### 27th International Papillomavirus Conference and Clinical Workshop Conference Review

Making Education Easy

17-22 September 2011, Berlin, Germany

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# **Welcome** to our review of the 27th International Papillomavirus Conference and Clinical Workshop, which was held in Berlin, Germany, 17–22 September, 2011.

The meeting was designed to meet two challenges i) the definition of future directions of papillomavirus research and ii) a transition of responsibility to young researchers – the next generation.

The Conference programme featured information on all essential topics and important aspects of papillomavirus research, presented by international experts and promising younger colleagues in the field. All presentations were peer reviewed to ensure the highest quality in content and relevance.

This Review has been created to allow those unable to attend, but with a keen professional interest in HPV-associated diseases, to access a summary of the most recent papillomavirus research and up-to-date background knowledge that are likely to increase your knowledge on clinical aspects or on public health-related issues in your ongoing or future practice. Selection and review of the research has been carried out independently by Dr Min Lo, MBChB FAChSHM (RACP), Specialist Sexual Health Physician.

We hope you find these abstracts interesting and helpful in your daily clinical practice.

### Kind regards,

#### Dr Chris Tofield

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### **Effect of Vaccine**

## Quadrivalent HPV vaccination and genital warts in Australia 2004-2010

Presenter: Grulich AE

**Summary:** Outcomes are reported from a national surveillance network set up to measure trends in clinical presentations in genital warts in Australia between 2004–2010, to assess the impact of a universal free vaccination program introduced in 2007 for all females aged between 12 and 26 years. Eight sexual health services provided nationwide data on 134,939 new patients between 2004–2010; 11,194 new cases of genital warts were identified. Before the vaccination program there was no change in the proportion of women or heterosexual men diagnosed with genital warts. To the end of 2010, there was a 73% decline in the proportion of young resident women diagnosed with genital warts (p-trend <0.0001) that is ongoing. In contrast, the 25% decline in young non-resident women only approached significance (p-trend=0.06), and there was no significant decline in genital warts among older women, or men who have sex with men. The proportion of resident heterosexual men diagnosed with genital warts (q-trend=0.06), and there was no significant decline in genital warts declined by 35% (p-trend <0.0001); the decline was greater (44%) among younger men.

Comment: See below.

#### Session 04. Prevention. Abstract O-04.01

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf

# Impact of vaccination on colposcopy referral and treatment rates

#### Presenters: Rodriguez AC, Schiffman M

**Summary:** The impact of adult vaccination on colposcopy referral and treatment is reported for 7,466 women aged 18–25 years vaccinated in 2004–5 in the Costa Rica Vaccine Trial with Cervarix or Hepatitis A. Women were followed for four years and those with cytological evidence of high-grade disease (HSIL+ or ASC-H) or persistent low-grade disease (LSIL and HPV+ ASC-US) were referred to colposcopy and treatment, as needed. After excluding women with evidence of high-grade disease at entry, the overall referral and LEEP treatment rates were 22.1% in the Cervarix arm and 3.5% in the Hepatitis A arm. Colposcopy referral was 11.5% lower and the treatment rate 27.4% lower among Cervarix recipients than in controls.

**Comment:** Since vaccination has begun, there have been several key publications demonstrating the decrease in occurrence of external genital warts, referral rates to colposcopy services and cervical disease. Australia was a key player in the development of the HPV vaccination and was the first country in the world to fund HPV vaccination. The article by AE Grulich outlined here shows early success for the vaccine with a decrease in the occurrence of genital wart diagnoses, and flow-on protection for heterosexual males. It is also clear that acceptance of vaccine is highly dependent on doctor/ nurse encouragement and this is a key obstacle for many.

#### Session 05. Cost effectiveness and awareness. Abstract O-05.01

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf



### **Vaccine Trials Update**

# HPV-16/18 vaccine: sustained immunogenicity and efficacy up to 9.4 years

#### Presenters: Naud P et al

**Summary:** Immunogenicity, efficacy and safety data for the HPV-16/18 ASO4 adjuvanted vaccine (HPV-16/18 vaccine) are reported up to 9.4 years for 437 healthy women (15–25 years at entry), oncogenic HPV DNA-negative, HPV-16/18 seronegative, and with normal cytology at baseline. According to annual ELISA and pseudovirion-based neutralisation assay (PBNA) measurements, all women remained seropositive for HPV-16 and HPV-18 antibodies. The vaccine demonstrated high and sustained immunogenicity and efficacy against HPV-16/18-associated endpoints, and had a clinically acceptable safety profile throughout the 9.4-year follow-up.

