Anal cancer is believed to occur as the final destination of a progression from human papilloma virus (HPV) infection of the anal canal via low and high grade anal intraepithelial neoplasia (AIN). Screening at risk populations for AIN and interventions for high grade AIN may reduce the risk of anal cancer. Definitive treatment for invasive anal cancer is with chemo-radiotherapy (CRT). Does CRT irradiate AIN as well as invasive anal cancer, suggesting that these patients do not require ongoing screening as they are not at risk of a second primary anal cancer?

**BACKGROUND**

A total of 54 HIV positive patients have been treated with CRT for invasive anal cancer. Patients who had completed chemoradiotherapy and subsequent high resolution anoscopy (HRA) were identified and the anoscopic and histological findings were reviewed.

**RESULTS**

- Two of the patients with low grade dysplasia at last HRA had previous HRA screening following CRT, that was normal, raising the possibility of reinfection rather than persistence of low grade dysplasia.
- Two patients relapsed 13 and 16 months after CRT and have died. They both had persistent dysplasia (one low grade and one high grade) at follow up HRA.
- A further two patients have died of unrelated causes (one lung cancer and one liver failure).

**CONCLUSIONS**

Anal dysplasia persists following CRT for invasive anal cancer and could result in disease relapse or development of a second primary anal cancer. Patients with invasive anal cancer who have been been successfully treated with CRT should still be considered for screening High Resolution Anoscopy.