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BAC

## British Association for Cytopathology

## BAC Executive Committee



## Editorial

## Sharon Roberts-Gant

As I write this it is a week since we had the Daily Mail announcement that the National Cervical Screening Programme is changing to the new HPV test which should be available nationwide in 2 years. It is unfortunate that the cytology community had to find out about its introduction from the national media even though it wasn't unexpected, of course the article was a little short on detail. The article focusses on how far more accurate the new test is compared with the current test which is subjective and relies on cell experts looking down a microscope - well be proud all of you 'cell experts' you have saved thousands of women's lives. There will always be progress but that does not detract from the achievement of the national cervical screening programme in the reduction of cervical cancer related deaths. At the time of writing we are still awaiting guidance on implementation so timelines are likely to slip. Hopefully by the time this edition is in print we will have had implementation details.

Looking to the future - ECC 2016 - cytology is not dead merely changing, the scientific programme of ECC 2016 is interesting and stimulating, there is still time to book your place. There are details of ECC 2016 in this edition of SCAN.

Dave Nuttall has written the cytology version of 'Sleepless in Seattle', although I didn't spot any night-callers! Alison has written about changing suppliers in a high volume laboratory - something a few will need to learn from as they prepare to do the same with HPV. We have cells from Hedley Glencross and Dr Gavin Laing they will still be there for us to examine, microscopy is not going away as can be seen from the biomedical scientist role in the provision of the non-gynaecological cytology service.

I would like to give my thanks to Andrew Evered, my co-editor, who has decided to step down from editing SCAN. Andrew came on board in 2008 and has produced many excellent editions since. Thank you Andrew.

## Sharon

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## INFORMATION FOR CONTRIBUTORS

Articles for inclusion in SCAN can be emailed to the editor if less than 1 MB in size or supplied on CD/DVD or memory stick. Text should be in a standard text format such as a Word document or Rich Text Format (rtf file). Please supply images as separate files in tiff or high quality jpeg files at a resolution of not less than 300 dpi ( 600 dpi if the image includes text). 35 mm slides and other hard copy can be supplied for scanning if no electronic version is available. Graphs are acceptable in Excel format.

If you are unable to supply files in the above formats or would like advice on preparing your files, please contact Robin Roberts-Gant on 01865222746 or email: robin.roberts-gant@ndcls.ox.ac.uk


President's Piece

Allan Wilson

I am writing my Presidents piece on the train back from the IBMS AGM where I was re-elected to IBMS Council for a second three year term. I would like to take this opportunity to thank all the BAC members who voted for me - the number of votes cast were the highest for many years.

I have previously mentioned the QUATE exam in SCAN and an article on this qualification is included in this edition of SCAN. I was in Billund, Denmark for the QUATE exam last month, rather bizarrely the exam was held in the Legoland hotel surrounded by young families on holiday - a rather odd experience. The exam itself went well and highlighted a few issues that have previously been touched on in SCAN. The status of cervical cytology in Russia is difficult to assess but a few Russian candidates have now sat the QUATE and it appears that in parts of Russia cervical smears are stained with Romanowsky stains. I assume screeners must simply become accustomed to this stain over time but this is obviously not recommended practice in most countries. This does raise another issue - how would a country who uses stains other than Papanicolaou convert to HPV primary? The additional complication is around the necessity to move to LBC and Pap staining. Candidates can sit the QUATE exam in conventional smears, Thinprep or Surepath. As countries move towards LBC conversion in anticipation of HPV primary screening, candidates are increasingly opting to sit the exam using technologies in which they have limited experience and inadequate training.

The guidance on conversion training has now been published by the NHSSCP and provides a structure for conversion and a monitoring procedure to validate the conversion training. The document can be used for individual conversion or whole lab conversion. The UK conversion guidance may well be used by other countries who will need to convert staff from conventional smears to LBC before moving to HPV first. It is clear from evidence from the QUATE exam that the resources required to convert from conventional cytology to LBC has been underestimated and must be included in any plan to move to HPV primary screening.

On a personal note, 1st June 2016 marked a milestone in my career: 40 years in cytology. I have tried not to wallow in nostalgia but it is perhaps worth noting the phenomenal changes that have occurred in cytology since I started in Glasgow Royal Infirmary as a junior B
(or was it junior A, I am sure someone of my age will remember better than I can the rather odd job titles in place in the 70s). In 1976 there was no organised screening programme, no computer systems and LBC was not on the horizon. QA really didn't exist, IQC was in its infancy and the significance of HPV was only just beginning to emerge. Immunocytochemistry was only just emerging in histopathology but was rarely used in cytology. The UK had more than 500 cytology labs. Screening staff were not trained in the features of CGIN. Staff were smoking in their offices and screening rooms and the pub at lunchtime for a few drinks was fairly common place! The progress that we have made over the last four decades has been considerable and the investment in the programme and staff dedication has resulted in a programme that is the envy of the world. We should be rightly proud of our achievements.

The move to HPV first continues to be a slow process with no immediate prospect of a clear timeline. The longer the delay in decision making the higher the risk to the ability of cytology labs to deliver the service. Recruitment is becoming more and more difficult and locum staff harder to find and more expensive. I know of one lab who interviewed over the phone and recruited from abroad. This also raises the issue of training of staff from outside the UK who do not have the certificate of competence or its equivalents. Labs are so desperate to recruit staff they will take on trained staff from other countries and deliver concentrated training programmes to enable them to practice within the UK screening programmes. We need to consider how we manage the laboratory service with shrinking staff resources but a static workload. The most obvious solution is to leverage the existing staff resource by offering additional hours and overtime to plug gaps in capacity. However, Agenda for Change (AfC) terms and conditions are not attractive to staff, particularly part time staff and screeners are often unwilling to give up their weekends for only a slight increase in their hourly rate. A strong case could be made for a "special case" highlighting recruitment and retention issues to enhance the overtime rate for screeners but many NHS employers are adhering rigidly to AfC terms and conditions and will not enter into negotiations. A national approach would be best but attempts in Scotland for a pan-Scotland solution have made little progress and some Health Boards are "going their own way" leading to a piecemeal approach to this growing problem. A solution must be found to the growing
gap between the primary screening capacity of cytology labs across the UK and the number of samples which continue to roll in to our labs.

As planning progresses for the European Congress of Cytology in Liverpool in October, I would like pay tribute to the local organising team and in particular Paul Cross, Kay Ellis, Dave Carter, Alison Cropper, Ash Chandra and Mina Desai for the incredible effort they are putting in to ensure the conference will be a success. Much of this work is carried out in their own
time and the success of the Liverpool meeting will be largely be down to this team of dedicated professionals. The reason this edition of SCAN is slightly early is an attempt to orchestrate a last push to encourage member to register for Liverpool and also to get involved in submitting short papers and posters. Please register for this major event and if you or your staff are involved in research or audit projects please consider submitting posters or short papers. We want the Liverpool congress to be a showcase for cytology in the UK.

## Chairman's Column

## Dr Paul Cross

As I write my Chairman's piece the fallout from the European referendum decision is beginning to sink in for everyone. The world will go on despite some of the apocalyptic claims by both sides. Whilst the UK has decided to leave the EU, we cannot nor would we wish to withdraw from European cytology circles. Cytology is a small world at the best of times, and withdrawal into an insular view of the world would not be good for us as cytology professionals and certainly not the patients we serve. The forthcoming 40th European Congress of Cytology, which the BAC is organising, is an opportunity for us in the UK to promote the best of UK cytology but it is also a fantastic opportunity for us to learn from our European colleagues, and those colleagues from further afield. We are honoured to be organising the 40th ECC meeting, and given it is on our own doorstep, I hope as many of you will attend as you can. The programme is varied and a great mix of all aspects and areas of cytology, and 1 am indebted to Mina Desai and Ash Chandra for largely developing the programme and personally approaching many of the speakers and chairs for the meeting. I must also thank Kay Ellis, Alison Cropper and Allan Wilson for their efforts in helping me with the organisation of the meeting in general. Thanks also goes to David Carter for helping engage with the many commercial companies that are attending: these contacts not only allow them to exhibit their products but also help with helping to reduce the costs through their sponsorship. We are all doing this as well as our NHS jobs, and have engaged the services of a professional conference organiser, Conference Partners. For a meeting of this size, we cannot
cover all the aspects or do the chasing up of things or look after all aspects - you need the help of people who do this regularly and professionally. The company we have engaged to do this have a great track record, and are doing a great job for us. There is still time to book for the meeting and attend - don't miss this great opportunity! All the meeting details are on the dedicated meeting website:

> www.cytology2016.com.

Check it out if you haven't already registered!
Like all professional bodies the BAC is always looking to recruit new members, and especially for the Executive. I am delighted that we have new members joining the BAC, and this bodes well for cytology as a whole and the BAC into the future. We depend on new blood and with it new ideas and experiences to progress, and the vibrancy of any association and the work it can do and achieve depends on this. We all have opinions about cytology but few get motivated enough to actually do something about it.

