Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Radiotherapy-influenced pathological complete response maintains its prognostic value in breast cancer subtypes and different subgroups.

87

IMPACT OF THE COVID-19 PANDEMIC ON RADIOTHERAPY PATTERNS OF PRACTICE FOR CURATIVE INTENT BREAST CANCER PATIENTS

Donna Liao, Kawalpreet Singh, Joelle Helou, Anthony Fyles, Ezra Hahn, Kathy Han, Naghmeh Isfahanian, Danielle Rodin, Aisling Barry, Fei-Fei Liu, Grace Lee, Amy Liu, Srini Raman, Alejandro Berlin, Michael Milosevic, Anne Koch, Jennifer Croke
University of Toronto, Toronto, ON

Purpose: In response to the COVID-19 pandemic, radiotherapy (RT) departments around the world created new policies as a means of reducing risk of exposure for patients and staff, while attempting to maintain high-quality RT. We aim to describe the impact of the pandemic on changes in breast cancer RT patterns of practice for new patient referrals at a tertiary cancer centre.

Materials and Methods: Newly diagnosed breast cancer patients referred to our department from March 17-June 30, 2020 were included. Referrals for palliative RT were excluded. Demographic characteristics, COVID-19 status (if available) and RT treatment information, including deviations from usual practice because of the pandemic, were extracted from medical records by independent reviewers, and validated by the treating radiation oncologist. Descriptive statistics were used to summarize the data. The results were compared to breast cancer patients treated from March 17-June 30, 2019.

Results: A total of 271 and 306 patients met selection criteria for the 2020 and 2019 cohorts, respectively. The majority of consultations in 2020 were virtual (96%), conducted via telephone, OTN or MS Teams, whereas in 2019 all were conducted in-person. Median age of the cohorts was similar: 58 years (range: 24-86) in 2020 and 59 years (range: 26-88) in 2019. Of those treated with adjuvant RT (n=209), 56% of patients received whole breast (WB), 36% regional nodal irradiation (RNI) and 8% partial breast (PB) RT in 2020, whereas in 2019 (n=284), 60% received WB, 31% RNI and 9% PB (Chi-squared test p=0.43). As a result of the pandemic, 78% of cases (n=211) received one or more deviations in RT practice compared to pre-pandemic institutional policies. The most common was an "altered dose/fractionation protocol" (n=197; 93%), such as use of hypofractionated RNI (2020: 97%, 74/76 cases versus 2019: 3%, 3/87 cases) or the FAST Forward regimen (2020: 43%, 57/134 WB/PB cases versus 2019: 0/197 cases). Other deviations included a delay in RT start (defined as >12-weeks post-op) noted in 11% (n=29) and omission of RT in only 8% (n=17), both were recommended when the risks associated with COVID-19 were felt to outweigh the benefit of RT. One patient had a deviation in RT as a result of testing positive for COVID-19.

Conclusions: In order to minimize hospital visits in response to the COVID-19 pandemic, a substantial proportion of breast cancer patients were seen virtually and treated with newer hypofractionated dose schedules, while total omission of adjuvant RT was infrequently observed. Continuously tracking patterns of practice provides an opportunity to evaluate the impact of the pandemic on clinical outcomes and help inform post-pandemic value-enhancing practices.

88

RADIOTHERAPY FOR PATIENTS WITH METASTATIC BREAST CANCER TREATED WITH CYCLIN-DEPENDENT KINASE 4/6 INHIBITORS: A PROVINCIAL MULTI-INSTITUTIONAL REVIEW OF SAFETY AND TOXICITY

Abdulla Al-Rashdan, Carla Amaro, Sasha Lupichuk, Michael Roumeliotis, Sarah Quirk, Lisa Barbera, Jeffrey Cao
University of Calgary, Calgary, AB

Purpose: An increasing number of patients with metastatic breast cancer are receiving Cyclin-Dependent Kinase 4/6 Inhibitors (CDK4/6i) which might have a radiosensitizing effect. Case reports have highlighted excess toxicity when radiation is given concurrently but the incidence and severity of toxicity remain unknown in a large patient population. Our aim is to review the practice patterns and toxicity profile of radiotherapy administration in patients receiving CDK4/6i within four provincial centres.

Materials and Methods: We conducted a retrospective chart review of patients with metastatic, luminal breast cancer treated with CDK4/6i from 2015 to 2020. All patients who received radiotherapy during the course, or within one month prior to initiation, of CDK4/6i were included. Timing of radiotherapy in relation to CDK4/6i was defined as pre-CDK4/6i (radiotherapy completed prior to initiation of CDK4/6i), concurrent (when both were administered together for a day or more), and sequential treatments (CDK4/6i was stopped while radiotherapy delivered). Acute (30 days post radiotherapy), or subacute (within 180 days post radiotherapy) toxicity events were defined as Grade II (GII) non-hematological toxicity or higher as per Common Terminology Criteria for Adverse Events v4.0. We used descriptive statistics for patient, disease and treatment characteristics.

Results: Among 522 patients who received CDK4/6i, 132 patients received radiotherapy to 223 different sites. Median age was 60 (35-86) years. Radiotherapy courses involved the following sites: bone (n=178), local or regional nodes (n=28), brain and orbit (n=9), lung (n=7), and liver (n=1). One hundred twenty-six patients received Palbociclib and six received Ribociclib. Radiotherapy techniques were direct fields in 112 courses, conformal in 94 courses, and stereotactic in 17 courses. CDK4/6i was initiated within one month after radiotherapy completion in 36 patients (65 courses). Sixty patients (101 courses) had concurrent, and 36 patients (58 courses) had sequential radiotherapy treatments where CDK4/6i was stopped at a median of 12 (1-131) days prior to radiotherapy and restarted at a median of 11 (1-74) days after completion. Two GII toxicities (dysphagia and radiation recall) were reported in pre-treatment cohort after a median dose 20 (8-50) Gy. Among patients with concurrent treatment, eight acute GII toxicities (dysphagia, dermatitis, and diarrhea), three acute GIII toxicities (diarrhea, dermatitis) were observed after a median dose of 20 (6-48) Gy, with four subacute GII-III toxicities. For sequential treatment, there were four acute GII, one acute GIII after a median dose of 20 (6-50) Gy, and one subacute GIV dermatitis after SBRT to the sternum which had an overlap with previous local radiation.

Conclusions: Concurrent administration of radiotherapy with CDK4/6i might be associated with GII toxicity or more. Radiation oncologists should take CDK4/6i administration into consideration when planning radiotherapy delivery.

89

IS POST-OPERATIVE RADIOTHERAPY NEEDED IN THE MANAGEMENT OF ADULT CRANIOPHARYNGIOMAS?

Julia Khriguian, Marwan Tolba, Farzin Khosrow-Khavar, Sarah Kordlouie, Denis Sirhan, George Shenouda, Bassam Abdulkarim, Marie-Christine Guiot, Luis Souhami, Valerie Panet-Raymond
McGill University, Montreal, QC

Purpose: The optimal treatment of craniopharyngioma (CP) remains controversial. Although rare and benign, these tumours have a high propensity to recur locally. The choice between gross