# **Infectious Agents and Cancer**



Poster presentation

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# HIV-associated bladder cancer: diagnosis and management

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### Introduction

Chronic HIV infection has been associated with an increased incidence of non AIDS-defining cancers. To date, only a limited number of cases of bladder cancer have been reported in association with HIV infection. Therefore, the aim of this study was to investigate a series of HIV-associated bladder cancer cases.

# **Methods**

A retrospective study was performed involving HIV positive patients with concomitant bladder cancer, combining cases from multiple institutions with published case reports. Data were extracted regarding patient demographics (age, gender), HIV status (CD4+ cell count, HIV viral load), clinical presentation, pathology, cancer treatment, and outcome. Accrued data were analyzed using descriptive statistics.

### Results

A total of 11 patients were identified with an average age of 53 years (range 33 to 67), most of whom were male (M:F 9:2). Their median CD4 cell count was 280 cells/mm³ (range 106 – 572 cells/mm³) and median HIV load <50 copies/mL (range <50 – 665,000 copies/mL). Five (45%) patients smoked tobacco, two had recurrent cystitis, two had bladder calculi, and one patient had previous pelvic radiation therapy for cervical cancer. Nine (82%) presented with hematuria. Less common presentations included lower abdominal pain, irritative urinary symptoms (frequency, urgency and/or dysuria), and weight loss. Most cases (10/11) had transitional cell carcinoma

and one person had squamous cell carcinoma. At presentation, two cases had stage 0a disease, five had stage I disease, and two stage IV disease. Treatment with transurethral resection of bladder tumor (TURBT) was followed by intravesical or systemic chemotherapy, cystectomy and/or radiation. Intravesical mitomycin C or epirubicin was used, despite the fact that BCG in one case did not cause complications. Several patients (64%) were alive following therapy, although many (71%) suffered from local relapse and metastatic disease.

## **Conclusion**

Bladder cancer should be added to the growing list of Non-AIDS defining cancers likely to be encountered in HIV-infected patients now living longer with controlled HIV disease. Afflicted patients are likely to present at a younger age and with only mild immunosuppression. Hematuria, dysuria, frequency and/or urgency in an HIV-infected patient warrants complete evaluation, including a work up for bladder cancer. Although most patients presented with early stage disease, the course for their bladder cancers was notable for frequent relapses and subsequent metastases. HIV positive individuals should be counseled on the potential risks (e.g., smoking) of bladder cancer.