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NGAL detects AKI much earlier than other biomarkers

NICE have published guidelines on AKI stating that early detection of this condition is a key priority and will prevent the patients condition becoming critical.

NGAL concentrations increase much sooner than the traditionally measured Creatinine.

This early detection could help save more lives than using Creatinine alone.

More information on NGAL for diagnostic or research use can be found at our new dedicated NGAL website www.ngaltest.co.uk
ACB Website Gets a Makeover

The ACB website is a major communication platform for the Association with members of the ACB and also anyone else with an interest in our work accessing the site. The website has recently had a makeover and is now up and running. There is a direct link on the right hand side to the PDF version of ACB News. Members of the ACB can log on to the members area of the site from the top right hand side of the front page.

ACB News generally goes live on the ACB website around the first day of each month and many people now access it electronically as soon as it is up. The ACB President sends a Tweet from @acbtpresident as soon as ACB News is up on the website for download. You can also access all editions of ACB News back to July 1988 from the publications area of the website.

Tender Goes South-West

The Strategic Projects team has let another one go. Readers will remember that it was announced on the 12th July that CCGs in the South West Tender (Lot 3) area had taken the decision to pause the procurement process, in order to review the business case for the procurement. The outcome of this review was confirmation that CCGs have decided to abandon the procurement, for essentially the same reasons given as the NW Midlands (Lot 2) tender reported in ACB News last month.

Participating bidders, which included NHS Trusts and several private sector pathology providers, were informed of this change of circumstances on 11th September. The CCGs in the South West Tender area are Coventry & Rugby, Warwickshire North, South Warwickshire, South Worcestershire, Redditch & Bromsgrove, Wyre Forest and Herefordshire. The Strategic Projects team state that they are still supporting the CCGs in the East Midlands (Lot 1) area with an on-going tender process.

Sudoku (for Microbiologists)

Last month’s solution
Raj takes time out from her stand at a recent exhibition in Birmingham to check out the new ACB website.

“I wish we had end-to-end sample processing”
Applications are invited from registered Clinical Scientists who wish to be considered to join this Advisory Group. The NEQAS Special Advisory Group (SAG) are interested in recruiting younger professionals who initially can gain experience in the workings of the Advisory Group but also offer constructive support to the team.

The SAG meets three times a year – at present once in Edinburgh and twice in Birmingham. The remit of the Group is to review the EQA schemes for Immunoassay and Endocrine assays offered by the three major scheme organisers; these being:

- **Birmingham Schemes - thyroid and steroids**
- **Edinburgh Schemes - pituitary peptides, selected tumour markers and urine pregnancy testing**
- **Guildford Schemes - insulin, C-peptide, IGF-1, IGFBP-3, gastrin**

Applicants who wish to apply should hold full FRCPath qualification and are invited to submit a brief (one side of A4) resume of your career, experience in Immunoassay and Endocrinology, publications and why you wish to be considered to join this group.

Please send submissions by post to: Dr Gwen Wark, Secretary iASAG, Clinical Laboratory, Level B, Royal Surrey County Hospital, Egerton Road, Guildford, Surrey GU2 7XX. Alternatively email: gwen.wark@nhs.net

Closing date for submissions is 1st November 2013 in order to review submissions at the next meeting on 21st November 2013.

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ACB Wales Region Autumn Scientific Meeting
The Biochemistry of Neurological and Muscle Disease

Thursday 24th October, 2013
University Hall, Cardiff

09.00  Registration and Coffee
09.30  Investigation of Rhabdomyolysis
Dr Duncan Cole, University Hospital of Wales, Cardiff
10.15  Mitochondrial Disorders
Professor Simon Heales, Great Ormond Street Hospital, London
11.00  Coffee
11.20  Members’ Presentations
12.30  Lunch and Trade Stands
13.30  Neurological Disease Cases
Maryam Khan, University Hospital of Wales, Cardiff
14.30  Biochemical Investigation of Seizures
Dr Johann Te Water Naude, University Hospital of Wales, Cardiff
15.15  Coffee
15.45  Audit Presentations
16.45  Meeting Close