#### Comment: See below.

Session 18. Prophylactic vaccination: clinical studies. Abstract O-18.04 http://www.hpv2011.org/pics/1/4/Abstract%20Book%202%20APSC%20WEBB%20110922.pdf

### Postlicensure safety study of quadrivalent human papillomavirus vaccine in females

#### Presenters: Velicer C et al

**Summary:** This study was conducted in two US managed care organisations to assess safety of the quadrivalent human papillomavirus vaccine (qHPV) in females under routine use. A total of 189,629 females received  $\geq$ 1 dose of qHPV. Except for syncope on vaccination day (OR 6.0) and possibly cellulitis within 14 days of vaccination (OR 1.6) (some possibly representing injection site reactions), no safety signals were detected for any health event resulting in emergency room visit or hospitalisation within 60 days of receiving qHPV. No safety signals associated with autoimmune conditions or pregnancy outcomes were identified.

**Comment:** Long term-follow up of Phase 3 trials is ongoing. Both Gardasil and Cervarix trials are approximately 10 years old. The trial data for both vaccines continues to show very good efficacy, immunogenicity and safety profiles. There are some differences between the two vaccines.

Cervarix contains a novel adjuvant, ASO4, that is believed to generate greater antibody response compared to Gardasil. Although not proven, Cervarix might provide longer lasting protection. We probably don't have to worry too much about this as both vaccines result in immune memory and it is very unlikely a booster will be needed.

Gardasil protects against HPV types 6 and 11. While these are not associated with cervical cancer, it is clear that types 6 and 11 cause about 10% of low-grade cervical abnormalities. In practice, these can translate to a high burden in referral to colposcopy services, unnecessary intervention and anxiety for patients. Let's also not forget the warts.

In addition, the trials for nonavalent HPV vaccine (nine HPV types) is currently underway. Session 1: Prophylactic vaccines, Abstract O-01.02

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf

### **Alternate Dosing Schedules for HPV Vaccination**

# Two dose vaccine trial of Q-HPV: Results at 36 months

#### Presenters: Dobson S et al

**Summary:** 36-month follow-up immunogenicity data were detailed from this post-licensure trial that assessed three vaccine groups and two dosing regimens: Group 1, 9–13 years old–2 doses at 0, 6 months (n=194); Group 2, 9–13 years old–3 doses at 0, 2 and 6 months (n=187); Group 3, 16–26 year olds–3 doses at 0, 2 and 6 months (n=203). At 36 months, HPV-16 and 11 antibody responses following the 2-dose regimen were non-inferior to the 3-dose regimen, but not for HPV-genotypes 6 and 18, for which the lower bounds of the 95% CI were below 0.5.

**Comment:** The possibility of alternate dosing schedules for HPV vaccine is a cause for major excitement as this will have huge implications for resource-poor areas in terms of better coverage, reduced costs and better implementation. Could the vaccine be given at a much younger age? Can the vaccine be given in 2 doses and can the 3-dose schedule be varied? Currently, British Columbia has changed to a 2-dose (0,6) schedule and Mexico and Quebec have started a 0,6 60 schedule. Recent data from British Columbia on the 2-dose vaccine schedule shows that the immune response in younger girls is good and follow-up has occurred for up to 36 months. The data would indicate that older girls and women still require 3 doses. Further study is needed to monitor ongoing antibody response and efficacy against HPV disease. However, it would seem that alternative dosing schedules are entirely possible in young girls (12–15 years).

Session 18: Prophylactic vaccination: clinical studies. Abstract O-18.03 http://www.hpv2011.org/pics/1/4/Abstract%20Book%202%20APSC%20WEBB%20110922.pdf

### **Use of Vaccine for Other Indications**

# Laryngeal papillomatosis: immunological and clinical responses to HPV and vaccination

Presenters: Fromm T et al

**Summary:** Clinical and immunological effects are discussed for five patients aged between 5 and 64 years with persistent and recurrent respiratory papillomatosis (RRP), who were vaccinated with Gardasil after surgical removal of RRP. Patients had reduced regrowth of papillomas and treatment intervals increased. All vaccinees developed or boosted antibody responses to the L1 antigens of HPV-6, -11, -16 and -18. They also developed significant CD4 T cell responses that increased during the course of vaccination. **Comment:** See below.