We are all aware of the NSC's recommendation about the adoption of HPV primary screening within the cervical screening programme, but we all await an announcement about timescales and implementation. As an association we have asked these questions to try and get answers. We aware of ongoing work on these issues at national level, and have pressed for early announcements. In the meantime many labs are struggling to maintain services, and staff retention and recruitment are
problematic in the extreme, and morale has dropped. I can assure you that the BAC is working hard on this. Not everyone agrees with the NSC decision and in the absence of any concrete information people do make up their own stories. The decision has been made on very solid scientific evidence and we must move forward. I hope that useable information will come out soon to assist us all. We will continue to press on this.

The joint statement on Biomedical Scientist roles within a diagnostic cytology service which we drew up along with IBMS and RCPath was issued a few months ago, and can be found within this edition of SCAN. This statement took over a year to produce not that impressive in time I would agree, but I do believe that getting three way backing for it was a major achievement, and gives it great weight. This "triple approach" I am sure is the way forward, and
ensures that the three major professional groups involved in cytology support and agree with such guidance. There is much more we can achieve together than working alone, but we need to accelerate the process of doing so.

This edition of SCAN contains a good mix of material. The is Allan Wilson's article on the QUATE exam, possibly something not many UK trained cytologists may know much about, Alison Cropper's article on how to change LBC systems and still deliver a service, a very real problem for many labs, Dave Nuttall's nocturnal musings on his American trip and educational CEC material and more too. Don't just leave it to the BAC executive to fill these pages - send your material too! We always welcome copy for it, and would value material from any BAC member. The next edition will come around soon, so get writing!

## Cytopathology journal impact factor up yet again!

Congrats to the Cytopathology team! Cytopathology, the scientific peer reviewed journal of the BAC, has increased its impact factor yet again. The impact factor (IF) of an academic journal is a measure reflecting the yearly average number of citations to recent articles published in that journal. It is frequently used as a proxy for the relative importance of a journal within its field, with journals with higher impact factors deemed
to be more important than those with lower ones. The impact factor has increased to 1.761, up from 1.481 in 2014, and it has moved up 11 places in the journal rankings in the Pathology category of the 2015 Journal Citation Reports ${ }^{\oplus}$. We would like to congratulate the journal's Editor-in-Chief, Mina Desai, and her editorial team, as well as all the authors and reviewers that have contributed to this success.

## Membership Details

## Please email or write to Christian Burt if any of your contact details change.

## Email: mail@britishcytology.org.uk

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## QUATE

Allan Wilson


Most SCAN readers will be well aware of the history and format of the primary screening qualification in the UK which has been running under a variety of names since the 1990's. However, I suspect less well known is its overseas cousin, the QUATE exam. The QUATE (Quality Assurance, Training and Examinations committee) Aptitude Test is an international examination for cytotechnologists who fulfil the criteria for accreditation in their own countries.

The exam has been running since 1992 and a table showing the venues and pass rates is shown in Table 1. The exam is designed to provide an objective assessment of a cytotechnologist's competence to screen conventional cervical smears or liquid based cytology samples and is available in conventional smears, Surepath or Thinprep technologies.


Table 1: QUATE aptitude tests 1992 to 1999

The exam is administered and funded by the European Federation of Cytology Societies (EFCS). BAC is a member of the EFCS

Unlike the UK, many European countries did not have their own "registry examination" for staff who primary screen to demonstrate their screening competence and the QUATE exam plugs this gap and offers a test as a qualifying examination for cervical cytology primary screening staff.

The examination team is Allan Wilson, Mina Desai and Elisabeth Fedl, a cytotechnologist from Austria. As we are all relatively new to the exam, we have all attended the exams but as we develop more
experience and confidence it is likely that exams with relatively small numbers of candidates will only require two examiners.

## Format of the exam

The exam comprises both a written and practical element. The written element is in the form of 50 multiple choice questions (MCQs). Each has only one correct answer and there is no negative marking.

The practical component comprises 16 slides, divided into two groups of eight with a short break between each group. These are available in conventional smears or Thinprep and Surepath technologies.

Candidates are allowed 10 minutes per conventional cervical smear or 8 minutes for an LBC preparation. The pass mark for each section of the exam is as follows:
$\begin{array}{ll}\text { - MCQ } & 50 \% \\ \text { - Screening test } & 75 \%\end{array}$
Candidates must pass each section in order to be awarded an overall pass. There is no transfer of marks between different sections of the examination.

Missing an abnormal sample will mean automatic failure. However an overcall of a negative smear as abnormal in the screening test scores zero. Repeated overcalling of negative slides is the commonest reason for failing the screening test.

The examination papers will be marked and the candidates notified of the results on the day of the exam.

## Sample exam timetable - conventional slides

| 09:00 | Candidate registration and ID check |
| :--- | :--- |
| 09:30 | Instructions to candidates |
| 10:00 | Written paper (MCQ) |
| 11:00 | Break |
| 11:15 | Screening test (slides 1 to 8 ) |
| 12:35 | Break |
| 13:15 | Screening test (slides 9 to 16) |
| 14:35 | Exam finishes |
| 15:45 | Exam results given to candidates |

## Slide selection for the exam

The criteria for slide selection is practically the same as the UK exam. No "trick" slides are used; borderline and unsatisfactory slides are not included. The slides assessed are intended to reflect routine practice and are assessed by many pairs of eyes before being logged onto the slide bank. The difference is that three slide banks are required; one for each of slide formats available to candidates.

Largely the same slide sets have been used over the last two years. This has been a deliberate strategy started by Nick Dudding who was my predecessor as examiner. The reason is simple - to try and produce data to allow a comparison between performance of candidates from different countries. It is tempting to suggest that the resulting data could be used as an indicator of effectiveness of training in different countries.

However, there are risks of using the same slides sets and great care is taken to avoid using the same set for candidates who are re-sitting the exam. It is also vital to record the country of training as this may differ from the base lab. Movement across borders is relatively common.

## Examples of good practice

Analysis of recent exam results has allowed us to suggest areas of good practice. For example, all 18 of the Slovenian candidates passed and 13 of these scored maximum marks on the screening. In the same exam 11 Slovenian candidates scored over $40 / 50$ in the MCQs. These are exceptional results for a small country and there may be much to learn by looking at training methods in Slovenia.

## An example of a complex exam

The candidate numbers varies widely. A minimum of six candidates are required for a viable exam and generally the exam is offered in the language of the host country and English. This does mean that the local hosts must commit to providing someone to translate the MCQ's and the clinical histories. However, the exam is often held at the EFCS congress meetings where a wider range of nationalities may be interested in sitting the exam.

In an attempt to increase candidate numbers, the exam has been recently offered in multiple languages although this does provide a challenge to find willing translators for potentially small number of candidates. In addition, the introductory guidance to candidates delivered as a PowerPoint presentation at the beginning of the exam may require a simultaneous translation in the host venue language. It is clear that some words and phrases simply do not translate easily from English into other
languages, for example, the phrase "iatrogenic change" has caused confusion in many translated papers.

Perhaps the most complex exam in recent times is the Milan exam last year which featured the following:

- 27 candidates
- 3 technologies
- 4 languages
- Translation of MCQ's, clinical histories, response sheets
- Different clinical histories for all technologies
- 29 different documents to prepare
- Simultaneous translation of introductory presentation
- All carried out simultaneously in one room


QUATE Milan 2015

## QUATE local support

Local support is vital to the success of each QUATE exam. Exams initiated by local teams that have been offered annually or biannually work well as there is an existing infrastructure and knowledge of the exam. Exams at congress and tutorials can be more challenging as the venue and local team may be different each time and responsibilities may not be clear.

Local knowledge of candidates is often very helpful particularly when there is a language barrier and
translation support during exam particularly during the MCQ's and feed back after results are issued is vital. Feedback to candidates on the same day is challenging and can be traumatic for candidates and examiners but is an important and welcome part of the examination process. It is vital that feedback is managed carefully and sensitively and there is local support available for candidates who do not pass. Standard feedback sheets are given to all candidates who fail the exam highlighting the main reasons for the fail; however, we do not discuss individual slides with candidates

## The impact of primary HPV screening on the QUATE exam

Many countries in Europe are in further ahead in the move to HPV primary screening than the UK. For countries where the move to "HPV first" was made from conventional smears this represents an additional problem; conversion from conventional to LBC for the cytology triage. The UK has a structured approach to conversion between technologies and this has been tightened recently with new guidance from the NHSCSP. However, in some countries the resources required to convert from conventional to LBC has been underestimated and this has been reflected in the results of the QUATE exam. It is clear that supplier conversion on its own is inadequate and additional training is required.

There has been an increased uptake of LBC QUATE option recently and it is clear that this is due to conversion to HPV primary screening. This has solved a potential problem with slide selection as it was increasingly difficult for UK based examiners to provide conventional slides for the exam. In addition an examiner from Austria, Elisabeth Field has been co-opted as an examiner. Conventional smears are widely used in Austria and Germany. The obvious consequence of this move to LBC is an increase in exams that must be offered in all three technologies. This increases the complexity of the exam and the time required to prepare.

## Careful planning

The exam slides and paperwork travel in a suitcase and careful planning is required based on experience of previous exams and examiners. The first time an examiner sees the venue and meets the local hosts is often the day of the exam! Flexibility and planning for potential issues will not prevent unforeseen issues arising on the day. Fast thinking and the support of the local team is vital in ensuring the success of logistically complex exams.

An expansion of the LBC slide bank is required to meet the increasing demands of the move to HPV
primary screening and to allow multiple matched sets to be held in different locations in case of delays in transport to the venue by the examiners or sudden inability to attend the exam.