Registration information:
Day delegate rate: £30 for ACB Members, £35 for non-ACB Members.
Registration via the ACB website. Registration closes on Friday 11th October 2013.
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ACB Scotland, National Autumn Meeting
Norton House Hotel, Ingliston
7th-8th November 2013

Thursday 7th November
09.30-10.45 Junior Members’ Papers Chair: Dr Ian Godber, Lanarkshire
A review of CSF spectroscopy reports with a raised CSF bilirubin
Dr Helen Falconer, Edinburgh
Serum androgen profiling: coming soon to a lab near you!
Miss Charlotte Fifield, Glasgow
Evaluation of hyaluronic acid as a liver fibrosis marker in NAFLD
Dr Laura Russell, Dundee
Anti-Mullerian hormone: fertile ground for improvement Dr Neil Syme, Edinburgh
10.45-11.00 Tea and Trade stands
11.00-12.30 Gastrointestinal and Nutritional Biochemistry Chair: Mrs Judith Strachan, Tayside
Recent evidence for the effects of calcium supplementation and vitamin D on cardiovascular disease and cancer Prof Alison Avenell, Aberdeen
Faecal tests from a clinical stance Dr Craig Mowat, Dundee
EQA for faecal tests Ms Jane French, UK NEQAS
12.30-13.30 Lunch
13.30-13.30 Endocrine Hypertension Chair: Ms Karen Smith, Glasgow
Endocrine hypertension: what’s new? Dr Marie Freel, Glasgow
The Pathway Trial. Analysis of aldosterone and renin using LC-MS/MS
Mr Brian Keevil, Manchester
13.30-14.00 Tea and Trade stands
14.00-15.30 Inter-region Biochemistry Pub Quiz – Dr Ian Gunn, Lanarkshire
15.30-19.00 Leisure activities
19.30-late Dinner

Friday 8th November
09.00-09.30 Registration
09.30-11.45 Leadership Workshop (Tea and Trade stands – 10.30-10.45)
Organised by Dr Anne Pollock, Inverness & Ms Hazel MacKenzie, NES National Leadership Unit
11.45-12.15 Update on Healthcare Scientist Training in Scotland. A head in the sand or ahead of the game? Dr Robert Farley, Healthcare Science Programme Director, NES
12.15-12.30 ACB Scotland Business Meeting
12.30-13.30 Lunch
12.30-13.30 Tumour Markers Chair: Dr Cathie Sturgeon, Edinburgh
CA125: from lab to scalpel Dr Paul Mills, Livingston
Clinical perspective on PSA Mr Prasad Bollina, Edinburgh
Update on MDN work on tumour markers Dr Cathie Sturgeon, Edinburgh
13.30-14.00 Tea and Trade stands
14.00-14.45 Plenary Lecture Chair: Dr Anne Pollock, Inverness
Measuring the value of laboratory medicine Mr Mike Hallworth, Shrewsbury
14.45-15.00 Presentation of John King Award and close of meeting

For booking please see ACB website
HMGCR Autoantibodies: Biomarker for a Form of Immune-Mediated Necrotising Myopathy

Andrew Woods, Oxford

We have recently introduced a novel diagnostic ELISA to facilitate the diagnosis of a form of immune-mediated necrotising myopathy (IMNM) secondary to therapeutic use of statins. The assay detects auto-antibodies (AAb) directed against 3'Hydroxy-3'Methyl-Glutaryl Co-Enzyme A Reductase (HMGCR), the target of statin inhibition and rate limiting enzyme in cholesterol biosynthesis, recently identified by Mammen et al.\textsuperscript{1,2}

These AAb have been demonstrated to be absent in statin-users without muscle symptoms, and in those with non-specific musculoskeletal symptoms, but are frequently present in those with immune-mediated myopathy.\textsuperscript{1-3} HMGCR AAb may therefore prove to be very valuable in the differential diagnosis of IMNM and related conditions; however, their presence in some patients who have never taken statins questions their specificity. We aim to independently assess the validity, sensitivity and specificity of this assay in the diagnosis of IMNM and will therefore be providing this service free of charge.

