O-1 BARRIERS TO CERVICAL CANCER SCREENING AMONG WOMEN WHO HAVE BEEN ABUSED: AN EXPLORATORY STUDY

Jo Waller[1], Louise Cadman[2], Lesley Ashdown-Barr[2], Anne Szarewski[2]
[1]Epidemiology and Public Health, University College London, UK, [2]Centre for Epidemiology, Mathematics and Statistics, Wolfson Institute of Preventive Medicine, London, UK

Little is known about whether women who have been abused take part in cervical screening, despite their identification as a group at increased risk of cervical cancer. This study aimed to identify the barriers to cervical screening among women who have been abused.

A link to a survey was placed on the website of a British charity providing support and information for people who have been abused. This included questions related to demographics, their screening history, perceived barriers to participation, and suggestions for improvements to screening.

157 women aged 18-62 years with a history of abuse completed the survey over a 2 month period. Mean age was 35 (SD: 9.9). 87% had been sexually abused. 73% had participated in cervical screening but with only 52% screened within the last 5 years. The main barriers to screening were: 1) emotional responses to screening, including stigma and anxiety; 2) impact of abuse, including feelings of vulnerability and violation; 3) characteristics of the test itself, including pain and intrusiveness; and 4) past screening experiences, including inability to complete the test due to distress or flashbacks, and lack of sensitivity from health professionals. Women had a variety of suggestions for improving screening, including developing ways to make it easier for them to disclose their abuse, longer appointments to give time for discussion prior to the test, sensitivity and acknowledgement of their distress by the screener, and the use of self-testing, or the option to insert the speculum themselves.

O-2 THE IMPACT OF A TEXT MESSAGE SERVICE AND CELEBRITY DIAGNOSIS OF CERVICAL CANCER ON ATTENDANCE RATES AT A COLPOSCOPY UNIT

Teena Cartwright-Terry, Claire Stewart, Kate Sheldon, Hayley McCabe, John Kirwan
Liverpool Women's Hospital NHS Trust, Liverpool, UK

Background: Jade Goody died from cervical cancer in March 2009 aged 27. The "Jade Goody Effect" was credited with the increase in uptake of cervical smear and colposcopy. She was diagnosed in August 2008 with metastatic disease confirmed in February 2009.

Methods: The failure to attend rate (DNA rate), for both new patients and follow-ups was noted from April 2007 to September 2010. From September 2007 to December 2008 a text message appointment was sent. A monthly DNA rate by age was correlated with Jade's disease progression.

Results: Prior to the study, the DNA rate was 22% (new patients) and 10.5% (follow-ups). With the text reminder service in place the DNA rate reduced, the average monthly rate being 16.5% (new) and 9.2% (follow-up). This improved from April 2008 until the service ended, with the DNA rate 10.5% for (new) and 7.5% (follow up). In September 2008, the DNA rate halved in new patients from 12% to 6%; this was not reflected in the follow-up patients until October 2008 when the DNA rate dropped to 5.8%. With the confirmation of metastatic disease, the lowest DNA rates for new patients at 4.8% were seen. The DNA rates remained low for the following 12 months, average monthly rates becoming 8.8% (new) and 7.3% (follow-up).

Conclusion: Text messaging patients led to a small drop in DNA rate.

Jade Goody's widely publicised diagnosis with cervical cancer, its progression and her eventual death significantly impacted on the DNA rate particularly in the younger age groups.

O-3 CHANGES IN THE COLPOSCOPIC AND CYTOLOGICAL DIAGNOSIS AND MANAGEMENT IN WOMEN AGES 18-29 OVER A 10 YEAR PERIOD

Karl Olah, Valerie Ross-Gilbertson, Kathy Taylor
Warwick Hospital, Warwick, UK

Since 2000 there have been major changes in cervical assessment, with the introduction of LBC, and the cessation of cytological screening in the under 25 age group. The changes in the screening group has caused concern by some clinicians and a warning over the long term risks. This has prompted an analysis of the cytological findings in all women aged 18-25 in South Warwickshire during this time period, and also an analysis of the first smear taken in women since the change in policy after the age of 25.

The results show no excess of cervical cancers in this age group. The number of smears with 'high grade' cytology are similar, but with a change from 'moderate dyskayosis' to 'severe dyskayosis' as the predominent referral smear.

Colposcopically there has been a shift from the performance of excisional biopsies of mild abnormalities, and also a tendency to move away from'see and treat' policies, except in cases of severe dyskaryosis. The data also shows that before the changes in policy there was a disturbing number of LLETZ excisions for CIN and indeed, cases in which histology showed no significant pathology.

The introduction of cytological screening at the age of 25 years of age has led, in this population, to no additional malignancies, and no change in the percentage of 'high grade' cytology. However, there is a change in the proportion of cases considered 'severe'. However, this can be offset against the reduction in destructive intervention for trivial pathology of the cervix.

O-4 FACTORS ASSOCIATED WITH DISTRESS FOLLOWING COLPOSCOPY AMONG WOMEN WITH LOW-GRADE ABNORMAL CERVICAL CYTOLOGY: RESULTS FROM TOMBOLA

Linda Sharp[1], Seonaidh Cotton[2], Anne-Elie Carsin[1,3], Nicola Gray[2], Alison Thornton[2], Julian Little[4], Margaret Cruickshank[2]
[1]National Cancer Registry, Cork, Ireland, [2]University of Aberdeen, Aberdeen, UK, [3]Centre for Research in Environmental Epidemiology, Barcelona, Spain, [4]University of Ottawa, Ottawa, Canada

Background: Little is known about psychosocial after-effects of colposcopy and associated investigations and treatment in women with low-grade abnormal cervical cytology. We investigated distress following colposcopy and related procedures.

Methods: Participants were 989 women aged 20-59 with recent routine cervical cytology showing low-grade abnormalities, who were recruited to TOMBOLA and attended colposcopy. If the transformation zone (TZ) was abnormal, women had an immediate LLETZ or punch biopsies: if the punch biopsies showed CIN2/3, women were recalled for LLETZ. Women completed socio-demographic and psychosocial questionnaires at recruitment and before colposcopy. Six-weeks after the last procedure, women completed the Impact of Event Scale (IES). Multivariate logistic regression was used to determine factors associated with significant distress (IES≥9). Analyses were stratified by colposcopic assessment of the TZ.

Results: 728 women completed the IES (response rate 74%). 86 (21%) of 391 women with a normal TZ had significant distress, compared with 144 (42%) of 337 with an abnormal TZ. In both groups, significant distress was associated with anxiety pre-colposcopy and pain or discharge following colposcopy. Additional factors associated with distress in women with a normal TZ were worries about having sex and dissatisfaction with support from others. In women with an abnormal TZ, additional factors were age, histologically confirmed CIN2/3, bleeding following colposcopy, and worries about having cancer.

Conclusions: Colposcopy is associated with subsequent distress for a substantial proportion of women, even when the colposcopy is normal. This is an important outcome of cervical screening. Interventions to alleviate adverse psychosocial effects are urgently required.

O-5 HOW ACCURATE IS THE DATA WE OBTAIN FROM THE COLPOSCOPY DATABASE SYSTEMS? CAN WE REPLY ON THEM FOR QUALITY ASSURANCE?

Vaishali Joshi, Denis Tsepov, Sally Antoniades, Suzanna Morton, Theresa Freeman-Wang, Anne Jackson
Barnet and Chasefarm NHS Trust, Enfield, Middlesex, UK

QA Reference centre aim to ensure a quality service in line with the national standards. To facilitate this specialised IT systems are used to capture patient activity real time, generate statistics to demonstrate how the unit is functioning (KC65) and develop a report for QA visits. Out of a total of 31 units in London, 12 use CIMS and 7 use Irisoft or Mediscan or other stand alone systems.

There was some question following first two rounds of QA visits about the accuracies of the data obtained from these databases. The London QA team therefore set up a validation project, identifying six key questions for assessing the quality of care. For the third round of QA visits the different database systems were validated for these questions against notes or an alternative database.

The problems identified were, inaccuracies in data collection, interpretation of data, intrinsic problems with software (IT linkage) and technical support.

Other outcomes demonstrated how the DNA rate and cancellations affected the results, making it difficult to achieve the National standards.

The validation project was arduous but was felt to be valuable by the most of the units. QA assessors felt confident about the validation process and felt as their concerns about the data quality at the previous visits had been justified.

The authors wish to share these findings and discuss the London QA recommendations.

O-6 EPIDEMIOLOGICAL FACTORS ASSOCIATED WITH CERVICAL CANCER: A 15-YEAR REVIEW OF CASES

Esther Moss[1], Sarah Askew[2], Philippa Pearmain[2], Kavita Singh[1]
[1]Pan Birmingham Gynaecological Cancer Centre, Birmingham, West Midlands, UK, [2]West Midlands Cancer Intelligence Unit, Birmingham, West Midlands, UK

Introduction: The incidence of cervical cancer has fallen since the introduction of the NHS Cervical Screening Programme in 1988, however, over the past 10-years there has been a steady reduction in the number of women attending for screening.

Methods: A review of the epidemiological factors associated with women diagnosed with cervical cancer in the Pan-Birmingham cancer network between 1995 and 2009.

Results: In total 1507 women were diagnosed during the 15-year study period. The number of cases fell by 18.5% between

1995-1999 (561) and 2000-2004 (457) but rose by 7.0% in the 2005-2009 period (489). Age-standardised incidence rates demonstrated no significant difference between the first and last cohort (11.2-9.57 per 100,000 population, 95% CI 10.25-12.15 and 8.70-10.44 respectively). There was no difference in the median age at diagnosis or age distribution between the three time periods. The disease distribution by socio-economic status did not alter, with the majority of women belonging to the most deprived socio-economic group (52.2%, 53.0% and 51.7%). The percentage of squamous tumours did not change (70.8%, 70.5% and 70.3%), however, there was a reduction in the percentage of microinvasive as compared to frankly invasive squamous cancers (34.3%, 22.7% and 16.2%).

Conclusions: Despite a comprehensive cervical screening programme there has been only a non-significant reduction in the incidence of cervical cancer over the past 15 years suggesting that the existing programme may have reached its maximum efficiency. The reduction in microinvasive disease is probably a reflection of better diagnosis and treatment of pre-neoplastic cervical lesions via screening.

O-7 LIQUID-BASED CYTOLOGY COMPARED WITH COLPOSCOPY FOR THE FOLLOW-UP OF WOMEN IN COLPOSCOPY SERVICES IN WALES

Louise Pickford
Public Health Wales, Mold, UK

Objective: To determine the sensitivity of LBC smears alone versus colposcopy to detect cervical abnormalities in women attending for follow-up appointments

Design: A cross-sectional analysis of routine information held in an All-Wales colposcopy database about women's first colposcopic follow-up appointments

Population: A total of 31,608 women attending follow-up appointments in colposcopy services in Wales between 2004 and 2009

Methods: The records of women who had attended for a follow-up appointment (plus or minus previous treatment) between January 2004 and December 2009 were extracted from the colposcopy database.

Main outcome measures: The rates of cervical abnormalities were determined. The sensitivity of LBC alone to detect cervical abnormalities was compared with the sensitivity of colposcopic opinion and biopsy.

Results: The sensitivity of an abnormal colposcopic opinion for the detection of all biopsy-proven CIN 2+ was statistically significantly higher than that of an abnormal smear alone, for both previously treated and untreated women. In previously treated women the sensitivity was improved from 60% to 92%, whereas in untreated women, it was improved from 80% to 92.8%. The combination of cytology and colposcopy detected 97.9% of CIN 2+ in treated women and 99.5% in untreated women, but, 41% of biopsies taken after treatment were normal. In untreated women, over 99% of residual high grade disease would be detected by cytology alone within two years.

Conclusions: Colposcopy increases the detection rate of persistent or recurrent high grade abnormalities, but increases the number of false alarms. Cytology alone may be adequate follow-up for untreated women.

O-8 DEVELOPING RESOURCES TO SUPPORT GPS AND PRACTICE NURSES IN CERVICAL SCREENING AND HPV: PRELIMINARY RESULTS FROM SEMI-STRUCTURED INTERVIEWS IN THE ATHENS STUDY

Lisa McSherry[1], Stephan Dombrowski[2], Jill Francis[2], Judith Murphy[1], Cara Martin[3], John O'Leary[3], Linda Sharp[1]
[1]National Cancer Registry, Cork, Ireland, [2]Aberdeen Health Psychology Group, University of Aberdeen, Scotland, UK, [3]Coombe Women & Infants University Hospital, Dublin, Ireland

Background: GPs and practice nurses play a key role in cervical cancer prevention. Their knowledge and practices will have a major influence on the success of prevention strategies. ATHENS (A Trial of HPV Education and Support) aims to (1) develop practical resource(s) to support GPs and practice nurses in Ireland in relation to screening and HPV; and (2) test the efficacy of these resources in improving knowledge and influencing clinical practice. Here we describe the initial process in developing the resource(s).

Methods: Resource(s) will be developed through primary research based on theories of behaviour change and following MRC guidelines for developing complex interventions. In-depth semi-structured telephone interviews are underway with health professionals to identify key clinical practices/ behaviours that the resources will seek to influence, and associated barriers or facilitators for these behaviours.

Results: 26 interviews have been conducted (12 GPs; 14 practice nurses). Preliminary analysis shows that HPV infection is not widely discussed with patients. Reasons cited include professionals' lack of knowledge, unwillingness to embarrass patients and uncertainty about how to tackle the topic, leading to avoidance. Cost is perceived to be a major barrier to HPV vaccination in general practice. Professionals' awareness of HPV testing is limited; considerable uncertainty surrounds the role and clinical benefit of HPV testing. Additional interviews will be conducted; further analysis will link behaviours to theoretical constructs.

Conclusions: As well as facilitating best practice in relation to cervical cancer prevention, ATHENS will help to ensure that women receive the most up-to-date information and appropriate advice.

O-9 THE COST EFFECTIVENESS OF HPV-DNA TESTING IN PERSISTENT BORDERLINE SMEARS IN COLPOSCOPY

Ana Lima, Yuliya Ashton, Theresa Freeman-Wang, Ashfaq Khan, Narendra Pisal, Albert Singer
Whittington Hospital, London, UK

Aim: To evaluate the cost effectiveness of hrHPV-DNA testing in women referred to colposcopy with three consecutive borderline (BNA) smears.

Method: A two year retrospective review of 880 patients who attended a busy London Colposcopy department between April 2008 and March 2010. Data was collected from the MediScan® computerized database and the hospital cytology/ histology database Anglia ICE.

Results: There were three different groups of this study: an HPV test not performed in n=149 (17%). An HPV test was performed n=731 (83%). Of these 377 were HPV Positive (51.6%), 354 were HPV Negative (48.4%).

The average number of follow up appointments per patient was: 1.9(no HPV done) , 1.9 (HPV pos), 1.3 (HPV neg) respectively with a range of 1-7 appointments.

Forty-seven (5.3%) of the total 880 patients had a high grade cervical lesion. Only one patient of 354 (0.3%) HPV negative at referral, had CIN2 during the follow up period. This gives a negative predictive value of 99.7%.

The HPV test cost £50 per test. The cost of colposcopy was £267 (HRG). The average saving of HPV triage was £136.90 per patient. More detailed analysis will be presented of appointment and cost savings.

Conclusion: The prevalence of HPV Positivity with persistent BNA cytology is similar to that after a single BNA cytology. An HPV test is a reliable tool to safely discharge a patient referred with persistent BNA cytology after first appointment if the result is negative. If performed at first appointment, it allows a reduction in the number of follow up appointments.

O-10 EFFECT OF CONDOM USE AFTER CIN TREATMENT ON HPV POSITIVITY: A RANDOMISED CONTROLLED TRIAL

George Valasoulis[1], Maria Kyrgiou[2], Christina Founta[1], Sofia Melina Stasinou[1], Ioanna Tsoumpou[3], Marc Arbyn[4,5], Pierre Martin-Hirsch[6], Petros Karakitsos[7], George Koliopoulos[1], Evangelos Paraskevaidis[1]
[1]Department of Obstetrics & Gynaecology, University Hospital of Ioannina, Ioannina, Greece, [2]Department of Obstetrics and Gynaecology, Queen Charlotte's and Chelsea Hospital, Hammersmith Hospital, London, UK, [3]Department of Obstetrics and Gynecology, University Hospitals of South Manchester, Manchester, UK, [4]Unit of Cancer Epidemiology, Scientific Institute of Public Health, Brussels, Belgium, [5]European Cooperation on Development and Implementation of Cancer Screening and Prevention Guidelines, IARC, Lyon, France, [6]Department of Obstetrics and Gynaecology, Central Lancashire Teaching Hospitals, Preston, UK, [7]Department of Cytopathology, Attikon Hospital, University of Athens, Athens, Greece

Objective: to determine whether consistent condom use after treatment of CIN reduces HPV positivity post-operatively and possibly as a result, the risk of treatment failure.

Materials & Methods: Design: Single-blinded randomised controlled trial.

Inclusion criteria: Women planned to undergo LLETZ for CIN.

Intervention: Women randomly allocated to Group A were given recommendation for condom use, whilst women in Group B received routine information. An LBC sample was tested for HPV typing, E6 & E7 mRNA (NASBA technique), E6 & E7 mRNA by flow cytometry, $p16^{INK4a}$ and microspectroscopy at 0 (pre-treatment), 6 and 12 months. A questionnaire to assess compliance was also completed.

Outcomes: The relative risk (RR) and absolute RR (ARR) were calculated in an intention-to-treat analysis. The number needed to treat (NNT) and compliance were also assessed.

Results: A total of 204 women were recruited, 98 in Group A and 104 in Group B. The positivity for all the tested markers at follow-up was significantly reduced in Group A ($p<0.05$). In particular, 32% (31/98) of women tested positive for HPV in Group A in comparison to 61% (65/104) in Group B [$p<0.0001$; RRR: -0.484; ARR: -0.297; NNT: 3). Consistent compliance with condom use was notably low (59%).

Conclusions: Post-treatment condom use significantly reduces HPV positivity at 6 months and as a result possibly the risk of treatment failure. However, compliance, particularly after 6 months, is difficult. It remains uncertain whether HPV vaccination might be effective in women that test negative for HPV after treatment.

O-11 THE MANAGEMENT OF UNRESOLVED COLPOSCOPY BY HUMAN PAPILLOMAVIRUS (HPV) TESTING - THE MUCH STUDY

Julie Bowring[1], Rebecca Albrow[2], Ann Fisher[3], Gabrielle Downey[4], John Cullimore[5], Henry Kitchener[2], Patrick Walker[1]
[1]The Royal Free Hospital, London, UK, [2]School of Cancer and Enabling Sciences, University of Manchester, Manchester, UK, [3]Queen Elizabeth Hospital, Gateshead, UK, [4]Birmingham City Hospital, Birmingham, UK, [5]Great Western Hospital, Swindon, UK

Introduction: U.K Colposcopy services are seeing increased workloads with a large proportion being follow-up appointments. The NHSCSP HPV Special Interest Group have identified women who often require prolonged follow-up regimes into five sub-categories; persistent minor cytological abnormalities or CIN1, low-grade abnormalities following a history of treatment for cervical intraepithelial

neoplasia (CIN), minor cytological abnormalities following hysterectomy, women experiencing difficulties during cytological testing and cases where histological results suggest low-grade abnormalities in the presence of high-grade cytology.

Methods: Four colposcopy clinics prospectively identified women according to the five MUCH categories over 12 months. All women underwent cytological testing and High-Risk (HR) HPV testing (Hybrid Capture 2). Management was at the clinician's discretion and outcomes for women were recorded. Decisions based on knowledge of the HPV status were documented.

Results: Data available on 755 women tested shows 422/755(56%) and 260/755(34%) had persistent CIN1 (category 1) or a minor abnormality following treatment (category 2) respectively. In categories 1 and 2, 212/422(50.2%) and 151/260(58%) were HPV negative, and of these 208/212(98%) and 145/151(96%) had low-grade cytology or less. The rate of high-grade disease (≥CIN2) in HPV negative women across the two categories was 2/363(0.5%), in HPV positive women the rate was 21/298(7.0%).

Conclusion: This study shows that the majority of women with persistent low grade disease or minor abnormalities following treatment could be returned to routine recall based on their HR HPV negative status. This reduces patient inconvenience and anxiety, reduces the burden on colposcopy clinics, and consequently could be cost saving.

O-12 QUICK SELF SAMPLING HPV DNA TEST BY VAGINAL TAMPON TO DETECT HIGH GRADE CEVIAL PRE-CANCER

Ashfaq Khan[1,2], Theresa Freeman-wang[1], Narendra Pisal[1]
[1]Whitington Hospital NHS, London, UK, [2]Institute of Child Health, University College London, UK

Objective: To evaluate the effectiveness of Self sampled HPV DNA collected by ordinary tampon to detect High Grade CIN.

Method: It is a multicentre multinational double blinded prospective study.

Study period: Ongoing since August 2010

Inclusion Criteria: Women with all grades of abnormal smears or with suspicion of cervical disease referred for colpscopy.

Women were asked to insert an ordinary tampon by themselves which were removed after a minute prior to colposcopic examination. Further samples were collected from cervix with Digene kit brush. Colposcopy directed biopsy were taken where indicated.

HPV DNA was detected from tampon by a special type of PCR test. Hybrid capture was used to detect HPV from the brush. Genotyping was on positive cases. 10 women refused to use tampon.

Result: 270 samples were initially analysed. 163/270 (60.37%) were tested positive by HC2 and 152/270(56.2%) by Tampon test. Punch or Cone biopsy detected 44 cases of ≥CIN2. HC2 missed 3 cases while tampon test missed 5 cases.

	HC2	Tampon
Sensitivity	93.18	88.1
Specificity	29.89	44.1
PPV	13%	15%
NPV	98%	97%

269/270 found the test very user friendly.

