STRATIFYING ANAL CANCER RISK IN GAY AND BISEXUAL MEN

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Introduction:
Anal cancer occurs at elevated rates in gay and bisexual men (GBM), particularly HIV+ individuals. In the longitudinal cohort study of the prevention of anal cancer (SPANC), around 30-40% of GBM had the anal cancer precursor lesion high grade squamous intraepithelial lesions (HSIL) at baseline. The diagnostic investigation, high resolution anoscopy (HRA) is an invasive procedure not widely available in Australia. We sought to develop a risk stratification algorithm using our understanding of pathogenesis to more effectively target high risk individuals.

Methods:
Over a three-year period, SPANC participants underwent HRAs, anal swabbing and testing for high risk HPV genotypes (HRHPV). Biopsies were taken of lesions suspicious for HSIL. The algorithm utilized persistent HRHPV and histological HSIL to stratify participants into four risk categories with the subsequent follow up: high (one year), elevated (two years), moderate (three years) and low (none).

Results:
Of the 617 SPANC participants enrolled (29.7% HIV+), 312 had complete data on all 5 visits by July 2018. The average age was 56.9 (range 39 - 86) years with no statistical difference between ages of HIV+ and HIV- individuals (P = 0.88). 54 participants (17.3%) were evaluated to be high risk, 87 (27.9%) elevated risk, 67 (21.5%) moderate risk and 104 (33.3%) at low risk of developing anal cancer. There was no difference between the proportions of HIV+ and HIV- in the moderate and elevated risk categories. However, HIV+ were more likely than HIV- in the high risk (23.0% versus 15.1%) and less likely in the low risk category (37.7% versus 21.2%, P = 0.004).

Conclusion:
The use of HRHPV and histological findings permitted the development of a risk stratification algorithm enabling scarce resources to be targeted towards highest risk of developing anal cancer. Long term follow-up is required to assess the effectiveness of the algorithm at predicting risk.

Disclosure of Interest Statement: