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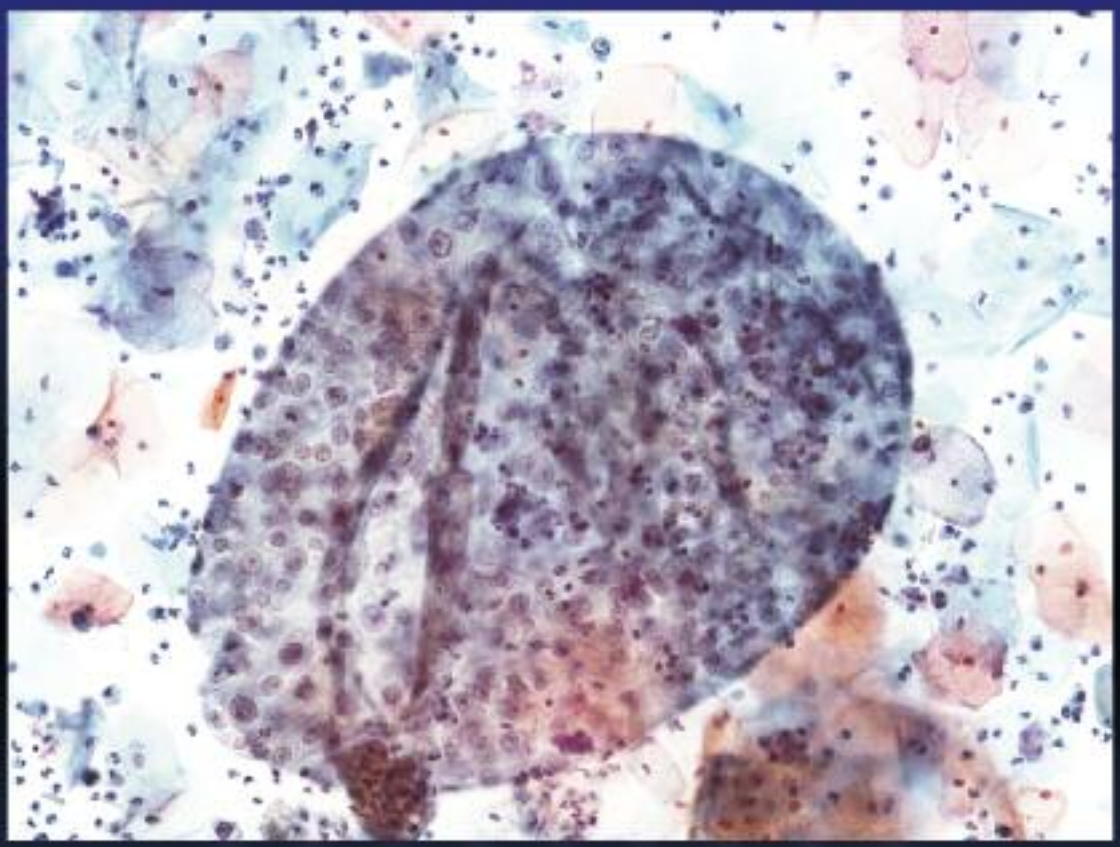

BAC British Association for Cytopathology

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Editorial

Sharon Roberts-Gant

The contributors to the autumn edition of SCAN provide us with lots of information from national and international meetings. Allan Wilson provides feedback on the European scene where he represented BAC, Mark Howard shares his experience of the International Congress of Cytology held in Paris and Melanie Buchan summarises the ACP and BAC joint scientific meeting held in London.

Karin Denton updates us on the HPV pilot whilst there is a call from America for more data on the performance of HPV testing in cervical specimens from women who later develop cervical cancer. Paul Cross shares the results of the pilots in non-gynaecological technical EQA and Karin explains quality assurance in the new NHS.

We are introduced to Christian Burt the IBMS Professional Support Services Manager who manages all things administrative at the BAC Office. There are articles from Andrew Evered and Tom Giles and some sound advice from Amanda Herbert. Membership and CEC updates can be found on page 17 and Alison Cropper provides information on forthcoming BAC educational events — don't miss the BAC autumn meeting later in the month.

I hope you find the edition interesting and informative. My thanks to all of the contributors.
Sharon

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INFORMATION FOR CONTRIBUTORS
Articles for inclusion in SCAN can be emailed to the editor 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). 35mm 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 01865 222746 or email: robin.roberts-gant@ndcls.ox.ac.uk

BAC British Association for Cytopathology

Chairman's Report

Allan Wilson

I always find it harder to focus during the unusually hot weather (yes, we do see the sun occasionally in Scotland!) that we are currently experiencing and forcing myself to put fingers to keyboard to write this report has been more difficult than usual but the nagging emails (thanks Paul and Sharon!) about the copy deadline finally forced me to tear myself away from a summer of sport, put down my barbeque tongs and head for the laptop.

It has been an interesting few months; I attended the 18th International Congress of Cytology in Paris at the end of May. My attendance was funded by the BAC and I would like to take this opportunity to thank the Executive for agreeing to fund my expenses to attend this excellent meeting. Due to significant pressure on NHS training and education budgets, it is unlikely that non-medical staff would get funding from their employers for overseas meetings — it is difficult enough for UK based meetings. As the BAC will have a non-medical chair or president, the Executive felt that it was appropriate to fund the chair to represent BAC not only at the meeting but also at the meetings of the European Federation of Cytology Societies (EFCS) and the European Cytotechnologist committee (EACC). Reports from these meetings are within this issue of SCAN

The Paris meeting was fascinating. I approached the meeting confident that the organisers could not better the last congress in Edinburgh but the scientific content was of a very high standard and the setting stunning. However, the organisers could not better the weather we had for the Edinburgh meeting or the social events. I still have clear memories of the reception at Edinburgh castle on a sunny May evening (typical Scottish weather for that time of year).

The BAC also awarded a bursary to Mark Howard from Newmarket to part-fund his attendance at the Paris meeting. His report is within this issue of SCAN. I do not wish to steal Mark's thunder but I thought an overview of the main themes of the congress may be of interest.

It is difficult to avoid mentioning HPV as the focus of many cytology meetings is too often on HPV primary testing. It was good to see several presentations "flying the cytology flag", notably Nick Dudding made an excellent presentation highlighting the weaknesses of HPV primary screening. The move to HPV testing, however, was a theme running through the conference with particular focus on the role of cytology and HPV testing in screening a vaccinated population. Several European screening programmes are now close to making a decision in favour of HPV primary screening. The difficulties in managing women who are high risk HPV positive but cytology and colposcopy negative was another theme running through the meeting and many programmes are now looking towards the use of molecular markers to triage this group of women. The CINTec+ p16/Ki67 test was highlighted by several presenters as a promising test to triage these women, identify those with significant disease and reduce colposcopy referrals. It should not be forgotten that only around 10-20% of women who are HRHPV positive will have CIN2+.

In the face of what appears to be in many countries a rush towards replacing cytology with HPV primary testing it must not be forgotten that many studies compare HPV primary testing with national programmes that do not compare as favourably with the sensitivity delivered by the UK screening programmes.

One of the most interesting parts of the meeting was the networking with "cytotechs" from around the world but in particular our European colleagues. The role of Cytopathologists in cytology labs around the world appears to be fairly constant but the wide variation in the role of cytotechnologists never fails to surprise me. From Greece where many cytotechs do not even sign out negative cervical cytology requests (one could reflect on the financial position of Greece) to Sweden where cytotechs sign out EBUS samples in a one-stop environment. I will share more of this in my report from the EACC meeting. I also attended the Editorial Advisory Board meeting for Cytopathology which focussed on the role of cytotechnologists in cytology labs across the world, more from that elsewhere in this issue.

One last thing from the Paris meeting, despite the fact that the UKCSP's are undoubtedly among the best in the world, is the profile of cytology within the UK which is often subservient to that of Histopathology. Cytology within the UK is usually viewed as a subspecialty of Histopathology. Our European colleagues, however, are more likely to view Cytology as a specialty in its own right and exist as an independent professional grouping wielding its own political pressure. Indeed a recent statement from the EFCS highlights the specialist role of Cytopathology.

Given this background it is extremely good news that the RCPath Cytopathology Sub-Committee will become a full Specialty Advisory Committee in its own right, reporting directly to RCPath Council. Tom Giles from your executive currently chairs the college subcommittee and this positive move will increase the profile of Cytopathology within the college and ensure a close working relationship with the RCPath.

Now to UK based activities. Your executive has been selflessly working through high temperatures to ensure cytology is represented nationally on many fronts. I have listed a few of the often overlooked pieces of work that executive members undertake on your behalf to ensure the role of cytology is highlighted:

- The pilot non-gynae technical EQA scheme continues to gather pace and is now close to being launched as a self funding EQA scheme within the CPTEQA scheme. BAC has pump primed this scheme and the second round of submissions are currently being assessed. Thanks are due to Paul Cross for his hard work in driving this important work forward. Paul will present results of the pilot at IBMS Congress in September.

- Melanie Buchan has attended two meetings of a group established by the Department of Health to establish a voluntary register for a range of healthcare groups including Cytology Screeners. Progress has been slow as with most projects initiated by MSC and the DH. It is not yet clear if this is the way forward for Cytology Screeners but the BAC is well represented in Melanie's capable hands.

- Tom Giles represents the BAC on the British Thyroid Association and has been pivotal in ensuring that cytology is at the core of clinical pathways.

Many of you may already be aware that I was elected to the IBMS Council in June. I would like to take this opportunity to thank everyone who voted for me. I will be a strong voice for cytology within Council.

I am sure that there will be several prompts and nags elsewhere in SCAN to register for the forthcoming BAC meetings and in particular the Manchester meeting in October. The programme should appeal to all members and I urge all members to consider attending what should be an excellent and interesting meeting. Full details of the London spring tutorial should be available before the end of the year, but pencil in the date as 4th April 2013. This format has proved very successful in previous years and is particularly attractive to trainee pathologists. Our "big event" for 2014 is the Birmingham meeting 9-11th October, more information will emerge as the programme is finalised but our aim is to make this the "must attend" event for all cytology professionals in 2014.

Finally, by the time this issue of SCAN drops through your letter box, you should have received your voting paper for the BAC executive. Please exercise your democratic right and vote; it is a sign of a healthy association that we have interest in joining your executive.

HPV primary screening — where are we now?

Dr Karin Denton
(Cancer screening QAD South West, Public Health England)

Readers of SCAN will be very familiar with the history of the decision to pilot HPV testing as a primary screening modality. The pilot in England is now under the control of an implementation group chaired by Prof Henry Kitchener, and this is a brief update on progress so far.

The six pilot sites were identified some time ago — these are Sheffield, Liverpool, Manchester, Northwick Park, Norwich and Bristol. Some of you will have noticed that this list includes 3 SurePath and 3 ThinPrep sites. These laboratories all tend to be on the larger side, but none is undertaking a complete conversion. The reason for this is obvious — a Pilot has to be reversible, and after completely converting your lab to HPV primary screening for several years, it would be impossible to go back. Each of the sites has identified a subgroup of women — some by former PCT area, some by selecting particular GP practices, who are to be included.

The pilot officially started on 1st April — and congratulations to Sheffield who managed to go live shortly thereafter. The last site (sadly, Bristol) is about to go live at the time of writing.

A pilot of implementation is just that — it aims to identify and solve practical problems which may not have been foreseen, and the pilot has certainly done this. There is a national laboratory group and a national steering group. Another group developed the algorithm and there is a cost effectiveness group as well.

Within laboratories there have been various issues. One we didn't anticipate is the question of which HPV platform. The NHS CSP had undertaken a comparison of 5 different technologies on triage samples and found them all to be remarkably similar. However since this work was undertaken, publications from elsewhere, particularly Denmark, began to raise a query about whether the different HPV tests performed identically in other clinical settings. So the first thing we had to do was dual test (with Hybrid capture 2) until confirmation of equivalence was achieved. This work will be published in due course.

Most of the labs found that actually doing the HPV test was the easy part. Many have struggled with IT, as the lab system suppliers have been variably willing and able to implement the new codes. The new codes are established and working on the Exeter system, but interfaces have been an issue, as have GP systems which find it hard to classify an HPV negative, no cytology result. Ultimately, we all want a very automated system, which minimises the chance of manual data errors, but this seems to be still a little way off.

Training for clinicians, both in primary care and colposcopy has been another challenge. There is an on line training pack but most have supplemented this with face to face training. For colposcopy, there is a familiar challenge in ensuring that all colposcopists comply with the new flowcharts. We don't know yet how well this has been going.

The statistical evaluation hasn't started yet, but there will be an interim report after a year. And also, we will start to get some experiential outcomes – not hard data but still very valuable. From the laboratory point of view we will find out how labs find doing a greater volume of HPV tests, which staff are doing it, and which staff are screening the resulting cytology. The big question, on which the success or failure of the whole project could turn, is how good is cytology at triaging an HPV positive sample? All the pilot sites are putting a lot of effort into robust diagnosis, particularly of borderline changes.

As an add on, we will be looking at other tests which may help – CinTec Plus for HPV positive, cytology low grade, and genotyping for HPV positive, cytology negative samples.
Overall, the project is going very well, and the pilot structure is responsive to trouble shooting. As for outcomes, none yet, but watch this space.

Joint Scientific Meeting of the Association of Clinical Pathologists (ACP) in conjunction with the British Association for Cytopathology (BAC) Histopathology, Cytopathology & Forensic Pathology, 6th – 7th June 2013

By Melanie Buchan

The first few wonderfully hot days of our iconic British Summer and the superb classic Art Deco building of the Royal Institute of British Architects majestically occupying the corner of Portland Place and Weymouth Street, London; created the perfect setting for the first joint scientific meeting of the ACP and the BAC. The themed programme for the conference was 'Screening'.

The first morning was opened by Dr Galloway, whose Presidential Address was a mindful reminder about the importance of our participation in CPD, appraisals and the revalidation of medical professionals.

Our President, Karin Denton then got things off to an excellent start with her presentation informing us about the Quality Assurance of the NHS Cancer Screening Programmes and its exciting new partnership with Public Health England — ensuring there is standardisation of the highest quality, in the delivery of the screening services across all of England.

As a cytology screener with a limited scientific background, I was apprehensive about the talk 'Molecular Tools in the Screening of Tumours'. Dr Salvador Diaz-Cano gave us an oversight of molecular genetics and their role in indentifying and understanding the progression of tumours. I shall be first to admit that I found some of this lecture went over my head, however, I was transfixed by Dr Diaz-Cano's passionate and powerful delivery of the subject and I found myself wanting to know more, it was extremely impressive.

For me, one of the most fascinating lectures was by Professor Ray McMahon and his explanation about the Anal Cancer Screening Study currently taking place in Manchester. The project started in March this year and will

be following 1000 volunteers recruited at GUM clinics; together with a sample of immuno-suppressed transplant patients, over 30 months. Depending on its outcome, it may have a part to play in the future of HPV testing and cytology screening. Much interest was shown amongst the delegates surrounding this study and questions were asked about the morphology involved; the development of different sampling techniques; the value of conducting HPV testing (as all of the participants are proving HPV positive); the type of treatments being offered when pre-cancerous anal lesions are discovered and the importance of including boys in future UK HPV vaccination programmes.

I was very interested to learn more about the HPV Primary Screening Pilot presented by Kay Ellis. A new pilot scheme has been launched by the NHS Cancer Screening Programme to determine whether HPV testing will prove to be a feasible option as a future primary screening tool. Kay is based at Sheffield, one of six sites across England piloting the scheme, the others are Manchester, Liverpool, Norwich, Bristol and Northwick Park. The study involves collecting a woman's cervical sample as usual for LBC but it is first tested for high risk HPV. If positive, only then will a sample be prepared for microscopic study. The first phase of invitations went live on 1st April this year, with the first cohort of women being tested from 1st May. Although the pilot is in its very early days Kay was able to share some of the challenges and issues that the pilot had thrown up so far, such as:

- The struggles with the Exeter System and IT in general, when the test is HPV negative and therefore no cytology result
- Whether the HPV positive test result has an influence on its subsequent cytology report?
- the undercall/overcall variation in reporting profiles from the various sentinel sites
- the impact of HPV positive referrals on colposcopy clinics
- training issues eg. maintaining cytology skills with a reduction in microscopy slides to be examined
- implications for staff with future job security
- laborious aliquoting for HPV testing
- the prolific down time of HPV testing platforms

Given these concerns, one cannot escape the ultimate benefits of such a scheme, namely that HPV Primary Screening will certainly improve the sensitivity of cervical screening giving women a more reassuring outcome.

Other Screening topics of the Conference included:

- The logistics involved with colorectal screening and the challenges facing its future increased demand
- The inevitable increase in skin cancer amongst immune-suppressed patients
- The benefits and drawbacks of core biopsy vs. fine needle aspiration cytology within the Breast Screening Programme
- Cytology Screening in High Risk Groups and the importance and relevance of meeting the criteria and principles of a screening programme
- An informative and very entertaining presentation about cost-effective cholesterol screening and the thought provoking link of high cholesterol and its geographic correlation with rates of precipitation in Scotland...!
- A very enthusiastic dual presentation by Dr Singh and Dr Faruqi on difficult cases from the female genital tract, and despite being delivered at the end of a hot afternoon, these medics had such zeal for their subject that they kept everyone alert and interested!

Due to the meeting of the BAC Executive being held on the last afternoon, I was unable to attend the sessions dedicated to Forensic Pathology. However, I have been reliably informed that they were incredibly interesting, and fascinating explanations were provided about:

- post mortem imaging;
- CT vs. MRI scans
- the pros and cons of imaging as a non-invasive alternative to a traditional autopsy.

Lunches on both days were excellent quality buffet style meals, and I was surprised to discover that we were allowed to wander around and explore the amazing RIBA building with our plates of food. This provided opportunities for us to relax, eat out on their wonderful outdoor terraces and make the most of the good weather whilst soaking up the fantastic architectural setting. Coffee breaks were great opportunities to peruse the appropriately stocked Blackwell book stands and catch-up and network with others from different laboratories or, as some of did, dash outside and enjoy a few minutes of absolutely glorious sunshine!

There were eight Poster Presentation submissions and the prize of £100 (proudly donated by the BAC) was awarded to Debra Collins for her collaborated poster entitled 'Diagnostic Accuracy of Biliary Brush Cytology Using ThinPrep®' — Well Done Debra.

Despite the low attendance, with only 49 delegate members attending, it was a successful joint meeting; all of the speakers were warmly received and almost all of the presentations had feedback from delegates appraising them as either 'Very Good' or 'Excellent'. As a cytology screener I was expecting to feel a little intimidated and out of my depth but my experience could not be further from my expectations. I found the pace and content of the conference was absolutely perfect and everyone I met, be it from a BAC or ACP background was very friendly and welcoming. The venue staff were brilliant, very accommodating and helpful. I would certainly urge screeners out there to give these meetings a go. I have definitely learnt a great deal and I also have a greater appreciation of the NHS Cancer Screening Programmes now than I did before the 6th June.

The European scene: a report from the Paris meeting

Allan Wilson

The recent 18th IAC congress held in Paris during May was a convenient venue to hold a range of committee meetings related to the European Cytology scene. I represented the BAC at three meetings:

- **European Federation of Cytology Societies (EFCS)**
  - This group meets at IAC and EFCS scientific meetings. BAC has two representatives on this body, currently Allan Wilson and Karin Denton. One of the most important functions of this group is to manage the QUATE exam. This European cervical cytology qualification is currently delivered by Nick Dudding and Peter Smith.
- **European Advisory Committee on Cytotechnology (EACC)**
  - This group also takes advantage of the venues of international and European cytology meetings. This group discusses issues of general interest but often focuses on training and education for non-medical staff. BAC has one representative on this body, currently Allan Wilson
- **Editorial Advisory Board of Cytopathology (EAB)**
  - The Advisory Board meets twice a year to discuss the journal and plans for future editions. The board will often focus on a particular issue and seek input from all countries represented. This is not a European body and representatives from Australia and the USA were also present at this meeting. This meeting focussed on the role of the Cytotechnologist. Allan Wilson represented the BAC.

EACC meeting

This was a fascinating snapshot of cytotechnologist's limits of practice within Europe. The meeting was well attended and representatives from across Europe were present including Hungary, Sweden, France and Switzerland. The meeting was chaired by Maj Liv Eide from Norway. The meeting focussed on the proposal to introduce minimum standards of training in cytology across Europe. This issue has been discussed many times over the previous three years and there is now pressure form the EFCS to bring this to a conclusion and issue guidance.

Training programmes vary widely across Europe but most countries offer a college or university based syllabus. The UK is the only country which offers a national certificate delivered through our network of training schools and administered by the national screening programme. Universities in the UK currently do not offer the intensive cytology courses delivered in many other European countries. Among many of our European colleagues there is envy of the standardised approach to training in cervical cytology for primary screening and advanced practice. It is often difficult to compare education and training in the UK with the rest of Europe as we are the only country that has cytoscreeners and Consultant Biomedical Scientists. There are excellent models of university delivered cervical cytology courses in mainland Europe but there are also many examples of very poor practice.

However, the same cannot be said of non-gynae cytology. Within the UK training in non-gynae is patchy and mainly delivered in house with no standard syllabus or training plans. The IBMS DEP in non-gynae does plug this gap but uptake of this qualification to date has been low and it is not required to report non-gynae specimens. The delivery of training in non-gynae and the practice and application of molecular techniques in mainland European laboratories is undoubtedly more advanced than the UK. There are pockets of good practice in the UK but most labs do not have access to molecular tests that are now considered as routine in many other countries.

One of the difficulties in establishing a standardised training and education programme for cytology is the differences in terminology used across Europe to describe teaching establishments and qualifications. The term 'High School' in the UK means something entirely different in other European countries and is equivalent to what we understand in the UK as technical colleges. The only universally understood educational standard was Batchelor of Science and this standard appears to emerging as the level of education required to practice in cervical cytology in many European countries. The recommendation of this group that a BSc should be the minimum qualification to prcatice in cytology could present some problems for the UK. We have achieved the most effective screening programme without the imposition of such a standard and we must guard against the introduction of inapropriate or unnecessary standards to the UK. The BAC representation on this group will ensure our views are clearly communicated.

EAB meeting

This meeting was chaired by Amanda Herbert, editor of Cytopathology. Most of the editorial board were present and as the focus of the meeting was the role of the Cytotechnologist, the chair and secretary of the EACC group were also invited. The information offered at this meeting confirmed the wide variation in practice not only across Europe but also in USA and Australia. A full report from this meeting has been circulated among the editorial board. Snapshot surveys were carried out during the meeting and the comments from the various nations represented emphasised once again the differences between the participating countries. Countries represented were:

- UK
- Portugal
- Austria
- Poland
- Russia
- Croatia
- Norway
- France
- Australia
- USA
- Kuwait
- Turkey
- Hungary
- Italy
- Greece

The following examples should illustrate the variation in training programmes and the challenges facing the EACC:

- Poland has 5 years of university training followed by 3 years cytomorphology supervised by pathologists.
- Despite once having a strong training programme, Russia is now struggling to deliver conversion courses from conventional to LBC. Some unqualified "biologists" are now trying to report cervical samples.
- In Denmark, Cytotechs sign out both positive and negative tests of cervical cytology, urine, nasal secretions and in some hospitals EBUS and some FNAs. They also carry out FISH and other molecular techniques and HPV testing. The training to laboratory technologists is a general education including all laboratory specialities, and after employment in Pathology, further education and training takes place according to QUATE and Danish Board of Health regulation.

Another theme running through this meeting was the uncertainty around the potential introduction of HPV primary testing. For example, the Turkish health department has recently announced a move to HPV primary testing and specimens have almost immediately started to go directly to microbiology departments.

There are also issues around reimbursement for Pathologists attendance at FNA's and EBUS clinics. The healthcare funding provision in many countries will not fund a Pathologist to attend clinics and the gap left has been filled by Cytotech's.

This discussion will be continued in writing when the summary and responses to other questions have been received from the panel. Highly variable training in non-gynae cytology was identified at a time when expansion of Cytotech's involvement in FNA assessment is badly needed and the volume of work in gynae cytology services is likely to decline. This should be an opportunity rather than a threat.

EFCS meeting

The venues for future EFCS meetings were confirmed. The 2014 meeting will be held in Geneva. A report on the QUATE exam was provided by Peter Smith. This was my first EFCS meeting and my overall impression was that most decisions had been made outside the room and brought to the group for ratification. There was very little discussion on many issues, apart from the proposed standardisation of training programmes for cytotechnologists. There was a determination to finalise this paper and Mina Desai and Nick Dudding have been asked to take this forward.

Summary

The three meetings described above provided a lot of food for thought for the BAC executive. Previous communications with our European colleagues either through NAC or BSCC have been patchy. The executive wishes to establish clear lines of communication with both the EACC and the EFCS to explore common issues and to share best practice. Attendance at future meetings will ensure matters of interest are fed directly back to the executive, and that the views of BAC members and cytology as a discipline within the UK is represented and heard internationally.

Newsflash

Changes with the Executive
Sadly Dr Mina Desai (CBE) and Mel Buchan are leaving the Executive but we are pleased to welcome new Executive Committee members:

Jackie Jamison Consultant BMS, Depts of Cellular & Molecular Pathology, Antrim Hospital (formerly IBMS rep on BAC)
and
Claire Geary, Cons BMS Consultant Biomedical Scientist at Cambridge University Hospitals NHS Foundation Trust.
More from them in the next issue…

ICC Paris 2013 — An Englishman Abroad

Mark Howard, Consultant Biomedical Scientist in Cytology
Cytology Department, Cambridge University Hospitals NHS Foundation Trust, West Anglia Pathology Services

I was fortunate enough with the help of my Trust and a bursary from the BAC to attend this conference in May of this year. It was a little disappointing to be one of only a few British delegates attending, who incidentally were all Pathologists or ABMSPs. I'm sure this is in no small part down to the current financial climate in the NHS but the BAC bursary is available to us ALL and I encourage ALL cytologists to make use of this resource.

I took the opportunity to travel by Eurostar to Paris, the venue itself was situated just to the east of the city centre and only a 10 minute walk away from the Arc de Triomphe.

As is usual with these international conferences the biggest headache each day was deciding which symposium or session to attend. I am lucky enough to work both in gynae and non gynae cytology so these decisions were even more problematic for me than would have been the case for many other cytologists. There were also many different workshops taking place throughout the day. I was not able to attend any of these but in discussion heard that all were of a very high standard.

I produced a poster for this event which for the first time was as an Eposter. This proved to have both good and bad points. Throughout the venue were monitors which could be accessed to search for or scroll through as many posters as you wished however myself and other contributors missed the interaction of delegates browsing around the venue reading your printed poster and asking questions. It will be interesting to see if Eposter continue for other cytology meetings.

I arrived too late on the Sunday to attend the opening ceremony but was up "bright" and early on the Monday morning. For those of you who know me this is a slight exaggeration, I'm not really a morning person, but I did get to the venue in time for the first lectures of the day.

This proceeded to be one of two very packed days with one very pleasant evening in the company of a colleague at a café off the main Paris boulevards.

Monday 8am to 9.30am:
Cervical screening recommendations
This was a session with four speakers from the US, Spain, The Netherlands and the UK. Of particular interest was the US approach of co-testing at the primary screening stage which has the benefit of very high sensitivity for identifying cervical abnormalities but at a cost which would be prohibitive for the UK let alone for any less developed countries. Peter Sasieni from the UK outlined the introduction of HPV testing as we have now and possible future primary HPV testing. As we know the pilot studies have started for this recently.

Monday 10am to 11am:
Liver, Bilio-Pancreatic and Anal cytology proffered papers
I had a difficult decision between proffered papers on the Liver, Bilio-Pancreatic and Anal cytology or Molecular and Diagnostic Lung Cytopathology. I chose the former.

All the papers were extolling the recent advances in technology in obtaining and in evaluating bilary brushings, and endoscopic ultrasound (EUS) guided FNA's.

Monday 1pm to 2.30pm:
Gynaecology — a case and issue-based interactive seminar.
This was a seminar I had no difficulty in choosing. It consisted of various case studies and much morphology and interactive voting. In my experience this system is welcomed by delegates and should be used wherever possible. Being primarily a morphologist as we all are I particularly enjoyed this

session. The common diagnostically difficult entity of Hyperchromatic Crowded Groups in cervical cytology samples was a prominent theme.

It was stressed that morphology is first and foremost when assessing these groups and that falling back on to HPV testing doesn't always give you the correct answer.

Monday 2.30pm

I actually split myself in two during this session attending two lectures from a proffered papers session and then changing rooms to attend a different seminar.

2.30pm to 3pm:

Proffered papers: Cervical screening in a poor resource setting. Anal cytology in Australia.

One talk was on which methods have been assessed to screen in India in particular and the benefits of each. No one particular solution was suggestion.

The other was outlining an Australian targeted anal screening study. This has shown that there is an increasing incidence of high grade AIN in the patients. The study used both LBC and HR HPV testing.

Quick walk along the corridor and quiet entrance at the back of the auditorium

3.10pm to 4pm:

Urine – The most frustrating specimen

This was the first of 2 sessions I attended on urine cytology. One of the lectures extolled the virtues of Fascin IHC which is strongly positive in most invasive cases. Another confirmed for me the difficulty in diagnosing low grade urothelial carcinoma and gave some good pointers in identifying true papillary groups. The final talk explained all about circariform cells which if present can help identify a metastatic carcinoma as urothelial in origin.

Tuesday 8am to 9.30am:

Alternatives for cervical screening

This was a very interesting session where the lectures all emphasized various uses of biomarkers in cervical screening particularly in a well screened or post vaccination population. The one mentioned in every talk was p16. The use of genotyping the HPV subtypes especially for subtypes 16 and 18 was also put forward. Of note was that the subtypes 56 and 58 are relatively higher in China than in many other parts of the world. So genotyping would need to be geographically centred and monitored to see if prevalence changed in vaccinated populations.

Tuesday 10am to 11am:

IAC Awards

These were three very different, but all interesting, invited lectures.

One was about a philanthropist gentleman called Maurice Goldblatt who founded the Cancer Research Foundation in the USA.Followed by a digital microscopy lecture which showed how very advanced this technology is now and how close the technology is to being taken up widely in cellular pathology.

Finally our very own Mr Nick Dudding coherently (even if in broad Yorkshire) put forward some facts about HR HPV testing which may prove it not to be the panacea it has been extolled as in some parts of the world. For instance in one or more trials 17% of CIN3 cases were HR HPV negative and up to 30% of invasive cancers can be HR HPV negative.

T**uesday 11.30am to 12.30am:**

Cervical health screening modalities: Past, Present and Future

This session was the first time (I think) an international audience has heard about the introduction of HPV testing in to the NHSCSP which was presented by Dr Karin Denton. It certainly produced a few quizzical looks and many questions from the floor.

The other lecture stated again that some cervical cancers (about 10%) can be HR HPV negative when tested. It was postulated that this could be due to low copy numbers in early stage cancers. Another interesting fact was the emergence of new subtypes such as 90 – what could that mean for the future?

Tuesday 1pm to 2.30pm:

Serous effusions: Toward a more personalized medicine

A couple of very useful lectures on IHC panels in serous effusions and their interpretation set this session going. This was followed by the growing field of analysis molecular markers for specific cancer types to inform clinicians as to appropriate and targeted treatment especially in metastatic disease. These included EGFR, KRAS, and Her2.

Tuesday 2.30pm to 4pm:

Urine: Toward a more personalized medicine

In this session the lectures theme was on how to improve the specificity of urine cytology. It is the atypical or equivocal result that the clinicians find the most problematic. p16/Ki67 dual IHC staining and the use of FISH was variably discussed with the general consensus that in high grade disease is very useful but then high grade cytology is highly specific also. It was also stated that false positive FISH results are relatively common in umbrella cells and after pelvic irradiation for instance and cystoscopy does not always detect cancers initially. This was my final session of the conference.

Non-Gynaecological Technical EQA Update

Dr Paul Cross BAC Exec Member

Mrs Chantel Hodgson UK NEQAS CPT Scheme Organiser

The BAC has been working with UK NEQAS Cellular Pathology Technique (CPT) to develop a non-gynaecological technical EQA scheme. Labs were invited via the BAC email and website, and from the labs already registered with UK NEQAS CPT, over the early spring to take part in the first of two pilots assessments.

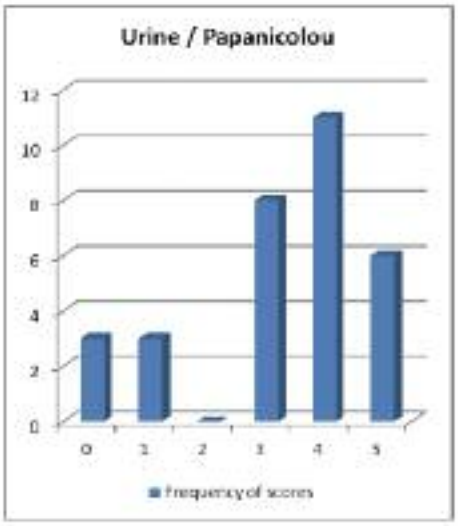
Over 70 labs expressed interest, and from this some 30 labs were chosen for the first pilot (held in April) and all those that expressed an interest in the first pilot were invited to take part in the second pilot, held in early August.

The aim was to use the two pilots to develop a workable protocol, and this has been tested over the two pilots and is now, we feel, developed enough for a first "proper" round under UK NEQAS CPT banner later this year. Whilst the pilots were free to the contributing labs, in future it will be a CPT module, and hence will be charged for.

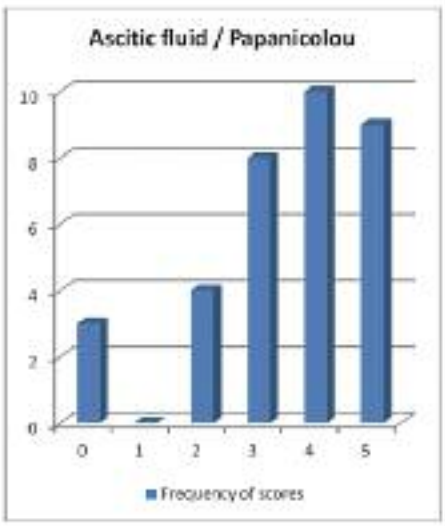
The pilots asked for two specimen types — a urine sample and a peritoneal/ascitic fluid, and for two stain types — Papanicolou and Romanowsky. Slides were assessed against pre-determined criteria *(Non Gynae Technical EQA*

Results for Pilot Phase 1 Submission date: 15 April 2012

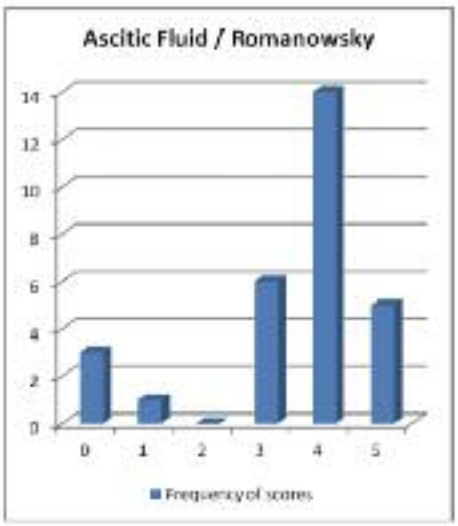
Method 1 **National Mean Score: 3.77**



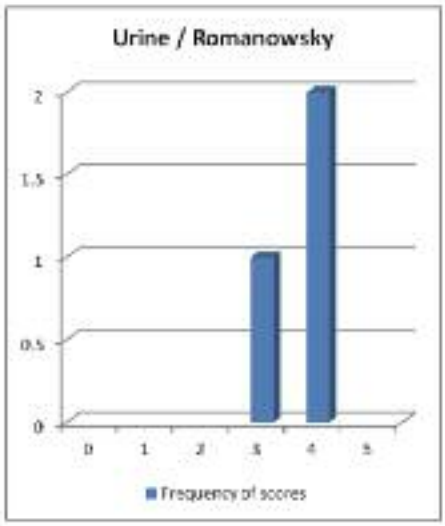
Method 2 **National Mean Score: 3.61**



Method 3 **National Mean Score: 3.85**



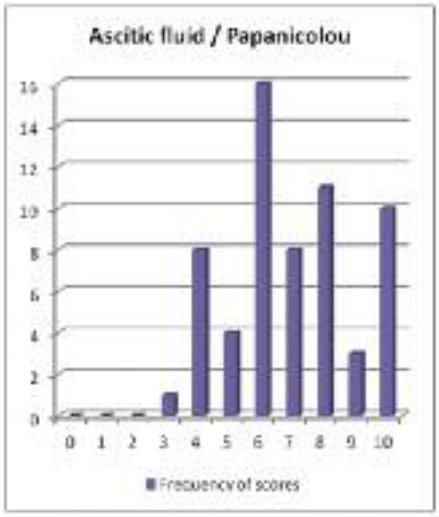
Method 4 **National Mean Score: 3.67**



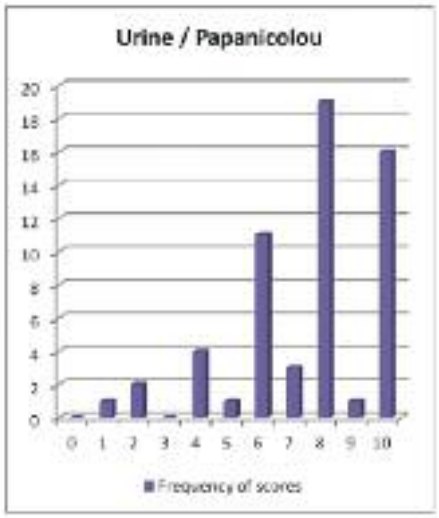
Scores key: 0 = non submission; 1 = fail; 2 = fail (borderline); 3 = pass; 4 = good; 5 = excellent

Results for Pilot Phase 2 Submission date: 15 July 2013

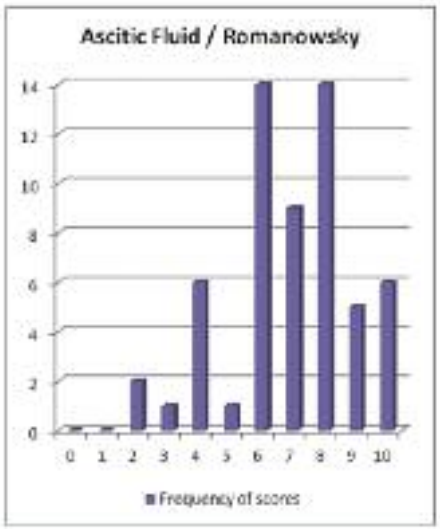
Method 1 **National Mean Score: 6.92**



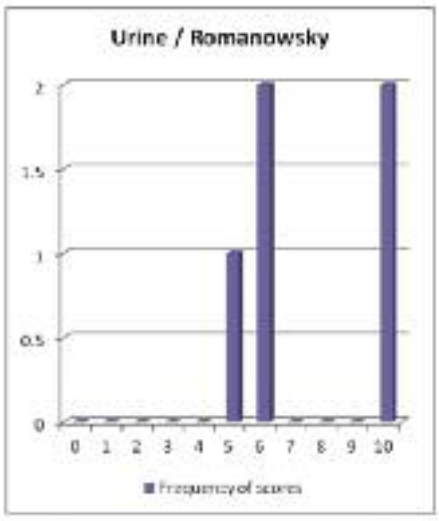
Method 2 **National Mean Score: 7.48**



Method 3 **National Mean Score: 6.9**



Method 4 **National Mean Score: 7.4**



Score <5 — a score of less than 5 / 10 is given for poor staining, where the participant has failed to clearly demonstrate the expected results.
Score 5/6 — a score of 5 or 6 / 10 is a pass. Whilst the staining appropriately demonstrates the expected staining results, staining is suboptimal and improvements are still required overall.
Score 7/8 — a score of 7 or 8 / 10 shows good appropriate demonstration of the expected results, and an acceptable level of quality.
Score 9/10 — a score of 9 or 10 / 10 shows excellent appropriate demonstration of the expected results, and a high level of quality.

Pilot Scheme Marking System), initial drafts of which were issued to the phase 1 and 2 participants, and was open for discussion and modification following the assessment of phase 1 submissions from participants. Assessment was carried out by a team of assessor pairs, and given a score (initially out of 5 for the first pilot but changed to out of 10 for the second pilot). Specific comments were also given which will hopefully be of use to each submitting lab in helping identify problems seen during the assessment.

The participating laboratories were issued with their own lab scores, showing specific feedback comments made by the assessors on their submissions, as well as an overview of the "national" scores.

The vast majority of slides submitted were of a good standard, as highlighted by the results. The preparation of non gynae cytology from receipt to report is technically demanding and is subject to potential problems at several stages of the process if full care and attention is not given.

The pilot scheme has proved this in that marks have been deducted for preparation, staining and slide finishing. An established and dedicated EQA scheme would allow us to gather and circulate best methods and make these available to participants and users via the CPT website.

Full details of the scheme will be available to registered labs from the UK NEQAS CPT website (www.ukneqascpt.org.uk) and a summary can be found on the BAC website.

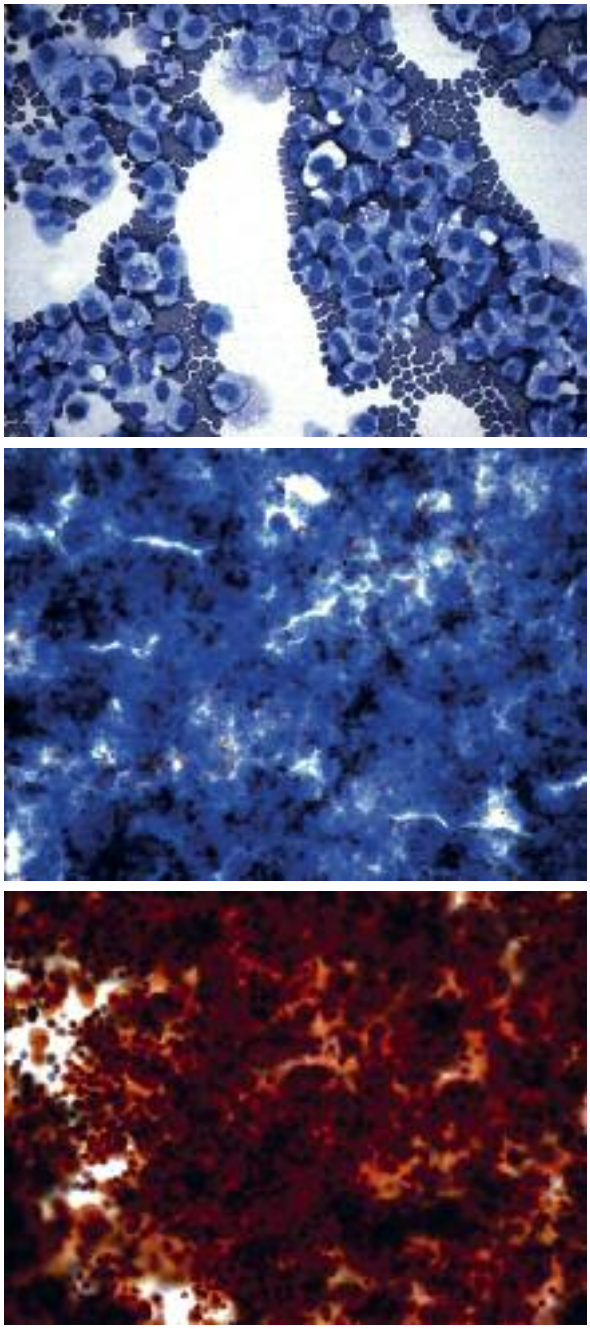
The results of the pilot phase have shown that there is a great need for quality initiatives within NG cytology, and there is indeed a requirement for a NG cytology technical EQA CPT scheme. The benefit to the user is comprehensive quality assurance of their repertoire of work.

The pilots have used experienced cytologists and UK NEQAS CPT assessors to both assess the material submitted but also test-drive the draft protocols. This has been invaluable. Whilst the protocol is now developed for use, it will, like all protocols, be developed further with time. It is been quite amazing to see the variety of preparation types and staining between labs. In several cases it was quite problematic to decide upon the sample type, let alone the actual stain being assessed! The pilots have demonstrated the wide technical variation in the material used for cytology diagnosis — and how poor technical preparations can make cytology diagnosis far more problematic than it needs to be. The whole raison d'etre behind the scheme is to promote good technical quality in NG cytology, and this should ensure far greater consistency of material between labs and hence easier diagnosis.

The development of the scheme has been a real eye-opener to all those involved, and has sparked heated discussions about the scheme and it operation amongst the assessors. Continuous assessor training would need to be provided to all individuals carrying out this task. Whilst it may be early days for this scheme, its potential to help promote quality in technical NG cytology will be well worth the effort.

An established scheme will allow Cellular Pathology departments to be sure that the standard and quality of work they are producing is equal to that of their peers. This is not only for the raising of standards, but also to ensure good adequate cytological material for diagnostic purposes. The results show that there is still room for improvement in laboratories across the UK, and overseas. The EQA scheme will provide regular scrutiny of performance.

The scheme, if successful, would be open to any UK or non-UK based laboratory, as for the current UK NEQAS CPT modules.



The good, the bad and the ugly

Data should be Collected throughout the UK and other countries on the Performance of HPV Testing in Cervical Specimens from Women later Developing Cervical Cancer

R. Marshall Austin, MD, PhD

Magee-Womens Hospital of University of Pittsburgh Medical Center, USA

The purpose of cervical screening is to decrease cervical cancer incidence and morbidity and mortality in the screened population. Swedish investigators recently referred to these key desirable impacts of cervical screening as the "cure proportion" (1). These goals are achieved both by identifying and ablating true precancerous lesions, especially CIN3, and also by earlier diagnosis and resulting down-staging of screened women who already have developing invasive cervical carcinoma (1). Recent USA guidelines have put more emphasis on the use of HPV testing as a way to achieve "reasonable protection," while recommending less frequent cytologic screening (2). Although these guidelines have been evidence-based, there is little evidence available for the most significant end-point: invasive cancer. Many feel that this gap in our knowledge should be closed before major changes are made to successful cervical screening programs, including the well established one in the UK.

Studies on cervical cancer screening have typically employed endpoints of histopathologic CIN2+ detection (CIN2 or "worse," CIN2, CIN3, and invasive cervical cancer) as "surrogates for cervical cancer"(3). This study design has prevailed because cervical cancer is rare in screened populations, because histopathologic CIN2+ diagnoses represent the common threshold for diagnostic excisional procedures, and because CIN2 and CIN3 are thought to represent lesions with a significant likelihood of progressing to invasive cervical cancer.

Natural history studies, however, suggest that most CIN3 lesions will never progress to invasive cervical cancer during follow-up periods as long as 30 years. The largest and best documented natural history data comes from a so-called "Unfortunate Experiment" (4) carried out over decades at Auckland National Womens Hospital in New Zealand. (5) In this cohort, only about 30% of women with untreated CIN3 diagnoses developed cervical cancer over 30 years of follow-up, and the rate increased to only around 50% among the subset of women with persistent CIN3 diagnoses (5). Therefore, it appears that CIN2 and even CIN3 are imperfect "surrogates" for invasive cervical cancer and that the majority of these lesions have limited precancerous potential. Unfortunately, no one knows how to reliably differentiate between progressive and nonprogressive CIN2/3 lesions.

In contrast, women who develop invasive cervical cancer represent the one group of women in whom provably progressive precursor lesions can be reasonably assumed to have been present in the years preceding cervical cancer diagnoses. Differences between women with invasive cervical cancer and women with histopathologic CIN2/3 are also reflected in the differing profiles of high risk HPV types detected in women with invasive cervical cancer versus women with CIN2 or CIN3. (6) Therefore, in studies of molecular cervical screening tests, it is especially important to focus on data from the small subset of women who are diagnosed with cervical cancer.

In HPV tests either approved in the US by the Food and Drug Administration (FDA) or deemed as adequate for cervical screening based on performance in international clinical trials, such as Hybrid Capture 2 (HC2) collected in Digene Specimen Transport Medium (STM) tubes, a proposed "standard" of 89–95% or 90–95% high risk HPV positive results in CIN2+ lesions has been put forward (7,8). For patients with documented invasive cervical cancer at the time of HPV testing, pooled data on 293 cervical cancer patients in the two largest studies have reported positive HC2 hrHPV results in 268 of 293 (91%) women (9,10), within the range of the proposed 89–95% standard. Since "virtually all" cervical cancers are now thought to be due to persistent carcinogenic HPV infections (11,12), this 9% HPV negative rate in women with cervical cancer is thought primarily to be due to samples with low viral load below the cut point of HC2 tests. Recent studies on invasive cervical cancers caused by HPV 16 have now shown that low viral load in a subset of invasive cervical cancers may be more common than previously thought, perhaps due to post integration viral copy number reduction (13).

The implications of these observations for cervical screening are clearly significant. This issue becomes even more important when HPV test samples obtained months to years before cervical cancer diagnoses are studied. Data from Australia, for example, has documented that the HPV negative rate rises appreciably as samples are tested at

greater time intervals from the diagnosis of cervical cancer (14). Only one large study from Kaiser Permanente has reported HC2 hrHPV detection rates in large numbers of cervical cancer patients tested within five years of cervical cancer diagnoses. In this Northern California cohort, 27 of 87 (31%) cervical cancer patients had baseline negative HC2 results within five years of diagnosis (15). In the UK Artistic trial an unexpectedly high 3 of 12 (25%) of cervical cancers had baseline negative HC2 results (16). This unexpectedly high rate of negative HPV results in women expected to have persistent (and detectible) carcinogenic HPV is most likely due to a combination of inadequate sampling of lesional cells and cancers with low viral load.

Proposed international standards for HPV testing in cervical screening (7,8) have not as yet addressed this documentation that hrHPV test performance during the five year period preceding invasive cervical cancer diagnoses appears to be well below the proposed 89–95% standard.

As HPV testing and cervical screening is introduced at extended 3–5 year intervals, the performance characteristics of available hrHPV tests in women developing invasive cervical cancer over these time intervals will become more of an issue. Therefore, we feel it is important that widespread efforts are undertaken to collect data on this small subset of patients (17,18). We propose that laboratories should be collecting and sharing this data to better assess the reliability of negative HPV test results to indicate a low risk for invasive cervical cancer and the safety of extended screening intervals. We also believe that this data collection effort should include information on the specific type of HPV tests being performed, including widely used laboratory developed tests (LDT), currently not recommended for use in cervical screening in either recent American Cancer Society (2) or American College of Obstetricians and Gynecologists' Guidelines (19).

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The BAC Office: Welcome to Coldbath Square

BAC members will be aware that the registered office is in London with support services provided by the Institute of Biomedical Science Professional Support Services Manager Christian Burt.

Christian has managed the administration end of the BAC since its inception; and of course the BSCC, prior to the merger with the NAC. There are several membership associations housed within Coldbath Square and Christian looks after the BAC, National Association of Phlebotomists, Association of Anatomical Pathology Technology and more recently the IBMS work licensed by the Science Council (i.e. Chartered Scientist and the other voluntary registers).

The BAC is the largest of the smaller groups and the role involves working closely with the BAC Executive and in particular the Meetings Sub-Committee, Membership Sub-Committee and with Dr Paul Cross to ensure members of the Association have access to the private domain of the BAC website.

Christian attends all BAC Executive meetings, taking notes and offering the occasional professional body advice to inform and aid debate. Within the office, membership applications are pre-assessed by Christian before formal assessment by the Membership Sub-Committee.

The database is housed at Coldbath Square and this is where the renewals, reminders and collection of subscription fees are administered. In recent years, with an energised BAC, there has also been an increase in planned events such as the Spring Tutorials and Christian is an official member of the 2014 ASM committee.

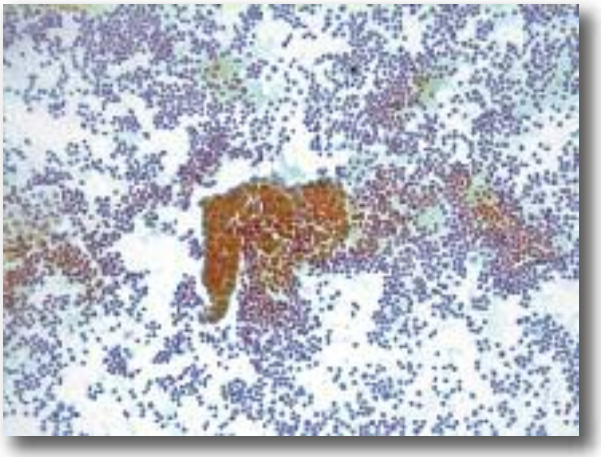
On a personal note Christian said about his work with the BAC, *"I fully enjoy my role as the non-medical/scientist support manager on the BAC Executive. It is genuinely fascinating to see such a committed Executive doing their upmost to enhance Cytopathology in the UK and beyond. It is always great to attend BAC scientific events and I look forward to helping as many members, and potential new members, as possible"*

The BAC office can be seen as the first point of call for BAC enquires — by email is the preferred method: **mail@britishcytology.org.uk**

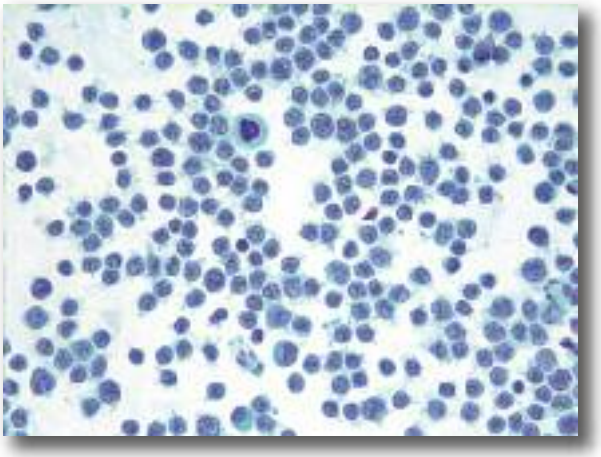
Case Study

Dr J D Hemming and Dr S L Williamson. Department of Pathology, Queen Elizabeth Hospital, Gateshead, Tyne and Wear

Clinical Details: Male age 82 years. Admitted with ascites and obstructing paraaortic lymphadenopathy. Diagnostic aspiration revealed milky looking fluid. Below are images from the cytospin stained with Papanicalaou. What is the diagnosis?



Slide 1.



Slide 2.

Answer on page 30

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CEC News – Autumn 2013

Jenny Davies

The scheme continues to tick along nicely, with book submissions and JBLs being sent in on a regular basis, thankyou.

Since the last edition of CEC news, stickers have been designed and printed, so all books that are sent from now on will have the correct logo on the front! I have also met with Christian Burt to see how the two databases (CEC and membership) can be streamlined. There is still work to be done here and any changes that affect current administration will be communicated through the website.

When you submit your CEC book for validation, if you do not know your BAC membership number, I can chase up your records with Christian, so don't worry about that for the time being.

Remember — if you haven't already transferred to the new scheme, please send your book to me even if you haven't reached the 300 points — and I will bring them forward into the new one to maximize the use of the new scheme credits.

Well done once again to everyone participating in the scheme, please keep it up.

Journal Based Learning

Now on to this issue's JBL exercise. One JBL — **10 questions — 10 credits.** I have chosen this JBL as it relates to the eagerly awaited ABC3, which is very pertinent to all of us. For submission, same instructions as before — photocopy the page and send your answers to me, or your Local Officer, for marking — there is no need to send your book.

Please try to do the JBL's as they come up in each issue of SCAN. JBL's more than 12 months old should be considered closed. Only one submission of each JBL will count.

Remember to keep a copy. Please include your name, BAC membership number, and as we are not receiving your book, your return address.

Membership Update

Louise Smart, Membership subcommittee

We are delighted that there continues to be a steady flow of new members of all staff groups joining the BAC. Currently we have 619 members including 262 Consultants (medical and BMS), 338 BMS/screeners, 9 trainee pathologists and 10 members who are honorary members. We have even welcomed a few new members from overseas. Please help to spread the word about the BAC and what we offer — passing your copy of SCAN around might entice a few colleagues!

Joining information can be found at by clicking the link on the BAC homepage **http://www.britishcytology.org.uk**

The Invasive Cervical Cancer Review: Psychological Issues Surrounding Disclosure

S.M.Sherman, E.Moss, C.W.E.Redman

Cytopathology 2013, **24**, 77 – 80

1. During the authors' study, 20% of women with cervical were found to have had a cytological undercall. TRUE/FALSE?

2. What reason do the authors suggest for the inconsistent application of the review process?

3. Another factor is cited to be a major contributor in the development of cancer in almost 2/3 of the whole cohort in the study. What is this factor?

4. Why might lapsed attenders not be invited for the review?

5. What recommendations, in brief, are given for the delivery of news to the patient?

6. What reasons did patients give for expressing dissatisfaction with the disclosure process?

7. In the majority of cases, patients prefer to have as much information as possible. TRUE/FALSE?

8. What percentage of patients want to know why they have developed cancer of the cervix?

9. The effects of disclosure on patients differs. Give:

   A) a reason for a relatively positive experience

   B) a reason for a negative experience

10. In the view of the authors, and other cited references what, perhaps surprising, outcome may result from a well handled review and disclosure procedure?

Name..... CEC number (if known).....

CEC Scheme Sponsorship

On behalf of the NAC Executive, and I am sure all the members, I would like to express my thanks to the following companies for the continued support they have shown in the development and growth of the CEC Scheme. With the changing nature of cytology (Gynae. in particular) I hope that this support will continue, and indeed that the group will grow to support the ongoing developments of CEC.

Pioneer Research Chemicals Ltd Julie Jarman Tel: 01206 791781 e-mail: sales@pioneerresearch.co.uk website: www.pioneerresearch.co.uk 2013/14	**Carl Zeiss Ltd (Paul Southey)** 15 – 20 Woodfield Road Welwyn Garden City Hertfordshire AL7 1JQ Tel: +44 1707 871200 e-mail: micro@zeiss.co.uk website: www.zeiss.co.uk 2013/14
Source BioScience Healthcare Wilma Anderson Tel: 0115 973 9012 e-mail: Wilma.Anderson@sourcebioscience.com website: www.sourcebioscience.com 2013/14	**Hologic (UK)** Jo Frost Tel: 01293 522080 e-mail: ukreception@hologic.com website: www.hologic.com 2013/14

This list will be regularly reviewed for each issue of SCAN. If any of the companies listed above have any changes of details to report at any time, please let Jenny Davies know by e-mail — jenny.davies@cmft.nhs.uk

In Memory of Colin Farahar

Stan Shakeshaft

Colin died peacefully on Thursday 20th July after a more acute illness. He had not been well for quite some time and had problems with mobility.

