

# Palliative care referral patterns and measures of aggressive care at the end of life in patients with cervical cancer

**Alexandra Bercow MD**, Roni Nitecki MD, Hilary Haber MD, Allison Gockley MD, Emily Hinchcliff MD, Kaitlyn James PhD, Alexander Melamed MD MPH, Elisabeth Diver MD, Mihir Kamdar MD, Sarah Feldman MD, Whitfield Growdon MD

**Introduction** Fifteen per cent of women with cervical cancer are diagnosed with advanced disease and carry a 5-year survival rate of only 17%. Cervical cancer may lead to particularly severe symptoms that interfere with quality of life, yet few studies have examined the rate of palliative care referral in this population. This study aims to examine the impact of palliative care referral on women who have died from cervical cancer in two tertiary care centers.

**Methods** We conducted a retrospective review of cervical cancer decedents at two tertiary institutions from January 2000 to February 2017. We examined how aggressive measures of care at the end of life, metrics defined by the National Quality Forum, interacted with clinical variables to understand if end-of-life care was affected. Univariate and multivariate parametric and non-parametric testing was used, and linear regression models were generated to determine unadjusted and adjusted associations between aggressive measures of care at the end of life with receipt of palliative care as the main exposure.

**Results** Of 153 cervical cancer decedents, 73 (47%) received a palliative care referral and the majority (57%) of referrals occurred during an inpatient admission. The median time from palliative care consultation to death was 2.3 months and 34% were referred to palliative care in the last 30 days of life. Palliative care referral was associated with fewer emergency department visits (OR 0.18, 95% CI 0.05 to 0.56), inpatient stays (OR 0.21, 95% CI 0.07 to 0.61), and intensive care unit admissions (OR 0.24, 95% CI 0.06 to 0.93) in the last 30 days of life. Palliative care did not affect chemotherapy or radiation administration within 14 days of death ( $p=0.36$ ). Women evaluated by palliative care providers were less likely to die in the acute care setting (OR 0.19, 95% CI 0.07 to 0.51).

**Discussion** In two tertiary care centers, less than half of cervical cancer decedents received palliative care consultations, and those referred to palliative care were often evaluated late in their disease course. Palliative care utilization was also associated with a lower incidence of poor-quality end-of-life care.