

BEHAVIOURAL PREDICTORS OF INCIDENCE AND CLEARANCE OF ANAL HIGH-GRADE SQUAMOUS INTRAEPITHELIAL LESIONS (HSIL): THREE-YEAR FOLLOW UP RESULTS FROM THE STUDY OF THE PREVENTION OF ANAL CANCER (SPANC)

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Background: Gay and bisexual men (GBM) are at increased risk of anal cancer. Persistent high-grade squamous intraepithelial lesions (HSIL) are the precursors to anal cancers. We report the behavioural predictors for incidence and clearance of anal HSIL in a cohort of GBM in Sydney, Australia.

Methods: At 5 study visits over 3 years, SPANC participants completed detailed behavioural questionnaires and underwent cytological and histological assessments and HPV genotyping of anal swabs. Composite HSIL was defined as detection of cytological and/or histological HSIL. Only participants who had attended all four annual visits were included in this analysis.

Results: 617 men were recruited. By February 2018, 377 men had attended all annual follow-up visits (median age 51, 29.7% HIV-positive). Among them, 147 (39.0%, 95% CI 34.0-44.1) had baseline composite HSIL and 85 cleared this (overall clearance rate 26/100 P-Y, 95% CI 21.0-32.2). By 36 months, 64 of those initially HSIL negative had developed HSIL (incidence of 10.3 per 100 person-years, 95%CI: 8.1-13.2). HIV status, smoking history and education level were not associated with incidence or clearance. Older men were less likely to clear their HSIL ($p=0.034$). Behavioural predictors of incident HSIL included: higher numbers of male partners ($p=0.026$) and receptive anal sex partners in the past 6 months ($p=0.002$). Behavioural predictors of lack of HSIL clearance included: higher numbers of lifetime male partners ($p=0.008$) and lifetime receptive anal sex partners ($p=0.031$).

Conclusion: The development of incident anal HSIL was associated with recent sexual behaviours whereas persistent anal HSIL was associated with older age and lifetime sexual behaviours. This suggests that incident HSIL may represent acute disease, that is more likely to resolve. HSIL associated with lifetime exposure is more likely to be persistent.

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