He was a big man with a big heart, but he was also tough; he taught self-defence and unarmed combat during his national service. He loved people and being in the company of others; he always said the meetings were his holidays! Everyone knew who Colin Farahar was; he would always the first to buy a round of drinks, he was quick witted, had a wealth of stories, and loved to tell jokes.

His company Pioneer Research Chemicals Limited first became a success in the Pharmaceutical sector marketing high quality stains and reagents, before moving into the NHS. Colin's priorities were high product quality and customer service. That philosophy means that the company is still very successful.

Due to his failing health, Julie Jarman became Managing Director assisted by David Brown the company chemist, also a director. Colin visited the company every day, and latterly remained in contact every day by telephone. He had a mobility scooter, which was apparently the fastest one he could get — I am sure the people of Colchester were well aware of that fact!

Colin loved to dress up for fancy dress events. This was very evident at the NAC conferences for which he won a number of prizes. My personal favourite was Beetlejuice, complete with the face makeup.

He will be greatly missed by his wife Avril, Julie and David and all the staff at Pioneer. He considered them to be his family.

I, for sure, will miss him and our friendly banter. He was a larger than life character so no wonder we got on so well. Quite simply, he was my friend.

Quality Assurance in the new NHS

Dr Karin Denton (Cancer screening QAD South West, Public Health England)

On April 1st major reforms to the NHS came into force, leaving no corner untouched, and having major implications for cervical screening. This is a brief overview of the changes, what impact they are having now, and what the effects may be in the future.

RIP PCT/SHA

The primary care trusts (PCT's) which had been the commissioners of cervical screening, wound up on 31st March, as did the Strategic Heath authorities (SHA's). Most people working in cervical screening will have been aware of colleagues based in PCT's, either as public health leads or through call and recall services. For many the SHA's were more remote, but they did have a role in performance management of trusts and PCT's which did not meet required standards, and also as the reporting line for QA directors (to the regional director of public health). Several SHA's were very active in forcing procurement and merger decisions, as some readers will recall all too well.

Commissioning in the new NHS

We now have several different organisations involved in commissioning. Clinical commissioning groups (CCG's) are often quoted as the new commissioners. They get a lot of press coverage in this role but their role in the CSP is very limited. NHS England is the commissioner for a number of specialised services and screening was placed in their remit. (A good thing). NHS England operates through local groups which were at first called Local Area teams (LAT's) but this was then shortened to Area Teams (AT's). The boundaries are different to the old SHA's but the size is similar. Embedded in each AT is a key person called the Screening and immunisation lead (SIL) and their team of managers and coordinators. These individuals actually work for Public Health England (I'm coming on to that), and they will be key contacts for those of us working in the CSP. However as their name implies, they have a wide remit covering all cancer and non cancer screening programmes and all immunisations. Despite 6 months having passed, these posts are not yet all filled.

Public health England was established to advise NHS England on public health matters. For the NHS CSP this means that PHE writes the specification for cervical screening so telling NHS England what they should be purchasing.

So where is QA in the new structure?

QA is now part of PHE. The QA directors report to Julietta Patnick who is now in a senior position within the organisation, as director of cancer screening. But remember, PHE also has the SIL's, and they report to PHE centre directors, who are based in areas which again look a bit like the old SHA's but whose boundaries don't match either the old SHA or the new AT boundaries.

What will be the impact on QA?

In the short term, you will not see that much change. Some of the former QAD's are still in post, others are new appointments or will come into post soon. The QA reference centres and their staff are unchanged. From my point of view as a QAD it is to an extent business as usual. We have all our quality documents plus the new specification documents and continue to monitor the programme against these. Instead of tasking PCT's to sort out issues, we now go to the AT's. We also have a line of accountability to Julietta and she and the national team should therefore be more in the loop. The PHE centre directors will receive the reports of visits, but at the moment it seems likely they will just be having oversight, and will be checking the AT's have carried out the actions.

Is anyone else involved with public health of cervical screening?

Well, yes. Many of the PCT public Health leads moved not into AT's or PHE, but into local authorities, and they still have a responsibility for overseeing health of their populations. I think they will maintain an interest in issues such as coverage, health equity and access to services.

Doesn't it all seem a bit complicated?

Well, if you are thinking this you would not be the first to do so. We still need to work out the details of who will do what, for example if there was a major incident. At the moment the policy is generally to make sure that everyone is kept informed whilst ensuring an organisation with prime responsibility for the incident is identified

What does the future hold?

QA is seen as an integral part of screening programmes, and the CSP retains its high political profile. But PHE is a civil service organisation, and working in it feels quite different to working in the NHS. Many of the individuals we are working with are new to the field, or not yet in post, and the new organisations, PHE and NHS England, and old organisations with new roles (local authorities) are still getting established. I think this is going to take the rest of this year at least to accomplish. But after that there are some intriguing possibilities. The new structure offers a much more direct route for QA to influence specifications, and to ensure that robust commissioning actually occurs. Also, as QARC's are now under a single national management, the variations in practice between QARC's which many in cytology have found frustrating should become a thing of the past. There are many possible changes on the horizon, and robust commissioning and QA are going to be essential in safely implementing them.

A challenge to conventional models of education and training in cytopathology

Andrew Evered

Manager, Welsh Cytology Training School

Principal Lecturer in Biomedical Science, Cardiff Metropolitan University

Background

How do humans learn? This question has puzzled teachers, trainers, cognitive scientists, neuroscientists and even the great philosophers since time immemorial. Of more specific interest to readers of SCAN will be the nature of the visual learning process in cytopathology. What is the mechanism by which novice cytologists become experts in their field? What factors enhance and hold back the development of expertise? Can we tap into these mechanisms to develop novel training techniques that might help to expedite the transition? These questions are of enormous importance because medical image perception tasks, which range from the reading an x-ray to the diagnosis of cancer by examining cells through a microscope, permeate the world of medical diagnosis, and will do for many years to come.

My interest in medical image perception began on 1st April 1987, when I began work as a Junior B Medical Laboratory Scientific Officer in the cytology department at St David's Hospital in Cardiff. Under the watchful eye of experts I began my journey through the ranks to eventually become a cytology trainer and manager of a cytology training centre. The journey took several years. Even on careful reflection I'm not quite sure how my transition to so-called "expert" status happened. My training was very informal and consisted partly of lectures in which diagnostic feature lists were drummed into me until I could recite them in my sleep. Diagnostic criteria, decision algorithms, rules of thumb and hints and tips from my trainers were, of course, accompanied by beautiful photographs of cells (digital images were unheard of in those days) and microscopy practice, lots and lots of practice. Today we have cytology training centres that deliver standardised programmes but I would challenge any claim that teaching methods have changed dramatically over the years.

The absence of a firm evidence base from which to develop efficient and effective cytology training programmes is remarkable. I am now in my eighth year of research in the field and, apart from the occasional success story, the answers to the questions raised above remain as elusive as ever. This article is about one of those success stories.

What is learning?

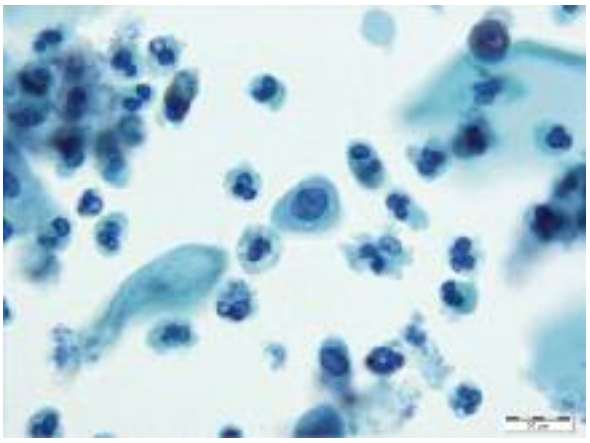
There is no quick or easy answer to this question. All teachers and trainers will be familiar with the concepts of *declarative* and *procedural* learning, which describe how learners acquire knowledge and learn how to do things, respectively. Less familiar will be the notion of *perceptual* learning, which can be defined as practice-induced improvements in the ability to gather and make sense of sensory stimuli.[1] Perceptual learning occurs in all the senses — from a very young age we learn how to recognise the smell of food, the sound of crying and the feel of pain. Visual perceptual learning is the main interest of the cytologist who wishes to discover how individuals improve their ability to *discriminate* visual stimuli with increasing *fluency* over time. Improvements in discrimination and fluency are the key ideas in visual perceptual learning. In cytological terms we might describe visual learning as practice-induced improvements in the accuracy and fluency with which normal and abnormal cells are discriminated.

Visual learning in cytology involves practice-induced improvements in the accuracy and fluency with which normal and abnormal cells are discriminated

The extent to which these skills are innate or learnt is not known. Equally, and many readers might find this quite surprising, opinion is divided about the requirement for explicit instruction during perceptual

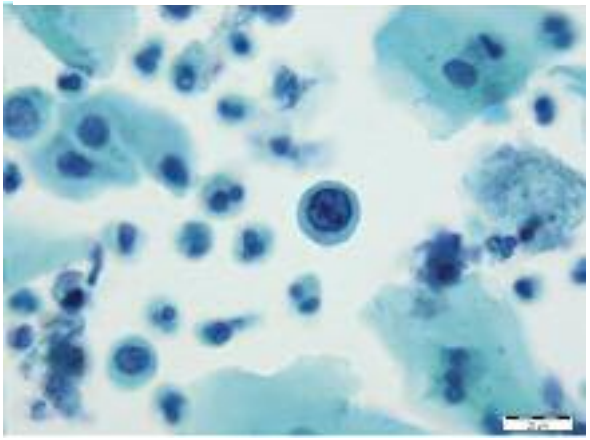
learning. Many cognitive scientists believe that the only requirement for developing visual discrimination skills is deliberate practice. By implication, all the diagnostic rules, feature lists and decision algorithms that are the focus of so many cytology textbooks, atlases and training courses would appear to be surplus to requirements. Some cognitive scientists would go further by claiming that such a detailed analytical approach can actually *impede* the learning process. These remarkable claims, among other factors, led me into an area of research that was too alluring to forego.[2] The following section outlines one of my investigations in which a *non-analytical* approach to visual learning in cytology was directly compared with the more familiar technique of training accompanied by diagnostic feature lists.[3]

Normal



- **Smooth chromatin**
- **Round-to-oval nucleus**
- **Normochromsia**

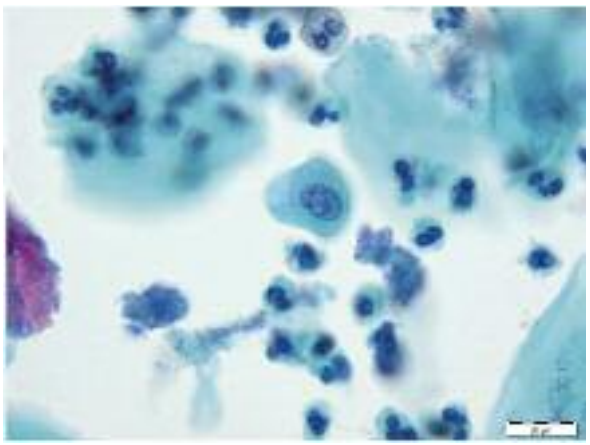
Abnormal



- **Clumped chromatin**
- **Irregular nuclear membrane**
- **Disproportionate nuclear enlargement**
- **Hyperchromasia**

Figure 1. An example of a paired image used for training in the "analytical" group

Normal



Abnormal

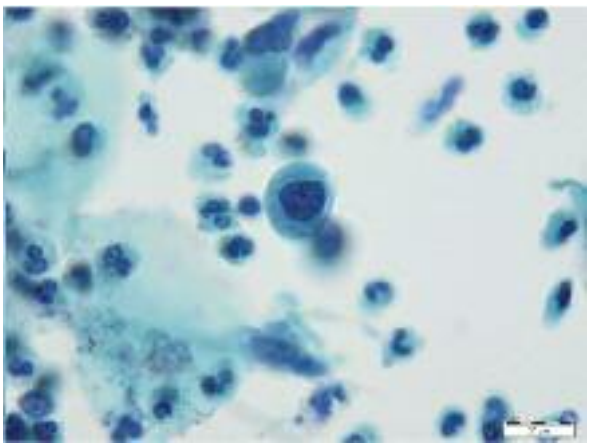


Figure 2. An example of a paired image used for training in the "non-analytical" group.

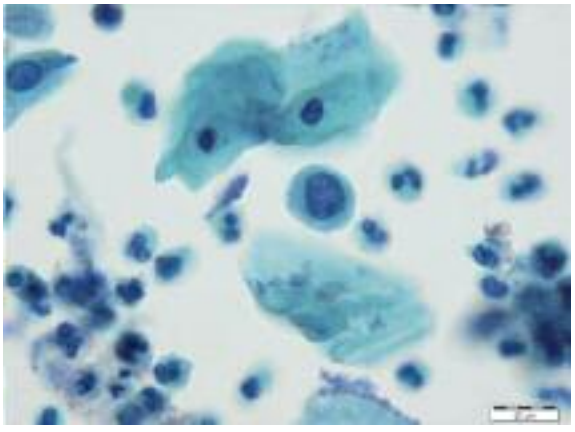


Figure 3. An example test image. Participants used a computer keyboard to record a response of "normal" or "abnormal" and to indicate their degree of certainty on a scale of 1 (definitely normal) to 5 (definitely abnormal).

Procedure

Two groups of 25 undergraduate psychology students without previous cytology experience were consented to take part. Both underwent an initial image interpretation test in which they were shown 60 images of single cervical epithelial cells in a random sequence (figure 1). Half the images were of normal cells and half were of dyskaryotic cells. The purpose of this initial test was to establish baseline diagnostic accuracy of naïve observers. Performance better than chance at this stage might indicate some implicit cell discrimination abilities. One group was then given formal cytology tuition in which the criteria of dyskaryosis were explained and demonstrated using 20 paired and annotated cell images (figure 2). The second group, the non-analytical group, was simply shown the same series of 20 paired images (figure 3). The only image annotation used for the non-analytical group were the labels "normal" and "abnormal". The intention was to test the ability of this group of participants to extract and make sense of relevant features for themselves. To be absolutely clear, this group of students had never seen cytology images of this nature before, and were not given any guidance on what to expect. Both groups were then re-tested on a new series of 60 images. Diagnostic opinions and response times (as a measure of fluency) were recorded automatically using DMDX software.[4]

Results

Figure 4 shows that diagnostic accuracy improved significantly in both groups following their respective training protocols ($p<.05$). The degree of improvement for the non-analytical group was impressively similar to the analytical group ($p>.05$). Curiously, baseline diagnostic accuracy was significantly better than chance for both groups before any training was provided ($p<.05$). Far from being naïve observers, novice participants entered the study with implicit pattern recognition skills that could be generalised to the very specific domain of cytopathology. Response times decreased between test 1 and test 2 for the non-analytical group but not for the analytical group. As response times are a general indicator of cognitive effort, we have the interesting suggestion that non-analytical learning is less demanding but just as effective as analytical training.