Conclusion: Interim report suggests HPV test by tampon is a quick, user friendly and as effective as HC2 to detect HPV and HG CIN. This 'DIY test 'can be useful among the non responder, under- screened population. Final report on 500 samples will be ready by April 2011.

O-13 DOES SPECIMEN FRAGMENTATION DURING LARGE LOOP EXCISION OF THE TRANSFORMATION ZONE INCREASE CYTOLOGICAL TREATMENT FAILURE

Rasiah Bharathan, Arvind Subramanium, Balvinder Sagoo, Andrew Fish, Peter Larsen-Disney, Anthony Williams
Royal Sussex County Hospital, Brighton, East Sussex, UK

Objective: This study was designed to assess whether fragmentation of LLETZ specimens influences the cytological outcome at 6 months following treatment.

Method: This retrospective study was performed at a cancer centre. Women who underwent LLETZ for suspected high grade CIN over a five year period were included. Any specimen where cancer or diathesis of cancer was suspected were excluded. Patients were identified through a regional database. Data was obtained from hospital and regional database. Fishers exact test was used.

Outcome measures: Primary - Percentage of LLETZ specimens obtained intact or fragmented, and cytological outcome at 6 months following treatment. Secondary - risk factors for LLETZ fragmentation.

Results: 75% of all specimens were obtained intact. Where a single piece was removed, 89% of smear tests were reported as negative, against 86% where the transformation zone was removed in multiple pieces. Fragmentation of LLETZ specimen leads to significant increase in high grade smear outcome at 6 months (2.6% V 6.2%). Specimen fragmentation is also significantly associated with adverse histological features such as positive endocervical margin and indeterminate margins. Trainee grade of colposcopist significantly increases the probability of LLETZ fragmentation.

Conclusion: Fragmentation of LLETZ specimens does not influence the probability of obtaining negative smear test, but it is associated with significant increase in the risk of obtaining a high grade smear at 6 months post treatment.

O-14 FOURIER TRANSFORM INFRARED MICROSCOPY CAN SEGREGATE DIFFERENT TYPES OF EXFOLIATIVE CERVICAL CYTOLOGY A NOVEL SCREENING TECHNIQUE

Nikhil Purandare[1,3], Gunther von Bunau[1], Noel Bolger[1], Karen Farrar[2], Imran Patel[3], Julio Trevisan[3], Pierre Martin-Hirsch[3], Frank Martin[3], Walter Prendiville[1]
[1]Coombe Women's Hospital, Dolphins Barn, Dublin 8, Ireland, [2]Adelaide and Meath Hospital, Tallaght, Dublin 24, Ireland, [3]Department of Biomedical Sciences, University of Lancaster, Lancaster LA1 4YW, UK

Current screening methodologies for screening for precancer of the cervix involves, sampling exfoliated cervical cells, and then using liquid based cytology. The implementation of cervical screening programmes has been highly successful yet the PAP smear used lacks sensitivity and specificity. It has a sensitivity of 59%and a specificity of 69%. Cytology is laborious and expensive. There is a need to replace it with a robust, cheap and less laborious method of screening.

Cervical cytology samples were collected in Thin Prep (Preserv Cyt[tm]). Fourier Transform Infrared Microscopy (FTIR-ATR) was employed on a prepared sample of exfoliative cervical cytology. These slides were placed under a diamond crystal and exposed to IR rays. Ten readings were obtained from each slide. The Infrared rays on the cervical cells produced a biochemical fingerprint from the absorbance and reflectance of rays from the biochemical components of the cells.

The use of these biomarkers in the IR spectral region of 1200cm-1 -950-1, namely carbohydrates, phosphate and glycogen facilitated the differentiation between different categories of cervical cytology namely normal, low grade and the high-grade variety.

Two hundred and thirty cytology samples were collected. One hundred samples were normal, one hundred were low grade and 30 were high grade as per the cytological diagnosis. They were then examined by FTIR-ATR Spectroscopy. Statistical analysis was done using LDA (Linear Discriminate Analysis). This work demonstrates the potential of ATR micro spectroscopy coupled with multivariate analysis to be an objective alternative to the PAP smear.

O-15 IMPROVED DETECTION OF HIGH GRADE CIN IN WOMEN UNDERGOING COLPOSCOPY USING ELECTRICAL IMPEDANCE SPECTROSCOPY

John Tidy[1], Brian Brown[1], Jamie Healy[1], Sai Daayana[2], Henry Kitchener[2]
[1]Royal Hallamshire Hospital, Sheffield, UK, [2]St Mary's Hospital, Manchester, UK

Objectives: To determine if use of an Electrical Impedance Spectroscopy (EIS) device improves detection of high grade CIN.

Methods: 191 women with abnormal cytology were recruited at two clinics. Referral cytology: severe (64), moderate (30) and mild dyskaryosis (41), borderline (45), ASC-H (7), ?invasive (1), glandular neoplasia (2) and AGC-US (1). 72% of borderline and mild dyskaryosis were positive for high-risk HPV. Mean age: 34 years (23-60 years), 7 were post-menopausal.

The EIS device - APX100 - was used to take 12 readings from the cervix before and after the application of acetic acid. Examinations were recorded to produce a colposcopic diagnosis for each APX100 reading and a measure of the accuracy of directed biopsies. EIS spectra are compared with reference modelled spectra deriving a measure of probability that high grade CIN is present at a site. Probability values are compared with the colposcopic diagnosis to determine the agreement between the two methods.

ROC curves were derived to discriminate high-grade CIN (>CIN1) from other cervical tissue types, pre- and post-acetic acid (AA), at each reading site. AUC were 0.77 (pre AA) and 0.79 (post AA). Comparison showed no significant difference, indicating application of AA does not produce a large change in spectra. PPV for colposcopy was 69% (cut-off of >CIN1).

Conclusions: This study has confirmed our work demonstrating EIS can discriminate between high-grade CIN and other cervical tissues. The next stage is to use the APX100 device with colposcopy to improve the selection of biopsy sites and improve PPV.

O-16 EXAMINERS' PERCEPTION OF OBJECTIVE STRUCTURED EXAMINATION IN COLPOSCOPY

Najum Qureshi
Birmingham Women's Hospital, Birmingham, UK

Certification in Colposcopy by the British Society for Colposcopy and Cervical Pathology (BSCCP) and the Royal College of Obstetricians and Gynaecologists is a formal pre-requisite to the practice of Colposcopy within the UK. This certification is awarded after passing an Objective Structured Clinical Examination (OSCE). The aim of the project is to explore examiners' perceptions of the OSCE examination in Colposcopy and consider whether it is the right tool to differentiate between safe and unsafe practice in Colposcopy.

A case study research methodology was employed for the project and questionnaires were sent to thirty examiners for OSCE in Colposcopy. The project also included conducting semi-structured interviews with two examiners, two trainees and a senior manager of the BSCCP. The questionnaire had a response rate of 28 (94%). The satisfaction rate among the examiners about the standard of questions in OSCE in Colposcopy was 93% and 89% of the examiners would allow a candidate passing the examination to carry out a clinic in their absence. A total of 26 (94%) of examiners thought that the examination was fit for purpose. It was suggested that testing of practical skills should also be made part of the examination.

P-1 'BORDERLINE CANNOT EXCLUDE HIGH GRADE DYSKARYOSIS' REFERRALS TO COLPOSCOPY: A WEST MIDLANDS-WIDE AUDIT

Sarah Askew, Philippa Pearmain
West Midlands Cancer Screening QA Reference Centre, Birmingham, UK

Although this category of result is uncommon, an increase in 'borderline cannot exclude high grade dyskaryosis' referrals (BNC?HG) to colposcopy was reported during QA Team visits. Due to the difficulties associated with the clinical management of these patients, a baseline assessment of administrative, pathological and clinical practice was undertaken within West Midlands laboratories and colposcopy clinics based on referrals received between 1 April 2008 to 31 March 2009.

Methods: Two short questionnaires were distributed to laboratory and colposcopy services. Data were requested from each laboratory including the number of these tests reported, subsequent histological outcome and the coding used for reporting. Information on how these referrals were recorded onto the colposcopy database, offered appointment timescales, anticipated clinical management and usual follow up was requested from all colposcopy clinics. Both questionnaires asked if these referrals were discussed at MDT.

Results: 246 tests (0.07% of all tests reported in 2008/09) were reported as BNC?HG during this time period with 44.3% of referrals having a subsequent high grade histological outcome. Results showed wide variation in the use of this category and the histological outcome across services, disparities in coding between the laboratory and colposcopy and differences across and within Trusts regarding offered appointment waiting times, clinical management and MDT discussion criteria.

Conclusion: Local policies regarding 'borderline cannot exclude high grade dyskaryosis' referrals must be established to ensure consistency across Trusts and to avoid differences in approach between laboratory and colposcopy services that affect the clinical management and information women receive.

P-2 AUDIT OF BORDERLINE GLANDULAR AND ?GLANDULAR SMEAR

Lily Aung, S Sanikop, S Islam, R Gonsalves, S Parveen
Royal Gwent Hospital, Newport, GWENT, UK

A retrospective audit of borderline glandular and ?glandular smear was done from 1/1/2007 to 31/12/2008. Threr were 72 women: 26(36.1%) with borderline glandular and 46(63.9%) with ?glandular smears.

All(100%) borderline glandular and 45(97.8%) women with ?gladular smear received colposcopy appointment appropriately.

Boederline Glandular Smear

All women (100%) underwent colposcopy.

LLETZ was performed in 11/26 (42.3%) of the women and histology of 6 women showed cervical intra-epitheial noeplasia (CIN)/cervical glandular intraepithelial neoplasia(CGIN) and no CIN in 5.

Pipelle endometrial sampling was performed in 16(61.5%) women and histology was normal in 15 women and 1 showed atypical hyperplasia.

6 women had ultrasound scan(USS), 5 showing normal findings and 1 showed endometrial polyp.

?Glandular Smear

7(15.2%) of the ?glandular smears were reported as atypical endometrial cells and 2 of these had postmenopausal bleeding.

44/46 were seen in colposcopy and 2 patients were seen in rapid access clinic because of postmenopausal bleeding.

34(73.9%) women underwent LLETZ and 29/34(85.2%) histology's showed High Grade Lesions : 16 CGIN,7 CIN3 and 2 CIN 2. 3 women had knife cone /LLETZ and one had hysterectomy.

34(73.9%) women underwent pipelle sampling/hysteroscopy and 9 showed endometrial carcinimas. 16/46(34.8%) had USS.

Totally 14(30.4%) malignancies were seen in women with ?gladular smear :9/46(19.5%) endometrial carcinomas,4/46(8.7%) cervical carcinoma and 1/46(2.1%) carcinoma of ovary.

In conclusion, all women received appointment appropriately and investigated appropriately.

6 women with borderline gladular smear showed CGIN/CIN and positive predictive value was 23.8%.

Women with ?glandular smear showed 14 malignancies and 29 CGIN/CIN and PPV was 41/46(89.1%).

P-3 THE COLPOSCOPY ATSM ~ A SURVEY OF CURRENT SPECIALIST REGISTRARS

Julie Bowring[1], Heather Evans[1], Deidre Lyons[2]
[1]The Royal Free Hospital, London, UK, [2]St Mary's Hospital, London, UK

Within Obstetric and Gynaecology training, supervisors have become aware that very small numbers of Specialist Registrars are currently choosing the Colposcopy Advanced Training Skills Module (ATSM) in their final two years of training.

A small survey has been conducted among a group of Obstetrics and Gynaecology trainees in the North London Region to investigate this further. The aim of the survey was to explore the possible reasons behind their ATSM choices and how current trainees regarded the Colposcopy ATSM in its current format. A double survey was carried out asking trainees in years ST6-7 what motivated them to pick their chosen ATSM's, in addition trainees in years ST3-5 were asked what their perceptions of the colposcopy ATSM were and whether they were considering to take it in the future.

Results showed only a small number of trainees had actually considered the Colposcopy ATSM before making their final choices and that 3 out of ten trainees in years ST3-5 were considering the ATSM in the future. There seemed to be confusion as to how the ATSM could be obtained, but the desire was there for BSCCP accreditation to remain available for more junior trainees in years ST3-5. The majority of trainees felt the ATSM should be combined with another related Gynaecological sub-specialty to make it more attractive from a future post point of view.

P-4 A PILOT STUDY TO ASSESS THE SWEDE SCORE COLPOSCOPIC SCORING SYSTEM WITHOUT THE KNOWLEDGE OF PATIENT REFERRAL CYTOLOGY

Julie Bowring[1], Deborah Gould[2], Suzan Soliman[2], Deidre Lyons[2], Patrick Walker[1]
[1]The Royal Free Hospital, London, UK, [2]St Mary's Hospital, London, UK

Objectives: Colposcopic scoring systems aim to increase accuracy by improving detection of high-grade disease. Knowledge of referral cytology however may be a more influential factor in colposcopic assessment. The Swede Score has shown encouraging results from earlier validation studies, a pilot study to assess the scoring system's performance in the absence of referral cytology has been carried out.

Methods: A prospective 5-month pilot study was conducted between St Mary's Hospital and The Royal Free Hospital. New patients undergoing diagnostic colposcopy were included. The Swede Score was performed at the time of examination by two colposcopists, one of whom was masked from the patient referral information. Both scores were compared with the final histological diagnosis following directed biopsy.

Results: Out of 37 women, 30 had histological results available for review (4 cases of high-grade disease, 6 low-grade cases and 20 with less than CIN1). Using a cut off score of ≥6 for high-grade disease, colposcopists aware of the referral cytology correctly identified 3 out of 4 cases of high-grade disease but incorrectly gave a high-grade score or high-grade impression to 4 women. The 'masked' colposcopists correctly scored 3 out of 4 cases of high-grade disease, in two cases scored women as high-grade when no disease was present.

Conclusion: Using the Swede Score 'masked' colposcopists correctly identified the same number of high-grade cases compared to those aware of the referral cytology. A study is currently ongoing to fully assess the predictive ability of the Swede Score when masked from referral cytology.

P-5 REFERRAL TO COLPOSCOPY WITH CLINICAL INDICATIONS - FINDINGS, OUTCOME AND MANAGEMENT

Mohammad Aziz, Shabana Sayed, Deirdre Lyons
Imperial College Healthcare NHS Trust, London, UK

Introduction: Referrals to Colposcopy form a significant percentage of the Colposcopy workload. Women are referred for a variety of reasons and triaged into Clinical Indications - Urgent and Non- Urgent.

Methods: There were 571 referrals to Colposcopy over a two year period with Clinical Indications. This represented 21% of overall workload. These were subdivided into Clinically Urgent (52.7%) and Clinically Non-urgent (47.3%). Each subcategory was analysed with regards to indication for referral, demographics, findings and outcomes.

Results: Among the Urgent referrals, post coital bleeding (PCB) and an abnormal cervical appearance accounted for 39% and 37.5% of referrals respectively. Cytology at referral was normal in 95% of women.

Out of the Non-urgent referrals, post coital bleeding represented 22% of cases whereas an abnormal cervix was the indication in 40%. Cytology had been negative in 92% of women.

Analysis of outcomes from 'Urgent' group show HPV changes in 22% of biopsies,CIN1 in 4% and CIN2,3 in 2% of the urgent referral group. There were 3 patients diagnosed with cervical cancer in the same group.

In the non-urgent group the results show HPV changes in 21%,CIN1- 2% and CIN2,3 - 2%.There was one patient diagnosed with micro invasive cancer.

Conclusion: 50% of patients referred urgently for colposcopy were found to have abnormality in the cervical biopsy ranging from mild HPV changes to benign polyps to invasive cancer of the cervix.

In the non-urgent group the abnormalities of the cervical biopsies numbered 43% including one invasive cancer. 5% of referrals due to inability to locate cervix - all were discharged after one visit

P-6 RESULTS OF A COLPOSCOPY TRAINEE

Aderemi Alalade, Rabia Zahid, Simon Leeson
Department of Obstetrics and Gynaecology, Betsi Cadwaladr University Health Board, Bangor, Wales LL57 2PW, Bangor, UK

Objective: Highlight areas of deficiency or excellence in the present training curriculum.

Design: Questionnaire survey carried out among colposcopy trainees

Results: There were 23 respondents; eighteen were training for the treatment module. Three respondents experienced difficulty obtaining training. The median time to gaining a training place was five months. Two respondents felt they did not get enough clinics for their training requirements, four respondents had difficulty obtaining cytology and histology sessions. Seven respondents had difficulty with the log book of which six used the elogbook. One respondent had difficulty completing the required work based assessments. One of 16 respondents experienced problems booking the exit OSCE. All respondents but one expressing a preference felt the length of training was adequate.

Discussion: The present curriculum and examination is designed to standardise training. Comments made about the e-logbook include- "too complicated; inability to mix new and review cases as the trainee wishes". Other problems regarding training in general include difficulty getting the required number of cases due to insufficient training clinics, difficulty obtaining required numbers of new referrals with high grade lesions, inability to add referrals for non-abnormal cytology and difficulty adding cases with other treatment modalities. Trainees suggested on-line courses, interactive sessions on the BSCCP website, a trainees' blog to discuss interesting cases and protected time for the ATSM as ways to address these problems.

Conclusion: Most trainees felt the current system was structured and addressed training needs. Modifications to address concerns as stated will help further improve training and trainee satisfaction.

P-7 INCOMPLETE EXCISION AND FOLLOW UP OF PATIENTS TREATED WITH LOOP EXCISION BIOPSY

Roopa Bangari, Dan Zamblera, Dhiraj Uchil, Ola Folayan
University Hospital Lewisham, London, UK

Aims: To assess the long term outcome and compliance of women with incomplete Excision after loop excision biopsy(LLETZ).

Methods: Retrospective analysis of women with incomplete excision of LLETZ over 6years.

Results: Of 584 women who had LLETZ between 2004-2005, 20% had incomplete excision on histology. In the incomplete excision group, high grade CIN/ CGIN was found in 87% of the women. Incomplete excision at ectocervical margin was found in 44% and at the endocervical margin in 44%. Incomplete excision at both margins 12%. In 22% crypt involvement was described.

At 6 month follow up 61% had normal smears and only 3% had severe dyskaryosis. However 23% of patients did not attend for follow up. Treatment was required in 10% of these (5% needed LLETZ, 2.5% required cone biopsy, 2.5% had hysterectomy).

At 5-6 yrs 53% were lost to follow up. Of 47% who attended, 79% of these had normal smears and 5% required further treatment. Over the 6 years in women with crypt involvement, only 27% had normal smears, 27% had abnormal smears and 15% required further treatment.

In all women who required further treatment, 11 had an incomplete excision at the endocervix and only one was at the ectocervix.

Conclusion: CIN at the resection margins is a risk factor for recurrent disease. The risk is increased with incomplete excision at the endocervical margin and also significantly increased with crypt involvement.

P-8 CONE BIOPSY: A RETROSPECTIVE REVIEW OF 7 YEAR UNIVERSITY HOSPITAL LEWISHAM

Roopa Bangari, N Agrawal, D Zamblera, O Folayan, A Jolaoso, D Uchil
University Hospital, Lewisham, London, UK

Introduction: Cone biopsies are used for diagnostic and therapeutic purposes including the presence of high grade cytology with normal colposcopy, women with glandular abnormalities and fertility-saving treatment for early carcinoma cervix. We reviewed cone biopsies performed in our unit to assess indications and outcomes.

Methodology: Retrospective review of cone biopsies performed at University Hospital Lewisham between 2003-10. Data was obtained from the dedicated colposcopy database (Compuscope).

Results: Notes of 56 patients who underwent cone biopsy were reviewed. Two-thirds of women were between 25-44 yrs, with 3 women <25 yrs at treatment. The referral smear was high grade in 29 (53.5%), possible invasion in 5(8.9%) and glandular abnormality in 9 (16%). The initial colposcopic impression was high grade in 36 (64%) of cases. Thirty women had undergone LLETZ prior to cone biopsy. Of these, 9 had CGIN, 13 had involved margins and 5 showed invasive disease. Histology of cone biopsy showed no evidence of CIN in a third, with the rest showing high grade or invasive disease. The margins were involved in 13 cases (23.2%). Follow up smear was normal in 34 women (60.7%) with only 1 woman having high grade smear. Seven women underwent hysterectomy in this group.

Conclusions: Cone biopsy remains a very useful diagnostic and therapeutic tool. In our series nearly a third of women did not have residual disease in the specimen. This also highlights occurrence of severe high grade abnormalities in the < 25 year group who are currently not subjected to routine screening.

P-9 COLPOSCOPY INTERPRETATING SERVICES - WHERE ARE WE GOING?

Jessica Hall, Pavandeep Sidhu, Omar Sany
Walsall Manor Hospitals, Walsall, UK

Background: Recent changes in immigration trends pose new challenges for colposcopy services in the West Midlands area. Data are needed to inform provision of services to migrant groups and to ensure their access to appropriate health care.

Aims/Objectives: To determine the trend of professional medical interpreters use in the colposcopy clinic setting for patients with limited English proficiency (LEP).

Methods: Retrospective study utilising colposcopic database between 2005 -2008 were analyzed. Data items include patients' demographics and choice of language in relation to smear referrals and colposcopy findings.

Results: 68 patients attended colposcopy clinic on 134 occasions requiring interpretating services during the study period. The trend of professional medical interpreters use is increasing in each year studied: 5 in 2005, 32 in 2006, 56 in 2007 and 41 in 2008 (6 months data). Main language used were from Eastern European (29.1%: Polish, Czech, Serb Croatian Slovakian) followed by Western European (23.9%:French, Portugese, Russian) and Asian (14.9%: Bengali, Gujarati, Punjabi, Urdu). Most of the referral smears were mild dyskaryosis (46.3%) or borderline (25.6%). Colposcopy opinions were mainly normal (55.7%) or low grade CIN (23.9%).