#### Johnment: See Delow.

Session 13. HPV related benign diseases. Abstract O-13.02

http://www.hpv2011.org/pics/1/4/Abstract%20Book%202%20APSC%20WEBB%20110922.pdf

# Prevention of HGAIN with quadrivalent HPV vaccination of MSM

#### Presenters: Goldstone S et al

**Summary:** The efficacy of qHPV was evaluated in a cohort of 252 older men who had sex with men (MSM). More than half were high-risk HPV positive; over 40% had a history of high-grade anal intraepithelial neoplasia (HGAIN). Compared with unvaccinated men, vaccinees were half as likely to develop HGAIN (RR 0.53). Vaccine efficacy was 46.3% and the p-value approached significance (0.096). qHPV vaccination significantly reduced the risk of HGAIN recurrence in men with history of HGAIN (RR 0.30) and among patients with history of high-risk HPV (RR 0.53).

**Comment:** Can persons who already have warts, cervical or other anogenital disease be vaccinated? The answer is probably yes they can (but will have to pay for it). The rationale is as follows:

- As is already well established, vaccination does not cure or treat the existing problem (e.g., the warts or cervical lesion)
- It is possible for recurrent disease to be due to reactivation of latent infection rather than exposure to new virus
- HPV vaccine is sufficiently immunogenic in older women (age 45 to 55 depending on the study)
- A recent study with women older than 26 years receiving Gardasil vaccination showed a significant benefit and protection from reinfection and reappearance of disease even after therapeutic intervention for cervical or vulval disease. In other words, the study showed vaccination of women after lletz/cone procedure helped to reduce recurrence of abnormality [Joura EA et al. FUTURE I and II Study Group. Eurogin 2010, SS 4-3]
- There are now several case reports showing vaccination decreasing recurrence or reactivation of HPV in children with RRP [recurrent laryngeal papillomatosis], adults with external genital warts and men with high-grade AIN [anal intraepithelial neoplasia]
- Vaccination of older women can be recommended on an individual basis due to the absence of side effects and good protection.

### Session 18. Prophylactic vaccination: clinical studies. Abstract O-18.08

http://www.hpv2011.org/pics/1/4/Abstract%20Book%202%20APSC%20WEBB%20110922.pdf

### Colposcopy

### HPV negative at baseline: Risk of subsequent abnormal smears Presenters: Petry KU et al

**Summary:** 3,389 women (30–65 years) who were negative for HR-HPV (HC2) and had normal Pap smears at baseline were followed for 5 years with annual Pap smears within the German cervical cancer prevention program and had  $\geq$ 1 follow-up smear. The risk of atypical Pap smear findings ranged from 2.2% to 3.03% per screening round. The accumulated risk of receiving  $\geq$ 1 atypical Pap smear was 12.8% in women who underwent 5 subsequent annual screening visits. No CIN2+ cases were reported in the complete double negative group or among 96 randomly selected women undergoing colposcopy at study entry and another 296 participants at study end.

**Comment:** HPV testing has very good negative predictive value so it is pointless doing cytology on a woman who is negative for HPV at baseline.

#### Session 17. Cervical screening. Abstract P-17.36

http://www.hpv2011.org/pics/1/4/Abstract%20Book%202%20APSC%20WEBB%20110922.pdf



# The incremental benefit of taking multiple biopsies for detecting HGCIN

Presenters: Wentzensen N et al

Summary: Of 568 previously untreated women referred to the University of Oklahoma colposcopy clinic for abnormal screening results, worst diagnoses from biopsies were CIN3 (n=61), CIN2 (n=169), CIN1 (n=208) and no dysplasia (n=130). 116/383 women (30.3%) with a low-grade or benign colposcopic impression had CIN2+ in one of multiple biopsies. Converselv. 71/185 (38.4%) with a high-grade colposcopic impression had <CIN2 in their worst biopsy result. In 61.7% of women with CIN2+, the worst lesion was detected in the first biopsy, in 26.1% it was found at the second biopsy and in 12.2% it was detected in the third or fourth biopsies. Similarly, 68.9% of CIN3 were detected with the first biopsy, 21.3% with the second biopsy, and 9.8% with the third and fourth biopsies. Only one CIN3 was detected with a random biopsy (1.6%).

