Results Out of the 9 diagnostic primer pairs tested for Ng identification, one probe failed to detect 28 positive samples of Ng out of a total of 234 isolates. Another primer pair, which amplifies the DR9 repeat region used in the COBAS4800 was not able to detect one Ng isolate collected from Hong Kong. The remaining 7 primer pairs showed 100% specificity in terms of Ng detection and were highly sensitive in detecting Ng DNA in concentrations as low as 0.00001 ng/ul. A multiplexed assay using ciprofloxacin susceptibility-determining primer pairs distinctly differentiated between resistant and susceptible isolates based on melt curve analysis.
Conclusion A POCT-adaptable assay has been developed for the simultaneous identification of *N. gonorrhoeae* and its ciprofloxacin susceptibility status.
Disclosure of interest statement The present work was supported by Grand Challenges Canada ((#S5 398). No grants were received from any company in the development of this study.

P10 - Human papillomavirus infections and other viral STI

P10.01 HIGH-RISK HPV IS A MARKER FOR ATYPICAL INTRAANAL CYTOLOGY IN IMMUNOCOMPETENT WOMEN

[1]J Eleutério, [2]MRL Passos*, [1]R Eleutério, [3]P Giraldo, [4]AK Gonçalves. *[1]Universidade Federal Do Ceará, Fortaleza, Brazil; [2]STD Clinic, Universidade Federal Fluminense, Niterói, Brazil; [3]Universidade Estadual de Campinas, Campinas, Brazil; [4]Universidade Federal Do Rio Grande Do Norte, Natal, Brazil*

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Introduction Currently there is a worldwide concern about how best to screen for anal intraepithelial lesion. The cytology seems to be a good method, but there are few experts who have skill. The objective of this study was to evaluate whether high-risk HPV identification by PCR may precede cytology this end.
Methods This was an cross-sectional study of 140 women attended at the Federal University of Ceará (UFC). A sample of the residual material of liquid-based cytology (Surepath®) was used for RT-PCR on the Cobas 4800 (Roche). Cytological findings were compared with the PCR results. Fisher exact test were applied for a CI of 95%.
Results There were 57/140 positives cases for high-risk HPV and 83/140 negative cases. The average age was similar in both groups. The number of sexual partners referred was not significantly different between the two groups. Among the positive cases atypical intra-anal cytology was significantly more frequent. Among the HPV positive = 17 (25%) and in negative = 12 (14.5%) (RR = 2.06, 95% CI = 1.06 to 3.98).
Conclusion The presence of intraanal high-risk HPV is frequent and its presence is associated with an increased risk of abnormal intraanal cytology.
Disclosure of interest statement There is no conflict of interest.

P10.02 FIELD EVALUATION OF THE XPERT HPV TEST FOR THE DETECTION OF HUMAN PAPILLOMAVIRUS INFECTION IN WOMEN USING SELF-COLLECTED VAGINAL COMPARED TO CLINICIAN-COLLECTED CERVICAL SPECIMENS

[1,2]A Vallely*, [2]P Toliman, [3]S Tabrizi, [1]SG Badman, [4]Z Kombati, [2]J Gabuzzi, [2]J Allan, [2]G Munnull, [2]S Silim, [5]C Ryan, [2]LM Vallely, [2,6]A Kelly-Hanku, [1]H Wand, [7]GDL Mola, [2]P Siba, [1]R Guy, [1]JM Kaldor. *[1]The Kirby Institute, University of New South Wales, Sydney, Australia; [2]Papua New Guinea Institute of Medical Research, Goroka, Papua New Guinea; [3]Molecular Microbiology Laboratory, The Royal Women's Hospital, Melbourne, Australia; [4]Pathology Department, Mt Hagen Hospital, Western Highlands Province, Papua New Guinea; [5]The Burnet Institute, Melbourne, Australia; [6]School of Public Health & Community Medicine, UNSW Australia; [7]Department of Obstetrics & Gynaecology, School of Medicine and Health Sciences, University of Papua New Guinea, National Capital District, Papua New Guinea*