Discussions: Our results demonstrated an increasing trend of the need for interpretating services in colposcopy clinics since the introduction of ten new member states who joined the European Union in May 2004.

Conclusion: It is vital to incorporate interpretating costs calculations in colposcopy service planning in order to optimize and provide equal health care to all patients on the NHS.

P-10 DOES A SINGLE MILD DYSKARYOTIC SMEAR JUSTIFY REFERRAL FOR COLPOSCOPY

Jain Rains, Edward Osei, Farida Bano, Denise Hecker, Stephen Burgess, Charlotte Harper
Queens Hospital, Romford, UK

Objective: To determine biopsy outcomes of women referred with mild dyskaryosis. NHSCP guidelines for colposcopy indicate that women with a single mild dyskaryotic smear may be referred for colposcopy or may have a repeat smear before referral for colposcopy.

Methods: Retrospective review of 53 case notes of women with mild dyskaryosis referred for Colposcopy. The review period was from June 2007 to August 2007.

Results: A total of 51 cases were reviewed during the six month period. 43 cases had biopsies. 25 of those cases (58.13%) had CIN. In 18 cases (41.8%) cases there was no CIN. Of the cases with CIN, 13(52%) had high grade disease and 12(48%) had low grade disease.

There was variability in the age distribution of the grade of CIN. Below the age of 25 years, 2(8%) had high grade disease, 6 cases (24%) between 25-35 years, 4 cases (16%) between 36-39 years, and 1 case had high grade disease.

Conclusion: From the findings of this audit, the current guideline is appropriate for our population, and the study therefore support the recommendation to consider a repeat smear for mild dyskaryosis before referral for colposcopy.

The findings also justifies deferring women <25 years for colposcopy with mild dyskaryosis until a repeat positive smear at 25 years, as only 12% had CIN, with only 8% as high grade.

P-11 AUDIT OF LARGE LOOP EXCISION OF THE TRANSFORMATION ZONE (LLETZ), THE EXCISION MARGINS AND ANALGESIA

Edward Osei, Farida Bano, Stephen Burgess, Jains Rains, Denise Hecker, Charlotte Harper
Queens Hospital, Romford, UK

Objective: Are local standards meeting NHSCSP Standards? Standards recommending that CIN extending to excision margins results in higher incidence of recurrence but not justify repeat excision as long as:

- There is no evidence of invasive disease
- There is no evidence of glandular abnormality
- The woman is under 50 years of age

More than 80% of LLETZ should be done under local analgesia.

Methods: Prospective audit of 163 consecutive women undergoing LLETZ between June 2007-July 2008 at Queens Hospital.

Results: Total number of LLETZ were 163 out of which 112 (69%) were performed under local anaesthetic (LA) and 51 (31%) under general anaesthetic (GA).

The excision margins were complete in 57 (35%) of the patients, incomplete in 54(33.1%) patients and unable to assess in 21(12.9%) of patients. In 31 (19%) patients, the histology was negative, with no CIN.

With the incompletely excised margins, 76% had negative smears at 6 months follow-up. 18% had positive smears at 6 months ranging from mild to severe.

Conclusion: From the data analysis, it is clear that incompletely excised margin is not an indication for repeat conisation. The loop conizations performed under GA was 31% which, was above the national target of 20%.

P-12 AN AUDIT OF CERVICAL SMEAR HISTORY IN PATIENTS WITH SYSTEMIC LUPUS ERYTHEMATOSUS (SLE)

Varsha Jain[1,3], Chee-Seng Yee[1,2], Caroline Gordon[1,2]
[1]City Hospital, Birmingham, West Midlands, UK, [2]University of Birmingham, Birmingham, West Midlands, UK, [3]Birmingham Women's NHS Foundation Trust, Birmingham, West Midlands, UK

Introduction: SLE patients are more likely to develop cervical dyskaryosis and at increased risk with immunosuppressants. No current guidelines for smear frequency in SLE women exist.

Background: SLE patients at City Hospital and University Hospital, Birmingham were audited to assess if screening met current national guidelines. We assessed knowledge of correct frequency of screening and if more information was desired.

Methods: Anonymous questionnaires were distributed in outpatient departments at the aforementioned hospitals. Completion was voluntary, targeted at women up to 64 years who were or had ever been sexually active. We aimed for 100 completed questionnaires. Our standard was set at 90% according to national guidelines.

Results: 96 patients completed questionnaires. Under 25s: 50% had a smear and one had a smear before age 25 as well. 25-49 years: 81% had a smear within three years which was an improvement on 59% who had a smear in the three years prior to that, but some would have been under 25 previously. 50 - 64 years: 78% had a smear within the last five years, however, 82% had a smear in the five years previously. Only 33% of patients knew the correct frequency of screening but only 29% wanted more information on cervical screening.

Conclusions: None of the age groups met our standards for screening. Despite being a target population for smears, < 1/3 wanted more information on screening. Re-audit is needed after patient education techniques have been established and gynaecologists, physicians and general practitioners involved are briefed about this at-risk group.

P-13 UNEXPECTED INVASIVE CERVICAL CANCER FOUND AT COLPOSCOPY

Cynthia Barbara, Kiritea Brown, Najum Qureshi
Birmingham Women's Hospital, Birmingham, UK

Objectives: To look at the demographics and management of patients referred to Colposcopy clinic, in whom unexpected invasive cervical cancer was diagnosed.

Method: Retrospective review of 65 patients' notes who had colposcopy at Birmingham Women's Hospital and were diagnosed with invasive cervical cancer between January 2001 and December 2010. Patient demographics and aspects of patient care were recorded.

Results: Patients were aged between 24 and 69, with 32.3% between 25 and 29 years. 84.6% of patients were white British, 3.1% black African, 3.1% Asian.

35.4% of patients were nulliparous, 61.5% multiparous. 65% of patients whose BMI was documented had a BMI >25. 55.4% were current or ex-smokers.

1.5% were referred for symptoms. 98.5% for abnormal smears; Of these 6.2% had mild dyskaryosis, 6.2% moderate, 49.2% severe, and 21.5% severe dyskaryosis with potential invasion. 29.3% previously had an abnormal smear.

57.9% of patients were referred directly from the lab and 35.4% by the GP. 9.2% waited <7 days from referral to colposcopy appointment, 33.8% waited 7 - 14 days, 20% 15 - 21 days and 36.9% >21 days.

7.7% were successfully treated with one LLETZ, 32.3% required repeat LLETZ, 9.2% required LLETZ and knife cone biopsy. 35.4% had hysterectomy or radical hysterectomy and lymphadenectomy, with 6.2% also requiring adjuvant chemotherapy, radiotherapy or both. 3.1% had chemoradiotherapy only.

Conclusion: Invasive cervical cancer affects patients with different demographics and severity of smear abnormalities. Close follow-up of patients with abnormal smears or certain symptoms is essential for early detection or avoidance of invasive disease.

P-14 IS "SEE AND TREAT" POLICY MEETING NATIONAL STANDARDS?

Edward Osei, Farida Bano, Kingsley Mahendra, Stephen Burgess, Jains Rains, Denise Hecker, Charlotte Harper
Queens Hospital, Romford, UK

Standard: "SEE AND TREAT" policy should be adopted if >90% of excised lesion has CIN.

Methods: Prospective audit of 163 consecutive women undergoing LLETZ between June 2007-July 2008 at Queens Hospital. Sixty one cases were "see and treat".

Results: A total of 163 patients had LLETZ during the audit period. 61 had "see and treat" at the first Colposcopy visit. Of the "see and treat" group, the referring smear was low grade (borderline and mild) in 10 cases, high grade (moderate/severe) in 49 cases and glandular in 2 cases.

Of the high grade smear, 6 cases had no CIN, 2 cases had CIN1, 40 cases had CIN2/3 and 1 case had invasion.

Of the low grade smear, 6 cases had no CIN, 2 cases had CIN1 and 2 cases had CIN3, albeit, one case of the low grade smear was suspected to be possibly high grade.

Of the glandular smear, all 2 cases had high grade glandular neoplasia.

Conclusions: From our study, the histology of the lesions with CIN was slightly below the national standard of >90%. However, more than 87% of the high grade smears had histological proven CIN. 60% of the low grade smears had no CIN.

It can be concluded that a selective "see and treat" approach should be the standard management to reduce over- treatment, especially patients with low grade smear referrals.

However, patients with high grade smears may safely be managed by the "see and treat" management approach.

P-15 EVALUATE THE OUTCOMES IN PATIENTS REFERRED FOR COLPOSCOPY WITH CERVICAL CYTOLOGY SUGGESTING GLANDULAR ABNORMALITY

Edward Osei, Farida Bano, Kingsley Mahendra, Stephen Burgess, Jains Rains, Denise Hecker
Queens Hospital, Romford, UK

Standard: NHSCP recommends that all women with cervical cytology suggesting glandular abnormality must be referred urgently for Colposcopy within 2 weeks to exclude significant cervical and endometrial neoplasia.

Methods: Retrospective review of case notes of 21 patients referred with cytology suggesting glandular abnormality from January 2007 to December 2009.

Results: A total of 21 patients referred with glandular smears were reviewed during this period. The ages ranged from 27-45 years. All the patients had colposcopic assessment and loop excision. Hysteroscopy was performed in all cases and no pathology was defined. Of the 21 cases, 18 cases had ? glandular neoplasia and 3 cases had severe dyskaryosis with ? glandular neoplasia.

In 5 (23.8%) cases, Colposcopy was unsatisfactory, 2 had adenocarcinoma from histological analysis, 2 high-grade CIN/HCGIN and 1 with normal histology. 4(19%) had no abnormal colposcopic findings but biopsy confirmed adenocarcinoma in 1 case, 2 high-grade CIN/HCGIN and one normal histology. In 6(28.5%) cases high-grade disease was suspected at Colposcopy.

14(66.7%) of the 21 cases had significant disease (HCGIN, CIN2/3 and adenocarcinoma). 3(14%) had adenocarcinaoma.

Conclusion: All women with ? glandular smears should be referred for urgent Colposcopy within 2 week referral to treatment time.Loop excision is a must in all cases of suspected glandular neoplasia irrespective of the colposcopic findings.

Suspected glandular neoplasia does not justify routine hysteroscopy, especially in women less than 40 years of age as no endometrial pathology was defined in any of the cases audited.

P-16 HIV SCREENING IN THE COLPOSCOPY SETTING

Catherine Muggeridge, Marianne Wood, Melanie Rosenvinge, Wendy Majewska, Mark Pakianathan, Paul Carter
St Georges Hospital, London, UK

UK Guidance for HIV testing (2008) recommend that HIV testing should be routinely offered to all patients diagnosed with a clinical indicator condition (CIC), for HIV. An estimated 27% of patients with HIV, in the UK, are currently undiagnosed. This leads to delayed diagnosis, poorer health outcomes and impacts on onward transmission. CICs listed in the guidelines include cervical cancer, vaginal and cervical intraepithelial neoplasia grade 2 or above. We present the findings of a collaborative pilot project, offering HIV testing to patients diagnosed with these conditions.

The initial protocol targeted women diagnosed with CIN 2/3, however, due to low numbers of tests offered, the pilot was expanded to include all referrals to Colposcopy. In October 2010, an automated IT prompt on HIV testing was introduced. Serology samples were tested using an Abbot paired HIVp24/antibody assay.

Results: 624 women were offered testing, 131/624 (21%) patients accepted. 54/131 (41%) did not access phlebotomy services (majority cited waiting times). 77/131 (59%) were tested. 77(100%) had a negative result. Those accepting testing (n=131) were younger than those declining (n=493) (32.3yrs versus 34.6yrs). Of those declining, 90% reported undergoing 'recent' HIV screening. As a result of introducing the automated prompt the number of patients offered testing increased by 57% (29%-86%). [p<0.0001]

Conclusion: Acceptance of testing was low; the majority of patients claimed to have tested previously. Near patient testing could improve uptake but would impact on clinical time. The introduction of an automated prompt significantly improved uptake.

P-17 CAN HPV CAUSE ENDOMETRIAL CANCER?

Deepali Bhatte, Ashfaq Khan, Narendra Pisal, Theresa Freeman-Wang, Albert Singer
The Whittington Hospital, London, UK

A 43 year old lady was referred to colposcopy clinic for glandular dyskaryosis (endocervical) in August 2010. She had borderline personality disorder and was living in a care home. Initial colposcopic assessment was satisfactory with high grade changes.

Transvaginal ultrasound found endometrial thickness of 5.4 mm. Endometrial sampling is indicated in women over 35 years with glandular dyskaryosis to rule out endometrial cancer. She underwent hysteroscopy, endometrial curettage and laser cone biopsy. Histology reported high grade CGIN and that of the endometrial curettagings was complex atypical hyperplasia.

This was discussed at the colposcopy MDT meeting. Considering her psychiatric problem, she was recommended to have hysterectomy and bilateral salpingo oophorectomy. She underwent total laparoscopic hysterectomy and bilateral salpingo oophorectomy two weeks later. Post-operative recovery was uneventful. Her final histology report suggested completely excised small focus of residual CGIN .The endometrium showed a focus of a well differentiated (Grade 1) endometroid adenocarcinoma arising in a background of complex atypical hyperplasia. No invasion into the myometrium was seen (FIGO Stage 1a1). On Immunohistochemistry the atypical glands in the cervical cone were positive with CEA and p16 but were negative for vimentin, thus confirming cervical origin of the glands. The endometrial adenocarcinoma showed focal staining with vimentin and p16 but was negative for CEA. This would be usually expected in a primary endometroid adenocarcinoma but not in a cervical adenocarcinoma. P16 staining has been reported in some endometrial adenocarcinomas. Thus suggesting HPV driven changes in endometrium. She was advised regular surgical follow up.

P-18 HPV E6/E7 mRNA AND HPV DNA TESTING IN POST COLPOSCOPIC TREATMENT SURVEILLANCE OF CERVICAL INTRAEPITHELIAL NEOPLASIA

L. Pilkington[1], H. Keegan[1], C. White[1], C Spillane[1], S Singh[2], S O'Toole[1], S Cleary[2], W Prendiville[3], T Darcy[2], M Anglim[2], G von Bunau[2], MJ Turner[4], JJ O'Leary[1], CM Martin[1]
[1]Department of Histopathology, University of Dublin, Trinity College, Dublin, Ireland, [2]Department of Obstetrics and Gynaecology, Coombe Women and Infants University Hospital, Dublin, Ireland, [3]Department of Obstetrics and Gynaecology, RCSI, Dublin Ireland, [4]School of Medicine and Medical Science, University College, Dublin, Ireland

Background: The risk of disease recurrence post treatment with LLETZ for high grade CIN ranges from 5-35%. Women with evidence of persistent HPV infection following treatment have a higher incidence of disease recurrence. The aim of this study is to evaluate the utility of both HPV DNA and mRNA testing in post treatment surveillance of cervical disease.

Study Design: To date, 1,020 women presenting at colposcopy at the Coombe Women and Infants University Hospital have been prospectively enrolled in the study. Cervical cytology specimens are taken at first visit prior to colposcopic procedure and at regular intervals during follow up. HPV DNA is detected using HC II assay (Qiagen) and HPV mRNA detected using HPV PreTect Proofer (Norchip)

Results: The data presented in this abstract relates to 349 patients treated by LLETZ for low grade and high-grade disease. The prevalence of high risk HPV DNA and mRNA in these women prior to treatment was 93.2% and 76.6%, respectively. HPV 16 was the most predominant HPV type representing 69% of the cohort. Histological examination revealed 79% had CIN2+ disease, 15.6% CIN1, and 2.6% Normal. Post-colposcopic follow up of these women, indicated HPV DNA persistence in up to 22% of cases, HPV mRNA persistence in 9.5%, of which 20% had abnormal cytology.

Conclusions: HPV DNA/mRNA testing is useful for predicting recurrence of CIN in women treated for high grade CIN and can be used as test of cure in colposcopy.

This study is funded under the CERVIVA Programme by HRB, Ireland.

P-19 AUDIT OF OUTCOME OF BORDERLINE NUCLEAR CHANGES IN EDNOCERVICAL CELLS ON SMEAR REPORT OVER 3 YEAR PERIOD 2006 - 2008

Riad Boules, Nabil Haddad, David Semple
The Countess of Chester Hospital NHS Foundation Trust, Chester, UK

There is no uniform agreement or national protocol for management of such smear report.

37 women with smear report of borderline nuclear changes in endocervicall cells (BLNC ENDOCX.) from 1/1/2006 - 31/012/2008 were referred to colposcopy clinic. History and examination findings were recorded as per computerised colposcopy data. Findings were analysed for women features, risk factors, colposcopy findings, biopsy and treatment. Also vaginal scan, hysteroscopy and biopsy findings were recorded. Two further colposcopy visits were included. All results, treatment and outcome were related to smear report.

Results showed normal findings in half of the cases (19). 8 cases had high grade CIN and CGIN. One case had microinvasive cancer and uderwent cone biopsy. There were 2 cases of cancer, endometrioid adenocarcinoma of uterus in a 54 year old woman and adenosqumous carcinoma of cervix in a 27 year old patient. Both those patients had pelvic clearance.

There is tendency, 30%, 32% to have BLNC. ENDOCX. in nulliparous patients and those who had 2 children. There is no strong correlation between abnormal bleeding, smoking and such abnormal smear. 67% of patients had normal smear history and 24% had colposcopy. Non-CIN causes were present in 13 cases and 7 normal loops. Better methods of diagnosis of these causes are required to avoid overtreatment.

There was large overtreatment. 26 cases had Large Loop Excision of Transformation Zone (LLETZ) and half of them (13) were normal. One case had 2 loops. 7 cases had high grade CIN, 2 glandular neoplasia. One case of cancer was diagnosed by LLETZ. 84% of smears were normal after 3 visits.

P-20 AUDIT OF OUTCOME OF BORDERLINE NUCLEAR CHANGES, CAN NOT EXCLUDE HIGH GRADE LESION ON SMEAR REPORT OVER 3 YEAR PERIOD 2006 - 2008

Riad Boules, Nabil Haddad, David Semple
The Countess of Chester Hospital NHS Foundation Trust, Chester, UK

46 women with smear report of borderline nuclear changes, can't exclude high grade lesion(BLNC,?HG) from 1/1/2006 - 31/12/2008 were referred to colposcopy clinic. History and examination findings were recorded as per computerised colposcopy data. Findings were analysed for women features, risk factors, colposcopy findings, biopsy and treatment. Two further colposcopy visits were included. All results, treatment and outcome were related to smear report.

Results showed normal findings in 41% of cases(19). 15 patients had high grade CIN and one case had VAIN2 treated with diathermy. There were no case of cancer.

There is tendency 35% and 30% to have such abnormal smear in nulliparous and women who had 2 children. There is significant association between smoking and BLNC,?HG. (20%). Half of the patients had normal smear history. There was high incidence of previous colposcopy(35%), CIN3(44%) and loop excision(LLETZ) (70%). Despite of high incidence of previous LLETZ the squamocolumnar junction was seen in 90% of cases. Non-CIN causes of BLNC,?HG. include regenerative basal nuclear changes and reserve cell hyperplasia. Better methods of diagnosis of these conditions will help to reduce overtreatment.

LLETZ done in 23 cases. 7 cases showed normal histology (30%), 11 cases showed high grade CIN (48%) and 5 cases of CIN1. There 48 negative smears after 3 visits.

P-21 AUDIT OF OUTCOME OF GLANDULAR NEOPLASIA ON SMEAR REPORT OVER 3 YEAR PERIOD 2006 - 2008

Riad Boules, Nabil Haddad, David Semple
The Countess of Chester Hospital NHS Foundation Trust, Chester, UK

25 women with smear report of suspected glandular neoplasia 1/1/2006 - 31/12/2008 were referred to colposcopy clinic. Another patient had smear reporting borderline nuclear changes in endocervical cells(BLNC Endocx.) and borderline nuclear changes, can't ecxlude high grade lesion(BLNC, ?HG) in addition to suspected glandular neoplasia. History and examination findings were recorded as per computerised colposcopy data. Findings were analysed for women features, risk factors, colposcopy findings , biopsy and treatment. Two further colposcopy visits were included. All results treatment and outcome were related to smear report.

Results showed 6 cases of HG CGIN, 4 cases OF CGIN and 5 cases of HG CIN. There were 3 cases of cervical adenocarcinoma, 2 had hysterectomy and lymph node dissection and one had hysterectomy and bilateral salpingo-oophorectomy. There were 3 normal cases.

32% of patients were nulliparous and 32% had two children. 2 patients were postmenopausal and 5 had history of abnormal periods. Only 3 women were smokers.

All patients had loop excision of cervix(LLETZ). 2 patients had 2 loops making a total of 27 loops. 7 loops were normal(7/27). 4 of 7 normal loops had non-CIN causes. These include microglandular hyperplasia, immature squamous metaplasia, tuboendometrial metaplasia, tubal metaplasia and endometriosis. 3 loops showed CIN1. The other 17 cases(68%) showed 3 cancers, 5 HG CGIN, 4 CGIN and 5 HG CIN. 2 patients had cone biopsy. One had incomplete excision of glandular lesion, second case had microinvasive adenocarcinoma with early stromal invasion on loop excision.

Case with 3 cytological abnormalities on smear report had normal colposcopy. LLETZ showed indeterminate HG CIN.

There were 30 normal smears after 3 visits.

P-22 VAULT SMEARS & THE NHS CERVICAL SCREENING PROGRAMME

Emma McGoldrick, Julie Scanlan, David Semple
The Countess of Chester Hospital NHS Foundation Trust, Chester, UK

Background: In September 2008 the NHS Cervical Screening programme designated that vault smears would no longer be part of the national call/recall programme. Currently there is no international consensus in relation to the indication for vault smears after hysterectomy. The current practice guidelines initiated at the Countess of Chester Hopsital are based on those drawn up by the North West NHSCSP QARC.

