

Title: Patterns of care and outcomes among women with locally advanced cervical cancer treated with curative intent at a tertiary center in South Africa

Authors:

Juliet Maina, MBBS, FCRadOnc, University of Cape Town, Department of Radiation Oncology
Katie Lichter, MD, MPH, University of California San Francisco, Department of Radiation Oncology
Jessica George, BS, University of California, Donald Bren School of Information and Computer Sciences
Michelle Henry, BS, M. Psych, University of Cape Town, Centre for Higher Education
Elana Benishay, BS, Northwestern University Feinberg School of Medicine
Nazia Fakie, MBChB, FCRadOnc, MMED, University of Cape Town, Department of Radiation Oncology
Surbhi Grover, MD, MPH, University of Pennsylvania, Botswana-UPenn Partnership

Abstract

Purpose/Objective: Cervical cancer is the leading cause of cancer-related deaths for women in South Africa. The standard of care treatment for locally advanced cervical cancer (LACC) is external beam radiation followed by brachytherapy with concurrent platinum-based chemotherapy. Today, there exists a paucity of data regarding the treatment regimens received by women with LACC in South Africa. The aim of the study is to assess patterns of care and survival for patients with LACC treated with curative intent at a tertiary center in South Africa.

Materials/Methods: This retrospective review of cervical cancer patients with FIGO 2009 Stage IB2 – IVA disease analyzed women treated with curative intent at Groote Schuur Hospital in Cape Town, South Africa between July 2013 and July 2018. Overall survival (OS) and disease-free survival (DFS) were evaluated using the Kaplan–Meier method. Cox proportional hazards modeling analyzed patient and treatment factors associations with survival. Logistic regression modeling was performed to assess factors associated with receipt of chemotherapy and baseline hemoglobin.

Results: Among 278 patients, 28.4% (n=79) of women had co-infection with HIV, and 64.8% (n=180) received chemoradiation. Median age for all patients was 51 years (IQR; 41-60). Most patients had stage II disease accounting for 48.6% (n=135) or stage III disease accounting for 45.7% (n=127). Regardless of HIV status, patients who received chemoradiation had improved 2-year OS (87.4% vs 52.8%, $p<0.001$) and DFS (80.2% vs 58.3%, $p<0.001$) compared to those receiving radiation alone. Factors associated with improved OS were receipt of chemotherapy (HR 0.32, $p=0.005$) and higher baseline hemoglobin (HR 0.86, $p=0.018$). Upon multivariate logistic regression, adjusting for age, stage, and HIV status, patients with stage III/IV disease were less likely to receive chemotherapy (HR 48.17, $p<0.001$) and were less likely to have hemoglobin ≥ 10 g/dL (HR 0.20, $p<0.001$).

Conclusions: Addition of chemotherapy to standard radiation improved overall survival in women with LACC, regardless of HIV status. Our findings add to a body of literature, highlighting the importance of providing concurrent chemoradiotherapy to all patients with LACC, including WLWH and women with stage III/IV disease.