## QUATE and Eurocytology

One of the ambitious aims of the QUATE committee is to link the exam to the Eurocytology website. A mock exam is already available on the QUATE website but it is also hoped to use the teaching resources on the website to address training issues identified from analysis of exam results and the performance of MCQ's and slides. For example, from analysis of candidate performance in recent years there appears to be some issues in location and interpretation of hyperchromatic crowded groups in LBC slides. This will be addressed through the Eurocytology website.

The mock exam on the website could be developed further but there is the risk of giving away the answers to too many MCQ's. It must be remembered that our field is narrow and there is a limit to the number of MCQ's that can be put on the website. Another suggestion under consideration is the mandatory completion of Eurocytology modules before sitting QUATE exam.

## QUATE and medical staff

Although the exam is primarily aimed at primary screening staff, there has been a small number of medical staff sitting the QUATE exam over the last few years. We emphasise to medical staff applicants that this qualification does not permit reporting of abnormal samples or medical staff roles in cytology but there is still a steady demand, particularly from Eastern Europe to sit the exam.

## QUATE - non-gynae options

There is an ambition to develop a QUATE non-gynae exam for Cytotechnologists, Biomedical Scientists and Cytology Screeners similar to the gynae exam but this suggestion has barely got of the ground and discussions are very much at the preliminary stage. Given that some mainland European countries have better developed training schemes than the UK it would make sense to involve potential examiners in other EFCS countries. The option of an exam for cytopathologists would be a logical second phase.

## Further work to be done

As the exam expands in frequency and complexity and more examiners are involved, documentation becomes vital to ensure the exam is delivered consistently across Europe. The discussion above suggests we already have analytic tools to assess candidate, slide and MCQ performance. This is far from the truth. A database to hold all the exam data
including morphology features in slides would permit analysis from multiple perspectives and allow us to focus on gaps in training programmes and problems with MCQ and slide performance.

The exam is delivered by examiners located across Europe making administrative support difficult. Funding is available but given the complexity of QUATE exam delivery the best use of this funding has yet to be decided.

As suggested above, there is more work to be done to Identify strengths and weaknesses of individual countries training programmes and to learn from best practice and address substandard practice.

Translation of the MCQ's is usually carried out after question selection and is often followed by a nervous wait as the translation is usually carried out by local hosts and other "volunteers" in their own time it is not unusual to receive the translated papers only a few days before the exam. A better approach would be to translate the entire bank as this would ease the pressure close to the exam. This would require a bank of "willing" translators.

Uptake of the exam across Europe is patchy this is partly because some countries such as the UK have their own registry exam but countries that do not have any exit exams for primary screener training should be encouraged to adopt the QUATE exam.

## Summary

I have now been an examiner for the QUATE exam for just over a year and have had the pleasure of taking the exam to Slovenia, Austria, Italy and Denmark. The most recent exam was in Billund, Denmark and was held in the Legoland conference centre which was an interesting experience. It has been a pleasure and a privilege to visit these countries and as with all such visits there is always something to learn about how cytology is delivered across Europe and it has been fascinating to watch the evolution of the exam over a relatively short period. I would like to thank Peter Smith for his hard work in raising the profile of the exam as Mina's predecessor as lead examiner and Nick Dudding for his tireless work in modernising and delivering the exam and for his unselfish approach to passing the baton to Elisabeth and myself and his quick responses to any questions we have had has led to a smooth handover.

The next exam will be in Liverpool at the ECC in October, we do not expect many UK candidates for the QUATE exam but we hope to see as many BAC members as possible for the scientific programme.

Further information can be found at http://www.eurocytology.eu/en/quate

The Royal College of Pathologists
Pathology: the science behind the cure

## Role of Biomedical Scientists within the provision of a non-gynaecological cytology service

## Introduction

The provision of a non-gynaecological cytology (NGC) (also referred to as diagnostic cytology) service involves a team of trained health care professionals. Historically this was typically provided by medically trained pathologists who would report and sometimes take samples, especially fine needle aspiration (FNA) cytology and biomedical scientists and laboratory staff who would receive and prepare the sample for reporting. This model has evolved significantly in recent years for many reasons including:

- requirement for better use of limited resources
- service expansion/service delivery changes
- changes in training programmes/competency assessment facilitating the expansion of scientific roles
- staff skill shortages.
- development of quality guidance and standards
In many ways these changes are not fully recognised in existing guidance. Given this they require clarification to assist laboratories and clinical teams and hospitals in service provision.


## Sample preparation

Once a cytology sample is received into a laboratory it will be processed by a biomedical scientist and/or other grades of laboratory technical staff, working to existing guidance and laboratory standard operating procedures (SOPs). ${ }^{1}$ Such SOPs should be produced and agreed within the laboratory in line with quality standards. ${ }^{2,3}$

## Reporting

The reporting of all types of NGC can be undertaken by Consultant Pathologists, with appropriate post-FRCPath training if required.

Pre-screening of NGC samples is done in many laboratories, with biomedical scientists offering an opinion as to diagnosis prior to being reported by either a Consultant Pathologist or suitably trained/qualified biomedical scientist. This provides a valuable quality assurance and education/training opportunity.

Biomedical scientist staff in many departments report out appropriate negative exfoliative NGC, as long as this is agreed based on experience, competency and repertoire in line with the laboratory's quality assurance process which the medical head will be part of; attainment of the Diploma of Expert Practice in Non Gynaecological Cytology (DEP) would be suitable evidence of competence for the areas it covers.

Biomedical scientists who hold the Advanced Specialist Diploma in Non-Gynaecological Cytology (ASD) are able to report out positive samples from respiratory exfoliative cytology, urine and serous fluids.

The attainment of the DEP and ASD qualifications is advocated as independent external evidence of attainment of suitable skills in these areas. The reporting of fine needle aspiration cytology is not considered appropriate for biomedical scientists.

Ultimately it is the Medical Head of Department who is responsible for the issue of all diagnostic cytology results. ${ }^{4}$ As is the case for Pathologists, no biomedical scientist should be working in isolation, and should have access to colleague(s) for case discussion.

## Ancillary Testing

In some areas of cytology, ancillary testing (e.g. molecular or genetic markers) is indicated. Depending on the laboratory facilities, these may be done by biomedical scientist staff, often from Cellular Pathology, but may involve other pathology disciplines also. This will require suitable training in the required methodology and technology, again with participation in the appropriate EQA scheme(s).

## Sample assessment for adequacy for reporting

Certain NGC samples are taken by specific clinical procedures (e.g. mediastinal EBUS, FNA of many sites) by clinical teams or by Pathologists. An opinion as to sample adequacy and sometimes a diagnosis can be offered by a Pathologist at the time the sample is taken. In most settings though, resources do not allow for this. A comment on sample adequacy (Rapid on-site evaluation ROSE) may be offered by a biomedical scientist. If the biomedical scientist has suitable experience based on competency and service needs and appropriate training/qualifications they may also be able to offer a preliminary opinion mainly for triage of the sample material rather than for patient management as well as ROSE.

## Multi-disciplinary Team Meetings (MDTMs)

The majority of MDTMs are cancer related, and offer an opportunity for the whole clinical team to meet and discuss all the relevant information concerning a patient to help arrive at the best individualised treatment option(s). Many of these will involve cytology and also histology. In most cases it will require a Pathologist to report/review the cytology and histology. The development of biomedical scientist histology reporting may alter this in the future. ${ }^{5}$ A biomedical scientist may attend and present at MDTMs, and on occasion stand in for a pathologist, but the MDTM named Pathology lead will always be a Pathologist. ${ }^{6}$ Biomedical scientists who hold the Advanced Specialist Diploma in Non-Gynaecological Cytology can review and present appropriate cytology.?

## Clinical Scientists in Cytology

Clinical Scientists in Cytology are uncommon, although the role is more common in other Pathology disciplines. It is possible that biomedical scientist cytology staff in this grade of post will increase in the future ${ }^{8}$ with developments in biomedical scientist career pathways. Trusts/employing hospitals and those in such posts should follow guidance on appointment to such a post. ${ }^{9}$ The Health and Care Professions Council for Clinical Scientist Standards of Proficiency state that they are able to practice as an autonomous professional, exercising their own professional judgement. ${ }^{10}$

## Continuing education/assessment/appraisal

All staff operating at Consultant level require appraisal which covers their whole scope of work, and for a biomedical scientist operating at this level in cytology this is best done in a similar manner to that of a medical Pathologist. This will ensure their development, education and monitoring is the same in this capacity as a

Pathologist. This would include participation in CPD and showing evidence of this through audit, quality improvement activities, review of material and participation in relevant EQA etc. They should also be supported in their role with access to suitable training and education, as is appropriate to the departmental quality assurance process, departmental needs and individual roles.

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# Changing LBC suppliers in a High Volume Laboratory - Improving Quality and Efficiency - one laboratory's experience Alison Cropper, Consultant Healthcare Scientist in Cytology, The Royal Derby Hospital 

Almost 3 years ago the Derby cytology laboratory changed LBC platforms and this account tells the story of how and why that change occurred. First presented at the European Congress of Cytology in Milan in September 2015, the data has been updated for this article.