Aims: To identify the number and indication for vault smears analysed at the local cervical screening laboratory and to assess who was took the smears (Primary / secondary care) and whether the smears were being performed according to the NW NHSCSP guidance.

Results: Cases were identified from 2009 from the NHAIS (Exeter) cytology database. 68 cases were identified of which 39 sets of casenotes were identified by the Clinical Audit Department. A total of 35 sets of case notes were appropriate. The majority of the vault smears were initiated by secondary care (51% v 46%). 46% of cases did not follow the guidance and were deemed to be inappropriate with the majority of these being initiated in primary care (81%). The main reasons for the inappropriate smears were wrong timing and continuation of annual vault smears over many years.

Conclusion: Greater consensus over the use of vault smears is required. Hospital guidelines are required in order that only the appropriate patients undergo vault smears. Greater dissemination of the guidelines in primary care is essential and GP's need written confirmation regarding the follow up protocol for individual patients.

P-23 SURVEILLANCE VERSUS IMMEDIATE TREATMENT OF MODERATE DYSKARIOSIS IN YOUNG WOMEN

Helen Bradshaw, Derek Parkinson
Liverpool Women's Hospital, Liverpool, UK

Introduction: Young women with moderate dyskariosis present a dilemma. National guidelines advocate excisional biopsy (LLETZ) for high grade disease (HG) but the associated obstetric risks are particularly relevant in this age group. Our current practice is to selectively offer surveillance or cold coagulation instead of LLETZ to younger women with moderate dyskariosis and HG colposcopy. Criteria for more conservative management include patient preference, small area of HG disease and compliance with follow up.

Aims: This retrospective audit assessed the proportion of women <28yrs who chose surveillance or cold coagulation instead of LLETZ, the follow up required for each management option and treatment outcomes.

Methods: Data was obtained from a Compuscope database. Colposcopic diagnosis, histological diagnosis, treatment and follow up before treatment and discharge were ascertained.

Results: Between 2002 and 2010, 334 women aged <28years were referred with moderate dyskariosis. In 55, HG disease was identified on colposcopy and/or histology but excisional biopsy was initially deferred. In those women not treated immediately 22 went on to have a LLETZ and 4 underwent cold coagulation. Data will be presented on the number of additional visits and months until treatment. The number of women undergoing surveillance whose colposcopy and cytology reverted to normal without treatment will also be reported.

Conclusion: When given the option younger women often defer definitive treatment even if this means more examinations. The burden of additional colposcopic input needs to be balanced against possible improvements in patient satisfaction and the opportunity to avoid treatment associated risks in some women.

P-24 AUDIT OF MANAGEMENT OF SMEARS SHOWING GLANDULAR NEOPLASIA

G Srivastava, E Moore, P Sriram, A Gibson, C Bartlett
Basildon and Thurrock University Hospital, Basildon, UK

Introduction: Smears with a report of glandular abnormalities identify a population of women with high risk for having pre-invasive and invasive disease of the genital tract and indeed of non-genital tract origin. We have looked at the management and outcomes of women with smears showing possible glandular neoplasia over a 5 year period.

Methods: This was a retrospective audit from January 2005 to December 2009. All new referrals with a smear report of possible glandular neoplasia were selected.

Results: 51 cases were identified and all had colposcopic assessment. 10 (20%) had pelvic imaging done and 22 (41%) had endometrial biopsy done. 40(78%) women had a LLETZ biopsy, 1 had a cervical punch biopsy, 2 had polypectomy and 7 had hysterectomies for various indications.

Significant histological findings were noted in 33 (65%) cases. 5 (10%)cases of invasive malignancy were found - 2 adenocarcinomas of bowel origin, 2 endometrial adenocarcinomas and 1 FIGO stage 1A1 microinvasive squamous cell cancer. 11(22%) CGIN were found and 3 had coexisting CIN. 5 (10%)high grade CIN and 9 (18%) low grade CIN were noted, 2 of the low grade CIN cases had simple endometrial hyperplasia noted on their endometrial biopsy . 2 benign endocervical polyps were seen.

Of those women available for cytological follow-up this was done in approximately 95% of cases.

Conclusion: There was indeed significant pathology found in this population of women. Our management was generally as per NHSCSP guidance however there is some room for improvement.

P-25 MONITORING QUALITY STANDARDS IN PRIMARY CARE CERVICALCHECK - THE NATIONAL CERVICAL SCREENING PROGRAMME, REPUBLIC OF IRELAND

Elaine Buckley
CervicalCheck-The National Cervical Screening Programme, Republic of Ireland, Ireland

CervicalCheck - Ireland's first national cervical screening programme became available to over 1.1 million eligible women aged 25-60 on 1st September 2008. To achieve maximum benefit from the cervical screening programme, every aspect of the service delivered to women must be fully quality assured.

CervicalCheck Quality Assurance Committee was established to review international standards, recommend best practice, monitor and evaluate achievement of the recommended standard; and monitor and support adherence by service providers. Quality is assured through the CervicalCheck QA committee.

The Guidelines for Quality Assurance in Cervical Screening were launched in January 2010. They provide a framework of quality standards for every step of the screening process - Programme Administration, Primary care, Cytopathology, Colposcopy and Histopathology.

Smeartaker Coordination supports and facilitates registered smeartakers in the provision of quality assured smeartaking services to eligible women. Smeartaker activity and performance are monitored against The Guidelines for Quality Assurance in Cervical Screening.

CervicalCheck has a Quality Management system in place which deals with complaints & non-conformances (non compliance) against service providers (smeartakers), external feedback from stakeholders (both positive & negative) and a continuous improvement process.

This poster will outline a sample of primary care standards and how they are monitored. Standards are monitored using a number of reports generated from information stored on the programme register: smeartaker inadequacy rates, sample submission times and outstanding referral recommendations for colposcopy referrals. Any significant findings which are outside the minimum standards set by the programme are escalated through the quality management system.

P-26 REVIEW OF OUTCOME OF CYTOLOGY RESULTING FROM REPEAT SMEAR AT TIME OF FIRST COLPOSCOPY VISIT

Abi Oladipo, Latika Narang
Croydon University Hospital, Croydon, Surrey, UK

Aim: To evaluate the histological and cytological outcome of repeat smear performed at the time of first colposcopy visit

Method: All women referred to the Croydon Colposcopy service between January and December 2008, were recruited . Exclusion criteria include patients with cytology or symptoms suggestive of invasive cervical cancer, patients who were pregnant.

Clinical and demographic characteristics for all patients were recorded. Referral smears were noted. A repeat smear was performed, on all patients who met the study criteria.

Colposcopic impression was noted and cervical biopsies obtained as required. Results of referral smears and smears taken at time of colposcopic visit were compared. Histology of cervical biopsies taken at time of colposcopy were noted and compared to referral and smear taken in clinic.

Result: 249 women met the study criteria, however 13 were excluded from the analysis as they either had unsatisfactory smear at visit or had no biopsy.

Of the 249 women, 136 (54.7%) had LSIL on referral smear and 113 patients (45.3%) had HSIL on their referral smears. Of the repeat smears, only 89 (35%) had smear of lower grade than the referral smear. Of these lower grade smears, 30 (33%) had cervical biopsies showing histological abnormalities. Only 4 patients (1.6%), had repeat smears of higher grade than the referral smears.

Conclusion: The study showed only 1.6% of the repeat smear showed a higher grade than referral smears; thus contributing very little value to the management.

P-27 THE EXPERIENCE OF A SMEARTAKER TRAINING INITIATIVE FOR GENERAL PRACTICE TRAINEES IN IRELAND

Criona Burns, Carol McNamara
CervicalCheck - The National Cervical Screening Programme, Limerick, Ireland

Background: Smeartaker training has been identified as a critical component of a successful quality assured screening programme. CervicalCheck - The National Cervical Screening Programme in Ireland has a dedicated Smeartaker Training Unit.

Primary Care is the setting where the vast majority of smear tests are carried out and GPs have clinical responsibility for cervical screening. Traditionally training for General Practice trainees in the area of cervical screening was on an ad hoc basis. A specific resource was developed by CervicalCheck to facilitate, complement and standardise the content and quality of cervical screening within the woman's health curriculum delivered by GP Training Schemes. The resource includes written material, a training DVD, a smear audit tool and a clinical visit.

Objective: This aim of this poster is to provide a 360 degree view of the acceptability and value of this educational resource for General Practice trainees in an Irish setting.

Method: A retrospective study was carried out looking at twelve months (Feb 2010 - Jan 2011) experience of this resource. The study utilised qualitative and quantitative methods of research to collect and analyse the data.

Results: 13 of the 14 GP Training Schemes in Ireland accessed the resource and positive indicators were reported. Feedback from Clinical Trainers was constructive. Among the findings, 89% of the trainees reported subjective improvement in their skills and competencies in smeartaking.

Conclusion: The smeartaker training initiative for GP trainees in Ireland was found to be an acceptable and valuable educational intervention.

P-28 WOMEN'S KNOWLEDGE AND VIEWS ABOUT HPV INFECTION AND VACCINATION: FINDINGS FROM A NATIONAL POPULATION SURVEY IN IRELAND

Mairead O'Connor, Judith Murphy, Linda Sharp
National Cancer Registry Ireland, Cork, Ireland

Objectives: It is a time of change in cervical cancer prevention in Ireland. The national screening programme was rolled out in 2008. The programme is likely to introduce HPV testing in 2011. A school-based HPV vaccination programme was launched late 2010. In view of these changes, we conducted a population survey to investigate women's knowledge and views about HPV infection, testing and vaccination.

Methods: A questionnaire was developed from results of focus groups and mailed to an age-area stratified random sample of 5,553 women aged 20-64 years during August-September 2010, selected from general practices and Well Woman clinics. 3,345 responded (response rate=60%). This analysis includes the first 1,654 respondents.

Results: Overall, 43% of women had heard of HPV. This was lower among younger women (<35 years) and those without tertiary education. Of 10 factual questions about HPV infection, 48% answered ≤4 correctly; 26% answered 5-6; and 26% answered ≥7 correctly. Younger women were more likely to have a lower HPV knowledge score. 55% had heard of a vaccine against HPV. Younger women were less likely to know about the vaccine but more likely to say they would get vaccinated if it was available. Attitudes towards the vaccination programme were generally positive. However, 26% had concerns about long-term side-effects and 14% felt that vaccination could encourage unprotected sex.

Conclusions: Women's knowledge and attitudes will influence the success of cervical cancer prevention. These findings suggest gaps in HPV knowledge and reveal some attitudes which could provide a challenge to the vaccination programme.

P-29 A MEASURABLE SUSTAINED IMPACT ON HIGH-GRADE DISEASE DIAGNOSIS FOLLOWING THE 'JADE GOODY EFFECT'

Genevieve Casey (Medical Student)[1], Anna Parberry[2], Adam Rosenthal[1,2]
[1]Barts and the London School of Medicine and Dentistry, London, UK, [2]Barts and the London NHS Trust, London, UK

Background: National data indicates that publicity surrounding Jade Goody's (JG) diagnosis resulted in a 13% increase in referrals to colposcopy nationally. We are unaware of any published data investigating resultant changes in the numbers of women diagnosed with high-grade disease.

Objective: To determine whether the 'Jade Goody Effect' influenced the number of women diagnosed with high-grade disease at a colposcopy unit serving over 220,000 women.

Methods: Data on all 3591 referrals from quarter 1 (Q1) 2004/5 to Q4 2009/10 was extracted from the departmental database. Data was split into two cohorts; pre and post JG's diagnosis (Q2 2008/9). Mean quarterly referrals and diagnoses for each time period were compared.

Results: There was a 19% (p=NS) increase in referrals post-JG's diagnosis. When the analysis was restricted to women <34yr, the increase was 47% (p< 0.0001). There was a 51% increase (p=0.006) in high-grade diagnoses post-JG's diagnosis. Increased high-grade diagnoses above the mean pre-JG level were sustained for 18 months and only fell below the mean pre-JG level in the final Q of the study.

Conclusions: JG's diagnosis was associated with increased referrals, especially amongst women <34yr. There was a disproportionately higher increase in high-grade diagnoses, suggesting that screening-naive women attended following JG's diagnosis. This increase persisted for over 18 months. We recommend this study is repeated using national data and more detailed analyses taking into account women's screening history to confirm this hypothesis, as it would suggest that continued publicity might improve not only screening attendance, but also high-grade disease diagnosis.

P-30 ARE WOMEN AGED LESS THAN 25 YEARS AT RISK OF HIGH GRADE CERVICAL DISEASE?

Rachel O'Donnell, Amy Robb, Sheena Pinion
Forth Park Hospital, Fife, UK

Background: Cervical cytological screening has been described as one of the most successful cancer screening tools in the history of medicine, resulting in a significant decrease in the incidence of cervical cancer. There is widespread debate about the age at which women are first invited for screening; women living in England and Northern Ireland are invited from the age of 25 years, whilst those living in Wales and Scotland are invited at 20 years.

This project aimed to audit the management of women aged 25 years or less attending a colposcopy clinic in Scotland.

Methods: The electronic records for all women under the age of 25 attending the colposcopy service over a 6 month period were retrospectively reviewed.

Information regarding their referral cytology as well as colposcopic assessment, investigation and treatment was extracted.

Results: Over the 6-month audit period, 27% (n = 80) of all patients attending colposcopy were under the age of 25, with a median age of 23 years (15-25).

40% of women under 25 were referred with moderate or severe dyskaryosis. 88% had at least one cervical biopsy and in 49% this demonstrated CIN2 or worse.

68% of women underwent treatment (large loop excision of the transformation zone (LLETZ) or cold coagulation). 94% of cases were managed appropriately, according to local and national guidelines.

Conclusions: High-grade cervical disease is present in women under 25 living in Scotland. These women receive appropriate treatment, however further consideration is needed to minimise the number of LLETZ in this age group.

P-31 LARGE LOOP EXCISION OF THE TRANSFORMATION ZONE (LLETZ) AND RISK OF PRETERM BIRTH

Manju Chandiramani[1], Mariana Carreno[1], Maria Kyrgiou[2], Manal Reyad[1], Fateh Raslan[1]
[1]West Middlesex University Hospital, London, UK, [2]Queen Charlotte's and Chelsea Hospital, London, UK

Objective: To determine whether large loop excision of the transformation zone (LLETZ) is associated with an increased risk of preterm birth (PTB) and to determine whether the volume of tissue excised is important.

Methods: This retrospective cohort study was undertaken at West Middlesex University Hospital between 2001 till 2009. Women with a history of LLETZ that subsequently fell pregnant were included. Suitable cases were identified by linking the pathology register for histological cone samples with the maternity birth register database. The primary outcome was PTB (<37 weeks). Secondary outcomes included the volume of the excised cone and its correlation with the risk of prematurity.

Results: A total of 28,354 women delivered over the study period. Our cohort consisted of 135 women who delivered after LLETZ. The rate of PTB for the untreated group was 5.4% (1529/28,354) as opposed to 12.6% (17/118) for treated women. The risk for PTB increased almost threefold amongst those who had a LLETZ (relative risk [RR] 2.93, 95% confidence interval[CI] 1.76-4.89). The number needed to harm was 28. The mean volume of excised tissue in those who delivered preterm was greater than those who delivered at term (5.73 cm^3 ± 4.96 cm^3 versus 3.66 cm^3 ± 2.81 cm^3; p=0.01).

Conclusion: LLETZ predisposed women to PTB, and larger excision volumes increased this risk. Larger studies are required to determine if larger excision volumes are associated with an increased risk of ascending infection or alterations in the tissue composition resulting in PTB and subsequent poor perinatal outcomes.

P-32 CONSERVATIVE MANAGEMENT OF WOMEN REFERRED WITH MILD DYSKARYOSIS AND CERVICAL BIOPSY SHOWS CIN1 OR LESS

Swarup Patel, Nicola Yearsley, K V Chia
Royal Bolton Hospital, Greater Manchester, UK

Background: HPV infection is common in sexually active women. The lifetime risk of developing HPV infection is 80%. The majority of high-risk HPV infections are transient and clear in 18-24 months without clinical consequence. Persistent high-risk HPV infection is a necessary prelude to the development of high-grade CIN and cervical carcinoma. Most of the low-grade CIN regress. Some however progress and eventually turn malignant. This is the rational for ablative or excisional therapy. However, evidence is accumulating about the risk of developing cervical incompetence with these modes of therapy. Are we over treating low-grade CIN which would have resolved?

Methodology: 149 cases were referred to Royal Bolton Hospital with mild dyskaryosis in 2006. 112 women had CIN1 or less at initial biopsy/treatment. 42 women were managed conservatively.

Results: The age of the women managed conservatively ranged from 21 to 62 years. One of the patients has HIV. 2 women were treated after 6 months for progression of disease. One woman had SEMM and the other had cone biopsy. 2 women had treatment 18 months after initial visit for persistently abnormal smears. 1 had LLEDTZ which showed CIN1 and another had ablative treatment after cervical biopsy which was normal. 1 woman has persistently abnormal smears to-date but has not been treated. She is HIV positive.

Conclusion: Conservative management of women

presenting with mild dyskaryosis and cervical biopsy of CIN1 is a viable option of management. This will decrease the risk of cervical incompetence in women.

P-33 DISCORDANT SMEAR AND HISTOLOGY OUTCOME

Mazhar Chaudry, Richard Hutson
Saint James University Hospital, Leeds, UK

A cohort of patients are directly referred to colposcopy clinics with a severely dyskaryotic smear, but are subsequently found to have a normal histological outcome. We wanted to know what this percentage is, and what the outcomes in these patients are.

Data was collected from the Leeds colposcopy database between 2005- 2009. The data included patients referred with severe dyskaryosis, but have had a normal LLETZ biopsy.

1302 patients were referred with severe dyskaryosis between 2005-2009. Subsequently, 3% (33) of these patients had a normal LLETZ biopsy.

Of the patients with normal LLETZ histological outcome following a severely dyskaryotic smear, 78% (26) had a normal cytological follow up, 15% (5) no smear follow up as of yet, 7% (2) hysterectomy. Median follow up period of 26 months.

Of the 7% of patients who had a hysterectomy, one patient had CGIN. The rest had normal histology.

We may conclude that women who undergo a negative LLETZ, following a severely dyskaryotic smear, may represent a low-risk group for developing further cytological and histological abnormalities. However, the discrepancy between smear and histology should be discussed at the colposcopy MDT and the patient should undergo annual cytological surveillance for at least 3 years.

P-34 OW EFFECTIVE THE FOLLOW UP AFTER RADICAL HYSTERECTOMY? VALUE OF SMEAR, MAGNETIC RESONANCE IMAGING AND CLINICAL EXAMINATION

Pubudu Pathiraja, Ewelina Rzyska, Desmond Barton
The Royal Marsden Hospital, London, UK

Objective: To evaluate the benefit of vaginal cytology and use of MRI in terms of sensitivity and specificity for detection of recurrent disease after radical hysterectomy for cervical cancer in addition to clinical history and examination.

Method: Retrospective study using electronic patient note system (EPR) of all the patients who under went radical hysterectomy in the Royal Marsden Hospital during the period of year 2000 to 2008. Cervical cancer patients were identified from histopathology database (1189 patients) and each EPR accessed to identify patient who had radical hysterectomy for early stage (Stage $1a_1$-$1b_2$).

Results: Total of 88 patients were identified, mean age 43.3 (25-74), average months of follow up 58.7 (18-126 months) histology type being Squamous cell cancer 77, adeno-carcinoma 9 and other 2. Ethnicity Caucasian population of 86 %(76). Missing data 15, number of patients referred for radiotherapy(RT) 34, number of smears 338(8.9 per patient), MRI 163(2.3 per patient). Final FIGO staging $1b_2$-10, $1b_1$-62, $1b_2$-4, $1a_1$-1 and stage 2 or more 10. Total number reccurence 16 (Symtomatic 8, Examination 4, Radiological 4, Smear/ Examination 1).

Conclusion: Clinical history and examination was the most useful method in identifying the local recurrences and MRI is the most useful method in detecting pelvic side wall and distal recurrences. Vaginal cytology may be omitted from routine follow up in post hysterectomy patients.

P-35 THE IMPACT OF HPV GENOTYPES ON COLPOSCOPY PERFORMANCE

Maggie Cruickshank[1], Collette Gilespie[1], Seonaidh Cotton[1], Camille Busby-Earle[2], Catherine Moore[3], Heather Cubie[3], Kate Cushieri[1]
[1]University of Aberdeen, Aberdeen, UK, [2]New Edinburgh Royal Infirmary, Edinburgh, UK, [3]Specialist Virology Centre, Edinburgh, UK

Background: In 2008, vaccination against the two most common HPV types, 16 and 18, was introduced across the UK as a further step towards cervical cancer eradication. However, CIN could be easier to miss in immunised women if high risk HPV infection is responsible for the colposcopic features considered to represent high grade CIN.

Aims: To determine if there is an association between HPV genotype and colposcopic features seen in women with an abnormal smear result.

Methods: This study is recruiting women aged 20-25 years in Aberdeen and Edinburgh referred with an abnormal cervical cytology test. Colposcopic findings and a Reid's Colposcopic Index are recorded and a cervical sample is obtained for HPV genotyping at this examination. The colposcopist has the results of the referral smear but the HPV genotype result is not known.

Results: From the first 50 women, none of whom have been vaccinated, the mean age was 22.3 years. 90% were high risk HPV positive and the mean number of HPV genotypes detected was 2.9 (range 0- 9). On histology, 13 had CIN1, 13 CIN2/3 and 1 case of microinvasive cancer. The PPV of colposcopic impression for high grade CIN was 80% (95% CI 37.6 to 96.4) in women with HPV16 and/or18 but only 33% (95% CI 6.2 to 79.2) for women with other HPV types.

This study is ongoing with 153 recruited and further data and its analysis will be presented in March 2011.