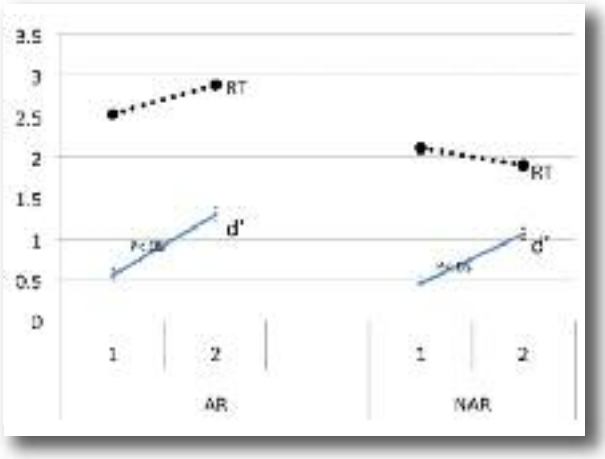


Figure 4. Changes in median response time (RT) and participants ability to discriminate normal and abnormal cells (d') between tests 1 and 2 for analytical and non-analytical training conditions (AR and NAR). Response time is in seconds. D prime (d') is devoid of units and only relative values are important. A d' value of zero indicates no discriminability. Error bars represent +/-1 standard error of the mean.

Conclusions

The results point clearly in one direction. A non-analytical approach to visual learning in cytopathology can be as effective as traditional training methods, and learning is more fluent. It appears that practice does indeed make perfect. Encumbering trainees with complex, often confusing and sometimes ambiguous diagnostic rules does not seem to be necessary and slows learning, at least during the early phase of training.

To suggest that traditional cytology training methods are useless would be unhelpful and rather extreme. Instead, we can ask how the findings of this study can be incorporated into existing cytology training programmes. *Perceptual learning modules* have been developed in fields as diverse as aircraft pilot training, surgery, and mathematics. They have been used successfully in the treatment of amblyopia, during recovery from stroke and traumatic brain injury and even to improve the visual skills of healthy volunteers. Their use as a training aid in cytopathology is a fascinating prospect and will be the subject of future research.

- Kellman PJ, Garrigan P. Perceptual learning and human expertise. *Phys Life Rev.* 2009;6:53–84.
- Evered A. What can cytologists learn from 25 years of investigations in visual search? *Br J Biomed Sci.* 2005;62:182–92.
- Evered A, Walker D, Watt A, Perham N. To what extent does non-analytic reasoning contribute to visual learning in cytopathology? *Cancer Cytopathol.* 2013;121:329–38.
- DMDX display software. University of Arizona. Available from URL: http://www.u.arizona.edu/~kforster/dmdx/dmdx.htm . [Accessed July 11, 2013].

Forthcoming BAC educational events

Alison Cropper

Chair, Meetings Sub Committee

The Meetings Sub Committee members have been busy planning and organising several exciting events which will be happening over the next year or so:

BAC Autumn Meeting 2013
A one day meeting is to be held at the University of Manchester Innovation Centre (UMIC) on Thursday 24th October.

The meeting will be a mixture of lectures and workshops with a predominantly Gynae slant, but also with some non-gynae cytology, it will be of great interest to all BAC members and non-members alike. The meeting will cover HPV testing, results of the HTA adequacy study, and topics such as correlation meetings and cytology checker roles. A choice of three optional workshops will cover atrophic changes in LBC, invasive cancer audit cases and Head and Neck cytology, covering EBUS and ROSE.

The BAC AGM will also be held during this meeting, so please do try and attend — the meeting is there for all our members to hear what the association has achieved and been involved with in the last year and what it's plans for the future are, and also provides an opportunity for you to put your questions directly to the Executive.

A full programme for this meeting can be found on the inside back cover of this edition of Scan, and also on the website, along with booking details and registration form on the link shown below
http://www.britishcytology.org.uk/meetings/meetings.asp

BAC Spring Tutorial 2014
Following the huge success of the first BAC Spring Tutorial in March this year, another is planned for April 2014. The programme has yet to be finalised but will be mainly non-gynae lectures and workshops, and will be on the 4th of April at Guy's and St Thomas' in London — please put the date in your diary and keep an eye on the BAC website for programme and booking details.

BAC bi-annual conference and trade exhibition
2014 will also see the return of the BAC conference, which is to be held over three days, Thursday 9th to Saturday 11th October 2014, at the Crowne Plaza Hotel in Birmingham city centre. The venue and dates have been confirmed and the scientific programme is being planned at the time of going to press. The education committee would welcome any suggestions from members as to what topics they would like to see on the programme — please send any requests or suggestions to Fraser.Mutch@bedfordhospital.nhs.uk — we want this conference to be the event of choice for all cytologists in 2014!

We look forward to seeing as many members as possible at all of these events. If you have any ideas for future meetings or want to help (speaker, host a meeting, etc) then please let us know!

Contributions

The Editors are always grateful to receive case studies, interesting quiz slides or other articles of interest to members for inclusion in SCAN.

Emails can be sent to Andrew Evered at Andrew.Evered@wales.nhs.uk or Sharon Roberts-Gant at Sharon.Roberts-Gant@ouh.nhs.uk

Copy Deadlines are April 2014: 10th February 2014
October 2014: 5th August 2014

Morphology or Molecular

Thomas Giles

The trainee presents the case to me and concludes that the specimen contains no malignant cells, yet I notice bright orange stained cells that have moderate amounts of cytoplasm. The outlines of the cells are irregular with some including thin processes. The nuclei are of variable size and have a variable intensity of staining. I diagnose a squamous cell carcinoma. The trainee was confused because the specimen was of brushings from the common bile duct and their understanding of systemic pathology did not include this as a possible site for this disease. They had allowed preconceptions and bias to affect their assessment.

We are practising at a time when there is increasing emphasis on histological tissue biopsies, immuno-cytochemistry and molecular techniques for the diagnosis of cancer. The accurate tissue diagnosis of carcinoma is no longer sufficient, although still essential. At the same time performance in the FRCPath examination repeatedly demonstrates a weakness in assessing morphology. This is not new! In 1968 T Symington in the foreword to a textbook of diagnostic cytology wrote:

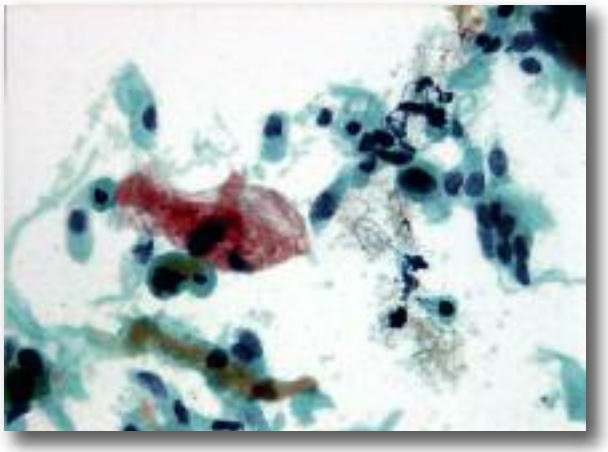
The ease with which satisfactory specimens, in the form of smears, could be prepared from the cervix and the introduction by Papanicolaou of a suitable method of staining them, aroused most gynaecologists, but alas only a few pathologists, to the value of exfoliative cytology as a diagnostic tool for cervical cancer. With experience, the technique has been extended to cytological examination of smears from bronchus, serous cavity and other organs with remarkable and gratifying success, and no pathology department can afford to be without this valuable diagnostic tool.

44 years later and we still have a wide variation in the use of cytology in clinical departments. Staining protocols differ, diagnostic confidence varies and rumours persist that the ancillary tests necessary for modern medicine cannot be performed on cytology specimens.

Despite the advances in ancillary tests, morphology remains the basis of diagnosis. A morphologcal assessment is rapid and cheap. Ever increasing expectations on turnaround times increase the importance of morphology as well as allowing effective use of limited resources without compromising quality. The confident and competent application of basic morphological tests still have a pivotal role in health care. Once again, no pathology department should be able to afford to be without this valuable diagnostic skill. Patients can be assessed clinically and have a pathological tissue diagnosis in a single clinic visit. Appropriate staging procedures can be requested in the light of an established diagnosis, without the necessity for speculative tests based on suspicions alone. Even where immunocytochemistry and molecular tests are required, a morphological assessment remains a key to their use and interpretation. The specificity of ancillary studies is only maintained in the appropriate clinical context. For example, CD56 is widely used as a 'specific'marker for small cell carcinoma, yet the illustration below is of expression in thyroid epithelial cells. Also, I have seen thyroid transcription factor-1 (TTF-1) quoted as being 'highly specific' for lung cancer, yet it is also expressed in some transitional cell carcinomas, hepatocellular carcinomas and upper gastrointestinal carcinomas as well as all differentiated thyroid malignancies. At an even more basic level, cytokeratin 7 is used to determine the most likely site of origin of metastatic adenocarcinoma but it is easy to forget that it is also expressed by normal mesothelial cells, providing a pitfall for the unwary when assessing serous cavity effusions.

The answer to the question 'morphology or molecular' is both. Molecular tests are gaining an increasing role in modern pathology but the use of these can only be used in the context of a robust morphological assessment. The major clinical advantage of cytology, a very rapid turnaround time, can only be achieved by a deep knowledge of morphology. I still consider morphology to come first and molecular studies to qualify, not replace, this. I will continue to teach and assess cytology on this basis.

For the insatiably curious, the answer for the patient who had malignant squamous cells in their bile duct brushings was that they had a tumour in the head of the pancreas. Resection was attempted but was not possible. This therefore appears to be a primary pancreatico-biliary squamous cell carcinoma.



Malignant cells on a billiary brushing – morphologically in keeping with a squamous carcinoma

How to write a paper and get it published

Amanda Herbert

Guy's & St Thomas' NHS Foundation Trust

Editor, Cytopathology

When I started as Editor of Cytopathology I wondered how I had got anything published before; but realised that journal editors had provided me with a great deal of help themselves and through their referees. In this article I will discuss the things that have helped me most — in writing articles and editorials myself, and helping authors with theirs. First, you need something original to say. Even in a case report, you should explain what is new and why it is being published. Second, you have to present the findings and conclusions succinctly. Third, you have to pay attention to grammar, punctuation and spelling; it is not only the overseas authors, who I readily forgive and help, it is often 'native English speakers' who can't write 'proper'. Fourth, you should read the referees comments and follow them carefully, even if they reject your paper and you want to do further work on the topic or send it elsewhere. Fifth, very important, you should decide when a finding needs statistical analysis; and when it doesn't: two out of two cases compared with one out of four doesn't — although in the right setting it might be relevant as an observation.

Preparing and structuring an article.

Betty Flowers' advice is relevant to writing anything, from a letter to your granny to writing up your thesis.1 The four stages of writing are essential for success: madman, architect, carpenter, judge. I now start everything by writing as a madman, letting my mind flow; I may not get any further but at least I've written down what I wanted to say. I have actually advised a senior author to go back to their introduction and write down what they said to me, like a madman, on the telephone; they had judged it too soon and been scared to write what they really wanted to say. Judging comes last; and it's not a bad idea to get someone to look at it before you submit it to the judgement of the editor and referees.

Architecture is essential, and sometimes forgotten for editorials, reviews and letters that are not usefully constrained by IMRAD (introduction, methods, results and discussion). I would never have passed Latin A level (yes, I did) without someone telling me at the last minute that for each question I should write an introduction of what I was going to say (not much when it was about Hannibal crossing the Alps), list the main points to be made, and round it up with a conclusion going back to where it all began — obvious, but often forgotten (someone must have told me before that) and relevant to everything from a symphony to an article on FNA cytology.

Authors should use IMRAD logically, as Hall explains in *How to Write a Paper*.[2] The introduction should start with something at least vaguely interesting; preferably not an obvious or arguable platitude such as 'FNA cytology is the most accurate method of pre-operative diagnosis of thyroid nodules' when you are about to present rather inaccurate results. Materials and methods require details about case selection, methodology and statistical analysis. Results are usually the easiest part of a scientific study to write; the main faults lie in repeating tabulated data, quoting percentages on their own without the values (25% of cases when it is 3 out of 12), and using graphs when tabulated data would be more transparent. Selected graphs may illustrate the most significant findings: if a difference is not obvious on a graph, it's probably not statistically significant — think what it would look like with 10% of cases in the other direction. The discussion should not be too long: according to Hall, it shouldn't be more than one-third of the total length of the article.[2] The discussion should briefly summarise the main findings, relate them to previous studies, point out limitations of the study and suggest possibilities for further work. A concise conclusion should round it off.

Carpentry includes spelling and English; and data presentation, which I have already dealt with briefly. I recently learnt from my Spanish teacher that I was unusual among her pupils in knowing what verbs, nouns, adjectives and adverbs, and even the subjunctive, were. (All that Latin sometimes helps.) Luckily grammar comes naturally, and may even be hardwired,[3] but only to a limited extent. Getting it wrong can change the meaning; and so can wrong punctuation as in *Eats, shoots and leaves*.[4] Grammar and punctuation are worth reading and thinking about if you are going to write seriously; and George Orwell's simple rules are well worth observing (Table 1).[5] Short words do not include abbreviations, especially daft newly invented ones. Try and stick to ones that are well known (FNA, LBC, CIN etc.); or for entities frequently repeated in your article (you can't keep saying 'low-grade fibromyxoid sarcoma'). And it's best not to use abbreviations that are better known for something else. (I recently asked an author not to use CIN for a form of chromosomal abnormality.) And, please, have a dictionary to hand — or if you use the internet make sure the spelling is 'English' if you are writing for *Cytopathology*.