The commonest form of immune mediated myopathy is “myositis”, characterised pathologically by the presence of inflammatory cell infiltrates and necrotic muscle fibres. Sub-types include dermatomyositis, polymyositis, myositis associated with connective tissue disease, and inclusion body myositis (IBM). These may be associated with a range of…
auto-antibodies, particularly anti-synthetases (e.g. anti-Jo-1). Clinical features vary, but include progressive proximal muscle weakness which, with the exception of IBM, responds to immunosuppression.

**Role of Statins in Necrotising Myopathy**

Less frequent is IMNM, in which muscle biopsy shows necrotic fibres in the absence of inflammatory cells. Muscle membrane expression of MHC class I antigen is increased, and is considered a surrogate marker for inflammation. Such patients develop a progressive proximal weakness with elevated serum creatine kinase. Cases of IMNM have been associated with the use of statins, with disease progressing despite statin withdrawal. However, the myopathy does respond to immune suppression in a similar fashion to myositis. It seems probable that there is a direct cause-effect relationship between the statins and the IMNM, but it remains possible that in some cases the relationship is coincidental. The presence or absence of HMGCR AAbs may help in that differentiation.

There is increasing evidence that statins may induce a form of immune-mediated necrotising myopathy that persists on statin withdrawal, responds to immunosuppressant drug therapy and is mediated by antibodies against the therapeutic target of statins, the enzyme HMGCR. However, questions remain about the sensitivity and specificity of these antibodies, and to try to help answer those questions we are offering the ELISA assay free of charge.

For HMGCR autoantibody testing please send 1 mL of serum with a completed request form which includes brief clinical details to:

Dr Andrew Woods  
Dept of Clinical Laboratory Immunology  
Churchill Hospital  
Churchill Drive, Headington  
Oxford OX3 7LJ  
Email: andrew.woods2@nhs.net

**References**


**Immunology Research in Annals**

Edmund Lamb, *Annals Editor* & Anthony Rowbottom, *Immunology Associate Editor*

We were pleased to read the report in the Immunology section encouraging immunologists to submit their research work to the Annals in the August ACB News. We wholeheartedly agree that we would wish to see more immunological and other broader laboratory medicine content within the journal. However, we would like to clarify a couple of issues raised in that news item. It was suggested that clinical audit reports are accepted, but we need to point out that in our experience most audit submissions to the journal are predominantly of more local nature and are not suitable for publication. Review articles are considered, but the vast majority published in the Annals are commissioned through the Association’s Clinical Sciences Reviews Committee (CSRC). Potential authors are strongly advised to contact either CSRC directly or the journal before embarking on writing a review article.
Coeliac Disease in Paediatrics; New Guidelines

Robert Lock and Sarah Beck

Until recently, the diagnosis of coeliac disease (CD) has relied on small bowel biopsy as the gold standard test. The NICE guideline (Item 1.1.6) explicitly states practitioners should “Inform people that they should not start a gluten-free diet until diagnosis is confirmed by intestinal biopsy, even if a self-test or other serological test is positive”. Now, in contrast, we have new guidelines from European Society for Pediatric Gastroenterology, Hepatology, and Nutrition (ESPGHAN) that allow us to assume the diagnosis in children without biopsy.

The relevant recommendation from ESPGHAN is item 4.3.1. “Histological assessment may be omitted in symptomatic patients (see list in Who to Test) who have high IgA anti-TG2 levels (10 times above ULN [Upper limit of normal]), verified by EMA positivity, and are HLA-DQ2 and/or HLA-DQ8 heterodimer positive.”

Change in Test Use

Whilst stipulating that every antibody test should be validated against “the reference standard of EMA (endomysium antibody) or histology”, it should be noted this refers to a reference method. There is no international reference standard serum. Nevertheless, it is recognised that both IgA anti-tissue transglutaminase type 2 (TG2) and IgA EMA are both highly sensitive and highly specific for the diagnosis of CD. In combination they have been shown to have a high positive predictive value for coeliac disease, possibly as high as 97%. The use of TG2 alone is not recommended, with antibodies being found in contexts other than CD.