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Background The Cepheid Xpert® HPV Test has high sensitivity and specificity for the detection of HPV infection in women compared to the Roche cobas 4800 HPV assay using cervical specimens. In many high-burden, low-resource countries it will not be feasible to achieve high cervical screening coverage using HPV-DNA technologies that require clinician-collected samples. We are conducting the first evaluation of self-collected vaginal specimens compared to clinician-collected cervical specimens for the detection of HPV infection using the Xpert® HPV Test. This study is being conducted in Papua New Guinea, which has among the highest rates of cervical cancer globally, with an age-standardised incidence of 23.7/100,000 compared to 5.0/100,000 in Australia and New Zealand.
Methods Women aged 30–54 years attending two Well Woman Clinics are invited to participate and following informed consent procedures, complete a short interview, clinical examination, and provide self-collected and clinician-collected cytobrush specimens for clinic-based HPV testing. Women are given their cervical test result the same day. Those with a positive HPV test and a positive examination on visual inspection of the cervix with acetic acid are offered same-day cervical cryotherapy.
Results A total of 313 women were recruited to end-Feb 2015. There was 94.2% overall percentage agreement (OPA) between vaginal and cervical tests for all high-risk HPV (hrHPV) types; 100% OPA for HPV-16; and 99.7% OPA for HPV 18/45. Based on cervical test results, the prevalence of HPV-16 was 4.2% (13/313); HPV 18/45 was 1.6% (5/313); and other hrHPV, 11.8% (37/313). Overall, 15.7% (49/313) of participants had one or more hrHPV infection.
Conclusion Preliminary results suggest that self-collected vaginal specimens compare favourably to clinician-collected cervical specimens for the detection of HPV infection using the Xpert® HPV Test. If confirmed, this finding is likely to have significant implications for future HPV-based cervical screening programs in high-burden, low-resource settings worldwide.
Disclosure of interest statement Nothing to Disclose.

P10.03 ANAL HUMAN PAPILLOMAVIRUS (HPV) INFECTION AND ANAL INTRAEPITHELIAL NEOPLASIA (AIN) AMONG MEN WHO HAVE SEX WITH MEN (MSM) IN KUALA LUMPUR, MALAYSIA

I Azwa*, I Yee, N Hairunisa, CH Tan, S Harun. *Clinical Investigation Centre, University Malaya Medical Centre, Kuala Lumpur*

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Introduction MSM in particular HIV positive MSM have an increased risk of anal cancer. There is a paucity of data regarding anal HPV infection and high grade anal intraepithelial neoplasia (HGAIN) among MSM in Malaysia. The study is part of a larger regional collaboration with sites in Bangkok, Bali and Jakarta.

The aims of the study were to determine the prevalence, incidence and risk factors associated with high risk anal HPV infection and HGAIN among a cohort of MSM attending a screening site in Kuala Lumpur.

Methods 3 doctors received training in high resolution anoscopy (HRA). 52 MSM participants, 26 HIV positive and 26 HIV Negative, were enrolled into the study. Participants were screened at 3 time points – at baseline, 6 months and 12 months. Each participant completed a questionnaire on demographics, smoking and sexual history. Anal sample collection was then undertaken for liquid based anal cytology and anal HPV genotyping (Linear Array). This was followed by HRA and biopsy of abnormal areas. Patients with AIN 2 or 3 were offered treatment. Each participant was also screened for syphilis (RPR nad TPPA) at each visit.

Results The baseline results are presented. There were no anal cancers. The most common HPV genotype was HPV 16 in 17/52 (33%) participants. 39 (75%) had at least one high risk HPV infection. 26 (50%) had abnormal cytology. 9/52 (17%) had HGAIN (AIN 2 or 3). HGAIN correlated with high grade anal cytology (ASC-H or HSIL) in 6/9 patients. There was 1 newly diagnosed HIV infection. There were 6 incident syphilis infections. Demographic and sexual behaviour data and correlates of HGAIN will be presented.

Conclusion High risk anal HPV infection and HGAIN was highly prevalent at baseline within this cohort of Asian MSM reinforcing the importance of screening within this population.

Disclosure of interest The study was funded by grant from TreatAsia.