P-36 HOW REASSURING IS A NORMAL COLPOSCOPY FOR WOMEN WITH LOW-GRADE ABNORMAL CERVICAL CYTOLOGY: CLINICAL RESULTS FROM TOMBOLA

Maggie Cruickshank[1], Seonaidh Cotton[1], Linda Sharp[2], Julian Little[3]
[1]University of Aberdeen, Aberdeen, UK, [2]National Cancer Registry, Cork, Ireland, [3]University of Ottawa, Ottawa, Canada

Background: HPV triage of women with low-grade cytological abnormalities allows women referred for immediate colposcopy after a single BNA or mild smear and with normal colposcopy to return to routine recall. We used data from TOMBOLA to investigate clinical outcomes 3 years after a normal colposcopy examination.

Methods: Women aged 20-59, with a recent routine low -grade cervical cytology result were recruited to TOMBOLA and provided a sample for HPV testing. This analysis included 884 women who underwent colposcopy at recruitment, had a normal type 1 or 2 transformation zone, and did not have biopsy or treatment at this time. After 3 years, women were invited to an exit examination.

Results: The participants' median age was 36 years (IQR 26-44). At recruitment, 24% had mild dyskaryosis and the remainder BNA. 612 attended for the exit colposcopy. 9.9% with mild dyskaryosis developed CIN2+ disease within 3 years compared to 3.3% with BNA (multivariate OR 2.73, 95%CI 1.44-5.14). Risk of CIN2+ was significantly higher in women who tested high-risk HPV positive at recruitment compared to those who were high-risk negative (8.6% vs 2.8%; multivariate OR =2.68, 95% CI 1.36-5.31).

Conclusions: Women with a low-grade cytological abnormality who then have a normal and adequate colposcopy can be reassured that the risk of high-grade CIN within 3 years is low overall, and especially in those with a BNA smear and/or who are HPV negative.

P-37 IMPLEMENTATION OF CERVICAL CANCER AUDIT: A LOCAL EXPERIENCE

Diane Dearden[1], Victoria Peers[2], Margaret Middleton[3], Maria Pinto[4], Graham Cawdell[5], Tim Kundodyiwa[5]
[1]CNS, St Helens & Knowsley Teaching Hospitals NHS Trust, Prescot, UK, [2]C-Garrd, St Helens & Knowsley Teaching Hospitals NHS Trust, Prescot, UK, [3]Hbcspc,St Helens & Knowsley Teaching Hospitals NHS Trust, Prescot, UK, [4]Consultant Histopathologist, St Helens & Knowsley Teaching Hospitals NHS Trust, Prescot, UK, [5]Consultant Gynaecologist, St Helens & Knowsley Teaching Hospitals NHS Trust, Prescot, UK

Background: Cervical cancer cases are still being diagnosed despite the effectiveness of the NHS cervical screening programme.

Objective: To monitor effectiveness of our local screening programme and identify areas of good practice.

Method: Retrospective study of cervical cancer cases diagnosed at a district general hospital. The NHS Invasive cervical cancer audit classification used to categorise cervical cancer cases.

Results: Forty-eight women with cervical cancer were identified over the 4 year period. The screen detected cancer category contributed the largest number (60%), lapsed attender (15%), never attended (8%), never invited (4%) and interval cancer (2%). Out of 34 women with available smears, 17 cases (50%) had no change on cytological review. There was an under-call of 17 cases of which 9 originally reported as negative were deemed high grade. The false negative rate in our cohort of women was 25% (12 cases).

Discussion: Most of the women with microinvasive cervical cancer were screen detected reflecting the success of our local screening programme. In a quarter of the cases, accurate interpretation of cytology would have changed the clinical management of the women. The misdiagnosis was probably due to sampling or interpretation errors as a result of use of conventional Pap smear in the earlier part of the study.

Conclusion: Although our local screening programme outcome is successful, more effort is required to target the non attenders, improve compliance and evaluate the causes of our high false negative rate.

P-38 HOW DEEP IS A CONE BIOPSY? A COMPARISON OF CLINICAL AND HISTOLOGICAL CERVICAL LLETZ CONE BIOPSY DEPTH

G Petts, B Poskitt, S Soliman, S Ahmed, D Gould, I Lyndsey, D Lyons
St Mary's Hospital, Imperial College Healthcare NHS Trust, London, UK

Introduction: NHSCSP Guidelines state that, for adequate excision of ectocervical lesions, cervical LLETZ 'cone' biopsies should be a minimum of 7mm in depth. Cone biopsies with depths in excess of 17mm have been associated with an increased risk of pre-term labour. These measurements are taken from histological slides after the tissue has undergone chemical and physical processing, leaving the Colposcopist with the dilemma - how deep is a cone biopsy?

Method: Independent data was prospectively collected on the depth of cone biopsies in theatre ('fresh tissue depth'), on arrival in the histopathology department (after fixation and prior to dissection – 'macroscopic depth') and from the histology slides. Histology reports were retrospectively reviewed for quality assurance.

Results: 62 cervical LLETZ cone biopsies were included in the study. There was no statistically significant difference when comparing the fresh tissue depth with the macroscopic depth [paired t(60)=0.046, p(0.05)=2.009] or the slide depth [paired t(60)=0.729, p(0.05)=2.009]. From a quality control perspective there was no significant difference between the

study macroscopic depth and the histology report depth [paired t(34)=0.002, p(0.05)=1.691].

Discussion: The results support the reliance on histology macroscopic reports to guide clinicians in their tailored counselling of women undergoing cone biopsy and reinforces the guidance set out in the literature relating to adequacy of excision and adverse pregnancy outcome risk stratification.

Although not statistically significant interesting trends were seen in the mean tissue depths during the specimens processing (data not included in abstract) which is of interest to Colposcopists and Pathologists.

P-39 COLPOSCOPY SERVICES IN IRELAND: A QUALITY IMPROVEMENT INITIATIVE THAT WORKED

Grainne Flannelly, Leahna Kelly, Sinead O Neill, Therese Mooney *National Cancer Screening Service, Dublin, Ireland*

Background: A national cervical screening programme, CervicalCheck started in Ireland in September 2008. To inform the delivery of quality assured colposcopy, a gaps analysis was performed in 2007 and additional resources were put in place to establish multidisciplinary teams for fifteen services. Agreements to deliver increased capacity using defined processes aimed to achieve significant improvements.

Aim of this paper: To document any improvements during the first two years of the CervicalCheck programme and to identify lessons learned.

Methods: An infrastructure was developed to enable effective audit against national standards. Data was extracted, collated and analysed centrally.

Results: In 2007, nine out of 15 services did not have access to computerized audit reports. During 2008 electronic links were established between the programme and all clinics, enabling the provision of computerized extracted raw data.

In the first year of the CervicalCheck programme, 284,833 women were screened. There was a significant increase in the numbers of new patients attending colposcopy services between 2007 and 2010. Of 28,925 appointments nationally, 2,186 (7.6%) women defaulted (target <15%).

2007	**2008/2009**	**2010**	New Patients attended
9043	12,307	15,759	Treatments
2504	4714	6,711	

The numbers of women treated for CIN increased to 4714 in 2008/9, 95.3% under local anaesthetic (target >85%).

Conclusions: The combination of individualized plans and matching resources delivered improvements within a short timeframe. The central collection of cytology, histology and colposcopy data has enabled the calculation of national results. Valuable lessons have been learned which should inform opportunities for improvement into the future.

P-40 COLPOSCOPY HIGHLIGHT RULES

Louise Pickford
Public Health Wales, Mold, UK

Cervical Screening Wales (CSW) manages all the components of the cervical screening process, including direct referral to colposcopy and commissioning of colposcopy services from Health Boards in Wales. It is has the legal liability for the colposcopy services.

Health Solutions Wales (HSW) adapted the Exeter (NHAIS) system to allow colposcopy episodes to be recorded. All women who have a colposcopy episode due to abnormal cytology/ histology have their appointments, biopsies and treatments recorded on the system by CSW. This ensures that women are seen in a timely manner and are entered into further failsafe systems if they do not attend their appointments.

CSW and HSW further adapted the system using NHSCSP 20 (Colposcopy and Programme Management) and CSW's strategic operating policies and procedures to alert the Regional Programme Coordinator (RPC) when a woman's management within the colposcopy service appears to contradict current guidelines. A set of rules were created which, when contravened, result in the woman being 'highlighted'.

The RPC receives a weekly e-mail of highlighted women and which rule appears to have been contravened. The RPC then investigates further, to determine whether the highlight is genuine (e.g. a discrepancy between referral cytology and subsequent histology) or not. The RPC can request MDT discussion of the case if necessary, or write to the colposcopist to advise them of a management issue or request further information.

The CHR aids with quality assurance of the colposcopy services and can help to identify suboptimal management of women in Wales.

P-41 CERVICAL CANCER IN WOMEN ≥ 60 YEARS OLD: PRESENTATION AND SMEAR HISTORIES

S Seshadri, O folayan, D Zamblera
U*niversity Hospital Lewisham, London, UK*

Objective: To examine the presentation and previous smear history of women ≥ 60 years old diagnosed with cervical cancer.

Methods: A retrospective study was performed to look at all women over 60 years old who were diagnosed with cervical cancer between 2000 and 2009. Clinical cytological/ histological data was analysed.

Results: Nine women were diagnosed with cervical squamous cell carcinoma from 2000 to 2009. Their median age at presentation was 73 years (range 60-94). The reasons for referral were moderate or severe dyskaryosis in 5/9 (56%) and clinical suspicion of cervical cancer in 4/9 women (44%). 3/9 (33%) women had postmenopausal bleeding. 2/9 (22%) and 1/9 (11%) women had inflammatory atypia and nuclear changes in their previous smear history, respectively. 2/9 (22%) women had normal smear history and 4/9 (44%) women never had smear tests. At colposcopy, 4/9 (44%) women were suspected to have cervical cancer, 3 (33%) had high grade lesions and 2 (22%) had no visible lesion. Of the 9 women, 6 (67%) had punch cervical biopsies, 2 (22%) had LLETZ and one (11%) had knife cone biopsy. All women had histological diagnosis of invasive squamous cell carcinoma.

Conclusions: Cervical cancer still presents in women over the age of 60 years. Almost 50 % of these women were not in the cervical screening programme and thus presented late into the disease. We suggest that combining HPV testing with smear tests in this age group would identify who needs to continue in the screening programme.

P-42 MATURITY VERSUS YOUTH!

Anita Prakash
West Wales General Hospital, Carmarthen, Wales, UK

This is a Poster depicting an Audit comparing outcomes in women over 50 years of age referred to colposcopy and outcomes in young women aged between 20 -25 years. There are specific and diverse problems in assessment and management of these women in the two groups of the age spectrum. The poster aims to highlight the broad differences, similarities and contr-versies. It also examines the effectiveness of diagnosis and treatment in these two group of women.

P-43 PRESENCE AND CLINICAL IMPLICATIONS OF ANAL HPV INFECTION IN WOMEN WITH HPV LESIONS OF THE LOWER FENITAL TRACT

Olga Valari[1], George Valasoulis[1], Christina Founta[1], Maria Kyrgiou[2], Dimitris Godevenos[3], Sofia Melina Stasinou[1], Minas Paschopoulos[1], Vasiliki Malamou-Mitsi[4], Petros Karakitsos[5], George Koliopoulos[1], Evangelos Paraskevaidis[1]
[1]Department of Obstetrics & Gynaecology, University Hospital of Ioannina, Ioannina, Greece, [2]Department of Obstetrics and Gynaecology, Queen Charlotte's and Chelsea Hospital, Hammersmith Hospital, London, UK, [3]Department of Surgery, University Hospital of Ioannina, Ioannina, Greece, [4]Department of Cytopathology, University Hospital of Ioannina, Ioannina, Greece, [5]Department of Cytopathology, Attikon Hospital, University of Athens, Athens, Greece

Background: Women with HPV related lesions of the lower genital tract have a 5-6fold increased risk of AINor anal cancer.

Aim: Firstly to assess the risk of anal HPVinfection and clarify its clinical implications in women with HPV related lesions of the lower genital tract. Secondly to assess the diagnostic accuracy of three different tests as screening tests forAIN.

Materials-Methods: In women referred for colposcopy a detailed questionnaire, an anal smear and a cervical smear were taken. On each sample morphological cytology, flow cytometric evaluation of E6&7mRNA, and HPVDNA detection and typing were performed. Women with a positive anal result were referred for high resolution anoscopy.

Results: So far 164women have been included (mean age 33,7). Positive HPV DNA, high-risk HPV DNA,high-risk mRNA in the anal smear had 80,57and 14women respectively. Multiple types were detected in31. Absolute or partial concordance of the types between the cervix and the anus was seen in74.5%.

Logistic regression analysis revealed risk factors for the presence of anal HPV DNA (nulliparity and presence of cervical HPV DNA), hrHPV DNA (nulliparity and presence of cervical hr HPV DNA), and hr mRNA (presence of cervical hr mRNA).

Twelve months after LLETZ55% of women were cervical HPV negative, but22%of those were still HPVpositive in the anus.

Conclusions: The use of HPV biomarkers is feasible in anal smears. HPV infection of the cervix and the anus are interlinked. Possible clinical implications of anal infection in women attending colposcopy could be the development of AINand recurrence of CIN after treatment due to cervical reinfection from the anal reservoir.

P-44 CERVICAL SCREENING FROM THE AGE OF 25 - WHAT DIFFERENCE DOES IT MAKE? SEQUELAE OF THE AMENDED CERVICAL SCREENING GUIDELINE WITHIN THE SOUTH LONDON AREA

Neitah Prietzel-Meyer[3], Theo Hibbert-Peppera[2], Paul Carter[1]
[1]St George's Hospital, London, UK, [2]Guy's and St Thomas' Hospital, London, UK, [3]Croydon University Hospital, Croydon, UK

Objective: To determine the effect of delayed cervical screening from the age of 25.

Setting, Sample and Methods: Patients with CIN3 and invasive cervical carcinoma in age groups 20-24 and 25-29 in 2002/2003 and 2008/2009 at St George's and Guy's Hospital. High grade smears extracted from the KC 65 for Lambeth, Southwark and Wandsworth.

Results: The incidence of high grade smears in Southwark and Lambeth fell in these 6 years (Lambeth, 20-24 years from 3.67% to 2.61%, 25-29 years from 3.26% to 2.21%, Southwark 20-24 years from 2.88% to 2.79%, 25-29 years from 3.16% to 2.40%, percentages relating to adequate smears). Figures for Wandsworth rose for the age 20-24 from 1.77% to 2.48%. Results for the age group 25-29 remained static (in 2002-2003 1.59%, 2008-2009 1.60%).

Histologically, at St George's Hospital, we identified 120 CIN3 cases and 5 invasive cervical cancers in 2002-2003 (age 25-29). In 2008-2009 there were 140 CIN3 cases and four carcinomas. There were 123 histology cases at Guy's 2002-2003 and 193 in 2008-2009 (including carcinomas). The average LLETZ volume for CIN3 lesions in 2003 at St George's Hospital in this age group was 4.38cm3 and 5.97cm3 in 2009.

Conclusion: We observed a rising incidence of CIN 3 in women aged 25-29, 5 years following the change in the cervical screening age. However, more smears were performed in this age group in 2008-2009. The average LLETZ volume was increased in 2009. There was no rise in the incidence of invasive cervical cancer in this age group.

P-45 LLETZ VERSUS KNIFE CONISATION FOR CGIN TREATMENT - COHORT STUDY, DISTRICT GENERAL HOSPITAL EXPERIENCE

Fateh Ghazal, Fidan Israfilbayli, Chandrika Balachandar, Omar Sany
Walsall Manor Hospital, Walsall, UK

Background: Cervical Glandular Intra-epithelial Neoplasia (CGIN) refers to the glandular abnormality of the cervix, which may extend into the uterus. The condition can be difficult to monitor and often hospital based treatment is offered for this type of abnormality.

Aim/Objective: We wish to compare the results of Knife Conisation (KC) and Large Loop Excision of Transformation Zone (LLETZ) for CGIN and evaluate histological interpretability with effectiveness of either treatment modalities.

Methodology: We utilised retrospective data obtained from our histology department at Walsall Manor Hospital between 1995 and 2010. Hospital records of 80 patients with histologically reported CGIN in excisional biopsies were analysed. 10 cases were excluded (invasion, CIN, tubal metaplasia, HPV). 52 cases of LLETZ were compared with 14 cases of KC. 4 patients had total hysterectomy as first line treatment.

Results: Complete excisional biopsies were confirmed in 9/14 cases of KC in comparison to 19/52 cases of LLETZ (64% vs. 36%). 13/52 of LLETZ biopsies' margins were inconclusive compared to none in KC biopsies (25% vs. 0%). 8/14 (57%) of the KC group required further treatment with 50% showing residual disease, as compared to 17/52 (32%) of the LLETZ group requiring further treatment with 47% showing residual disease. 2 adenocarcinoma cases were identified following 2nd treatment with LLETZ.

Conclusions: Histological disease margins were more conclusive following KC as compared to LLETZ when treating CGIN. Fewer cases were found needing further treatment when treated with LLETZ. The incidence of residual disease however was similar in both groups.

P-46 PATIENT SATISFACTION SURVEY OF COLPOSCOPY SERVICES AT A DISTRICT GENERAL HOSPITAL

Anupama Ram Mohan, Theresa Poulton, Tahir Elniel
Milton Keynes General Hospital, Milton Keynes, UK

Aim: To conduct patient satisfaction survey of Colposcopy services at MKGH

Method: Prospective study from 01/04/-30/04/2010, 52 consecutive patients were given a questionnaire as the women were leaving the colposcopy clinic.

Background: BSCCP guidelines, May 2010, there should be a permanently sited room for colposcopy ,a private area with changing facilities, separate waiting and recovery area, toilet facilities, refreshments, clinic facilities maintaining patients dignity, women should be given time to discuss before and after colposcopy,women should be given verbal and written information sent before and after colposcopy.

Results: 59% of the women seen in the colposcopy clinic were between age 25-40yrs, 6% of the women were <25 yrs.92% of the referral were from the general practitioner. It was first colposcopy visit for 46% of the women.

Waiting time was <30 minutes reported by 100% of the women, 100% women felt environment was appropriate, 100% women felt welcomed by the staff, 100% women felt everything was explained and they understood what was explained.

97% of the women felt they had opportunity to ask questions, 100% women felt they were treated sensitively.

36% women reported that seating facilities were excellent, 49% women reported that toilet facilities were excellent, and 38% reported cleanliness was good.

81% reported privacy of the clinic was excellent .Overall rating of the clinic was reported to be excellent by 71% of women.

Conclusions: The colposcopy clinic services at MKGH are meeting the BSCCP standards, providing excellent environment for women having colposcopy.

P-47 ALPHA AND BETA OESTROGEN RECEPTOR EXPRESSION IN HPV ASSOCIATED GENITAL NEOPLASIA

Michelle Griffin[2,3], Jane Sterling[1,2], Dave Winder[2], Siolian Ball[2], Robin Crawford[1], Peter Goon[2,3]
[1]Addenbrooke's, Cambridge University Hospitals, Cambridge, UK, [2]Virology Division, Department of Pathology, Cambridge University, Cambridge, UK, [3]Cancer Research UK, London, UK

Introduction: No human model of cervical cancer currently exists, yet animal models have shown the involvement and the potential therapeutic target of oestrogen receptors. Oestrogen plays a significant role in other gynaecological cancers and the interplay between both the alpha (ESR1) and beta (ESR2) oestrogen receptor is of great interest.

Methods: Human genital samples were obtained. HPV strains were identified by Linear Array HPV genotyping test and HPV 16 viral load was determined by quantitative PCR. Both estrogen receptors' expression was quantitatively assessed by RT-qPCR.

Results: 54 samples were obtained, four were inadequate. The histological distribution in the samples was CIN1 8 (16%), CIN2 15 (30%), CIN3 16 (32%), squamous cell carcinoma (SCC) 9 (18%), and 2 (4%) normal tissue. 49 (98%) samples contained HPV 16, whilst only 3 (6%) contained HPV 18. 72% of samples were infected with multiple strains (36/50). Despite a trend between HPV16 viral load and histological status, it was insignificant. 40 and 38 samples had detectable levels of alpha and beta oestrogen receptor mRNA respectively. ESR1 mRNA level was not significantly associated with histological status, however there was a trend seen with ESR2, mRNA levels in CIN1 and CIN2 samples were both significantly greater than that in SCC samples (p= 0.0009 and 0.0101 respectively). Neither ESR1 or 2 mRNA levels correlated with HPV 16 viral load.

Conclusion: There is no relationship between alpha oestrogen receptor expression and HPV associated genital neoplasia, however beta oestrogen receptors could be lost in the development of squamous cell carcinoma.

P-48 CLINICAL SIGNIFICANCE OF MILD DYSKARYOSIS ON FOLLOW UP OF INCOMPLETELY EXCISED HIGH GRADE CIN

Nikki Ramskill, Wendy Dugmore, Michael Jones
Darent Valley Hospital, Dartford, Kent, UK

Background: The management of patients whose follow up cytology shows mild atypia after incomplete excision of high grade CIN remains controversial (BSCCP presentation 2010). Current opinion is divided on further treatment (to exclude hidden, residual high grade disease) or careful surveillance, unless the colposcopy findings are worrying. To date there is no formal guidance.

Objective: To evaluate the clinical significance of mild dyskaryosis found on follow up cytology at 6 months, after incomplete excision of high grade CIN, when the follow up colposcopy is normal.

Method: Retrospective case analysis (over 2 separate time periods) of all patients having a LLETZ for high grade CIN, including review of clinical outcome and final diagnosis. These patients were all managed in a District General Hospital setting following standard guidelines.