Table 1

George Orwell's rules for clear, concise English

- Never use a metaphor, simile or other figure of speech which you are used to seeing in print
- Never use a long word when a short one would do
- If it is possible to cut out a word, always cut it out
- Never use the passive when you can use the active
- Never use a foreign phrase, a scientific word or a jargon word if you can think of an everyday English equivalent
- Break any of these rules sooner than say anything outright barbarous

Chosing a journal

You should send your article to a journal that publishes the sort of thing you are writing. You can find this out by taking advantage of 'virtual issues' and 'Editor's choice' articles, which are free to download even if you are not a subscriber to that journal. It's easy to spot scientific papers with no particular relevance to diagnostic cytopathology that have probably been rejected by someone else. Remember that most journals avoid case reports, and ask for them to be re-written as letters to the editor. Why? The answer is 'impact factor'. Case reports are seldom cited and count as 'articles' in the denominator of articles cited/articles published. A series of letters to the editor counts as a single article, so any one of them being cited will count. Don't let this put you off: case reports are important to cytology practice, but they do need to say something new and to illustrate it well and helpfully. *Cancer Cytopathology* simply doesn't publish case reports, but *Cytopathology* does; and welcomes good ones with a useful message. Now that most case reports are published as letters in batches, articles that don't get cited at all are more of a concern: this is something all editors keep a close eye on. But nowadays we also keep a close eye on 'downloads': It is clearly important that articles should be downloaded, and, ideally, read. This leads me to the abstract, which is all too often the only thing that will be read.

Abstracts, titles and keywords

Google and other search engines look for keywords that are repeated in titles of articles, abstracts and first paragraphs. Sadly, this mitigates in favour of long titles and against fun snappy ones. Abbreviations are supposed to be avoided in titles, but can be useful as keywords. Ted Duvall's editorial entitled 'ABC3 and LBC — Adequate or not?'[6] breaks both these rules (but George Orwell says rules may be broken) and we've made up for it by referring to it in our first tweet — so perhaps a few more people will read this excellent well written article!

The abstract summarises the article and should include something about all the relevant findings. If you can't fit your relevant findings into the abstract perhaps you should have written two papers. (An important point about cancers after treatment of CIN was completely lost in an article of ours through not being mentioned in the abstract — perhaps you can read about it now.[7]) Furthermore, you would be surprised to know how often authors leave out of the abstract their most important finding. You have to remember how little time people have, or how lazy they are, and that many will simply look at the conclusion of the abstract before deciding to go any further.

Summary

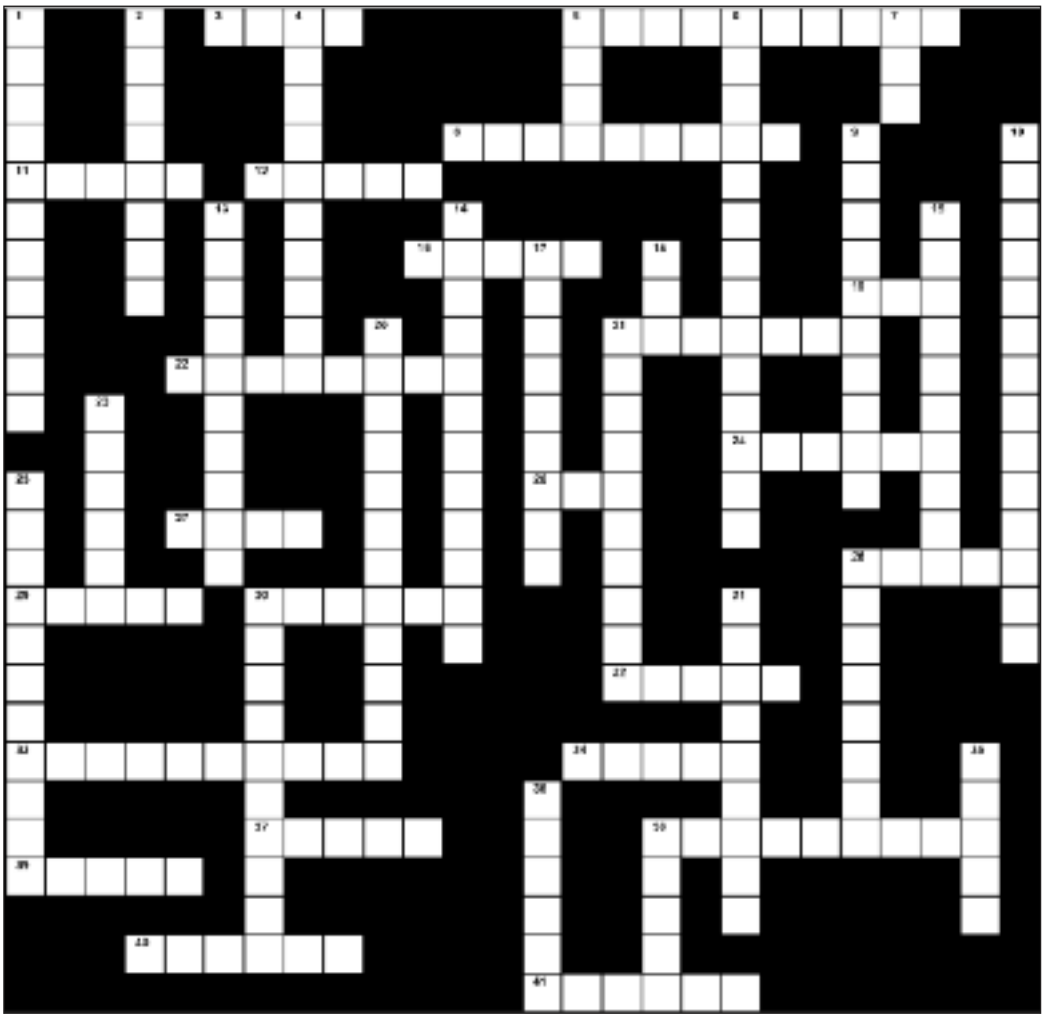
People will want to publish and read what you write if you have something to say, say it concisely and present the data clearly; and if you remember to observe the guidelines for authors published by journals and think about grammar, spelling and style. Once you have written down what you want to say and got it off your chest, structure it carefully and concentrate on clear illustrations, informative tables and statistics if relevant. Remember that the key to writing is reading; so download and critically read the articles in *Cytopathology*; submit your papers to us; and follow us on Twitter: https://twitter.com/CytopathologyJ

References

1. Flowers BS. Madman, architect, carpenter, judge: rules in the writing process. http://www.cse.fau.edu/~zhong/madman.htm
2. Hall GM ed. *How to write a paper* (4th edition) Blackwell Publishing 2008.
3. Stephen Pinker. *The Language Instinct: How the Mind Creates Language.* New York: William Morrow & Co 1994.
4. Lynne Truss. *Eats, shoots and leaves.* London: Profile books, 2003.
5. George Orwell. Politics and the English Language, in the *Penguin Book of Essays of George Orwell,* Penguin, 1984.
6. Duvall E. ABC3 and LBC — Adequate or not? *Cytopathology* 2013;24:211–5.
7. Herbert A, Anshu, Culora G *et al.* Invasive cancer audit: why cancers developed in a high-risk population with an organised screening programme. *BJOG* 2010;117:736–45.

BAC Cytology Crossword

created by Melanie Buchan 2013



Across

3. The venue of the joint scientific meeting in June (1,1,1,1)
5. Non-epithelial cell (10)
8. Female hormone (9)
11. See 18 down
12. CEC Co-ordinator, first name (5)
16. Recommended after 2 hours screening (5)
19. See 7 down
21. (and 30 across) Screener member of BAC Executive (7,6)
22. Correlates with CIN2 (8)
24. High Grade (6)
26. Joint hosts of meeting at 3 across (1,1,1)
27. Essential part of microscope (4)
28. To pay particular attention (5)
29. BAC President, first name (5)
30. See 21 across
32. (and 41 across) BAC Chairman (5,6)
33. x10, x20, x40 (10)
34. (and 36 down) Internal quality control (5,6)
37. See 40 across
38. Guardian of patient identifiable information (9)
39. Surname of a clever BAC Executive member (5)
40. (and 37 across) BAC Executive, Chair of Non-Gynae Working Group (6,5)
41. See 32 across

Down

1. ABC3 non-cervical cell (11)
2. Found within a nuclei, sometimes prominent (8)
4. Holding category (10)
5. Final (4)
6. Inflammatory response (14)
7. (and 19 across) a typical formation seen with groups of 1 down (3,3)
9. Location of BAC Autumn Meeting, October 2013 (10)
10. Variability (14)
13. Pathognomic of HPV infection (10)
14. Hormone promoting production of glycogen (12)
15. Medically induced change (10)
17. Without nucleus (9)
18. (and 11 across) Secretary of the BAC Executive (3, 5)
20. Disintegration of nuclear chromatin (12)
21. Transformation of one cell type to another (10)
23. (and 35 down) Chair of BAC Education Sub-Committee (6,5)
25. Abnormal nucleus (11)
28. The sessions that 21 across missed in June (8)
30. Location of 2014 BAC Conference (10)
31. Type of epithelium (9)
35. See 23 down
36. See 34 across
38. We see them down the microscope every time (5)

Answer on page 30

Case Study answer:

Examination revealed a lymphocyte rich ascitic fluid with sheets of benign mesothelial cells in the background (Fig.1). The lymphoid cells are small and atypical with high nuclear cytoplasmic ratios and irregular angular and cleaved nuclei showing a coarse chromatin pattern. Occasional mitoses are identified (Fig.2). No normal lymphocytes are seen. The lymphoid population is monotonous. The ascitic fluid was reported as malignant with features of non-Hodgkins lymphoma, (C5). Biopsy of a lymph node from the mesentery at laparotomy confirmed a non-Hodgkins lymphoma , subsequently classified as B-cell, mature, mantle cell lymphoma (blastoid variant) (Figs. 3 and 4.)

Lymphocyte rich effusions should be examined carefully. Most are reactive to other pathology and contain a mixed population of benign lymphoid cells. However, lymphocyte rich effusions may be seen in patients with TB or lymphomas. In the latter the effusion may be the first manifestation of a lymphoma but in most cases the patient is already known to have a lymphoma. History is crucial. Careful evaluation of the lymphoid cells is essential and suspicion should be raised if the population is monotonous and atypical. High grade lymphomas involving serous cavities may be mistaken for metastatic poorly differentiated carcinoma. Intelligent use of immunochemistry will confirm the diagnosis.

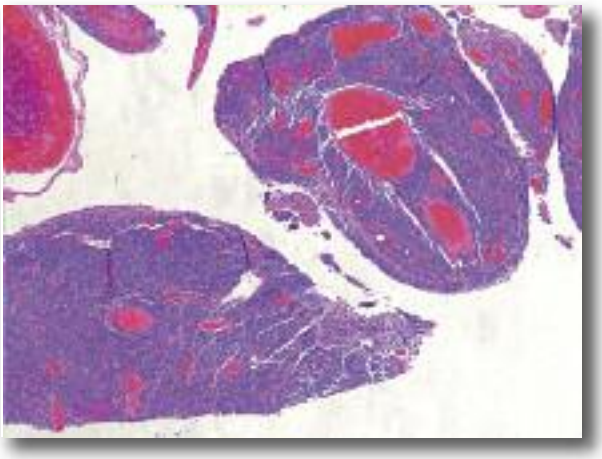


Fig. 3.

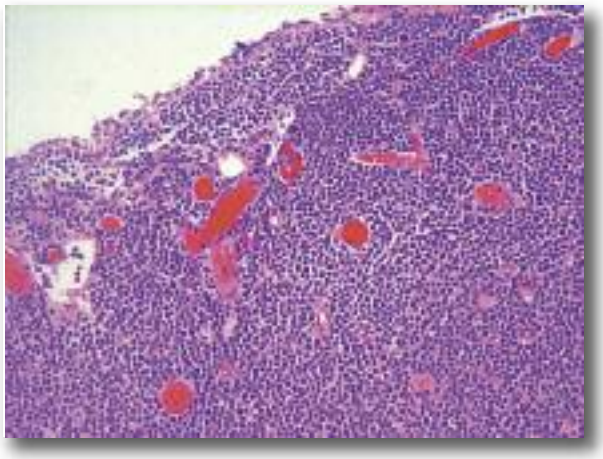
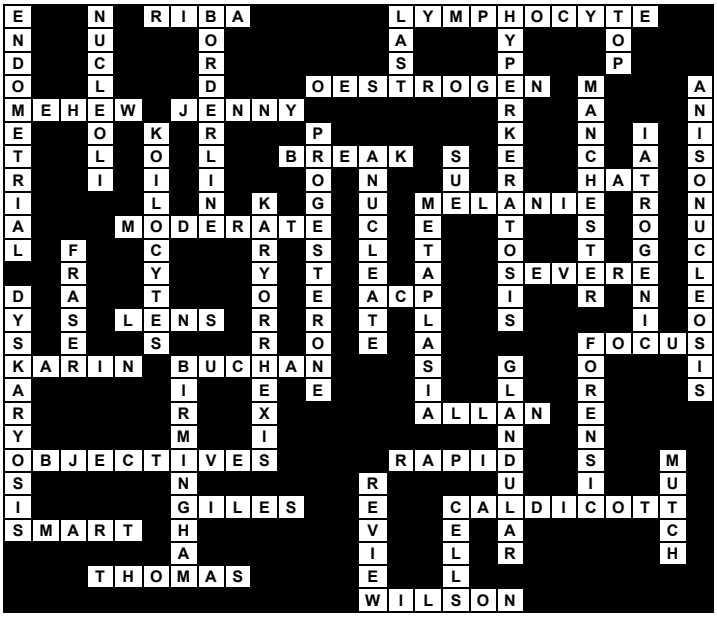


Fig. 4.

Sheets of mesothelial cells were seen in the background of this specimen and were also present over the surface of the mesenteric node biopsy. Such sheets, even when reactive features should not be misinterpreted as metastatic carcinoma. It is prudent to include mesothelial markers such as calretinin when using Immunocytochemistry panels to diagnose serous fluids.