## Background

The Derby cytology laboratory is one of largest in the UK, expecting to process in excess of 170,000 samples during 2016/17. This high volume workload has been created from the merger of four laboratories in 2010, when the total combined workload was then 170,000 but which fell to around 142,000 with the introduction of HPV Triage and Test of Cure in 2012. The recent acquisition of another contract which commenced in April this year has brought the workload back up to over 170,000.

Derby had used SurePath ${ }^{\text {TM }}$ (SP) technology since LBC implementation in 2006, initially on a 5 year contract which was then renegotiated in 2011 to include the combined workload from the merger,
and the contract was rolled over for another 2 years, being due for renewal in 2013.

At this time Cytology service provision was being looked at across a wider area as part of a total Pathology services' review, and the remit was to incorporate future plans for HPV primary screening. We needed to find the most suitable system for centralised LBC processing and HPV testing with a potential combined workload of around 240,000 LBC samples.

A Cytology clinical delivery group was established across the proposed new area and a mid to long term strategic direction was agreed by all parties - to perform HPV primary screening and associated cytology reporting, probably on one site, acknowledging that in the short term this would likely require further standardisation and consolidation of the existing Cytology laboratory services involved.

The group were tasked with working up a model to centralise all LBC preparation and HPV testing
onto one site in the short term, recognising that we all needed to be using a single LBC system before this could happen. Two of the laboratories used SurePath ${ }^{\text {TM }}$ and one ThinPrep ${ }^{T M}$ (TP). An option appraisal was undertaken to compare the advantages and disadvantages of both LBC technologies, considering clinical, quality and cost elements, in order to identify the single most efficient system for centralised processing and HPV testing.

The option appraisal identified that centralised processing with SurePath ${ }^{\text {TM }}$ would be almost impossible because none of the 3 laboratories had sufficient room or staff, and that ThinPrep ${ }^{T M}$ would be easier for processing large volumes of work in a single laboratory, being fully automated and with an integral chain of custody providing less risk in a centralised processing set-up. At the time there was also the added benefit of a potential price reduction for all laboratories because the southern half of the region was already using ThinPrep ${ }^{T M}$ and a regional discount would be applicable.

Of course there were risks as well as benefits identified with converting LBC technology - retraining of sample takers and laboratory staff would be required; risk of breaching TAT targets during the transition phase; processing both LBC technologies during transition phase and a potential significant rise in inadequate samples a concern of commissioners and sample takers, but the outcome of the option appraisal was still a recommendation for two centres to convert to ThinPrep ${ }^{\text {TM }}$.

The recommendation was approved by both Trust boards and all associated service commissioners and a new contract was awarded via the NHS supply chain in September 2013, with a start date of January 2014 - giving just 3 months to undertake the whole conversion process!

## The conversion process

Conversion was required in 3 main areas, detailed in the following sections:


Screening staff - conversion training for cytologists of all grades in the interpretation of ThinPrep samples was required
This must be provided by an NHSCSP approved Cytology Training Centre but our local Cytology Training Centre (CTC) did not provide TP training so we had to find another which had capacity and time within our short timescale, which thankfully we did. We also applied to become a satellite training site for an NHSCSP approved CTC so that we could have the conversion training delivered on-site and approval was given following an inspection in October 2013.


Staff were divided into 4 groups and undertook a 1 day course comprising a lecture, workshop cases, multi-header slides and a self-assessment set on the day. This was followed by a consolidation set of 100 slides to be completed within 2 weeks. High grade sensitivity was calculated (using Cyres) on these 100 slides with a 'pass mark' of $>95 \%$. Any individual with a high grade sensitivity of $<95 \%$ had to do second set of 100 slides. A final assessment set of 20 slides was then undertaken and a specificity of $>80 \%$ was required to complete the training and be awarded a conversion certificate. All staff were fully converted by January 2014

Laboratory support staff - needed training in the use of new processing equipment \& staining machines
Two Thinprep ${ }^{\text {TM }}$ T5000 Autoloaders were installed and Hologic provided on-site training for all support staff. A new staining/coverslipping machine was also installed and on-site training undertaken for this.

For a 2 month period both SP and TP systems were in use and very careful rota planning was needed for the support staff!

Sample takers - training in new technique was required for all sample takers
Training was undertaken by laboratory and Hologic staff in sessions of one hour comprising two talks and a practical demonstration of the technique, followed by a Q\&A session. A minimum
of one sample taker from each practice/clinic had to attend a face-to-face training session and a training package was supplied (DVD and laminated instruction sheet) to facilitate cascade training within each practice. Certificates of conversion were awarded to all sample takers and more than 3000 sample takers were converted in just 3 months!


Changeover of sample taking kits - all practices and clinics were sent new kits (TP vials and green handled Cervex brushes) prior to their go-live date and asked to ensure all SP kits were removed once their TP kits arrived. This actually resulted in nearly 30,000 unused SurePath vials and brushes being returned to the laboratory and highlights just how many consumables are stock-piled by practices and clinics! We also continued to receive SP samples after the changeover dates so we set a deadline after which any SP samples were rejected, one month after conversion whilst we still had both processing technologies on-site.

## Conversion timeline

Start to finish was just 3 months! In this time 35 cytologists were converted and more than 3000 sample takers, including those at 9 other Trusts (Colposcopy, Gynaecology and GUM clinics). The laboratory was re-fitted to enable installation of new processing and staining machines, and in the middle of all this we moved into the second year of HPV testing and the number of HPV tests quadrupled!

## Impact of conversion

Turn Around Time (TAT)
TAT inevitably increased but this was not all to do with conversion. We had planned conversion in December as it is usually a quiet month but conversion lasted into January when our workload rocketed, along with many other laboratories, and it stayed that way until August! We did experience reduced screening productivity during conversion, as had been anticipated, but we also had our screening capacity further reduced when
one Cytoscreener resigned, one retired and two went on maternity leave! Locum (agency) screeners were then employed in order to achieve and sustain the 14 day TAT.

## Screener confidence \& productivity

Only 2 of the 35 cytologists converted were required to do the additional 100 slide consolidation set but with hindsight we think 200 slides have been be better for all staff; many screeners said they would have preferred this and felt they lacked confidence after just 100 slides. There was extra pressure on checkers because the amount of checking doubled in the first month, but the checkers were no more experienced than screeners in TP interpretation! Multi-header microscope sessions were frequent and essential, and the on-site additional training sessions provided by both Hologic and the CTC were invaluable.

Morphology changes - reactive endocervical cells posed the main problem to start with but ultimately cells are cells, dyskaryosis is dyskaryosis, etc., and as all staff were already competent morphologists they soon got used to what they were looking at and also the different staining appearance - some screeners had never screened conventional smears so had not experienced 'orange' before and we had a degree of overcalling of 'orange' as possible viral/ borderline changes in the first few months.

## Scanty and blood-stained samples

Gaps and spaces in slide preps took some getting used to and adequacy was difficult to judge in the early days, especially in the absence of any national adequacy guidelines. Cell counts were tried but are not used so rigidly now - common sense must prevail and a cytological assessment of atrophy, presence of TZ cells, etc., should be used as well as cellularity to judge adequacy.

Bloodstained samples caused confusion initially. Some screeners put all scanty samples for an acid treat, blood or no blood, and some put all bloodstained samples for an acid treat even if it was a cellular sample, but we soon learnt that only scanty blood-stained samples benefit from acid treatment! Acid treatment is a time consuming process, with associated costs, so the number of samples treated should be kept to a minimum.

## Key Performance Indicators

Inadequate rate - Increased from $\sim 2 \%$ to $\sim 3 \%$, so not the significant increase that had been a cause of concern to sample takers and commissioners.

Low Grade detection rate - remained stable around 4-5\%.

High Grade detection rate - has increased almost 2 -fold in first two full years of conversion, from $0.8 \%$ to $1.5 \%$. This is not thought to be due to over-calling as the positive predictive value (PPV) for CIN $2+$ for the same periods has remained high:

| Year | HG detection rate <br> (\% adequate <br> samples) | PPV (previous 12 <br> months from KC61) |
| :---: | :---: | :---: |
| $2011 / 12$ | 0.83 | 91.6 |
| $2012 / 13$ | 0.84 | 93.9 |
| $2013 / 14$ | 1.26 | 95.0 |
| $2014 / 15$ | 1.56 | 92.6 |
| $2015 / 16$ | 1.51 | 88.3 |

Further analysis of the increased high grade sensitivity is currently being undertaken, but one contributory factor is thought to be possibly due to the screening staff now having experience in both technologies and therefore being more aware of the different morphological presentations and pitfalls in both types of slide preparations, which has led to increased vigilance and consequently detection of abnormalities.

Of the conversion overall - objective achieved? The original option appraisal was to identify the most efficient system for centralised processing and HPV testing, so yes, our objective was achieved in that we now have a much more streamlined processing lab with no more processing delays whilst awaiting samples being booked into the computer.

The smaller footprint of the new processing machines freed up a lot of bench space and enabled a re-design of the laboratory so that we now have a much 'leaner' workflow within the department.

The significant reduction in the hands-on time needed for processing enabled existing staff to absorb the increased HPV workload with no requirement for new staff or additional hours.

There are also on-going savings equating to 3 w.t.e. laboratory support staff because of the reduced hands-on processing time, and so overall there has also been no increase in the cost per test to commissioners for the last 3 years.

