there are limited data reporting cosmesis for women undergoing HFRT after OR. Given OR is a cosmetic procedure, this study aimed to demonstrate acceptable late toxicity and post-treatment cosmesis with HFRT after BCS and OP.

Materials/Methods: Women with > 3 months of follow-up after treatment with BCS, OR and HFRT between 2010 and 2018 were identified. Surgery was performed either as a single or staged procedure with immediate or delayed reconstruction. All women received 42.56 Gy to the whole breast using field-in-field technique. A lumpectomy cavity boost was performed at the discretion of the treating physician. Demographic, disease and treatment characteristics, and toxicity outcomes were recorded. For a subset of patients, pre and post-operative photos were maintained. Cosmesis at the time of most recent follow-up was independently rated by two plastic surgeons and two radiation oncologists (excellent, good, fair, poor). Chi-squared, Mann-Whitney U, and logistic regression were used to assess association between patient/treatment related factors and toxicity.

Results: 38 women were identified with a median follow-up of 12 months from completion of HFRT. Median age was 61.5 (61% white, 30% black, and 9% mixed /other). 55% underwent a single procedure with immediate reconstruction. 61% had local tissue rearrangement alone, 20% had mastopexy and reduction, and 24% had flap rearrangement. 16% of women received a lumpectomy cavity boost. Due to inability to accurately delineate the post-surgical tumor bed, the lumpectomy cavity was only contoured in 66% of women. Surgical toxicities were reported in 12% women prior to HFRT. Late cosmesis related toxicities were found in 52% women (table 1) of which the majority (58%) were skin toxicity (all RTOG grade 1). There was no significant association between age, race, BMI, comorbidities, receptor status, chemotherapy status, HFRT treatment position, boost, V105, or max point dose and late cosmesis. Of the cohort with longitudinal photos, cosmesis was rated as excellent in 42%, good in 46%, and fair in 12%. There were no locoregional failures.

Conclusion: OR with HFRT has good toxicity profiles and favorable physician rated cosmetic outcomes. It offers an acceptable alternative to CFRT. Further investigation of patient reported cosmesis and prospective evaluation of OR and HFRT is warranted.

Abstract 2113; Table 1

Late Toxicity	n (%)
Pain	3 (7)
Edema	4 (12)
Fibrosis	2 (5)
Dimpling	0 (0)
Nipple retraction	2 (5)
Volume loss	1 (2)
Skin changes	11 (29)

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Are We Missing Acute Toxicities Associated with Hypofractionated Breast Irradiation? A Report from a Large Multi-Center Cohort Study

H. Beydoun,[1] R. Jagsi,[2] K. Griffith,[3] J.W. Burmeister,[4] J.M. Moran,[5] F.A. Vicini,[6] J.T. Dilworth,[7] J.A. Hayman,[5] P. Paximadis,[8] T.P. Boike,[6] G.S. Gustafson,[7] J.D. Radawski,[9] E.M. Walker,[10] L.J. Pierce,[5] and M.M. Dominello[4]; [1]*Department of Radiation Oncology, Wayne State University School of Medicine, Detroit, MI,* [2]*University of Michigan, Ann Arbor, MI,* [3]*Department of Biostatistics, University of Michigan, Ann Arbor, MI,* [4]*Department of Radiation Oncology, Barbara Ann Karmanos Cancer Institute, Wayne State University School of Medicine, Detroit, MI,* [5]*Department of Radiation Oncology, University of Michigan, Ann Arbor, MI,* [6]*Michigan Healthcare Professionals, Farmington Hills, MI,* [7]*Department of Radiation Oncology, Beaumont Health, Royal Oak, MI,* [8]*Department of Radiation Oncology, Spectrum Health Lakeland, St. Joseph, MI,* [9]*West Michigan Cancer Center, Rockford, MI,* [10]*Henry Ford Health System, Detroit, MI*

Purpose/Objective(s): The efficacy and long-term safety of hypofractionated whole breast irradiation (HF-WBI) has been established through multiple randomized trials. However, data on acute toxicities associated with HF-WBI remain more limited. Since 2013, our group has prospectively collected data on acute toxicities associated with HF-WBI based on weekly evaluation during treatment and assessment at 1 month after completion of radiotherapy. In October 2015, we intentionally shifted the post-treatment assessment time-point from 1 month to 2 weeks post-completion of treatment. This change was intended to evaluate whether a closer follow-up (f/u) might result in the detection of otherwise unobserved acute toxicities for patients receiving HF-WBI. In this study we report whether 2-week f/u has resulted in increased sensitivity for detecting acute toxicity as compared with 4-wk f/u.

Materials/Methods: We prospectively compared acute toxicity for patients treated with HF-WBI at 25 participating institutions. We compared patients treated between 1/1/2013 and 8/31/2015 (before 2-week f/u up was adopted – "4 wk f/u cohort") to patients treated between 1/1/2016 – 8/31/2018 (after adoption of a 2-week f/u – "2 wk f/u cohort"). Acute toxicity was considered the maximum reported composite toxicity from 7 days prior to the completion of radiotherapy until 42 days (6 weeks) following completion. Composite toxicity was defined as self-reported or physician-assessed moderate or severe breast pain, and/or physician-assessed presence of moist desquamation. Multivariable logistic regression models were used to assess difference in toxicity by cohort using ASTRO HF-WBI 2018 Guideline v. 2011 Guideline, and further adjusted for BMI, breast volume, race, presence of comorbidity, smoking status, and use of IMRT.

Results: 2243 patients who received post-lumpectomy radiation and boost were analyzed, 1369 patients in the 2-wk f/u cohort and 874 in the 4-wk f/u cohort. Occurrence of composite acute toxicity was similar between the 2 cohorts, 28.4% for 2-wk f/u cohort vs 26.9% for the 4-wk f/u cohort, adjusted $p=0.66$. When analyzing only patients who met all ASTRO HF-WBI Guideline v. 2011 criteria, no difference in acute toxicity was noted; 26.5% with 2-wk f/u vs 25.0% with 4-wk f/u, adjusted $p=0.83$. Finally, with 2 wk f/u compared with 4 wk f/u, additional acute toxicities were not detected for patients who were younger <50 years ($p=0.72$), received chemotherapy ($p=0.93$), had ductal carcinoma in-situ ($p=0.13$), or had separation >25 cm, ($p=0.43$), yet otherwise guideline compliant.

Conclusion: A closer post-treatment follow-up for patients receiving HF-WBI did not reveal a significant increased incidence of acute toxicities at 2 weeks compared to 4 weeks. This study provides physicians and patients with additional data on the safety and tolerability of HF-WBI and the appropriateness of the interval of follow-up.

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