



Research Week 2022

Utilization of Brachytherapy for Cervical Cancer in Oregon

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Keywords

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Abstract

Purpose/Objective:

The standard of care for locally advanced cervical cancer is external beam radiation (EBRT) and chemotherapy followed by a brachytherapy boost. Despite the body of evidence supporting the survival benefit of brachytherapy, studies have shown a decreased use of brachytherapy over time as well as low baseline brachytherapy use overall. This study hopes to better characterize the utilization of brachytherapy for cervical cancer in Oregon and identify disparities in delivery of care.

Methods:

Patients diagnosed with FIGO Stage IB-IV cervical cancer between 2007 to 2016 who received initial EBRT were identified through the Oregon State Cancer Registry. Age, county, rural/urban status of the county, race/ethnicity, and insurance payer were studied using multivariable logistic regression to identify possible underserved populations. Survival data was compared using a Cox proportional hazard survival model.

Results:

401 patients diagnosed with FIGO Stage IB-IV cervical cancer between 2007 and 2016 who received primary EBRT were identified through the Oregon State Cancer Registry. Stages included 16% stage IB2, 23.9% stage II, 37.4% stage III, and 22.7% stage IV. 38.4% received brachytherapy boost, 18.7% received another boost modality, and 42.9% received no boost. Stage IV cancer ($p=0.001$), uninsured patients ($p=0.04$), and older patients ($p=0.04$) were all significantly less likely to receive brachytherapy. Native American and Pacific Islander patients were the only group significantly more likely to receive brachytherapy ($p=0.003$). There was no significant difference among other groups. Though not statistically significant, survival analysis indicated that patients that received brachytherapy had a 42% reduction in risk of cancer specific mortality ($p=0.057$).

Conclusions:

Overall brachytherapy utilization was low but in line with national averages, indicating that brachytherapy delivery needs to be improved across the state. Given the body of evidence, these data indicate that there was likely a survival benefit to receiving brachytherapy in the patients studied.