Case Study can be found on page 15

BAC CYTOLOGY CROSSWORD ANSWERS



South West Regional

CYTOLOGY training centre

2013 & 2014 Course Schedule

Date	Gynae Courses	Fee*
10 Mar-4 April 2014 29 Sept-24 Oct 2014	**Introductory in Gynae Cytology**	NHS £1000 Other £1200
Dates tbc	**Prep for C&G Diploma in Cervical Cytology**	NHS £250 Other £300
3-5 Dec 2013 4-6 March 2014 17-19 June 2014 9-11 Sept 2014 2-4 Dec 2014	**Update in Cervical Cytology for Technical Staff**	NHS £300 Other £350
12 Nov 2013 20 May 2014	Update in Cervical Cytology for Pathologists, Consultant BMSs & Holders of the Advanced Specialist Diploma in Cervical Cytology	£100
28-29 April 2014	**Gynae Pathology for Trainee Colposcopists**	£200
21 May 2014	**Gynae Histology for Technical Staff**	£100
24-26 Feb 2014 23-25 June 2014	**Gynae for Trainee Pathologists**	£300
11 Nov 2014	**Gynae Update for Cytology Checkers**	£100
27-28 Jan 2014 12-13 May 2014 15-16 Sept 2014	**Cervical Sample Taker Training**	£250
26 June 2014 19 Nov 2014	**1/2 Day Update in Cervical Screening**	

Date	Non-Gynae Courses	Fee*
30 April 2014	**Serous Fluid Cytology**	£100
3 June 2014	**Respiratory Cytology**	£100
7 Nov 2013 12 Nov 2014	**FNA Cytology**	£100
21 Nov 2013 25 Nov 2014	**Urinary Tract Cytology**	£100
4-7 Feb 2014 1-4 July 2014	**Non-Gynae for Trainee Pathologists**	£400

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

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Phone: 0117 323 5649
Fax: 0117 323 5640
E-mail: SWRCTC@nbt.nhs.uk

Dr K Denton
Director

Mrs Helen Burrell
Manager

Mrs Helen Hoskins
Deputy Manager

For further course details & application form please visit our website:

www.cytology-training.co.uk

North Bristol NHS

Central Manchester University Hospitals NHS
NHS Foundation Trust

Directorate of Laboratory Medicine

THE NORTH WEST CYTOLOGY TRAINING CENTRE COURSES 2013

Bespoke training available on request – please contact the Centre with your requirements

LBC Update Course in Gynae Cytology for BMSs/Cytoscreeners (SurePath)*

Topic A – Borderline
Topic B – Atrophy
Topic C – Pitfalls and lookalikes
£100 per day

28th August (B)
17th September (C)
22nd October (A)
19th November (B)
10th December (C)

Gynae Master Classes*

Glandular neoplasia: the role of HPV testing - Dr Tom Giles

10th October

Pre-Examination Course for the C&G Diploma in Cervical Cytology (Surepath)*

£250

3rd – 5th September

Non Gynae Master Classes for Medical Staff

THYROID

14th October
Course fee: £100 / £80 for NW regional staff

EBUS

27th November
Course fee: £150 / £120 for NW regional staff

FRCPath COURSES

Non Gynaecological Cytology Revision Course
£500
FRCPath Pre – Exam course
£400

20% discount for regional trainees
FRCPath COURSES 2014
DATES TO BE ANNOUNCED

Theoretical Cytology Course for Novice Sample takers

Course fee to be confirmed

12th – 13th November

Primary Care ½ day Update

£5 admin fee

17th October
5th December

*Mandatory Courses Are Free Of Charge to North West Region Technical Staff.
Please note that all gynae courses are based on Surepath morphology
Please check the website for future listings

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Birmingham Women's NHS
NHS Foundation Trust

BIRMINGHAM CYTOLOGY TRAINING CENTRE

All BCTC courses are provided in SurePath *and/or* ThinPrep LBC

INTRODUCTORY COURSES FOR CITY & GUILDS DIPLOMA IN CERVICAL CYTOLOGY

Provisional date 3-14 March 2014 & 24 March—4 April 2014

This course provides students with a theoretical and practical introduction to cervical cytology. A five-day Follow-on Course is offered free of charge to all those attending our Introductory Course.

FOLLOW-ON COURSES FOR CITY & GUILDS DIPLOMA IN CERVICAL CYTOLOGY

14-18 October 2013

The aims of this course are to revise the topics taught on the Introductory Course, consolidate skills and identify problem areas

PRE-EXAMINATION COURSES FOR THE CITY & GUILDS DIPLOMA IN CERVICAL CYTOLOGY

16-18 September 2013; 22-24 January 2014; 27-29 August 2014

A 3-day course for those preparing to take the City and Guilds Diploma in Cervical Cytology

UPDATE COURSES IN GYNAECOLOGICAL CYTOLOGY (ThinPrep & SurePath)

30 January 2014; 18 March 2014; 19 May 2014; 11 July 2014; 2 October 2014; 26 November 2014

Topics to be confirmed

NON-GYNAECOLOGICAL CYTOLOGY FOR TECHNICAL STAFF

10-11 April 2014

Ideal for those completing their portfolio for the Specialist Diploma

WEST MIDLANDS AUTOPSY PATHOLOGY COURSE

2-3 October 2013

For trainees in preparation for the Autopsy element of the FRCPath exam and Consultant Pathologists involved in coronial / procurator fiscal work as an update for annual appraisal and revalidation.

BIRMINGHAM HISTOPATHOLOGY COURSE

16-27 June 2014

The programme 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 (StRS)

10-11 February 2014; 8-9 September 2014

The programme for this course is a combination of lectures workshops and multiheader sessions. This course includes a mock exam and is particularly suitable as revision for the FRCPath Part 2 exam

NON-GYNAECOLOGICAL CYTOLOGY FOR TRAINEE PATHOLOGISTS (StRS)

4-7 February 2014; 2-5 September 2014

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

INTRODUCTORY COURSE FOR ST1s

2-6 December 2013; 1-5 December 2014

Gynaecological and Non-Gynaecological Cytology including Autopsy element

LBC Conversion Courses, Ad hoc workshops and Off Site workshops can be arranged on request—please contact BCTC

Please see our website for further details and for reservations please contact Louise Bradley or Amanda Lugg

Birmingham Cytology Training Centre
Birmingham Women's Hospital
Birmingham B15 2TG
Phone: 0121 627 2721
Fax: 0121 627 2624
Email: Louise.Bradley@bwhct.nhs.uk or Amanda.Lugg@bwhct.nhs.uk
Website: http://www.bwhct.nhs.uk/cytology-training-centre

EC IBMS RCPath CPD accredited courses

NHS Lothian

Scottish Cytology Training School

Programme 2013/14

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

Training School Manager
Sue Mehew
Tel: 0131 242 7149
Email:
Sue.mehew@luht.scot.nhs.uk

Training School Director
Dr Edward Duvall

Application forms available on request from:

Mrs Linda A Cooper
Training School Administrator
Pathology Department
Edinburgh Royal Infirmary
51 Little France Crescent
Edinburgh
EH16 4SA
(Available mornings Mon-Thurs)

Tel: 0131 242 7135
Fax: 0131 242 7169
email: Linda.Cooper@luht.scot.nhs.uk

NHSCSP Accredited Training Centre

Introductory Course

24th February – 21st March 2014
£1000

Introductory Course Part 2 tbc

Update Course

4th - 5th November 2013 (SGH Glasgow)
12th November (for consultant staff)
5th – 6th December 2013
3rd – 4th February 2014

£100 per day

Hosting Exam

Examination to be held in Edinburgh
29th October 2013
Applications to Examination Office, Liverpool.

Pre-Exam Course

9th – 11th Sept 2013 (for Oct Exam)

£250

Non-Gynae Course for Trainee Medical (ST3) & BMS staff

tbc October 2013

£100 per day

Trainee Colposcopists

tbc 2013

£200

Non-NHS Labs – price on application
All courses are in Liquid Based Cytology (Thin Prep)
Courses are CPD accredited

East Pennine Cytology Training Centre

EPCTC NHS

Overall Winner 2010

Achieving Excellence in Learning, Teaching & Development

Training Centre Manager:

Mr N Dudding
0114 226 8691
Nick.dudding@sth.nhs.uk

Website: www.cytologytraining.co.uk

Administration:

Mrs K Hawke
0113 246 6330
Kathryn.hawke@nhs.net

Cytopathology in the FRCPath Examination

This one-day tutorial is ideal for any trainees in Cellular pathology but in particular those approaching the FRCPath Part 2 Examination. Experienced educators will offer guidance on training and the examination. Areas covered will include the College training curriculum, an overview of the NHSCSP, cytology in the clinical setting and advice on the best approach to the examination.

Suitable for Thinprep® or Surepath™ users

Date: 7th March 2014

Course Fee: • £120 each

One-Day Update Courses in Cervical Cytology for Consultant Medical Staff

These one-day courses are ideal for and limited to Consultant Medical Staff. This year we will concentrate on cases identified through the NHSCSP cancer audit and recent developments regarding the introduction of HPV testing including an update on the progress of HPV primary screening.

1st May 2014

Course Fee: • £95

Three-Day Update Course for AP/Consultant BMSs

Includes sessions on cervical histopathology, recent developments in colposcopy, HPV triage and test of cure and a whole session on the NHSCSP cancer audit. Suitable for Thinprep® or Surepath™ users

2014 Dates TBC

Course Fee* : £230

Mock Exam Course for the Advanced Specialist Diploma in Cervical Cytopathology

A two-day course ideal for anyone intending to sit the Advanced Diploma exam. Practice at both written and practical elements and a full mock exam.

29th & 30th April 2014

Course Fee*: £200

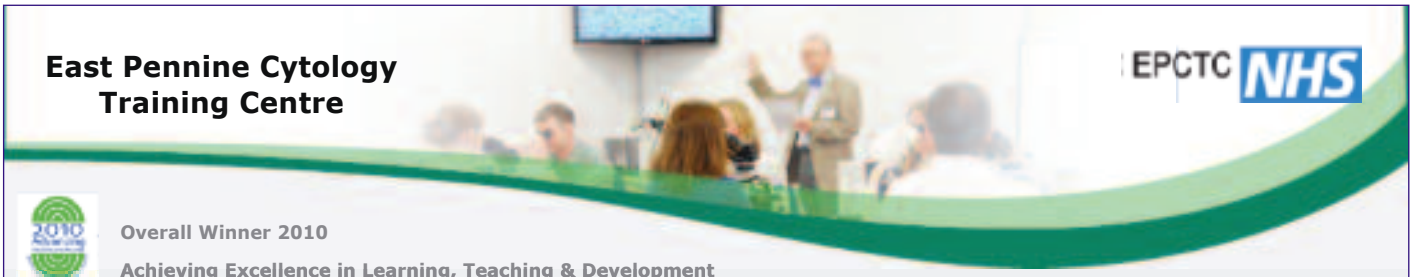
One - Day Update specifically for Checkers & Experienced BMS staff

A One-day course aimed specifically at those intending to, or already acting as Checkers. Includes a session on basic histopathology, new NHSCSP evaluation criteria and microscopy sessions on what can be called negative and what cant!

8th July 2014

Course Fee*: £120

****Participants from the North East, Yorkshire and East Midlands will incur £15 administration fee per day on all courses above except those marked • where full fee applies. All prices are subject to change. Further information and application forms are available from our Administration Team: Kathryn.hawke@nhs.net***



East Pennine Cytology Training Centre

EPCTC NHS

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Nick.dudding@sth.nhs.uk

www.cytologytraining.co.uk

Administration:

Mrs K Hawke
0113 246 6330
Kathryn.hawke@nhs.net

One-Day Masterclass

"Cytology of the Thyroid"

This one day course is part of our commitment to provide a series of interesting and challenging masterclasses aimed at practising consultants and senior BMSs. Dr Thomas Giles will explain recent guidance and highlight his approach to diagnostic work, followed by the opportunity for participants to view cases in a workshop format. He will also discuss the areas in which thyroid cytology is challenging with the aim of making participants feel more comfortable with reporting and more confident in addressing areas of uncertainty.

23rd October 2013
Course Fee: · £120

One-Day Course for Hospital Based Programme Coordinators

This one-day course is aimed at all Hospital Based Programme Coordinators (HBPCs). It would be particularly suitable to anyone new to post but should also appeal to those who have been in post for many years as an update and an opportunity to network with fellow HBPCs.

September 2014 (Date TBC)

Course Fee*: £120

Update Courses in Non-Gynae Cytology

A series of three one day courses covering serous fluids, urine & respiratory cytology and ideal for anyone seeking an update in these areas, particularly those intending sit the IBMS diploma. Also includes an optional fourth day covering aspects of the IBMS exam.

6th – 9th May 2014
Course Fee*: £95 / £230 / £345

One-Day Introductory Non-Gynaecological Cytology Workshops

Ideal for anyone requiring an introduction to non-gynae cytology. These courses will cover specimen preparation and understanding the morphology of urine, respiratory and effusion cytology. Very useful to anyone undertaking their Specialist Portfolio.

26th & 27th March 2014
Course Fee*: £95 per day

HPV. Its role in cervical carcinogenesis and how to Detect it

A one day course that aims to give anyone involved in HPV testing an overview of basic cell biology, the role that HPV plays and the different techniques that can be used to detect it.

25th March 2014

Course Fee*: £95

Participants from the North East, Yorkshire and Trent Regions will incur £15 administration fee per day on all courses above except those marked · where full fee applies. All prices are subject to change. Further information and application forms are available from our Administration Team Kathryn.hawke@nhs.net

BAC British Association for Cytopathology

BAC Scientific Meeting & AGM
Thursday 24th October 2013

University of Manchester Innovation Centre, Manchester

0900	Registration, refreshments and Trade Exhibition
0955	Welcome by Dr Karin Denton , President of BAC
1000	Challenges for implementation of Molecular HPV Screening: Experiences from three large Danish trials evaluating Roche cobas, Hologic GenProbe APTIMA, Qiagen HC2, BD VIPER LT & Genomica CLART **Dr Jesper Bonde, Denmark**
1040	What do screeners send for checking? **Mr Allan Wilson, BAC Chair, Monklands Hospital**
1120	Cervical correlation meetings: what's all the fuss about? **Dr Paul Cross, Gateshead Healthcare Trust Hospital**
1200	BAC Annual General Meeting
1230	Lunch and Trade Exhibition
1400	Delegates have a choice of 3 workshop options: The trouble with atrophy: a SP and TP microscopy workshop Host: North West Cytology Training Centre **Mrs Jenny Davies and Mrs Helen Burrell** EBUS-FNAC and ROSE Head & Neck clinics / cases symposium **Dr Durgesh Rana, Manchester Cytology Centre** **& Dr Ivan Robinson , Royal Derby Hospital** Interactive workshop – invasive cancer audit cases **East Pennine Cytology Training Centre**
1530	Tea and refreshments and Trade Exhibition
1600	Results of the HTA Adequacy Trial **Dr John Smith, Royal Hallamshire Hospital**
1630	Close of meeting

Meeting application form available on BAC website at:
http://www.britishcytology.org.uk/meetings/meetings.asp

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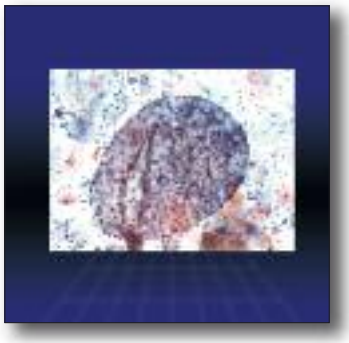
Material for publication should be sent direct to the Editor; all other correspondence with the Association should be addressed to the Secretary.

Cover image: The editor is indebted to Mr Nick Dudding, East Pennine Cytology Training Centre for the cervical image taken from a 40 year old female with a one month history of IMB. The hysterectomy showed mixed clear cell and endometrioid adenocarcinoma.



BAC British Association for Cytopathology

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