There were some costs attached to the conversion - the pump priming of sample taker kits (although this has now been addressed by Hologic and sample taker kits can be purchased
separately for pump-priming) but we did manage to offset most of these costs by selling on the returned kits!

And if other laboratories were considering LBC system conversion - what advice would we give?

- Do not under-estimate time needed for sample taker training!
- Ensure all practices and clinics are pumpprimed with new kits and remove old kits
- Allow sufficient time for support staff to train on the new processing machines to avoid a processing backlog developing - more operator training pre 'go-live' date
- Beware running two systems at the same time minimal staff to be allowed off in transition phase
- Screener conversion - more training slides required (this has now been addressed as a result of our experience and new national conversion training guidelines have been produced by NCCETC for the NHSCSP)
- Try and get locum screeners in sooner to 'mop up' the old technology slides and allow staff to concentrate on new technology slides

But for Derby none of these were show stoppers, and we successfully converted as did the other laboratory involved, although it is somewhat ironic that the planned alliance which drove the conversion never actually happened, but that's another story!

## Acknowledgements

Hologic Ltd and the Birmingham CTC for their invaluable support during conversion


# When it's there ... it's there! 

## Hedley Glencross, Advanced Specialist Biomedical Scientist, Cytology, Queen Alexandra Hospital

So-called 'difficult dyskaryosis' has been a feature of cervical cytology screening programmes, probably since their introduction, but perhaps only fully recognised and described as an 'entity' some years later. A number of names have been ascribed to describe the various features seen in the different types of 'difficulties' including amongst others: 'confusing comparables', 'diagnostic pitfalls', 'diagnostic difficulties', 'lookalikes' and 'pale staining dyskaryosis'. ${ }^{1,2,3,4}$ These types of difficult slides are still a feature of liquid-based cytology samples regardless of the removal of blood or polymorphs and the 'cleaner' nature of the final preparations. ${ }^{5}$ It is also evident that difficult dyskaryosis will continue to be a problem even if the recommendation to move to primary screening by HPV is adopted. We already know that cytologically negative samples may be HPV positive from test of cure, so cytology triage preparations will still require careful scrutiny to ensure that dyskaryotic cells are not missed when a woman is HPV positive on primary screening.

Of the difficult dyskaryoses, perhaps sparse highgrade dyskaryosis is even more difficult to recognise, as by their sparse nature these cells present a number of problems in screening, particularly if they are also small, pale, occur as micro biopsies only or if the high-grade dyskaryosis exists concurrently with low-grade dyskaryosis.

Described below are three cases received in the department recently. All slides were made using Sure Path ${ }^{\text {TM }}$ liquid-based cytology and the original screener marks in green have not been removed.

## Case 1

Female aged 26, first call. Only two marks made by the primary screener, with no other marks added at checking or reporting. Mark 1 (figure 1) shows a very shadowy and indistinct group of koilocytes. Mark 2 (figure 2) shows a 'squared off' hyperchromatic crowded group of cells, with some disorganisation and variation in the size and shape of the cells. The chromatin patterns are slightly disturbed, nucleoli are prominent and three mitotic figures are also noted (one of which is visible indicated by the lower arrow in figure 3). The primary screening opinion was very scanty low-grade dyskaryosis plus a single group of cells highly suspicious for severe dyskaryosis. Punch biopsy revealed CIN $1 \&$ CIN 2. Follow up LLETZ CIN2.


Figure 1


Figure 2


Figure 3: higher power view of the group in figure 2, showing the 3D nature of the group. At the periphery, the variation in the size and shape of individual nuclei can be seen, with a mitotic figure arrowed.

## Case 2

Female aged 34, last smear negative 13 years previously. Seven marks were made by the primary screener, with no other marks added at checking or reporting. The marks mostly showed small single cells (although one small group was also identified) with disturbed chromatin patterns and high nuclear cytoplasmic ratios (figures 4 \& 5). The primary screening opinion was severe dyskaryosis. Punch biopsy revealed CIN $1 \&$ CIN 2.


Figure 4


Figure 5

## Case 3

Female aged 25, first call. Four marks were made by the primary screener, with no other marks added at checking or reporting. The marks showed small clusters ( $3-5 / 6$ cells) of small cells, with disturbed chromatin patterns and high nuclear cytoplasmic ratios (figure 6). The primary screening opinion was severe dyskaryosis. Punch biopsy revealed CIN 3.


Figure 6
Although none of these cases were eventually reported as conclusively high-grade dyskaryosis, all the women were referred in line with the Public Health England national algorithm and have had a diagnosis established. While further surgery/LLETZ is awaited and CIN 3 has not yet been reported in two of the cases, the primary screening opinion was essentially correct in all instances, in that high-grade CIN has been identified by cytology.

These cases remind us that sparse high-grade dyskaryosis can be notoriously difficult, but not impossible to recognise at primary screening, or indeed in cytological triage if primary HPV screening is introduced. Careful examination of the variety of presentations of these types of cells is paramount and when in doubt, try to go back to basic dyskaryotic criteria and try not to be put off when only small numbers of cells are present.

Remember, when it's there... it's there!

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## CEC: Journal Based Learning <br> Colposcopy and Programme management guidelines for the NHSCSP <br> (NHSCSP Publication 20, March 2016)

1. Give 4 reasons (apart from automatic ceasing) why a woman might be withdrawn from The NHS Cervical Screening Programme? (4 marks)
2. What is the recommended management for a woman with negative cytology but an abnormal cervix? (1 mark)
3. If a woman has a LLETZ of less than 10 mm depth/width, is she at increased risk of pre-term labour in future? (1 mark)
4. Give 4 examples of cases that should be discussed at colposcopy MDT (4 marks)
5. How many NHSCSP referrals should a practising colposcopist see in order to maintain their clinical skills, and how often should they attend a BSCCP registered meeting? (2 marks)
6. What should the predictive value of a colposcopic diagnosis of CIN2 be, provided the assessment is adequate? (1 mark)
7. When can cryocautery be used and why? (1 mark)
8. Give 2 reasons why endocervical curettage is not advised for the assessment of cervical glandular neoplasia? (2 marks)
9. What is the recommended management if CIN is suspected during colposcopic assessment of a woman who is pregnant? (2 marks)
10. How often should women receiving cytotoxic chemotherapy for non-genital cancers undergo cervical screening and why? (2 marks)

Please send or email your answers to me (please note change of address)

Helen Burrell
Consultant BMS \& Manager
South West Regional Cytology Training Centre
Pathology Sciences Building
Southmead Hospital
Bristol
BS10 5NB
Helen.burrell@nbt.nhs.uk

## Case Study - An Unexpected Diagnosis <br> Dr Gavin Laing, Specialty Registrar in Histopathology/ Cytopathology Aberdeen Royal Infirmary, Aberdeen

Clinical Details: The patient, a 73 year old male, presented with a two year history of productive cough and, more recently, intermittent haemoptysis. An initial CT chest scan revealed a mass lesion in the right hilum and bronchoscopy at this time showed an abnormal area of bronchial mucosa within the right upper lobe (RUL) anterior segment. Bronchial brushings, washings and biopsies were obtained and demonstrated inflammatory features only. Microbiology grew Haemophilus parainfluenzae and antibiotics were commenced.

A clinical decision was taken to repeat the bronchoscopy in six weeks' time, which showed the abnormal area within the RUL anterior segment was still present, but was now a lobulated lesion with a black, necrotic surface. Further bronchial brushings (figures 1 and 2), washings and biopsies were obtained from this site and are shown below.

What might the differential diagnosis include? Is there any further information you would like to know from the MDT? How would you confirm the diagnosis?


Figure 1. Bronchial Brushings (high magnification) ThinPrepR slide stained by Papanicolaou (PAP) method.


Figure 2. Bronchial Brushings (high power) - ThinPrepR slide stained by PAP method.

# The $40^{\text {th }}$ European Congress of Cytology is nearly here! <br> Paul Cross 

The final planning for the $40^{\text {th }}$ European Congress of Cytology is well underway. Planning for an international meeting over four days, not just for the programme itself (which is hard enough) but also the venue, hotels, commercial input, speaker management, abstracts etc. etc. it is a BIG job!! The BAC were proud to be awarded the prestigious $40^{\text {th }}$ ECC meeting at the $38^{\text {th }}$ ECC in Geneva in 2014, and whilst 2016 seemed a long time away then, it doesn't now! The BAC Local Organising Committee (LOC) has met regularly and held numerous teleconferences and sent far too many emails. I am amazed at how well the LOC has pulled together, and how much we have achieved. One decision we made early on was to appoint a Professional Conference Organiser, and after a series of interviews we appointed a firm called Conference Partners. They organise meetings for a living, and drawing on their expertise has been invaluable. I cannot thank them enough for all they, and the LOC, have done to deliver what I am sure will be a great meeting.

However, the proof of the pudding, as they say, is in the eating...