The use of HLA in diagnosis is in contrast to the earlier NICE guidance 1.1.16 “Do not use human leukocyte antigen (HLA) DQ2/DQ8 testing in the initial diagnosis of coeliac disease. (However, its high negative predictive value may be of use to gastrointestinal specialists in specific clinical situations.)” In other words, we have moved from rule-out (something laboratory tests are generally good at) to rule-in (at which laboratory tests are generally a lot worse).

Excluding IgA Deficiency

Coeliac disease has strong HLA associations; 90-95% patients express HLA-DQ2. Almost all the remainder express HLA-DQ8. It should be remembered that the incidence of HLA-DQ2 or HLA-DQ8 in the general population in the UK is about 30%, whereas coeliac disease is found in 1-2%, so a lot more people are predisposed to the disorder than get it.

Two further statements are of interest. “It is important to exclude IgA deficiency by measuring serum total IgA levels. IgA-deficient children can be evaluated on the basis of IgG class tests”. The first contrasts with the NICE guidance that says “Investigation for IgA deficiency should be done if the laboratory detects a low or very low optical density on IgA tTGA test or low background on IgA EMA test”, implying the majority of samples do not require serum IgA measurement to exclude deficiency. It is also interesting to note that ESPGHAN advocates testing for IgG class antibodies if serum IgA is <0.2g/L, but does not appear to provide evidence to support this figure. Anecdotally, we had already come to the same conclusion, also without clear evidence! Again this is a change from NICE, who referred to the need to test in IgA deficiency, which most laboratories take to mean <0.06-0.07 g/L. On the second point of looking for IgG class antibodies in IgA deficient CD patients, it is worth noting the sensitivity is only 75-90% so a significant minority of these patients will be sero-negative.

Despite the concerns expressed above, the guidance is out there and Paediatricians and Gastroenterologists now require we report...
TG2 as numbers, albeit in arbitrary units, and we should still be using our old friend EMA. HLA testing is cheaper than biopsy, but the money is in someone else’s hands. Requests will be coming your way! It remains to be seen whether this approach to CD diagnosis will translate to investigation of adult patients.

What is being done in your region? What clinical advice guidance are you following for paediatric patients now, ESPGHAN or NICE? If you wish, send any comments or experiences on this to sarah.beck1@nhs.net

**Useful References**


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Clinical Biochemistry
The Christie Hospital
Wilmslow Road
Withington
Manchester
M20 4BX

**For Further information contact:**
Dr Phillip Monaghan
0161 446 3298

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You are provided with the details of the alkaline phosphatase method used in your laboratory. Calculate the serum alkaline phosphatase activity in a sample for which the absorbance change was 0.073 absorbance units over 270 seconds.

Method details:
Serum alkaline phosphatase activity is measured by monitoring the rate of hydrolysis of p-nitrophenyl phosphate to p-nitrophenol. p-nitrophenol has a molar absorption coefficient of 18,700 L.mol⁻¹.cm⁻¹. By convention, 1 U alkaline phosphatase is defined as the amount of enzyme that results in the formation of p-nitrophenol at a rate of 16.67 nmol per second under standard conditions. Your laboratory analyzer uses 5 µL serum diluted with 250 µL reagent in a 0.5 cm light path cuvette. Absorbance is monitored over a period of 270 seconds during which a linear increase in absorbance is expected.

Deacon’s Challenge
No 149 - Answer

Use the Beer-Lambert equation for a change in absorption:

\[ \Delta A = a \times b \times \Delta c \]

Where
- \( \Delta A \) = rate of absorbance change = 0.073 absorbance units/270 sec
- \( a \) = molar absorptivity of p-nitrophenol = 18,700 L.mol⁻¹.cm⁻¹
- \( b \) = light path = 0.5 cm
- \( \Delta c \) = rate of change of concentration (mol.sec⁻¹.L⁻¹)

Substituting these values gives:

\[ \frac{0.073}{270} = \frac{18,700 \times 0.5 \times \Delta c}{270} \]

Which rearranges to:

\[ \Delta c = \frac{0.073}{270 \times 18,700 \times 0.5} \text{ mol/sec/L reaction mixture} \]