Results: Two groups of patients (694 from 2004-08 and 178 from 2008-09) were studied. The type and frequency of incomplete excision was remarkably similar in each group. Complete excison occurred in only half the cases. Mild dyskaryosis at 6 months follow up was a rare event (6% of all excisions). The finding of mild dyskaryosis was slightly more frequent after incomplete excision compared with complete (overall ratio 3:2). No patients with mild dyskaryosis developed cancer but a few (11 cases) required repeat excision for persistent disease.

Conclusion: Mild dyskaryosis after incomplete excision of high grade CIN is a rare event. The findings of this study suggest that such cases may be managed by repeat cytology with colposcopy at 6 months, as long as the initial follow up colposcopy findings are reassuring.

P-49 DOES SIZE REALLY MATTER!?

Lynn Hryhorskyj[1], Scott Fegan[2], Greame Walker[2]
[1]University of Edinburgh, Edinburgh, UK, [2]Department of Obstetrics and Gynaecology, Royal Infirmary of Edinburgh, Edinburgh, UK

Background: A LETZ procedure is the preferred treatment for women with abnormal smear results in NHS Lothian to prevent the progression of CIN. The NHSCCP guidelines state the depth of a LETZ should be greater than 7mm. In 2003 an audit was performed to evaluate this NHSCCP standard.

Aims: To determine whether NHSCCP guidelines standards were met in patients undergoing a LETZ procedure in NHS Lothian in 2008 and relate findings to the 2003 data.

Method: A retrospective case review of 300 consecutive patients undergoing a LETZ procedure from January to March 2008.

Results: Guideline compliance was observed in 80% of patients (cf 58% 2003). Average patient age: 33 years (range 16 - 67). Average LETZ depth: 10.3mm (±3.37 SD). Average LETZ depth was significantly greater when performed by nurse colposcopist (11.11mm vs 9.99mm, p=0.0129). CIN margins were clear in 75% of procedures, (cf 70% 2003). No significant difference in margin involvement was observed between nurse colposcopist and doctor (19% vs 27%, p=0.1143). An 8% decrease in the percentage of treatments with no evidence of CIN was observed.

Conclusions: An improvement in compliance of this standard was seen within Lothian was observed but standards remain below NHSCCP guideline targets. A greater average depth was observed in nurse colposcopist group but this did not influence patient margin outcome.

P-50 ROUTINE HIV TESTING IN THE COLPOSCOPY CLINIC - ACCEPTABLE AND SUSTAINABLE

Michael Rayment[1], Susan Ogden[2], Dorthe Raben[3], Jens Lundgren[3], Ann Sullivan[1], Nick Wales[2]
[1]Directorate of HIV/GUM, Chelsea and Westminster Hospital NHS Foundation Trust, London, UK, [2]Directorate of Women's and Children's Health, Chelsea and Westminster Hospital NHS Foundation Trust, London, UK, [3]Copenhagen HIV Programme, University of Copenhagen, Copenhagen, Denmark

Background: UK guidelines recommend the routine offer of an HIV test to all women with CIN2 or above. Little evidence is available regarding the acceptability and feasibility of this approach, or of HIV prevalence in this group.

Methods: All new and follow-up patients attending the Colposcopy service were offered an oral-fluid based HIV test. The test was offered by doctors, nurses and healthcare assistants. Results were managed by the local GUM service.

Results: There were 528 attendances by 517 individuals: mean age 34 (range 21-70); 61% white. There were 11 attendances from known HIV-positive patients. 418 patients were offered an HIV test (83%) and 298 accepted (uptake: 71%). All HIV tests were negative. 91% of women accepting an HIV test had cytological/histological evidence of cervical dysplasia, 18% with CIN2 or greater. Test offer rate and uptake did not differ by patients' age or ethnicity. The test offer rate between providers varied considerably (range: 48 - 100%) as did test uptake (46 - 82%).

Conclusion: HIV testing in the Colposcopy Clinic appears feasible and acceptable, with generally high overall offer and uptake rates. There is no evidence of targeted testing, but offer and uptake rates did differ considerably between colposcopists. This may be due to underlying beliefs about the utility of routine HIV testing. Feedback from staff suggests the addition of routine HIV testing had little impact upon the operation of clinics, and should be sustainable. Further work is required to elucidate prevalence of previously undiagnosed HIV infection in this group.

P-51 CLINICAL AUDIT OF CERVICAL SMEARS REPORTED AS GLANDULAR NEOPLASIA: 10 YEARS EXPERIENCE IN A DISTRICT GENERAL HOSPITAL

Fidan Israfilbayli, Fateh Ghazal, Omar Sany, Chandrika Balachandar
Walsall Manor Hospital, Walsall, UK

Background: NHSCSP No: 20 May 2010 Guideline has published recommendations for management of glandular abnormalities found on cervical smears.

Aims/Objectives: We wish to report the incidence of cervical smears reported with glandular abnormality in our unit and determine its positive predictive value (PPV) in identifying significant disease. We aim to review our diagnostic pathway in these women and outline their management in correlation to their final histological diagnoses.

Methodology: We conducted a retrospective analysis of our cytology department database at Walsall Manor Hospital over a 10 year period from 2001 to 2010. We identified 110 women who were referred to colposcopy clinic with glandular neoplasia on cervical smears. Data collection included patients' demographics, indication for smear, colposcopy findings, treatment procedures, management and final histology.

Results: Our study (n=110) showed 32 (29.1%) of smears were consistently reported as glandular intra-epithelial neoplasia (CGIN), 30 (27.3%) had cervical intra- neoplasia (CIN) of varying degrees, 11 (10%) had early stage cervical cancers (stage 1A/1B), 10(9.1%) had non-cervical cancers, 6 (5.5%) cases showed HPV changes.

6 (5.5%) had no biopsy taken and in 15 cases, there were no histological outcome. Overall, we calculated that the PPV of cervical smear reported as glandular neoplasia at identifying a significant histological abnormality was 83/110 (75.5%) in our unit.

Conclusion: Smears reported as glandular neoplasia are associated with high probability of clinically significant lesions. All cases need urgent referral for colposcopy, assessment by experienced colposcopist and thorough investigations to assess an underlying pathology.

P-52 AUDIT TO FIND OUT WHY DID WOMEN UNDER 24 YEARS OR BELOW (GROUP A) HAVE COLPOSCOPY, COMPARE THEM WITH 25 YEAR OLDS (GROUP B), WHO HAD THEIR FIRST COLPOSCOPY REFERRAL, WITH REGARD TO POPULATION CHARACTERISTICS AND THE MANAGEMENT RECEIVED

Nilan Rodrigo, Salah Magd
Pilgrim Hospital, Boston, Lincolnshire, UK

In England, National Health Service Cervical Screening Programme (NHSCSP) recommends cervical screening start after the 25th birthday. Even though these recommendations are implemented since 2005, still we see women less than 25 years have been referred for the colposcopy.

Setting: Colposcopy referrals to Pilgrim Hospital Boston for above 2 groups from 01/08/2008 to 31/07/2009 analysed. The data retrieved from Trent Region Colposcopy Software.

Results: There were 15 referrals for Group A and 28 referrals for Group B. In Group B, 2 patients did not attend colposcopy clinic.

25% of Group A patients were under the age of 20 years.

Abnormal smear was the commonest indication for the referral in groups A and B, 60% and 85% respectively.

Direct laboratory referral was the source of referral in 45% of group A and 80% group B: where as 15% referrals in group A were done by a consultant Gynaecologist and there were no such Group B referrals.

Conclusions: No deference between 2 groups with regard to symptoms, contraceptive methods, smoking habits, alcohol consumption, bacterial swab, results colposcopy findings, cervical histology or the management received.

Both groups met the auditable standards set by the NHSCSP.

Recommendations: Group A need different approach to their management rather than "See & Treat".

P-53 TO ASSESS THE OUTCOME OF MODERATE AND MILD TO MODERATE DYSKARYOTIC SMEARS AT CONSULTANT LED COLPOSCOPY CLINIC

Shazia Jaleel, Suzy Matts
George Eliot Hospital, Nuneaton, West Midlands, UK

A retrospective audit was conducted over a one half year period from Feb 2008 to October 2009. Total of 40 patients with moderate and mild to moderate dyskaryotic smears were identified who were attending the colposcopy clinic. Data from one consultant led clinic was assessed and analysed on Microsoft Excel.

Results: Out of 40 patients 70% had moderate dyskaryosis and 30% had mild to moderate dyskaryosis on smear.

Mild to moderate dyskaryosis: Total 12 patients (30%). In 9 out of 12 patients colposcopy was suggestive of High Grade CIN and had LLETZ. The diagnosis of High Grade Disease was confirmed in >80% by histological examination.

Moderate dyskaryosis: Total 28 patients (70%). High grade disease was suggestive on colposcopy in all the patients (100%) which was confirmed on histological examination of LLETZ.

Conclusion: There is some controversy regarding the management of mild to moderate dyskarosis as there is a possibility that most women would return to normal without any treatment. Previous cross sectional studies and case series have shown risk of 74 -77% of High Grade CIN in patients with moderate dyskaryosis. We have found in our study that 100% of patients with moderate dyskaryosis had High Grade disease (CIN 2 / 3) and >80% with mild to moderate dyskaryosis also had High Grade CIN therefore it supports the fact the all patients with moderate and mild to moderate dyskaryosis should be seen and treated by LLETZ at colposcopy clinic.

P-54 AUDIT OF CERVICAL CANCER REPORTING IN THE UNIVERSITY HOSPITALS BRISTOL NHS FOUNDATION TRUST

Catherine Rowan, Jennifer Rootes, Joya Pawade
University of Bristol, Bristol, UK

The National Cervical Cancer Screening Programme has been successful in reducing the incidence of cervical cancer in the UK. It remains one of the most expensive screening programmes in the world and therefore needs continual assessment. Audit has been crucial to the development of the programme and continues to be valuable in its evaluation. This is the first audit to be carried out examining the quality of cervical cancer reporting in the University Hospitals Bristol. The audit included two cohorts of women with a diagnosis of cervical cancer - those above and below 35 years of age, the latter of which have seldom been studied. The case notes of 111 women aged 21- 89 years were studied, examining the recording of histological diagnosis, staging, health outcomes, screening history and discussion at MDT. The majority of standards were met with 4 out of 6 standards gaining 100% compliance. Epidemiological data was also captured demonstrating the rising incidence of adenocarcinoma within the under 35 age group. Overall the audit concluded that reporting within this area was satisfactory. In addition the evolving disease distribution confirms that auditing within this area remains important.

P-55 ACQUIRING HPV....DISPELLING THE MYTHS AND AVOIDING CIN, HOMOSEXUAL FEMALES ARE ALSO AT RISK FOR DEVELOPING CIN

K A Brougham, B Kabawala, N Gul
Wirral University and Teaching Hospital, Merseyside, UK

Background: Human papilloma virus (HPV) infection is the leading cause of the development of cervical intraepithelial neoplasia (CIN) and cervical carcinoma. (1) It is well established that HPV can be contacted following sexual intercourse. However, HPV can also be contracted by non-penetrative forms of sexual contact. Although rare, even perinatal transmission has been documented. (2) The NHS invites all women over the age of 25 for a smear test. (3) The aim of screening is to detect changes in cervical cells early and ensure the progression to high-grade intraepithelial lesions and invasive malignancy is avoided.

The case: This was a 36-year-old homosexual female with a long-term partner. She had previously been told by her GP that there was no need for her to have cervical cytology as she had never had heterosexual sex. Her first smear was taken after consultation with another medical professional at age 36. It showed severe dyskaryosis consistent with CIN III (three). The patient attended colposcopy where a loop biopsy was taken of a large area of suspected HPV/CIN. It showed severe dysplastic changes (CIN III) together with HPV changes.

Learning points: This case demonstrates that even within medical circles there are common misconceptions regarding the transmission of HPV.

Further education on the transmission of HPV and the pathogenesis of cervical cancer is required in the primary care setting.

The NHS (England) and American guidelines state that all women age 25-65, regardless of sexual history, should be included in the cervical screening programme.

P-56 BORDERLINE GLANDULAR CELLS IN LIQUID BASED CYTOLOGY- AN ANALYSIS OF MANAGEMENT

Sasikala Selvamani, Samina Farooq, Murshid Ismail, Heather Langan, Rouf Sallam, Helen Doughlas, Sinead Griffin
Sligo General Hospital, The Mall, Sligo, Ireland

Background: Borderline glandular smears form an increasing proportion of colposcopic clinic workloads. The management of borderline glandular cells is of immediate referral to colposcopy. We aimed at reviewing our local clinical practice

Methods: Information retrieved from the computer database and case notes of 47 patients over a 2-year period. (January 2009 to December 2010) were analysed including demograhics,diagnostic pathway and treatment.

Results: 43 patients were seen within 6 weeks of referral, 4 were seen within 8 weeks and all had colposcopy as first line of investigation. The average age of the study population was 42.5 yrs. The colposcopy was satisfactory in 43 (91.2%). In 28 0ut of the 47(59.5%) the colposcopic findings were normal. Nineteen Punch biopsies for colposcpic abnormalities were performed, 5 out of those (26.3%) showed high grade CIN and underwent LLETZ. Adenocarcinoma was diagnosed in 2 (10.5%) and one had High grade CGIN (5.25%). Three of the 5 cases with high grade CIN had Hysteroscopy and endometrial biopsy prior to LLETZ.One patient had hysterectomy for High grade CIN .No women under 35 yrs of age with normal satisfactory colposcopy had premalignant or malignant lesions.

Conclusions: Risks of over treatment need to be balanced against detection of occult endocervical disease**.** Wherever possible, the written cytology report should indicate the likely source of glandular cells. An experienced colposcopist should do colposcopic assessment of borderline glandular smears. In women over 36 years of age Hysteroscopy, endometrial biopsy and +/- TVS should be part of investigative protocol.

P-57 COMPARISON OF HYBIRD CAPTURE 2 (QIAGEN), FULL-SPECTRUM HPV (GenoID), GenoID MOLECULAR BEACON REAL-TIME HPV ASSAY WITH GENOTYPING BY LINEAR ASSARY (ROCHE) IN AN IRISH COLPOSCOPY POPULATION

Helen Keegan[1,2], Loretto Pilkington[1], Jamie McInerney[1,2], Borbala Pal-Szenthe[3], Marta Benczik[3], Borbala Kaltenecker[3], Johanna Mozes[3], Anett Kovacs[3], Agnes Solt[3], Noel Bolger[3], Csaba Jeney[3], John O'Leary[1,2], Cara Martin[1,2]
[1]Department of Pathology, Coombe Women and Infants University Hospital, Dublin 8, Ireland, [2]Department of Histopathology, Trinity College Dublin, Dublin 2, Ireland, [3]GenoID Ltd, Budapest, Hungary

Cervical screening programmes are moving towards HPV testing as part of the screening process and as triage for colposcopy. We evaluated 3 HPV detection methods on LBC specimens from colposcopy patients and performed HPV genotyping. This study forms part of the AutoCast Consortium funded by EU 7th framework, supported by CERVIVA funded by Health Research Board.

Cytology specimens from 242 women with >2 persistently abnormal smears were recruited at Coombe Women and Infants University Hospital, Dublin. Smears were taken at first visit for cytology (BSCC) prior to colposcopical examination. HPV DNA was detected by Hybrid Capture (hc2) for 13 high-risk HPV types, Full-Spectrum HPV (FS-HPV) for 49 high-risk, low-risk and unclassified HPV types and Molecular Beacon Real-Time HPV assay (MB-RTHPV) for 16 high and low-risk types. HPV genotyping was performed using Linear Array HPV Assay (LA). Histology was available for 185 cases.

HR-HPV was detected in 83.3% (195/234), 78.8% (186/236),

and 78.7% (169/211) of cytology specimens by hc2, FS-HPV and MB-RTHPV. The sensitivities for detection of HR-HPV in CIN2+ cytology were 100%, 97.3% and 94.6% (hc2, FS-HPV, MB-RTHPV) with NPV of 100%, 90.3% and 84.2%. The sensitivities for detection of HR-HPV in cytology specimens with CIN2+ by histology were, 98%, 97% and 94% (hc2, FS-HPV, MB-RTHPV) with PPV of 77%, 78% and 79%. The most common HPV genotypes were 16, 31, 33, 58, 42, 61 and 53.

FS-HPV and MB-RTHPV show comparable sensitivity with similarly high PPV as hc2 for HPV detection in cervical smears from patients with CIN2+ histology.

P-58 SHOULD WOMEN UNDER 25 BE SCREENED FOR CERVICAL CANCER? INVESTIGATING THE EFFECTS OF THE CHANGE IN SCREENING INTERVALS IN A TRUST ON THE BORDER OF ENDGLAND AND WALES

Laura Booth, Nidhi Shandil, Jane Panikkar
Shrewsbury and Telford Hospitals NHS Trust, Shrewsbury, UK

In 2004 decision was made in England to no longer screen women under the age of 25 for cervical cancer. In Wales women are still screened from age 20. In a Trust on the border of England and Wales screening results were examined to look for initial impact of this change. Cytology results from 2000 – 2009 and colposcopy outcomes for all referrals with moderate dyskaryosis from 2005 – 2008 were included.

Cytology results show no impact attributable to the change in guidelines. At colposcopy there was a small increase in high grade histology in English women aged 25 – 30 but no increase in cancers. New screening is yet to put English women at demonstrable risk.

More 20 – 24 year olds were found to have mild changes on cytology and low grade CIN than 25 – 30 year olds. This makes them financially a costly group to screen. It also causes more patient anxiety and increases risk of over treating lesions that would have regressed spontaneously. Of particular concern is the association between excision treatments for CIN and premature labour as demonstrated in the work of Ortoft et al.

From 2000 – 2009 seven incidents of cancer were seen in women under 25 in this Trust. These cannot be attributed to the change in guidelines as these women either declined screening or it was unsuccessful. It is debatable whether screening could have prevented the cancers but in some cases it did allow early detection that undoubtedly improves prognosis.

P-59 CONSERVATIVE MANAGEMENT OF SQUAMOUS CELL CARCINOMA OF THE CERVIX IN A YOUNG PATIENT

Nidhi Shandil
Shrewsbury and Telford Hospitals NHS Trust, Shrewsbury, UK

Young patients presenting with cervical carcinoma of FIGO stage 1B1 are treated in many centres with surgery while preserving the ovaries and part of vagina. This may be unsuitable if preservation of fertility is desired. A 27 year old nulliparous woman presenting with moderate dyskaryosis on cervical smear was discovered to have CIN 3 on colposcopy directed cervical biopsy. The patient reported no abnormal bleeding patterns, used Microgynon contraception, and was a non-smoker. The CIN 3 lesion, being wide, was treated with Large Loop Excision of the Transformation Zone (LLETZ) as a day case. The LLETZ sample was obtained in four fragments, making histological interpretation difficult. It showed invasive squamous cell carcinoma in two of the fragments, and was designated 1B1 on the basis of dimensions. As the tumour size was more in the lateral dimension (>7mm) than vertical depth (<3mm), expert consensus predicted a greater chance of subsequent local rather than regional recurrence. The lesion was therefore treated as FIGO 1A1 on the basis of biological behaviour. Pelvic MR showed no evidence of vascular or lymphatic involvement. Patient was treated with subsequent loop excision with negative margins, and follow up colposcopy and smears have been normal up to the most recent, four years after the initial event.

P-60 IS CERVICAL SCREENING UNDER25 OF USE?

Caroline Walsh, Kevin Hickey
Mid Western Regional Hospital, Limerick, Ireland

Aim: To review the referral pathway and cervical pathology in women less than 25 years of age attending a busy colposcopy service (>1000 new referrals/year).

Method: Retrospective review of women under 25 who were referred to colposcopy in 2010. Data reviewed included demographics, indication for referral, smoking, contraception and subsequent cervical cytology and histology results.

Results: 53 women under 25 were referred in 2010.

46 were referred for abnormal smears: 11 ASCUS/BNA, 31 LSIL/low grade, 1 HSIL/moderate dyskaryosis, 3 HSIL/severe dyskaryosis. 2 with a suspicious cervix, 2 for post coital bleeding. 1 was referred from another colpsocopy unit with suspected microinvasion on a LLETZ.

The demographics were: Age: 19-24. Parity: 43 (81%) were nulliparous. Contraception: 24/53 (45%) used contraception with none using barrier methods. 20 of the 53 (38%) were current or ex smokers.

Cytology/Histology results: 1 of the pateints had invasive squamous cell carcinoma resulting in a radical hysterectomy. 17 (32%) had CIN 2/ 3 /HSIL. 23 (43%) had CIN 1/LSIL. 5(1%) had ASCUS/BNA. 7(0.1%) had normal results (smear/ biopsy/colposcopy).

Conclusion: Alarmingly, 34% of these young women (<25 years) had high grade cervical lesions (>/= CIN 2). This group are not being population screened, and yet have a significant risk of invasive disease. Until HPV testing becomes established, should cervical smear screening from 20 years of age be considered?

P-61 TEXT MESSAGING TO REDUCE NON ATTENDANCE IN FOLLOW-UP OF COLPOSCOPY PATIENTS

Onnig Tamizian, Gaynor Lowe
Royal Derby Hospital, Derby, UK

Background: Poor attendance at follow-up colposcopy or cytology clinics was noted when compared to initial colposcopy or LLETZ treatment attendances. Patients attend nurse-led cytology clinics for first post treatment smears and cytology/colposcopy clinics as part of the surveillance of untreated low grade changes. The NHSCSP Colposcopy and Programme Management (2010) recommend that "the default rate should be below 15%". Non attendance results in wasted clinic slots and administrative costs to departments involved. Reasons cited include forgetting the appointment particularly when made 6-12 months in advance.

Intervention: Unidirectional text reminders were sent to follow up patients. This commenced in April 2010 after project approval by the Trust Caldicott guardian. Consent issues were overcome by discussing the scheme with patients at their initial colposcopy attendance, and posters displayed at reception. It was assumed patients 'opted in' by volunteering their mobile phone numbers but texts could be blocked if they chose not to participate. Reminder letters were sent to those without a mobile phone.