The meeting will be held between $2-5^{\text {th }}$ October 2016, at the Arena and Convention Centre (ACC) in Liverpool, on the banks of the River Mersey. The BAC held its one day ASM there last year, and the feedback we have had was very positive - our dry run was a success! The $40^{\text {th }}$ ECC will have 37 separate sessions on all aspects of cytology, including 4 oral paper sessions, and 27 hands on workshops. We expect well over 500 delegates from all over the world, and over 180 posters. A very strong commercial presence will be on site
for the duration of the meeting, with at the time of writing, two sponsored lunch sessions from our Gold partners Hologic and BD. The opening ceremony will include the Lord Mayor of Liverpool, adding a very local feel to the meeting. There is a Gala Dinner on the Tuesday night at the nearby Rum Wharehouse, where a Beatles themed evening with the famous Mersey Beatles, and three course dinner, will allow delegates to relax and even dance after a hard day's conferencing. The lunch and coffee breaks will allow delegates to mix and socialise, as well as keep in touch with the many commercial stands and also the posters submitted for the meeting.


Like all meetings people will look for different topics, speakers, themes or nuggets they can take back to their base. With up to five parallel sessions most days you will be spoilt for choice! Many of you will already have booked up for it, in part or in full. If not, take a look at the dedicated meeting website at: www.cytology2016.com. If you haven't booked up then you still have time - but be quick!! We look forward to seeing as many BAC members at the meeting as we can. Let's all make the 40th ECC meeting the best yet!


## CEC Local Officers

## (Autumn 2016)

Alison Baseley<br>Cytology Dept<br>Royal Hampshire County Hospital<br>Winchester, Hants<br>S022 5DG<br>Tel: 01962825371<br>Fax: 01962824664<br>e-mail: Alison.Baseley@hhft.nhs.uk

## Viv Beavers

Manchester Cytology Centre
Central Manchester Healthcare Trust
P.O. Box 208, CSB 2

Oxford Road, Manchester
M13 9WW
Tel: 01612765115
e-mail: Viv.Beavers@cmft.nhs.uk

## Hilary Diamond

The Laboratories
Belfast City Hospital
Lisburn Rd, Belfast
BT9 7AD
Tel: 02890263651
e-mail: hilary.diamond@bll.n-i.nhs.uk

In the absence of a local officer in your area, please send CEC items directly to me at the address below.

## Helen Burrell

Helen Burrell
Consultant BMS \& Manager
South West Regional Cytology Training Centre
Pathology Sciences Building
Southmead Hospital
Bristol
BS10 5NB
Tel: 01173235649
e-mail: Helen.burrell@nbt.nhs.uk
Please remember to make a copy of everything before it is sent - there have been one or two losses in the post.

Thank you

## "Sleepless in Seattle"

## Dave Nuttall

Seattle; a city situated on Puget Sound in the pacific north-west of the United States of America. It is surrounded by water, mountains and evergreen forests, and encompasses thousands of acres of parkland (hence its nickname, "Emerald City"). It is home to some of the big names in the informatics industry, with Microsoft ${ }^{\text {TM }}$ and Amazon.com headquartered in its metropolitan area. The futuristic Space Needle, a legacy of the 1962 World's Fair, is its most recognizable landmark - and was once the tallest building west of the Mississippi River.

It is also home to Boeing, the world's largest aircraft manufacturer and the first Starbucks coffee shop opened there in Pike Place Market in 1971. Seattle was also the birthplace of rock legend Jimi Hendrix and was the first city in the US to play a Beatles record on the radio! Bruce Lee's grave can be found at Lakeside Cemetery, next to that of his son, Brandon Lee. On a lighter theme, Seattleites seem to enjoy discarding their clothing in public, evidence by the annual "No Pants Light Rail Ride" where riders were encouraged to take off their pants and "pretend that everything is normal". Even more extreme is the annual Naked Pumpkin Run is held every year in October - "Go as bare as you dare" is the motto!

So what took me there? Well, I'm in the $5^{\text {th }}$ year of my PhD studies into the application and implementation of Computer Assisted Screening (CAS) in cervical screening programmes. I'm enrolled on a 6 year, parttime course at the School of Medicine, Trinity College, Dublin (TCD). One of the requirements of the course is that a student should present at an international or national conference that is related to the area of study of the individual concerned.

I was over in Dublin in November 2015, attending one of my regular face-to-face meetings with Professors John O'Leary and Cara Martin when the subject came up and the resulting discussion concluded that I should submit some of my work as a presentation for the 2016 series of pathology related conferences. First on the list was the Annual Scientific Meeting of the United States and Canadian Academy of Pathology (USCAP).

So I submitted an abstract summary of my work investigating the Becton Dickinson FocalPoint ${ }^{\text {TM }}$ GS "No Further Review" technology, in the hope that it would be accepted as a poster submission or even a platform presentation. I didn't have high hopes as
this is a big event - upwards of 3500 presentation submissions are received annually and around ten percent, that is around 350 platform presentations are accepted. Imagine my excitement when my submission was accepted for platform presentation - over the moon doesn't quite describe my feelings; however, suffice to say, I was mightily pleased!

The USCAP ASM 2016 ran from March 12-18 ${ }^{\text {th }}$ and I was due to present on Monday, March $14^{\text {th }}$ at 09.15 am (programme starts at 08:00 at this meeting, with companion society meetings running to 21:00 most days - so I guess you could say you get your registration fees' worth!). Anyhow, I registered for the ASM, booked accommodation and flights from Manchester and I was set to go.

As it turned out our research group at TCD submitted a number of presentations to USCAP and we secured two platform presentations and several posters - a good result! Prof. O'Leary was travelling over to present at the meeting and we arranged to meet up on the Saturday ( $12^{\text {th }}$ March) afternoon. March 11th arrived and I boarded the flight from Manchester to Seattle via Schiphol, Amsterdam at 05.55 GMT and arriving at Seattle Tacoma at 11.26 Pacific Standard Time (PST) - 8 hours behind the UK. I had a good trip across - the only issue was that due to the early

start, I didn't sleep at all the night before I departed. Nor did I sleep on the flight - so I could honestly say that I was "Sleepless before Seattle!". I took the train from the airport and checked in at the Westin Seattle Hotel. My room was on the $24^{\text {th }}$ floor and I had a terrific view from that level, albeit of other impressive tall buildings.


The next morning I rose at around 10.00 and left the hotel to explore my immediate surroundings and to locate the Washington State Conference Centre. My first impression during my walkabout was how clean the city was and how quiet! Considering it was midmorning on a Saturday there was hardly a soul about, however it livened up later on. I loved the American convention for identifying their streets in avenues and streets and as the Conference Centre was situated near the junction of Pike and Seventh, that's where I headed. When I arrived I was very impressed with the Conference Centre and its facilities and as registration was later in the day, I carried on with my walking tour.



I returned later in the day to find the registration aisles heaving with arriving delegates and I took my place in one of the queues. I had just registered when I received and e-mail from John O'Leary to let me know that he would be arriving later in the afternoon and we agreed to meet up for a meal. John introduced me to that fine American establishment - the Cheesecake Factory - where we spent a most agreeable couple of hours!


That evening I had booked to attend a companion society meeting - that of the Papanicolaou Society. The meeting was very interesting and honoured some of its members, including Dr David C. Wilbur, with whose work I am quite familiar with - being as it is concerned with Computer Assisted Screening, specifically with the AutoPap ${ }^{\text {TM }}$ system and then its later derivative the BD FocalPoint ${ }^{\text {TM }}$. John and I then pinned up the posters that had been submitted from TCD in the Trade Show area.

On Sunday morning, March $13^{\text {th }}$, John and I took a coach tour around the city - in the pouring rain! We were taken down to the markets and past the first Starbucks coffee shop. Then we headed around to the suburbs and on to the coast. In the afternoon I attended another companion society meeting - this time that of the International Society of Gynaecological Pathologists. What interested me at this meeting was the level that molecular
technologies such as second generation sequencing were now implemented at the coal face - providing hitherto unprecedented levels of personalised and precision medicine.


Later that evening I met up with John for a meal and then we rehearsed our respective presentations for the following day. Monday duly arrived and I was at the presentation theatre a half hour early to check that my presentation had been uploaded. What was daunting was the size of the theatre - it was huge with two massive screens to boot. Fortunately the rehearsals did the trick and things went very well!


Once John had delivered his talk we visited the trade show which was well attended by representatives of the various suppliers. Given that this was probably the premier event in the US pathology conference calendar - the size of the trade show reflected that and I just wished I had more time to wander around and take it all in. I must admit that I was impressed by the demonstration by Sekura of the automated microtome prototype - complete with multiple section drying ovens set at different temperatures depending on the staining requirements for the slide!

That evening I attended the last companion society meeting that I had booked - that of the American

Society of Cytopathology (ASC). This ran from 19.30 to 22.30 with some very high quality presentations on diagnostic and screening cytology and one notable presentation regarding the limitations placed on cytology services by medical insurance companies! A very strange concept for a delegate from the UK with nigh on 40 years experience with the NHS!

The next day I took the train back to Seattle Tacoma and boarded my flight homewards. All went according to schedule and after another change of flight at Schiphol, Amsterdam - I landed at Manchester. I picked up my car and drove home to St Asaph in North Wales. I didn't really feel too tired until I walked through the front door at about 14.00 on the Wednesday - the trail of discarded luggage and belongings through the house on the way to the bedroom told another tale though! I reckon I wasn't so sleepless once back home in the UK!