**Comment:** Colposcopy and single-targeted biopsy will pick up 70% of high-grade and miss 30% of prevalent high-grade [ALTS study]. The general consensus is that TWO biopsies significantly increases sensitivity of colposcopy. One targeted biopsy is not enough. 3+ biopsies do not improve results any further. Performing the second biopsy adjacent to the 'worst' area will increase the pick-up rate by another 20%. There is no need to do endocervical curettage. CIN3+ is rarely found in 'true random' biopsies, therefore the utility of doing 'random' biopsies is still being debated.

Session 15. Screening and patient management. Abstract O-15.02

http://tinyurl.com/biopsy-pick-up-rate

# HPV test of cure: Effective protection for 5 years

#### Presenters: Cruickshank M et al

Summary: Extended follow-up data are reported from a study (Kitchener et al, BJOG 2008;115:1001-7) in which women treated for CIN (365 CIN3; 326 CIN2; 217 CIN1 and 9 CGIN) underwent test of cure at 6 and 12 months' post-treatment with HC2 and LBC and were followed-up annually with cytology only. 70% of excised specimens had clear margins. At 6 months nonnegative cytology was found in 10.7% and 14.6% were HPV-positive. Among women who were HPV-negative post treatment, the cumulative rates of ASCUS+ from 12 months were 10.3%, 15.7% and 15.7% at 36, 60 and 84 months, respectively; corresponding values for HPVpositive women were 46.8%, 50.9% and 53.5%. Women who were HPV-negative at baseline had a cumulative CIN2+ rate of 2.6% at 60 months versus 12.6% for HPV-positive. Women who were HPV-positive/cytologypositive at 6 months had a RR of 7.8 for CIN2+ at 60 months compared with HPV-negative/cytology-negative.

**Comment:** The current guidelines recommend that women have two negative cytology/HPV results at 12 and 24 months before returning to 3-yearly screening, so it is good to know that in the future this could be modified further to one negative HPV test and a longer screening interval.

Session 19. Standard and experimental treatment. Abstract O-19.02

http://tinyurl.com/HPV-test-of-cure

### **HPV Primary Screening**

### HPV testing protects against CIN3+ in subsequent screening round Presenters: Meijer C et al

**Summary:** Outcomes are reported for 40,105 women aged 30–60 years who participated between January 1999 and September 2002 in the regular cervical screening programme in The Netherlands and were assigned to a control (conventional cytology) or intervention (HPV DNA/cytology co-testing) group. During the subsequent screening round after 5 years, HPV DNA/cytology co-testing was performed on both groups. Over two screening rounds, detection rates of CIN2+ were similar in the intervention and control groups. However, compared to the control group, more CIN2+ lesions were observed in the intervention group at baseline (RR 1.25; p=0.015), and fewer cervical cancer cases and CIN3+ at the subsequent round (RR 0.29; p=0.031 and RR 0.73; p=0.023, respectively).

#### Comment: See below.

#### Session 17. Cervical screening. Abstract O-17.01

http://www.hpv2011.org/pics/1/4/Abstract%20Book%202%20APSC%20WEBB%20110922.pdf

# **COBAS HPV test performance including HPV16/18 in cervical cancer screening**

#### Presenters: Stoler M et al

**Summary:** Of 41,955 US-based women aged  $\geq$ 25 years, whose cervical specimens were collected for liquid-based cytology (LBC) and HPV DNA testing by the cobas HPV Test, 10.4% tested positive for HPV and 6.4% had non-normal cytology. HPV testing was more sensitive for detection of  $\geq$ CIN3 than LBC (92.0% vs 53.3%; p<0.0001); this sensitivity remained after adjusting for verification bias (75.1% vs 43.2%). Co-testing increased diagnostic yield for  $\geq$ CIN3 by 5% and increased the number of screen positives by 36%. Triage strategies incorporating HPV-16 and/or HPV-18 detection alone or in combination with  $\geq$ ASC-US cytology yielded equal or superior performance for identifying HPV-positive women with  $\geq$ CIN3 compared to triage strategies based solely on non-normal cytology.

**Comment:** HPV DNA testing is more sensitive, more objective and better at detecting high-grade abnormality than cytology. HPV DNA testing is much more sensitive (90–100%) for CIN3 than cytology-based (50–75%), but is less specific. There is almost no doubt that HPV testing will in the future take over cervical cytology as primary screening for cervical cancer. Mexico is one of the first countries to adopt HPV testing in favour of cytology. The value of the HPV test is in its negative result. It is meaningless to perform cytology on a HPV-negative woman. One HPV test is also approximately equal to two pap tests; you are protected against CIN3 for twice as long. There is still some work to be done though. Important decisions are required as to how to triage positive HPV results, as HPV positivity is common and will often reflect nonpersistent and transient infection.