Results: Failure to attend appointments without prior notice (DNA's) in 2 follow-up cytology and 1 follow-up colposcopy clinic were reduced in the 6 months following introduction of text reminders. This fell from 26% in all clinics to 8-15% in the follow-up cytology clinics and to 10% in the follow-up colposcopy clinic.

Future Prospects: Piloting of bidirectional texting - this would allow patients to respond by text.

Pilot interactive voice messaging - patients are automatically phoned 5 days before and asked if they are attending their appointment.

P-62 OUTCOME OF INCOMPLETELY EXCISED HIGH GRADE CIN FOLLOWING LLETZ IN A BUSY CANCER CENTRE

Rashmi Shankarappa, Richard Hutson
St James's Institute of Oncology, Leeds, UK

Objectives:

1 To evaluate first follow-up smear of incompletely excised high grade CIN
2 To determine the necessity of colposcopy follow-up for incompletely excised CIN

Methods: Data collection were from the colposcopy database for women who underwent LLETZ for CIN 2/3 which was incompletely excised, in the year January - December 2009. All of the women had at least one follow-up smear. CGIN, CIN 1 and early stromal invasion were excluded.

Results: 249 women had positive excisional margins. 53/249 had no follow-up smear.

Ectocervical marginal involvement was found in 91 (44%) of which 95% had normal follow-up smears. The endocervical margin was involved in 25 cases (14%) but 88% had negative follow-up smears. Positive lateral margins were found in 27 (15%) and 96% had normal follow-up smears. Involvement of more than one margin was found in 47 cases (26%) of whom 94% had negative follow-up smears. For 7 (4%) women the margin was unspecified and of these 5 (72%) had negative follow-up smears.

Overall 182/196 (90.8%) had negative smears at follow-up following incomplete excision of high grade CIN at various margins. In 14/196 (9.2%) with positive smear follow-up, 6 were borderline and repeat cervical biopsy was normal. Three had mildly dyskaryotic follow-up smears, 2 of which had CIN 1 on biopsy. Four were severe and 2 had CIN 3 on biopsy.

65% of women had their first follow-up smear in 6 months and 75% by 8 months.

Conclusion: Incompletely excised HGCIN may be followed up by smear only and do not require colposcopy follow-up.

P-63 NEW TECHNOLOGIES FOR CERVICAL CANCER SCREENING AND HPV TESTING BASED ON RAMAN AND FTIR SPECTROSCOPY

Kamila Ostrowska[1], Aidan Meade[1], Alison Malkin[1], Hugh Byrne[1], Cathy Spillane[2], Cara Martin[2], John O'Leary[2], Fiona Lyng[1]
[1]Dublin Institute of Technology, Dublin, Ireland, [2]Coombe Women and Infants University Hospital, Dublin, Ireland

New technologies such as Raman and FTIR spectroscopy have recently been shown to accurately discriminate normal and abnormal cervical cytology samples based on the biochemical fingerprint of the cells. The aim of this study was to investigate the potential of Raman and FTIR spectroscopy to detect biochemical changes associated with HPV infection. Cervical cell lines, C33A (HPV negative), HeLa (HPV-18 positive, 20-50 copies per cell), SiHa (HPV-16 positive, 1-2 copies per cell) and CaSki (HPV-16 positive, 60-600 copies per cell) were cultured on glass slides. After Raman and FTIR measurements, the spectra were analysed using multivariate statistical techniques, Principal Component Analysis (PCA) and Partial Least Squares (PLS) analysis. Each cervical cell line showed distinct spectral fingerprints corresponding to protein, nucleic acid and lipid levels. Principal Component Analysis (PCA) clearly differentiated the groups of spectra representing each cell line. Partial Least Squares (PLS) analysis was employed to construct a model which could predict the $p16^{INK4A}$ expression level based on the spectral fingerprint of each cell line. The results show clearly that as well as discriminating HPV positive and negative cells based on their biochemical fingerprint, cells with different HPV type and copy number could be clearly differentiated. In addition, the $p16^{INK4A}$ expression level could be predicted based on a spectral fingerprint of a cell. These results suggest that Raman and FTIR spectroscopy could potentially be used not only to detect abnormal cells in cervical cytology samples but also to detect the presence of HPV infection.

P-64 CHOICE OF ANAESTHESIA IN THE TREATMENT OF CERVICAL INTRAEPITHELIAL NEOPLASIA

Pavandeep Sidhu, Jessica Hall, Omar Sany
Walsall Manor Hospitals, West Midlands, UK

Background: NHSCSP Publication No 20 May 2010: Colposcopy Management stipulates CIN treatment should be offered with local analgesia (LA) ≥ 80% and managed as outpatients.

Aims/Objectives: We wished to establish proportion of CIN treatments performed under LA /GA amongst diverse population of Walsall, reasons for anaesthetic choice and/if any intra-operator variation.

Methods: Retrospective study utilising most recent colposcopic quarterly database from 1/04/2010 to 30/09/2010. All patients requiring anaesthesia for CIN treatment included (n = 136). Mode of anaesthesia and reason of choice analysed, with intra-operator variation between the colposcopists (A - H) recorded.

Results: 60.3% (82/136) had treatment performed under LA. Of remaining women who had treatment under GA, 23 (43%) due to patient's preference, 17 (32%) due to large abnormal area or cervix, 7(11%) due to an additional procedure required, 6(11%) due poor access, 2 (4%) due to vaginal involvement and 6 (11%) where invasion was suspected. CIN treatment performed under LA ranged from 44.4% to 100% amongst colposcopists.

Discussions: IN treatment performed under LA offers quicker and faster recovery rates for patients; potentially reducing waiting lists, less resources utilization, fewer visits to clinics and improved did not attend rates (DNAs). Procedure done under GA allows easier and more comprehensive treatment of difficult cases; potentially better patients experience, reduced anxiety and increased satisfaction.

Conclusion: The study showed main factor not meeting NHSCSP target being patient choice (43%). Intra-operator practice discrepancy was seen. Findings suggest need to improve training and confidence of trainee colposcopists in performing treatment under LA.

P-65 WAITING FOR COLPOSCOPY WITH AN ABNORMAL CERVICAL SMEAR: A 6 MONTH REVIEW

Nadine Massiah, Laith Jasim, Sherif Ghobrial, Hisham Abouzeid *Rochdale Infirmary, Pennine Acute NHS Trust, Rochdale, UK*

Objective: To determine whether waiting times for consultation, treatment and communication of results in women with abnormal smears complied with national standards.

Method: This was a retrospective audit between July and December 2009. The standards were taken from the NHSCSP guidelines. The colposcopy database was searched to identify the cases.

Results: There were 54 index cases. Eighty eight percent (14/16) with severe dyskaryosis were seen within 4 weeks. Seventy five percent (6/8) moderate dyskaryosis were seen within 4 weeks. One hundred percent (2/2) with possible glandular neoplasia were seen within 2 weeks. Eighty nine (23/28) percent of mild, borderline or inadequate smears were seen within 8 weeks. Women who were not seen within the correct time missed their initial appointments.

Colposcopic examination revealed high grade lesions in 22/54 (41%) women and 7/22 (32%) agreed for immediate treatment by large loop excision of the transformation zone (LLETZ). The reports of 100% biopsies (punch and excisional) were communicated to the general practitioner and the patient within 4 weeks. LLETZ was performed within 4 weeks in 17/17 (100%) women. The 6 month post treatment visit was attended by 81% but rose to 95% at 13 months.

Conclusion: This audit has shown 100% achievement of waiting time targets for definitive treatment of high grade

lesions and communication of results. Missed appointments have resulted in less than 90% of women being seen within the correct time. We recommend studies to determine the reasons for non attendance and interventions that could reduce default in our unit.

P-66 THE COLPOSCOPIC AND HISTOLOGICAL OUTCOME OF WOMEN REFERRED WITH ABNORMAL SMEARS

Nadine Massiah, Laith Jasim, Sherif Ghobrial, Hisham Abouzeid *Rochdale Infirmary, Pennine Acute NHS Trust, Rochdale, UK*

Objectives: To review the outcomes of women who attended colposcopy with abnormal cervical smears.

To determine whether there were similarities between the modalities of colposcopy and histology.

Method: The colposcopy database was searched to identify cases from July to December 2009. The records were reviewed retrospectively. The audit standard was taken from the National Health Service Cervical Screening Programme guideline which recommends a 65% correlation between colposcopy and histology.

Results: Fifty four women were referred with abnormal smears. Seventy five percent (12/16) of women with severe dyskaryosis had high grade colposcopic lesions. Ninety two percent (11/12) high grade lesions were confirmed CIN 2/3 at histology. Low grade lesions were found in 4/16 (25%) and histology confirmed warty changes or CIN 1 in 2/4 (50%) cases.

Seventy five percent (6/8) moderate dyskaryosis were high grade lesions. Eighty three percent (5/6) high grade lesions were confirmed CIN 2/3 at histology.

At colposcopy, 4/10 (40%) women with mild dyskaryosis were normal, 5/10 (50%) low grade, 1/10 (10%) high grade. Of the low grade lesions, 1/5 (20%) was CIN 2 and 4/5 (80%) were CIN 1. Colposcopy showed that 2/9 (22%) borderline smears were high grade lesions and 4/9 (44%) inadequate smears were low grade lesions which was confirmed at histology. No women with inadequate smears had high grade colposcopic lesions.

Conclusion: This audit showed that there was good correlation between colposcopic assessment and histology for moderate and severe dyskaryosis. This supports continuing to provide treatment on the same day for high grade lesions.

P-67 THE OUTCOMES OF WOMEN REFERRED FOR COLPOSCOPY WITH POST COITAL BELLEDING

Nadine Massiah, Laith Jasim, Sherif Ghobrial, Hisham Abouzeid *Rochdale Infirmary, Pennine Acute NHS Trust, Rochdale, UK*

Objectives: To determine the incidence and outcomes of women referred to colposcopy with post coital bleeding.

Method: This was a retrospective review between July and December 2009 in the colposcopy unit of a district general hospital. The index cases were identified from the colposcopy database. Individual records were reviewed.

Results: There were 22 index cases, which represents 26% (22/82) of all referrals over the 6 month period. The mean age was 47 years (range:22 to 54). Within the previous 3 years, 91% (20/22) women had negative cervical smear reports. The remaining 9% (2/22) were under 25 and had not yet been invited. Colposcopic findings were 10/22 (45%) normal, 2/22 (9%) cervicitis, 1/22 (4%) ectropion and 1/22 (4%) endocervical polyp. Low grade colposcopic lesions were found in 8/22 (36%) women. Histological examination revealed 2 cases (9%) of HPV and 6 cases (27.2%) of CIN 1. Cold coagulation was performed in 11 women and post treatment smears were negative in 10/11 (91%). The smear report of one woman (9%) was mild dyskaryosis. There were neither high grade lesions nor cervical cancer.

Conclusions: More than a quarter of colposcopy referrals were for post coital bleeding with negative cervical smears. Since the majority (73%) of the women did not have CIN and the progression of CIN 1 is slow, it seems more practical, in the presence of a negative smear, to first treat cervicitis, ectropions and polyps. Should the bleeding persist then women with post coital bleeding should be referred for colposcopy.

P-68 BORDERLINE CHANGE, HIGH GRADE DYSKARYOSIS NOT EXLUDED (BL?HG): ONE IN TWO HAVE HIGH-GRADE DISEASE

Sandra SooHoo[1], Amit Patel[1], Holly Buist[2], Diane Hemming[2], Khadra Galaal[1], Raj Naik[1]
[1]The Northern Gynaecological Oncology Centre, Gateshead, UK, [2]Pathology Department, Queen Elizabeth Hospital, Gateshead, UK

Introduction: BSCC in 2008 proposed BL?HG, as a subcategory of borderline change. Although widely used, is not incorporated in NHSCSP yet. There is a lack of guidance on clinical management of women referred with BL?HG on liquid based cervical cytology (LBC). This is the first clinical review of outcomes of women referred with BL?HG on LBC.

Methods: All smear reported as BL?HG between July 2006 and December 2009 were identified from cytology database. Clinical information was collected from colposcopy database, clinical notes and histology database. SPSS was used for data analysis.

Results: Incidence of BL?HG on LBC is 0.4%. High-grade intraepithelial neoplasia and cervical cancer was found in 47.7% and 1.2% cases respectively. Introduction of BL?HG subcategory had no impact on reporting or positive predictive value (PPV) of high-grade (moderate and severe dyskaryosis) cervical cytology. The overall PPV of colposcopy for high-grade disease associated with BL?HG is 71.8%.

Conclusions: BL?HG is a valid and justified subcategory of borderline change as it predicts significantly higher proportion of high-grade disease compared to borderline squamous change (14% vs. 48%). Colposcopy has good PPV however 'see and treat' policy in women under 35 years cannot be justified based on our findings. Discussions at Multidisciplinary meetings are recommended for cases with mis-match between cyto-pathological and colposcopic findings. HPV testing may play a significant role in triaging initial assessment and follow-up of this category in the future.

P-69 EXPRESSION OF HPV-RELATED BIOMARKERS IN ASSOCIATION WITH THE GRADE OF CERVICAL INTRAPITHELIAL LESION

George Valasoulis[1], Maria Kyrgiou[2], Christina Founta[1], Sofia Melina Stasinou[1], Ioanna Tsoumpou[3], Maria Nasioutziki[4], Aristotelis Loufopoulos[4], Petros Karakitsos[5], George Koliopoulos[1], Evangelos Paraskevaidis[1]
[1]Department of Obstetrics & Gynaecology, University Hospital of Ioannina, Ioannina, Greece, [2]Department of Obstetrics and Gynaecology, Queen Charlotte's and Chelsea Hospital, Hammersmith Hospital, London, UK, [3]Department of Obstetrics and Gynecology, University Hospitals of South Manchester, Manchester, UK, [4]Second Department of Obstetrics and Gynecology, Aristotle University of Thessaloniki, Hippokration Hospital, Thessaloniki, Greece, [5]Department of Cytopathology, Attikon Hospital, University of Athens, Athens, Greece

Objective: To assess the alterations of HPV-related biomarkers in association/relation with the grade of cervical intraepithelial lesion.

Materials & Methods: Design: Retrospective observational study.

Inclusion criteria: Women referred to the colposcopy clinic with any abnormality in their pap smear and in whom histology was available (Punch Biopsies/LLETZ).

Intervention: Prior to the biopsy an LBC sample was obtained and was tested for HPV typing, mRNA E6&E7 (NASBA technique), E6&E7 mRNA by flow cytometry and $p16^{INK4a}$.

Outcomes: Assessment of HPV-related biomarkers positivity or negativity rates correlated with the grade of the cervical intraepithelial lesion (chi square test for trend).

Results: A total of 216 women were recruited. Twenty three were found to have negative histology, 79/216 (36.6%) HPV and CIN1, 50/216 (23.1%) CIN1,2 and CIN2, 48/216 (22.2%) CIN2,3 and CIN3 respectively. In 16 cases the pathology report showed micro-invasion or invasive carcinoma (7.4%). All the biomarkers (that have analyzed) showed an increased linear positivity rate with the progression of the grade of the intraepithelial lesion (chi square for trend $p<0,05$). Amongst women having had negative histology report, 6 were found to be positive for hr HPV DNA test, 3 for NASBA, 5 for mRNA E6&E7 estimated by flow cytometry and 2 had positive $p16^{INK4a}$ expression.

Conclusions: The linear alteration between HPV-related biomarkers and the grade of cervical intraepithelial lesion pronounce that these biomarkers (single or in different combinations) could be used possibly in the form of a Scoring System that could allow prediction of cervical intraepithelial lesion's grade.

P-70 CLINICAL REFERRALS TO COLPOSCOPY "SPOT" AUDIT FOR SERVICE EVALUATION

Kim Stokes, TS Shylasree, Robert Howells
Universty Hospital Llandough, Cardiff, Wales, UK

Background: There was a change in the NHSCSP guidelines (document 20) with regards to 'women with symptoms' (4.10) in 2010. This change had implications to the referral pattern to colposcopy service. Hence the need to look at our service to implement the guidelines.

Methods: Review of referral letters to coloposcopy service from elsewhere other than those from Cervical Screening Wales. There were 68 referrals over an eight week period (Sept.-Nov 2010). 58 notes were reviewed. The referrals were grouped into 8 subgroups depending on the indication for referral.

Results: Following analysis of the subgroups, it was felt that more than two thirds of the referrals to colposcopy were inappropriate and could have been dealt by referring them initially to a gynaecologist. The other referrals such as difficult smears and rare clinical problems were justified.

Recommendations: Having a named gynaecologist, who can triage these patients, is needed. Education and training doctors and nurses to reduce the number of difficult smears to be addressed. To re-audit in 2011, so that the referral criteria meets the national standard.

P-71 UNDERSTANDING OF HUMAN PAPILLOMA VIRUS IN WOMEN ACCESSING OBSTETRIC AND GYNAECOLOGY SERVICES IN COUNTY DURHAM AND DARLINGTON FOUNDATION TRUST

Nirmala Rai, Hadiza Babatolu, Remko Beukenholdt
Darlington Memorial Hospital, Darlington, UK

Recent developments in Human Papilloma Virus (HPV) research have influenced changes in cervical screening programmes. Information about HPV has been found to cause confusion among women with no prior knowledge of the virus. The introduction of vaccines has made it imperative that accurate information is available, to enable women to make informed choices and facilitate cervical screening.

Aims: To quantify levels of knowledge regarding HPV, in women accessing Obstetrics and Gynaecology services at County Durham and Darlington Foundation Trust.

Methods: A 6 month, anonymous questionnaire study conducted April to September 2010.

Results: 467 questionnaires out of 750 were returned (62.2%).

Of these 222 (47%) had heard of HPV. In the HPV aware group 59.9% were educated to A-levels or higher, compared to 49.8% in the non-HPV aware group.

Women reported to have heard of HPV from television, radio, healthcare workers and magazines.

In the HPV aware group, 73% knew HPV was sexually transmitted, but 50% thought HPV affects only women.

51% were aware that HPV caused cervical cancer but only 17% were aware that it causes genital warts.

In the HPV aware group, 75% of the women had also heard of HPV vaccination. 63% knew it is preferably given prior to becoming sexually active and 72% understood cervical screening should continue after vaccination.

Almost all women aware of vaccination confirmed they would like their child to be vaccinated.

Conclusions: There is a lack of HPV understanding among women accessing our services which needs to be addressed.

P-72 THE UNWELCOMED GUEST: A THOUGHTFUL ANALYSIS

Mini Suchetha Leelakutty[2], Lynn Govan[1], Valerie Harper[1], Mohammed Allam[1]
[1]NHS Lanarkshire, Lanarkshire, UK, [2]Glasgow Royal Infirmary, Glasgow, UK

Aim of study: Analysis of smear or histological abnormalities after treatment for CIN.

Method: The study included all women with smear or histological abnormalities after treatment for CIN in NHS Lanarkshire from beginning of 2007 till end of 2009. The age group of patients, the grades of initial and successive abnormalities, types and intervals between initial and successive treatments, completeness of excision if LLETZ and appropiateness of followup were analysed.

Results: 28 patients had persistent or reccurrent abnormalities. Treatment intervals were appropiate except when patients did not attend. Commonest age group was 31-40 at 46.4%. The referral smear was severe, moderate and mild in 57.1%, 17.8% and 14.2% respectively. One smear was glandular and one borderline. 57.1% had see and treat policy. 71.4% had LLETZ and 25% had cold coagulation as initial treatment. Histology came back showing CIN3, CIN2, CIN 1, CGIN and microinvasion in 75%, 7.1%, 3.5% , 3.5% and 3.5% respectively. 35% of LLETZ had completely clear margins and in 25% completeness was inconclusive. 71.4% required successive treatment and the rest were managed conservatively. Majority of high grade lesions continued to be high grade after first treatment. 85% of the second treatment were LLETZ. Most women had their second treatment by 8-12 months. 15% of re-treated patients had a third treatment.

Conclusion: Persistant abnormalities after treatment were commoner in high grade lesions. Most required a second treatment and a few third. Longer followup may identify more reccurrence.

P-73 DO ALL GLANDULAR ABNORMALITIES REQUIRE FURTHER INVESTIGATION WITHIN 2 WEEKS? EXPERIENCE FROM A BUSY PATHOLOGY UNIT

Raj (Prithwiraj) Saha, Bhavna Pandey, Mustafa Elgasim, Bruce Tanchel
Heart of England NHS Foundation Trust, Associated Teaching Hospital, Birmingham, UK

Introduction: NHSCSP guideline (May 2010) recommends "women with samples reported as ?glandular neoplasia should be referred for investigation within two weeks by colposcopy". However there was no recommended urgency of borderline glandular abnormality. We set out to assess the outcome of all glandular abnormalities over a period from 1.10.2009 till 31.10.2010 (13 months) at the Heart of England NHS Foundation Trust.

Methods: Correlation of history, cytology and histological findings were analysed anonymously. This was a retrospective observational study.

Results: Out of 47191 cervical cytology 25 women had glandular abnormality an incidence of 0.053%. Two women with glandular dyskaryosis treated in private sector were excluded, as the outcome was not available. 13 (57%) women out of 23 had borderline glandular abnormality. Six (46%) out of 13 women had high grade cervical lesion of which two women had adenocarcinoma of the cervix. Index smear of 10 (43%) women out of 23 had glandular dyskaryosis. Five women (50% of glandular dyskaryosis) had cancer. Three had adenocarcinoma of the cervix, one endometrial cancer and one diagnosed gastric cancer where cervical smear suggested signet ring cells.

Smear report	outcome				
	Benign	High grade CIN/ CGIN	Cervical cancer	Endometrial cancer	Other cancer
Borderline glandular dyskaryosis	7	4	2		
Glandular dyskaryosis	1	4	3	1	1

Conclusion: Our data clearly suggest all glandular abnormalities including the borderline glandular abnormalities should be seen within two weeks of the smear report. We recommend NHSCSP guideline should include this urgency to borderline glandular abnormality as well.