It was a memorable trip - perhaps the conference experience of a career and I feel really privileged to have had the opportunity. Which brings me to the BAC - without the financial support of our Association through a BAC bursary I might not have made the trip and I am extremely grateful for the support. All they wanted in return was this article - a good deal! Thank you BAC!


## ECC 2016 Draft Programme

## Updates to the programme are frequent, current programme can be found at http://cytology2016.com/scientific-programme/

Colours denote separate rooms

| Sunday 2nd October |
| :--- |
| Parallel EFCS Cytology Symposium: Croatian Cytology Society <br> Chairs: Ika Kardum-Skelin, Danijela Vrdoljak-Mozetič, Karmen Trutin-Ostović <br> Cervical Cytology Look a likes and mimics GS <br> Chair: Dr D Mody <br> Applying the Paris System for reporting urinary tract cytology GS <br> Chair: Dr Eva Wojcik <br> Parallel EFCS Cytology Symposium: Greek Cytology Society "Cytopathological and molecular diagnostic <br> and prognostic procedures towards a precise clinical management". <br> Chairs: Maria Nasioutziki, Panagiota Mikou, Emmanuel Mastorakis <br> Does knowledge of HPV status help or hinder morphological interpretation in cervical cytology? GS <br> Chairs: Ms Helen Burrell, Mr Chris Evans <br> Use of CINTEC plus in cervical diagnosis GS <br> Chair: TBD <br> Relative merits of LBP \& direct smears in FNA services GS <br> Chairs: Dr Ed Cibas, Dr Glen Dixon <br> Companion society symposium: Indian academy of cytology <br> Chair: Dr RGW Pinto <br> Invasive Cervical cancer audit GS <br> Chairs: Mr Nick Dudding, Mrs S Mehew <br> Cervical Cytology Glandular lesions GS <br> Chair: Dr Ritu Nayar <br> Chair: Dr Roberalel EFCS Cytology Symposium: Turkish Cytology Society Slide seminar on rare cases of FNA : learning <br> Co-chairs: Dr Darshana Jhala, Dr Nirag Jhala <br> Chaist: Pinar Firat, Aysun Uguz |



| Tuesday 4th October |
| :---: |
| Nongynae symposium 2: Digital cytology Chairs: Roberto Dina, Dr Arrigo Capitanio |
| HPV primary screening and vaccination: lessons learnt Chairs: Kate Cuschieri, Dr Jesper Bonde |
| EUS FNA pancreas \& submucosal lesions of the upper GI tract VM Chairs: Dr Barbara Centeno, Dr Mark Howard |
| Soft tissue and Paediatric Cytology Dr Jerzy Klijanienko, Dr Helena Barocca |
| Thyroid cytology: practical tips in applying diagnostic criteria GS Chairs: Prof Zubair Baloch, Prof.Guido Fadda, Dr Poller David |
| Nongynae cytology slide seminar - the Sherlock Holmes cases Chair: Dr Julie McCarthy |
| EFCS Programme: <br> Chair: TBD |
| Cervical cancer screening: who has the solution ?" |
| Guidelines in Gynae and Non Gynae cytology Chair: Dr Louise Smart |
| Multidisciplinary discussion of cytology, HPV, histology and colposcopy GS Chairs: Dr P Cross, Mrs A Cropper, Mr Chris Evans |
| FNA lung carcinoma with the current and future perspective: small or no-small, does size matter? Chairs: Professor Siddiqui, Dr Canberk |
| Key Note Lecture More than a decade of Molecular Diagnostic Cytopathology : How do we Practice it, how do we Teach it? Prof Manuel Salto-Tellez, <br> Chair: Professor Fernando Schmitt |
| Gynae cytology slide seminar — the Agatha Christie mysteries Chair: Dr Dina Mody |
| Focussing on the future of cervical screening: how can we improve uptake and save lives. Chair: Mrs Ruth Stubbs <br> 15. 45 - 16.00 Panel discussion and open Q\&A |
| InCyt/EACC: Widening the horizons of cytotechnologists and cytopathologists Chair: Mr Allan Wilson |
| Anal Cytology, HPV and histology GS Chairs: Professor Mina Desai, Professor Ray MacMahon, Dr Teresa Darragh |
| An approach to reporting salivary gland lesions using the Milan terminology GS Chairs: Dr William Faquin, Diana Rossi, Marc Pusztaszeri |
| Companion society symposium: ASC Uses and Misuses of Ancillary Tests in Cytopathology Dr Eva Wojcik, Professor Zubair Baloch, Dr William Faquin, Dr Edmund Cibas |
| Practical application of the ultrasound to assist pathologists in performing FNA HANDS ON SESSION Chairs: Dr Rose Ngu, Dr Ash Chandra |
| EACC Session Chair: TBD |
| WORKSHOP Serous effusions: morphological patterns in reactive and neoplastic conditions GS Chairs: Prof Ben Davidson, Dr Gareth Rowland |
| Lymph node FNA: morphology and interpretation of flow cytometry data GS Chairs: Prof Mousa AI-Abbadi Samer AI Quran, Nayef AqeI, UK |

## Wednesday 5th October

Revised Terminology in cervical cytology, histology and colposcopy
Chair: Dr John Smith
EBUS TBNA: Diagnosis and staging of lung carcinoma VM
Chair: Prof George Santos
Free Oral Session Non-Gynae
Chair: Mrs J Jamison
QUATE and IAC exam
Prof M Desai, Mr A Wilson, IAC Lead Examiner Mrs Allison Austin
Head \& Neck FNA cytology: thyroid, salivary gland and lymph node lesions Format: Glass slide microscopy workshop
Chairperson: Dr Massimo Bongiovanni
Co-chair: Dr Beata Bode-Lesniewska
Companion society symposium: IAC A Breast FNAB Cytology Reporting System: Draft Proposals Co-Chairs: Dr A Field and Dr P Viehl

Cytogenetics and Cytology
Chair: TBD
Free Oral Session Gynae
Chair: Mr D Nuttall
QUATE and IAC exam
Prof M Desai, Mr A Wilson, IAC Lead Examiner Mrs Allison Austin

## Key Note Lecture

Chairperson: Dr David Poller
Co-chairs: Dr William Faquin
QUATE and IAC exam
Prof M Desai, Mr A Wilson, IAC Lead Examiner Mrs Allison Austin


## Case study answer

## Dr Gavin Laing, Specialty Registrar in Histopathology/ Cytopathology Aberdeen Royal Infirmary, Aberdeen

## Metastatic malignant melanoma in the bronchus

(see page 18)

Examination of the bronchial washings was unremarkable with no malignant cells identified. However the brushings revealed, on a background of normal respiratory epithelial cells, an abnormal population of large pleomorphic cells predominantly singly dispersed but with a few small clusters. These cells had large, irregularly shaped nuclei with prominent nucleoli and moderate cytoplasm. Several binucleated and multinucleated forms were identified. Pigment was not evident within these cells. The cytological differential diagnosis at this stage included poorly differentiated carcinoma, lymphoma and melanoma. Similar malignant cells were present in the biopsy specimen (figure 3).

On looking into the patient's past medical history it was revealed they had a cutaneous malignant melanoma diagnosed six years previously. This lesion was excised from the left pre-auricular area and histology confirmed superficial spreading subtype with a Breslow thickness of 2.8 mm and no evidence of lymphovascular space invasion. A sentinel lymph node biopsy was not diagnostic as no lymph node tissue was obtained. Final staging was documented as pT3a fully excised.

For economical reasons immunohistochemistry was performed on the biopsy and showed the tumour cells to be positive with Melan A (figure 4) and S100, confirming the diagnosis of metastatic malignant melanoma in the bronchus. The black appearance of the lesion was not due to pigment and was attributed to high vascularity and haemorrhage. The patient was subsequently commenced on immune modulatory therapy (Ipilimumab).

Metastatic melanoma can involve any organ and commonly metastasises to the lungs and lymph nodes. Bronchial involvement however is very uncommon and is rarely reported in the literature. The most relevant piece of clinical history (melanoma) was not stated on the pathological request form, a not infrequent omission in clinical practice. This widened our initial differential diagnosis until further clinical information was obtained and confirmatory immunohistochemistry was available. In any cytology sample comprising singly dispersed or discohesive pleomorphic cells with a variety of morphological forms melanoma should always be excluded.


Figure 3: Bronchial biopsy (low magnification) Haemotoxylin and Eosin (H\&E) stain.


Figure 4 Immunohistochemistry slide (low magnification) Melan A.