#### Oral poster presentations 201-236. Abstract OP-228

http://www.hpv2011.org/pics/1/4/Abstract%20Book%202%20APSC%20WEBB%20110922.pdf

### **Natural History**

# HPV infection incidence and duration in previously unexposed women

#### Presenters: Ramanakumar AV et al

**Summary:** A cohort of 553 women aged 15–25 years enrolled in the placebo arm of a randomised trial of the HPV-16/18 AS04 adjuvant vaccine were followed for up to 6.3 years. Infections with HR-HPV types were more common and lasted longer on average than those with low-risk types. Cumulative risks were greater with cervicovaginal than with cervical sampling. HPV detection exclusively in cervical samples persisted longer than that based on cervicovaginal samples. Incidence rates were higher among women aged 15–20 versus those aged 21–25 and women with multiple sex partners had generally higher infection rates than those with a single partner.

**Comment:** How long does infection last? This study confirms previous epidemiological data showing that high-risk HPV has a longer duration of infection than low-risk types; of about one 1 year.

Session 8. Natural history. Abstract O-08.02

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf

### HPV persistence and CIN2+ risk in the ARTISTIC trial

#### Presenters: Gilham C et al

**Summary:** The role of persistent ( $\geq$ 26 months) HPV infection in predicting the risk of CIN2+ was assessed, using liquidbased cytology and HPV genotyping data from 17,294 women in the ARTISTIC trial. Women with persistent infection had nearly 3 times the CIN2+ risk (OR 2.8) versus newly infected women: 21% of persistent infections developed into CIN2+ within 30 months of the second HPV test compared to 8% of new HR-HPV infections; 32% of persistent HPV-16 infections developed into CIN2+ compared to 11% of newly acquired HPV-16 infections. The CIN2+ rate among new infections was similar in women who were HC2-negative at entry (7.5%) and in women who had other genotypes which cleared (7.7%).

**Comment:** The vast majority of high-risk infection is transient and becomes undetectable by HPV DNA testing. Those that remain detectable for more than two years are termed persistent and have a significant risk of progression.

#### Session 8. Natural history. Abstract O-08.05

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf



# HPV infection and progression to CIN in young women

#### Presenters: Castellsagué X, Jaisamrarn U

**Summary:** This analysis of 4-year follow-up data from 9,247 women aged 15–25 years enrolled in the control arm of an HPV-16/18 AS04-adjuvanted vaccine trial demonstrates a high rate of progression to CIN (CIN2 in 8%, CIN3 in 3%) among those with prior confirmed 6-month persistent cervical HPV infection, compared to those with no such confirmation.

**Comment:** 15–25-year-olds who are HPV-positive have a high rate of abnormal cytology. They will also have a high rate of regression. Screening this population results in over-detection of infection that has minimal risk of progression to cancer.

#### Session 8. Natural history. Abstract P-08.17

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf

#### Males

# Prevalent detection of vaccine HPV types in men

#### Presenters: Palefsky J et al

**Summary:** The burden of HPV 6/11/16/18 infection was examined in 4,065 males aged 15–27 years enrolled in a trial evaluating qHPV efficacy. Among all men on Day 1, HPV-16 (5.4%) was the most common type detected in anogenital swabs, followed by HPV-6 (5.0%), HPV-18 (3.0%) and HPV-11 (1.5%); corresponding prevalence rates were higher for the 602 men who had sex with men (MSM): 13.8%, 13.4%, 8.1% and 6.8%, respectively. Seropositivity at baseline for any vaccine HPV type was 5.4% in HM and 26.3% in MSM. Seropositivity and/or PCR positivity to a vaccine HPV type was 11.4% in heterosexual men and 40.6% in MSM.

Comment: See below.

#### Session 6. Non-cervical sites. Abstract P-06.14

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf

# Duration of HPV 6/11/16/18 infection in males

#### Presenters: Giuliano A et al

**Summary:** The median duration of HPV 6/11/16/18 infection was assessed in 2,033 men aged 15–27 (1732 heterosexual men and 301 men who have sex with men) in the placebo arm of a qHPV vaccine clinical trial. Overall, the duration of prevalently detected HPV infections at enrolment had a longer median duration than infections that were newly acquired, regardless of the anatomic site of detection or sexual orientation.