Courtesy: Karen Tomlinson, HBPC

P-74 HPV SELF-SAMPLING AS AN ALTERNATIVE STRATEGY IN NON-ATTENDERS FOR CERVICAL SCREENING - A RANDOMISED CONTROLLED TRIAL

Anne Szarewski[1], Louise Cadman[1], David Mesher[1], Janet Austin[1], Lesley Ashdown-Barr[1], Rob Edwards[1], Deirdre Lyons[2], Judith Walker[3], Joy Christison[3], Alison Frater[4], Jo Waller[5]
[1]Wolfson Institute of Preventive Medicine, Queen Mary, University of London, UK, [2]St Mary's Hospital, Imperial College Healthcare NHS Trust, London, UK, [3]NHS Westminster, London, UK, [4]South Central Strategic Health Authority, Newbury, Berks, UK, [5]Cancer Research UK Health Behaviour Research Centre, UCL, London, UK

A randomised trial to ascertain whether women who do not attend for cervical screening are more likely to respond to the opportunity to collect a self-sample for HPV testing, or to a further invitation to attend for cervical screening. The main outcome measures were (1) percentage of women attending for cervical cytology compared with those returning a self-sample HPV test or attending for cytology subsequent to receiving the kit and (2) percentage of those testing positive for HPV who attended further investigation**.**

3000 women in London were randomly selected from persistent non-responders (ie who had not responded to at least two invitations to attend for screening). The women were randomised on a 1:1 basis to either receive an HPV self-sampling kit or a further invitation to attend for cervical cytology. The total response in the self-sampling group for screening was 10.2%. Of the 1500 women in the control group sent a further invitation for cervical screening, 4.5% attended for cytology screening**.** Of the 8 women who tested positive for HPV, 7 attended for a cervical smear and had a concurrent colposcopy. Three of these (43%) had high grade disease (defined as CIN 2+), with one found to have an invasive cancer (stage 1b) and one CIN 3.

Our study suggests that self-sampling could increase participation among non-responders in England, but further work is needed to ascertain whether the response rate seen here is likely to be representative of the rest of the country.

P-75 MANAGEMENT OUTCOME IN WOMEN REFERRED TO COLPOSCOPY DEPARTMENT FOLLOWING HPV TEST OF CURE (TOC)

Mohini Vachhani, Mary Brett, Anne Vaughton, Vikki Finch, John Murdoch
North Bristol NHS Trust, Bristol, UK

Background: Under the NHSCSP Sentinel Site Implementation Project, women treated with excision for CIN are followed up with cytology at six months and tested for High Risk HPV if cytology is negative. Women on annual follow up for previous treatment also have an HPV test if cytology is negative. Women with negative cytology/ HPV positive are referred for Colposcopy and further management.

Objectives: To evaluate management practice in the follow up of treated women following HPV test of cure.

Methodology: Retrospective case note analysis on women (N=141) referred between 13/07/08 and 12/07/10 to Southmead Colposcopy clinic following TOC with positive HPV result.

Results: Colposcopy records were not found in 9 cases. Colposcopy was satisfactory in 91/132 (69%) cases and unsatisfactory in 41/132 (31%) cases. In the satisfactory colposcopy group, 2 cases had re-excision of an abnormal area (CIN1, CIN2), 20 cases had a punch biopsy (3 CIN1, 17 normal), 2 cases had repeat cytology (both negative). In the unsatisfactory colposcopy group, 6 cases had re-excision (all negative), 11 cases had a punch biopsy (10 normal, 1 CIN1), 15 cases had repeat cytology (10 negative, 1 borderline).

Conclusion: Women who are cytology negative/HPV positive at follow up after treatment for CIN are at minimal risk of residual CIN: 5/132 (3.8%) CIN1; 1/132 (0.8%) CIN2. Colposcopy was unhelpful in 31% of cases. While continuation of annual cytology may be appropriate for women with a persisting viral load or new infection, the role of colposcopy and retreatment is questioned.

P-76 RESIDUAL DISEASE AFTER HISTOLOGICALLY INCOMPLETE EXCISION OF CERVICAL INTRAEPITHELIAL NEOPLASIA (CIN)

Vidya Tamhankar, Dahlia Johnson, Eki Emovon
Doncaster Royal Infirmary, Doncaster, UK

Background: CIN extending to the resection margins after large loop excision of transformation zone (LLETZ) is considered inadequate treatment. Our aim was to detect the incidence of residual disease following histologically incomplete excision of CIN.

Methods: Retrospective analysis of all consecutive patients (n=168) who underwent LLETZ for CIN over a six month period.

Results: 33%(n=56) of all the patients undergoing LLETZ had histologically positive excision margins. 84%(n=47) of these patients had high grade CIN (4 with CGIN and 1 with stromal invasion). Positive margins were present at the ectocervical end in 39%(n=22), at the endocervical end in 43%(n=24) and at both ends in 11%(n=6). The deep lateral margin was positive in one and in the remaining three completeness of excision could not be confirmed.

Two patients failed to attend their follow-up leaving 54 patients in analysis. Cervical smear was performed on 45/54 patients. The smear confirmed borderline changes in 1/45, mild dyskaryosis in 8/45, severe dyskaryosis in 3/45 patients with 33/45 testing negative for residual disease. Patients with severe dyskaryosis (n=3) underwent further treatment, while patients with low-grade abnormality were followed-up and reverted back to normal. The remaining 9 patients directly had further excision and residual disease was found only in 4 patients. Only 7/54 (13%) patients had residual disease requiring further excision.

Conclusion: Histologically incomplete excision with LLETZ is not uncommon. Only a minority of these patients will have residual disease requiring further excision. An expectant management with follow-up smears and colposcopy prevents unnecessary over-treatment.

P-77 INCOMPLETE ENDOCERVICAL EXCISION IN TYPE 1 TRANSFORMATION ZONES >7MM DEPTH: A CLINICAL AND HISTOPATHOLOGICAL REVIEW

Jayna Mistry[1], Deirdre Lyons[2], Iain Lindsay[2], Gemma Petts[2]
[1]*Imperial College London School of Medicine, London, UK,*
[2]*Imperial College Healthcare NHS Trust, London, UK*

Introduction: According to Published data, ectocervical lesions should be excised to a depth >7 mm to ensure complete excision (99.7%). Known higher incidence of recurrence when CIN 3 extends to the margins of excision. We looked at factors that may predict incomplete excision and factors that may predict recurrence following incomplete excision.

Methods: A retrospective study over a 3.5 year period. Total number of cone biopsies 1023. 84 (8.21%) had positive/uncertain endocervical margins. Controls for index cases had clear margins and were age and grade of abnormality matched. 45 patients with positive endocervical margins had a Type 1 transformation zone (T1TZ). 90% of these had a depth >7 mm. Treatment details, demographics and mitotic counts were analysed in the index cases and matched controls.

Results: Proportion of unclear margins was greater in multiparous than nulliparous patients. Smoking and contraception were not found to be contributory to positive endocervical margins. Extended follow-up was carried out on patients with incomplete endocervical excision. An increased proportion of those with positive margins had low-grade cytological abnormalities on follow-up. Retreatment was undertaken in 6% of patients with positive endocervical margins.

Conclusion: There appear to be some trends in the data but none of the differences in demographics between the patients with positive/uncertain margins versus their clear margin controls were statistically significant. Initial analysis of mitotic counts showed no difference between cases and controls. Use of biomarkers/other colposcopic imaging might potentially be helpful in determining whether high grade disease is present at >7 mm depth (T1TZ).

P-78 AN AUDIT OF ANNUAL RATES OF TREATMENT FOR CERVICAL INTRAEPITHELIAL NEOPLASIA (CIN) UNDER GENERAL ANAESTHESIA (GA) AND LOCAL ANAETHESIA (LA) WITHIN A LONDON TEACHING HOSPITAL

Laura Walker, Julie Bowring, Heather Evans, Patrick Walker
The Royal Free Hospital, London, UK

Introduction: NHSCSP 20 recommends 80% of treatments should be under local anaesthesia. A number of units fail to achieve this target. Key indicators influencing the LA rate include; proportion of high-grade disease treated, percentage removed in one piece, completeness of excision, an assessment of the unit case-mix and patient preference.

Methods: A retrospective review of women treated at our hospital between 2004 and 2009 was carried out. The whole group was analysed for LA rate and percentage of high-grade treated each year. For a typical year (2006) the number of lesions removed in a single piece and completeness of excision were calculated. For a recent sub-group (March-October 2010) the specific indication for GA treatment was assessed.

Results: Between 2004 and 2009, 4350 new patients were seen in colposcopy and 1296(29.8%) were treated, 758(58.5%) under LA.

	2004	2005	2006	2007	2008	2009
LA Rate	63.7	75.0	61.5	49.8	51.7	55.4
% ≥CIN2 treated	76.3	80.4	67.8	70.6	74.3	73.2

In 2006 the overall percentage of lesions removed in one piece was 90.1%-national target 80% (98.8% for GA). Complete excision at the internal margin was 73.7% (84.1% for GA). The indications for GA treatment were; large lesion 22%, patient anxiety 22%, difficulty tolerating the procedure 8%, suspected micro-invasive or glandular disease 8%, technical reasons including poor access 8%, additional procedures undertaken at the time of treatment 6%, repeat treatments 4% and at present unascertained reasons 22%.

Conclusion: LA rates should be interpreted against a background of all relevant parameters.

P-79 ARE WE OVERTREATING YOUNG WOMEN AT COLPOSCOPY?

Chou Phay Lim, Mahalakshmi Gurumurthy, Maggie Cruickshank
Aberdeen Royal Infirmary, Aberdeen, UK

Introduction: In England, the first age of cervical screening is 25 years as per the NHSCSP. The Scottish Cervical Screening Programme (SCSP) screen women from the age of 20 years, every 3 years till the age of 60. SCSP is currently reviewing the age range for screening. One of the concerns has been that young women with high grade smear abnormalities were over investigated. Our study looks into the management of under 25 with high grade smear abnormalities.

Methods: Retrospective review of the high grade referral cases to the Colposcopy clinic from 1st of January 2009 until 31st December 2009 at our unit for women aged 20-24 years. Initial record of the patient details were extracted from the National Colposcopy Clinical Information and Audit System (NCCIAS).

Results: Total number of women referred with smear abnormalities: 367

Number of women with high grade smear: 118

Severe dyskaryosis: 44/118 (37%)

Moderate dyskaryosis: 74/118 (63%)

See & treat at first visit: 34/118 (29%)

Returned for treatment 40/118 (34%)

Discharged after initial visit 10/118 (8%)

Cervical punch biopsy at return visit 28/118 (24%)

Cervical smear and Colposcopy only at return visit 6/118 (5%)

All cases of LLETZ at initial visit were confirmed to be CIN2/CIN3.

Conclusions: Young age and possible nulliparity may have been contributing factors for conservative management in half of the women.

Selective See and Treat did not result in overtreatment .

To further avoid overtreatment, colposcopists should await the final histology of the punch biopsy before embarking treatment in the initial visit.

P-80 THE UTILITY OF HPV DNA/MRNA TESTING AND SMOKING AS A RISK FACTOR IN PREDICTING HIGH GRADE CERVICAL DISEASE IN WOMEN PRESENTING WITH LOW GRADE ABNORMALITIES

Christine White[1,2], Carmel Ruttle[2], Loretto Pilkington[2], Jamie Mc Inerney[1,2], Helen Keegan[1], Sharon O' Toole[1], Linda Sharp[3], Ruth O' Kelly[2], Maire Fitzpatrick[4], Peter Lenehan[4], Grainne Flannelly[4], John O' Leary[1,2], Cara Martin[1,2]
[1]Trinity College Dublin, Dublin, Ireland, [2]Coombe Womens and Infants University Hospital, Dublin, Ireland, [3]National Cancer Registry, Cork, Ireland, [4]National Maternity Hospital, Dublin, Ireland

High Risk (HR) HPV infection is identified in up to 80% of LSIL cases, most of which regress spontaneously. Thus co-factors are believed to be involved in the transition from transient to transforming HPV infections. This study evaluates the significance of smoking, through urinary cotinine analysis, and HPV infection in development of CIN2+.

A urine sample for cotinine analysis and a smear specimen for HPV testing were collected from 618 women presenting with LSIL and ASCUS at their first visit to colposcopy at the

National Maternity Hospital, Dublin. HPV DNA was detected by Hybrid Capture II (Qiagen, UK), HPV mRNA by the PreTect™ HPV Proofer (NorChip AS, Norway) and cotinine analysis by the Immulite Nicotine Metabolite assay (Siemens, UK).

The prevalence of HR-HPV DNA was 62% and HR-HPV mRNA 38%. The likelihood of mRNA positivity decreased with age (30-39vs<30: OR=0.61, 95%CI 0.39-0.95; 40+vs<30: OR=0.47, 95%CI 0.26-0.86). 160 participants had a LLETZ treatment. HPV prevalence in this cohort was 75% and 49% for HPV DNA and mRNA respectively. For detection of CIN2+ the sensitivity and specificity was 85% and 52% for HPV DNA and 58% and 80% for HPV mRNA. HPV mRNA was detected in 35% of non-smokers (cotinine <50ng/ml) and 43% of smokers (cotinine >50ng/ml).

HPV testing is a useful tool in triage of low grade abnormalities. Our results suggest cigarette smoke increases risk of persistent HPV infection, associated with progression to HSIL.

Work performed under CERVIVA funded by the Health Research Board and the Irish Cancer Society.

P-81 A CASE REPORT OF SCHISTOCOMIASIS OF THE CERVIX IN CHESTER

Peter Wilson, Jane Brookes, Jackie Elder, Nabil Haddad, David Semple
The Countess of Chester Hospital NHS Foundation Trust, Chester, UK

Background: Schistosomiasis is caused by scistosome eggs which are deposited by adult worms in the blood vessels surrounding the bladder or intestines. In women urogenital schistosomiasis may present with a range of symptoms including lesions of the cervix and vagina. Schistosomiasis is endemic in Africa with over 12 million affected people. Cervical schistosomiais may mimic cervical premalignant and malignant conditions.

Case study: A 44 year old patient was referred for colposcopy due to a moderate dyskaryotic smear. Colposcopy findings revealed a high grade lesion consistent with the smear abnormality and therefore a "see & treat" loop excision was performed. Subsequent histology revealed no evidence of CIN but infection with schistosomiasis haematobium. Subsequent to the histological diagnosis it was found the patient had lived for several years in Africa. After the patient was informed of the diagnosis referral was made to the hospital urological department for assessment of the urological tract and to The Liverpool School of Tropical Medicine. for appropriate treatment

Discussion: The term urogenital schistosomiasis arose because of the frequent co-existence of urinary and genital schistosomiasis. In women the cervix is the most common site for infection with schistosomiasis haematobium. It is though that alteration of the cervical epithelium may facilitate infection with and propogation of HPV infection. Macroscopic colposcopic abnormalities of schistosomiasis are similar to those found with CIN. As tarvel to Africa becomes more similar cases to that described may become more common.

P-82 NON CYTOLOGICAL REFERRALS TO COLPOSCOPY AT BARNSLEY DISTRICT HOSPITAL AND EVALUATION OF THE OUTCOME AUDIT

Susan Wood, Asok Kumar Banerjee, Ray K Raychaudhuri, Ajay Sharma, David Hicks
Barnsley District Hospital NHS Foundation Trust, Barnsley, UK

Background: Postcoital or intermenstrual bleeding has a risk of having cervical cancer of 1 in 44000 at the age of 20-24 years to 1 in 2400 at 45-54 years. Though rare, cervical cancer can occur under 25, due to delayed pelvic examination following abnormal vaginal bleeding.

Objective: Evaluate indication for non cytological referral, investigation and colposcopy outcome.

Standard: NHSCSP and NHS clinical practice guidance for the assessment of women aged 20-24 with abnormal vaginal bleeding, 2010.

Methods: A retrospective audit using computer data base between July and December 2010. Data of 53 women were analysed using Microsoft excel.

Results: The median age was 35.4 years (range 21-52). 66% of women were referred by GP. Total of 24 (45.2%) cases were referred for 2 weeks colposcopy. 66% were referred for PCB and 20.8% were for suspicious cervix. Pelvic examination and swabs were performed in 91.4% and 60% of cases in primary care. All women above 24 year had a negative smear before referral. Of 18 cases referred from GOPD 12 (66%) had normal Colposcopy. In total colposcopy revealed 43(81%) non-pathological cervix, including 6 post LLETZ and 11 physiological changes. Colposcopy indicated biopsy in 10(18.9%) cases and CIN 1 found in four.

Conclusion: Colposcopy revealed normal cervix in 81% of the referred women. The audit suggests that GP, nurse practitioner responsible for cervical screening along with hospital junior doctors should be trained regularly in local colposcopy unit to improve quality of urgent referral for colposcopy and to reduce patient's anxiety.

P-83 BORDERLINE ? HIGH GRADE SMEARS - AN AUDIT OF UNCERTAINTY

Hannah Barrett[2], June Peverley[1], Gary Player[1], Partha Sengupta[1], Christine Cassidy[1]
[1]Co Durham and Darlington Foundation NHS Trust, Durham, UK, [2]Imperial Medical School, London, UK

Aims: To audit the outcome of borderline? high grade (BL?HG) smears following conversion to liquid based cytology (LBC). To determine whether immediate referral to colposcopy is appropriate management and whether, as in conventional cytology, BL?HG has a higher proportion of no abnormality being identified during follow-up.

Results: 55 patients were identified. 3.6% had cervical carcinoma, 69% had subsequent high grade disease while 14.6% revealed no significant abnormality. Only 8% had a low grade abnormality.

Compared to borderline/low grade cytology, BL?HG is more likely to result in cervical cancer and CIN3 while borderline/low grade cytology was more likely to result in CIN1 and HPV related changes only. There was no statistically significant difference for no abnormality and CIN2 outcomes.

Compared to high grade cytology there were no statistically significant difference in any outcome except No CIN which was associated with BL?HG.

The positive predictive value (PPV) of a low grade (LG) outcome from a LG smear improves from 70% to 72% if BL?HG is excluded. There is no change in PPV of a high grade smear if BL?HG is added (remains 86%). The PPV of BL?HG having a high grade outcome is 82%.

Conclusions: We recommend that BL?HG smears are reported as "Features suspicious but not diagnostic of high grade disease" and the patient referred for colposcopy. Discussion in a subsequent multidisciplinary meeting is advised. The colposcopists would then be aware of the high likelihood of a HG lesion but also of the significant possibility of No CIN being present.

P-84 INADEQUATE SMEAR RATES - CAN IT BE REDUCED?

Kar Yeoh, Suma Reddy, Omar Sany
Walsall Manor Hospitals, Walsall, UK

Background: The Walsall Manor Hospital NHS Trust Quarterly Laboratory Data for 2010 showed a higher than average inadequate smear rates at 4.5% as compared to the rest of the West Midlands (1.8% - 3.5%).

Aims/Objectives: We performed an internal study in our unit to see if this is attributed to individual smear taking practice or inappropriate smear indications.

Methods: We retrospectively analyzed the Walsall Manor Hospital Laboratory database for the same period (01 April 2010 - 30 June 2010). We related all inadequate smears (n=116) to smear taker's experience. We also examined reasons for those inadequate smears which were deemed inappropriate.

Results: There were 41 smear takers of varying experience. Of these, 9 were deemed experienced smear takers (defined as taken more > 50 smears per annum). In this group, the inadequate rates were found to be lower at 4.8% -12.7% as compared to the non- experienced group at 4.5% -50%. We also found that 13.7% of the smears reported as inadequate had been inappropriately taken.

Discussions: Our results showed that more experienced smear takers have lower inadequate rates. A large proportion of the inadequate smears were also not indicated in the first place. These include gynaecological symptoms such as post-coital bleeding, heavy periods and post-menopausal bleeds.

Conclusion: Our study showed that smear taker's experience may play a role in reducing smear inadequacy rates. Findings suggest the need to improve training amongst smear takers and to increase an awareness of appropriate smear indications in our unit.

P-85 HOW GOOD IS LBC CERVICAL HISTOLOGY?

Megan Carr, Dhiraj Uchil, Dan Zamblera, Adeboye Jolaoso, Ola Folayan
University Hospital Lewisham, London, UK

Background: Current guidelines do not recommend a repeat LBC at the initial colposcopy visit. Women with features of an atypical transformation zone on colposcopy with moderate dyskaryosis or worse on referral smear will thus have a colposcopy-directed punch-biopsy (CDB). We assessed the correlation between LBC and CDB taken at the same visit.

Method: Retrospective review of results of LBC and CDB performed at the same visit in 494 women at UHL from 1/1/2007-1/1/2010.

Results: Although LBC was negative in 224 women, 75 (33%) had CIN on histology, the majority being CIN 1. Where LBC was persistently borderline (n=69), biopsy showed CIN 1 in 39% and CIN 2+ in 9.3%. In cases where LBC was unsatisfactory (n=62), CIN was present in 30%. LBC showed mild dyskaryosis in 103 women. Of these 59 (57.3%) had CIN 1, 13 (12.6%) had CIN 2 and 3 (2.9%) had CIN 3 on biopsy.

LBC showed moderate dyskaryosis in 18 women. Of these, 4 (22%) had CIN 1, 8 (44%) had CIN 2 and 3 (16.7%) had CIN 3 on biopsy. Severe dyskaryosis was present in 17 women, 2 (11.8%) had CIN 1, 4 (23.5%) had CIN 2 and 10 (58.8%) had CIN 3 on histology.

Conclusion: LBC taken at time of colposcopically-directed biopsy has poor negative predictive value for low grade CIN. LBC however has stronger positive predictive value for higher grade pathology.

Author Index

Notes