## BIRMINGHAM CYTOLOGY TRAINING CENTRE

All BCTC gynaecological cytology courses are provided in SurePath and/or ThinPrep LBC<br>Please see our website for full list of courses: www.bwnft.nhs.uk/professionals/cytology-training-centre/courses/course-calendar IBMS RCPath CPD accredited courses as appropriate<br>INTRODUCTORY COURSES FOR NHSCSP DIPLOMA IN CERVICAL CYTOLOGY<br>2017 dates to be arranged if required<br>FOLLOW-ON COURSES FOR NHSCSP DIPLOMA IN CERVICAL CYTOLOGY 10-14 October 2016<br>PRE-EXAMINATION COURSES FOR THE CITY \& GUILDS/NHSCSP DIPLOMA IN CERVICAL CYTOLOGY 30-31 January 2017<br>UPDATE COURSES IN GYNAECOLOGICAL CYTOLOGY (ThinPrep \& SurePath)<br>27 June 2016 (Small cells), 21 July (HPV), 22 September 2016 (Atrophy, latrogenesis), 17 October 2016 (Metaplasia), 29 November 2016 (Small cells) 2017 dates \& topics to be arranged

## NON-GYNAECOLOGICAL CYTOLOGY MASTERCLASS

2017 date to be arranged
Ideal for BMSs or medical staff requiring an update

# GYNAE PATHOLOGY COURSE FOR BMS UNDERTAKING RCPATH/IBMS ASD IN HISTOPATHOLOGY REPORTING <br> 2017 date to be arranged if required 

## BIRMINGHAM HISTOPATHOLOGY COURSE

## June 2017 (date to be arranged)

(course includes optional Saturday \& Sunday am for personal revision)
This two-week course provides topic based lectures on systemic pathology, slide review of selected cases followed by discussion and a revision session including mock exam in preparation for the FRCPath Part 2 exam.

GYNAECOLOGICAL CYTOLOGY FOR TRAINEE PATHOLOGISTS
12-13 September 2016
Spring \& Autumn 2017 dates to be arranged
The programme for this course is a combination of lectures workshops and multiheader sessions. Includes a mock exam and is particularly suitable as revision for the Certificate in Higher Cervical Cytology Exam

## NON-GYNAECOLOGICAL CYTOLOGY FOR TRAINEE PATHOLOGISTS

5-9 September 2016
Spring \& Autumn 2017 dates to be arranged
The programme for this course is comprehensive and includes the salient aspects of diagnostic non-gynaecological cytology. This course includes a mock exam and is particularly suitable as revision for the FRCPath Part 2 exam

## WEST MIDLANDS AUTOPSY PATHOLOGY COURSE <br> 2016/17 date to be arranged

INTRODUCTORY COURSE FOR ST1s
5-9 December 2016
Introduction to Gynaecological and Non-Gynaecological Cytology including Autopsy element

## LECTURE SERIES IN GYNAECOLOGICAL PATHOLOGY

Pathology of Cervical Carcinomas 16 September 2016
Update for consultant pathologists and senior trainees with an interest in gynaecological pathology.
TRAINING OFFICERS' MEETINGS: 25 November 2016
LBC Conversion Courses, Ad hoc workshops and Off Site workshops can be arranged on request-please contact BCTC LBC Sample Taker Introductory and Update Training sessions are arranged regularly throughout the year

For further details and reservations please contact Louise Bradley or Amanda Lugg

## SOUTH WEST REGIONAL

## 2016 Course Schedule

| Date | Gynae Courses | Fee* |
| :---: | :---: | :---: |
| 13 June - 8 July | Introductory in Gynae Cytology |  |
|  |  | Other $£ 1200$ |
| 7-9 June | Update in Cervical Cytology for Technical Staff | NHS £300 |
| 13-15 September 6-8 December |  | Other $£ 350$ |
| 8 November | Update for Cytology Checkers | £100 |
| 18 October | Update in Cervical Cytology for Pathologists \& Consultant BMS's \& Holders of the Advanced Specialist Diploma in Cervical Cytology | £100 |
| 25-26 September | Gynae Pathology for Trainee Colposcopists | £200 |
| 19-20 September | Cervical Sample Taker Training | £250 |
| 12 September 19 October | ½ Day Update in Cervical Screening for Sample Takers |  |
| 25 October | Condensed Core Foundation Course for Trainee GP's Cervical Sample Taker Training | £30 |
| Date | Non-Gynae Courses | Fee* |
| 11 October | FNA Cytology | £100 |
| 15 November | Urinary Tract Cytology | £100 |
| 6-9 September | Non-Gynae for Trainee Pathologists | £400 |

* PLEASE NOTE THAT NO FEE IS APPLICABLE FOR NHS STAFF BASED IN THE SOUTH WEST REGION

South West Regional Cytology Training Centre

## One-Day Update Courses in ThinPrep ${ }^{\circledR}$ Cytology ${ }^{+}$

One-day updates covering challenging and interesting cytological presentations from both squamous and glandular lesions
$1^{\text {st }}$ July, ${ }^{\text {th }}$ Sept 2016
Course Fee*: $£ 15$ / $£ 95$
One-Day Update Courses in SurePath ${ }^{\text {m }}$ Cytology

One-day updates covering areas such as Negative v High Grade and challenging and interesting cytological presentations from both squamous and glandular lesions
$11^{\text {th }}, 17^{\text {th }}, 18^{\text {th }}, \& 19^{\text {th }}$ Oct, $9^{\text {th }}$ Nov \&
$6^{\text {th }}$ Dec 2016
Course Fee*: £15 / £120

## Three-Day Update Course for AP/Consultant BMSs

Includes sessions on cervical histopathology, recent developments in colposcopy, HPV selfsampling and a whole session on the NHSCSP cancer audit. Suitable for ThinPrep ${ }^{\circledR}$ or SurePath ${ }^{\text {™ }}$ users
12th - 14th October 2016
Course Fee*: £45 / £275

## Update courses in Non-Gynae Cytology ${ }^{+}$ <br> A series of three one day courses covering serous fluids, urine and respiratory cytology ideal for anyone seeking an update in these areas, particularly those intending sit the IBMS diploma. Includes an optional fourth half-day covering aspects of the IBMS exam. <br> 15th -18 ${ }^{\text {th }}$ Nov 2016 <br> Course Fee*: $£ 15$ / $£ 120$ per day/ $£ 395$ for all 4

## One-Day Introductory Non-Gynae Cytology Workshops

Ideal for anyone requiring an introduction to nongynae cytology. These courses will cover specimen preparation of Head \& Neck samples and understanding the morphology of urine, respiratory and effusion cytology. Very useful to anyone undertaking their Specialist Portfolio.

21st-24th November 2016
Course Fee*: $£ 15$ / $£ 120$ per day

Courses run from both the East Pennine and North West Cytology Training Centre sites. Please check with our admin team for exact details
*Participants from the North West, North East, Yorkshire and East Midlands will incur $£ 15$ administration fee per day on all courses listed. All prices are subject to change.

Further information and application forms for any of our courses are available from our Administration Team:

Wakefield: Kathryn Hawke / Sally Collins - 01132466330 kathryn.hawke@nhs.net / Sally.Collins2@sth.nhs.uk
Manchester: Isabelle Caillet / Jen Bradburn - 01612765114 jennifer.bradburn@cmft.nhs.uk / Isabelle.Caillet@cmft.nhs.uk

Lothian

## Scottish Cytology Training School

## Programme 2016/17

No course fee is charged for Gynae cytology courses to employees of Scottish NHS Trusts

Training School Director Sue Mehew
Tel: 01312427149
Email: sue.mehew@nhslothian.scot.nhs.uk

## Training School Manager

Fiona McQueen
Tel: 01312427149
Email: fiona.mcqueen@nhslothian.scot.nhs.uk

## Training School Administrator

Training School Administrator Pathology Department Royal Infirmary of Edinburgh 51 Little France Crescent Edinburgh EH16 4SA

Tel: 01312427135
Email:scts@nhslothian.scot.nhs.uk

## Application forms available on

request from:
scts@nhslothian.scot.nhs.uk
NHSCSP Accredited Training Centre
Courses held at
The Bioquarter, Royal Infirmary of Edinburgh, $1^{\text {st }}$ Floor, Building 9, Edinburgh Bioquarter, 9 Little France Road, Edinburgh. EH16 4UX
unless states (QEUH) Queen Elizabeth University Hospital, Glasgow.

Non NHS Labs - price on application All courses are Liquid Based Cytology (ThinPrep) Courses are CPD accredited

## Introductory Course



5th September - 30th September 2016 20 ${ }^{\text {th }}$ February - 17th March 2017
$£ 1000$

## Colposcopy Course

$11^{\text {th }}$ - 12 January 2017 tbc or $10^{\text {th }}-11^{\text {th }}$ May 2017 tbc

## Introductory Course Part 2

21st November - 25th November 2016

## Update Course

8th - 9th November 2016 (QEUH)
7th - 8th December 2016
1st - 22nd February 2017
22nd - 23rd March 2017
7th - 8th June 2017 (QEUH)
7th - 8th November 2017 (QEUH)
£100 per day

## Pre-Exam Course

22nd - 24th Aug 2016 (for Oct Exam)
£250

## Update Course <br> Medical/Consultant BMS Staff

29th November 2016
£100

## ST1 Introduction to Cervical Cytology

5th - 9th September 2016
Non-Gynae Courses - for Trainee Medical (ST3) \& BMS staff

20th - 22nd September 2016 tbc
£100 per day

# ECC 2016 

2-5 October Liverpool, UK www.cytology2016.com

Join us at
The European Congress of Cytology this October in Liverpool Sunday 2nd -Wednesday 5th October 2016

There will be an abundance of inspiring symposias and interactive microscope workshops within the programme which cover all aspects of cytology; morphology, best practice, guidelines and new techniques.

Register today @
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## Front Cover image:

A cervical cytology case with occasional bare nuclei, reported as high grade dyskaryosis, best regarded as moderate dyskaryosis. LLETZ - CIN3. Supplied by Sue Mehew.

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[^0]:    BAC Office,
    12 Coldbath Square,
    London EC1R 5HL