**Comment:** With regards to males and HPV, the short answer is yes they should be vaccinated. The circular arguments around whether or not it is cost effective to include males exist only because the current cost of the vaccine is high. There would be no need to justify vaccination in the male population if cost was low. At present, heterosexual males receive some flow-on indirect benefit from a vaccinated female population. This is known as herd immunity. Herd immunity only works if more than 50% of the female population are vaccinated. At the current cost of the vaccine, if less than 50% of the females are being vaccinated then it is cost effective to include males in a vaccination programme. The reality is that Australia (and maybe the UK, which only uses Cervarix) is the only country that has achieved more than 50% vaccination coverage and most countries have no vaccination programme at all. Current data shows males have very good seroconversion to vaccination, safety profile and high efficacy in the prevention of HPV disease, namely external genital warts, penile and anal disease.

The argument to include males is gaining momentum as

- it is unfair to perpetuate HPV as a woman's issue
- It is not ethical for males to be excluded and not receive direct benefit
- · Males should not be perceived as 'mosquitoes' with 'carrier' status for a virus.

The argument to vaccinate MSM [men who have sex with men] is even stronger as this group of men receive no benefit at all and have a risk of HPV-related disease that is higher than for women.

#### Oral poster presentations 201-236. Abstract OP-232

http://www.hpv2011.org/pics/1/4/Abstract%20Book%202%20APSC%20WEBB%20110922.pdf

**Non-cervical Sites** 

### HPV genotype distribution in anal cancer worldwide

#### Presenters: Saunier M et al

**Summary:** In a worldwide series of 45 anal intraepithelial neoplasia (AIN) 2/3 cases and 445 invasive squamous cell carcinoma cases, HPV DNA was identified in 97% of AIN2/3 and 86% of invasive cancer cases. In invasive anal cancer cases, the HPV prevalence was 80% in men and 88% in women (p<0.05). The most frequently detected types (as in single infections) were HPV-16 (75%) and HPV-18 (4%). Multiple infections were detected in 7.4% of HPV-positive cases.

**Comment:** Current data shows that the HPV vaccine is effective in the prevention of HGAIN in both females and males. In New Zealand, Gardasil is approved (but not funded) for use in males 9–26 years. The U.S. Centers for Disease Control and Prevention's (CDC's) Advisory Committee on Immunization Practices (ACIP) recommends that boys 11 to 12 years old be vaccinated routinely.

#### Oral poster presentations 101-136. Abstract OP-134

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf

# Ongoing study on HPV detection in head&neck cancers worldwide

#### Presenters: Alemany L et al

**Summary:** This presentation outlined the procedure being undertaken in a study designed to estimate the worldwide HPV/DNA prevalence and type-specific distribution in head and neck cancers (HNC). Among over 2,000 head and neck cancer cases retrieved so far, 1,421 have undergone pathology evaluation and 1,156 HPV/DNA detection.

**Comment:** The conference had a strong focus on head and neck cancers. HPV is not just an anogenital disease. Watch this space.

#### Session 6. Non-cervical sites. Abstract O-06.07

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf

# HPV genotype attribution in vulvar intraepithelial and invasive lesions worldwide

Presenters: de Sanjosé S et al

**Summary:** HPV genotype distribution is described for a worldwide series of 1,571 histologically-confirmed vulvar high-grade intraepithelial (VIN2/3) and 524 invasive (IVC) lesions, of which 28.6% and 87% were HPV/DNA-positive, respectively. Among invasive cases, squamous cell carcinomas (SCC) with warty-basaloid features were more likely to be HPV-positive (61.8%) than pure SCC (10.6%; p<0.001). Cases aged <55 years were more likely to be positive, irrespective of histology. The most common types were HPV-16 and HPV-33 in all regions with the exception of Central South America, where HPV-16 and HPV-18 were the two most common types. Agreement between p16INK4a and HPV detection was 84% in SCC with 100% WB features; and 91.9% in pure SCC.

**Comment:** Ron Jones and Susan Bigby and a New Zealand Study Group have been collaborating with the Catalan Institute who analysed the Auckland vulval results.

#### Oral poster presentations 101-136. Abstract OP-133

http://www.hpv2011.org/pics/1/4/Abstract%20Book%201%20EP-PH%20WEBB%20110922.pdf

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