P10.04 A NEW PARADIGM FOR FOLLOW-UP OF MEN WITH ANAL SQUAMOUS CELL CANCER (ASCC)

[1]J Langton-Lockton*, [2]K Hesse, [2]A Carr, [2]AS Field, [1,2]RJ Hillman. *[1]Western Sydney Sexual Health Centre; [2]St Vincent's Hospital, Sydney*

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Introduction ASCC is the commonest non-AIDS defining cancer in HIV-positive men who have sex with men, with incidence rates of >100 cases/100,000. Five-year survival rates (65%) are closely related to tumour size at time of diagnosis. Post treatment local recurrence is common (33% of cases). Current follow-up protocols for local recurrence of ASCC are naked eye inspection and digital anorectal examination. Anal cytology and High Resolution Anoscopy (HRA) have been proposed as additional methods, as they have the ability to detect microscopic evidence of HPV-related lesions. We report findings following diagnosis of ASCC from a single hospital.

Methods Patients with ASCC who had at least one anal cytology test and/or HRA following initial diagnosis from 2001 to 2015 were identified. The HRA procedure includes an intra-anal swab for intraepithelial cytology, together with directly visualised HRA-guided anal biopsies for histopathology.

Results All 14 cases (13 intra-anal; 1 peri-anal) were male, with a mean age 56 years (44 to 68) at diagnosis, and 93% were HIV positive. Typical ASCC treatment was chemo-radiotherapy (86%). Two patients had follow up anal cytology/HRA but had not received treatment for their ASCC at time of analysis.

The first HRA following treatment was at a median of 9 months (range 2–48) and median follow-up after treatment was 24 months (range 2–72); with subsequent HRA follow up at 6–12 month intervals.

The most significant cytology/histology findings at follow-up were high-grade squamous intra-epithelial lesions (HSIL - 36%), low grade squamous intra-epithelial lesions (50%), and 14% completely negative. None had cytological or histological evidence of local ASCC recurrence.

Conclusion The use of anal cytology and HRA permit early identification of anal HPV-associated lesions, including HSIL. This has the potential to target those most at risk of ASCC recurrence. Further experience is needed to fully evaluate their role in long-term management.

Disclosure of interest statement No pharmaceutical grants were received in the development of this study.

P10.05 COST-EFFECTIVENESS OF SCREENING FOR ANAL CANCER USING REGULAR DIGITAL ANO-RECTAL EXAMINATIONS IN HIV-POSITIVE MEN WHO HAVE SEX WITH MEN

[1]J Ong*, [1,2,3]CK Fairley, [4]S Carroll, [2]S Walker, [2,3]M Chen, [2,3]T Read, [2,3]C Bradshaw, [5]A Grulich, [5]J Kaldor, [1]P Clarke. *[1]Melbourne School of Population and Global Health, The University of Melbourne; [2]Melbourne Sexual Health Centre; [3]Central Clinical School, Monash University; [4]Chris O'Brien Lifehouse, Sydney; [5]The Kirby Institute, University of New South UK*

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Introduction The optimal screening strategy for early anal cancer detection in men who have sex with men (MSM) living with HIV is unknown.

Methods We estimated the cost-effectiveness of regular anal examinations to screen for anal cancer in HIV-positive men MSM living in Australia using a probabilistic Markov model. Data sources were based on the medical literature and a clinical trial of HIV-positive MSM receiving an annual anal examination in Australia. The main outcome measures were undiscounted and discounted (at 3%) lifetime costs, life years gained, quality adjusted life years (QALY) gained and incremental cost-effectiveness ratio (ICER).

Results Base-case analysis estimated the average cost of screening for and management of anal cancer ranged from $195 for no screening to $1,915 for lifetime annual screening of men aged ≥50 years. The incremental discounted, QALYs gained ranged from 0.02 for 4 yearly screening to 0.03 for annual screening of men aged ≥50 years. Screening of men aged ≥50 years generated ICERs of $29,760 per QALY gained (for screening every 4 years), $32,222 (every 3 years), and $45,484 (every 2 years). Uncertainty for ICERs were most influenced by the cost (financially and decrease in quality of life) from a false positive result, specificity of the anal examination, the probability of detection outside a screening program and the discount rate.

Conclusion In settings where anal cytology for screening precursors of anal cancer is not available, screening for anal cancer by incorporating regular anal examinations into routine HIV care for MSM aged ≥50 years is most likely to be cost-effective by conventional standards.

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