assess use of extended fractionation (>10 fractions) RT.

Results: A total of 444 consecutive patients were enrolled by 24 treating facilities. The median case volume per center was 15 (range, 1-55), with a total of 608 plans from 411 patients available for analysis. The median number of plans per patient was 1 (range, 1-4). The most commonly employed dose and fractionation schedules were 3 Gy x 10 fractions (54%), 4 Gy x 5 fractions (14%), and 8 Gy x 1 fraction (11%). A minority of plans (5%) used extended fractionation. IMRT was utilized for 9% of plans, while cone beam CT image guidance was used in 14% of cases. A majority of plans (64%) were designed for uncomplicated osseous metastatic lesions. For uncomplicated lesions 13% of plans were prescribed 8 Gy x 1 fraction, while 5% were prescribed greater than 10 fractions. The only significant predictor of use of extended fractionation was type of treatment facility with academic centers significantly less likely to use more than 10 fractions per plan (OR=0.16, 95% CI: 0.04-0.72, p<0.02).

Conclusion: This is our initial analysis of contemporary practice patterns of palliative RT for bone metastases using prospective data recently collected from our statewide consortium. Within a large, consecutively enrolled patient cohort, we demonstrate that palliative RT for management of bone metastases remains diverse. Resource-intensive treatments including image guidance and extended fractionation exist, with type of treatment facility significantly predicting use of extended fractionation. Taken together, these preliminary results support our ongoing collection of the prospective data needed to more clearly understand the barriers to high value RT approaches in this setting.

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Association between Severe Gastrointestinal Toxicity and Molecular Targeted Therapy in Patients Received Radiotherapy for Metastatic Bone Tumor or Myeloma

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Purpose/Objective(s): Purpose of this study is to examine the association between severe gastrointestinal (GI) toxicity and molecular targeted therapy in patients received radiotherapy (RT) for bone lesions.

Materials/Methods: This study included the patients who received RT for metastatic bone tumor or myeloma of abdominopelvic region between 2013 and 2014 at 6 institutions. Patient/tumor characteristics, RT dose, molecular targeted therapy, chemotherapy and GI toxicities were analyzed. GI toxicity was graded according to the CTCAE v4.0. Fisher's exact test was used to examine the statistical significance.

Results: In total, 403 patients were included. Follow-up period was median 168 days (1-1798). Previous abdominopelvic surgery was performed in 145 patients. RT regimens were various, and major regimens were 30 Gy in 10 fractions and 20 Gy in 5 fractions. Total 21 different molecular targeted agents were administered in 185 patients. Vascular epidermal growth factor inhibitor (VEGFI) was administered in 85 patients; bevacizumab, sorafenib, axitinib, sunitinib, pazopanib, ramucirumab and regorafenib in 41, 24, 9, 13, 5, 1 and 2 patients. There were 30 (7.4%) patients who suffered ≥grade (G) 2 GI toxicities. G2, 3, 4 and 5 toxicities were observed in 15 (3.7%), 7 (1.7%), 4 (1.0%) and 4 (1.0%) patients, respectively. Duration between the beginning of RT and occurrence of GI toxicities was median 48.5 days (1-999 days). Perforation, bleeding, obstruction, diarrhea, gastroenteritis, vomiting and esophagitis were observed in 5 (1.2%), 7 (1.7%), 8 (2.0%), 4 (1.0%), 2 (0.5%), 1 (0.25%) and 3 (0.74%) patients, respectively. Among patients