

Objective.

To determine the impact of HIV infection on acute morbidity and pelvic tumor control following external beam radiotherapy (EBRT) for cervical cancer.

Method.

218 patients receiving EBRT who also had HIV testing after informed consent was obtained were evaluated. Acute treatment toxicity was documented weekly during treatment and 1 month post-EBRT. Pelvic tumor control was documented at 4 and 7 months post-EBRT. Clinicians were blinded for HIV results.

Results.

About 20% of the patients were HIV-positive. Overall, 53.4% of the patients had radiation-related acute toxicity (grade 3–4). HIV infection was associated with a 7-fold higher risk of multisystem toxicity: skin, gastrointestinal tract (GIT) and genitourinary tract (GUT) systems. It was also an independent risk factor for treatment interruptions (adjusted relative risk 2.2). About 19% of the patients had residual tumor at 4 and 7 months post-EBRT. HIV infection was independently and significantly associated with 6-fold higher risk of residual tumor post-EBRT. The hazard ratio of having residual tumor after initial EBRT was 3.1-times larger for HIV-positive than for HIV-negative patients ($P = 0.014$).