Multiplying by 1,000,000,000 to convert from mol to nmol

\[ \Delta c = \frac{0.073 \times 1,000,000,000}{270 \times 18,700 \times 0.5} \text{ nmol/sec/L reaction mixture} \]
Multiplication by the total reaction volume and division by the sample volume allows for dilution of serum during the assay:

\[
\text{Total assay volume} = \text{Sample vol} + \text{Reagent vol} = 5 + 250 = 255 \, \mu\text{L}
\]

\[
\text{ALP activity} = \frac{0.073 \times 1,000,000,000 \times 255}{270 \times 18,700 \times 0.5 \times 5} \, \text{nmol/sec/L serum}
\]

Finally divide by 16.67 since one ALP unit is defined as 16.67 nmol/sec:

\[
\text{ALP activity} = \frac{0.073 \times 1,000,000,000 \times 255}{270 \times 18,700 \times 0.5 \times 5 \times 16.67}
\]

\[= 88 \, \text{ALP units/L} \quad \text{(to 2 sig figs)}
\]

**Question 150**

A 75-year old man had a convulsion four days after a transurethral prostatectomy. He is found to have a serum sodium concentration of 105 mmol/L. His estimated weight was 64 kg. Calculate the volume of 2.7% saline required to increase his serum sodium concentration to 125 mmol/L stating any assumptions that you make (atomic weights of sodium 23, chlorine 35.5).

*FRCPath, Autumn 2012*
The Royal College of Pathologists first published a potential set of Key Performance Indicators (KPIs) for Pathology in 2011. Following further development and wide discussion within the College, and with the assistance of a Steering Group representing the College, the Institute of Biomedical Science (IBMS), the Association for Clinical Biochemistry (ACB) and the United Kingdom Accreditation Service (UKAS), the KPIs were subject to general consultation with College Fellows and senior Members of the IBMS in Spring 2013. The comments received from the consultation were broadly favourable and several pertinent observations have led to an amended version of the proposals for implementation being published in the Clinical Effectiveness section of the RCPath website in July 2013 (www.rcpath.org/clinical-effectiveness/KPI.htm).

The Steering Group has requested that UKAS facilitate a pilot study as part of its UKAS/CPA assessment schedule in Autumn 2013/early 2014. The pilot study will examine:

- The feasibility of data collection.
- The optimum way to present the data.
- The value of the KPIs to UKAS and laboratories in assessing conformity with ISO 15189.
- The possibility of deriving national standards based on the KPI targets.
- Any unintended consequences of implementation of the indicators.

This article summarises the ways in which KPIs may be used for the benefit of high quality pathology services and indicates how the pilot phase of implementation will occur. Information to support laboratories and assessors during this process will be provided on the public pages of the College website (www.rcpath.org/clinical-effectiveness/KPI.htm).

Why Do We Need Key Performance Indicators for Pathology?

Assessment of the clinical quality of a pathology service has been difficult historically, relying largely on accreditation, simple measures of speed of service delivery (for example, turnaround times) and the training and experience of staff providing the service. The clinical impact that a successful pathology service makes to the overall delivery of care in an organisation tends to be hidden in global statistics that organisations are required to submit to the Care Quality Commission and national audits.

Those providing pathology services are well aware of the value of their work and KPIs provide a way of demonstrating this value, using a nationally agreed process and standards. The KPIs are not intended to be the only measures of a clinical service, but they are likely to be of interest and relevance in discussions between laboratories and those with an interest in knowing how good their pathology service is (see Figure 1). Laboratories will be encouraged to publish their own KPI dataset for the benefit of the local clinical communities and public.

A broad overview of the seven domains of the KPIs and their content is provided in Table 1, and more details are provided in the College documents, but it is clear how the domains map onto the existing process of accreditation through Clinical Pathology Accreditation UK (CPA). The information supporting many of the KPIs is likely to have been assessed, in part, during accreditation visits and its adequacy judged subjectively by peer assessors. More rigorously defined indicators and standards should make it easier for laboratories and assessors to determine, objectively, the clinical quality of the services provided.

Many laboratories are looking closely at the KPIs and considering how the data can be
collected and presented most effectively. Conformity with some KPIs will be more challenging to demonstrate than with others and we intend to provide additional guidance on the College website during Autumn 2013. Experience from the pilot phase of implementation (and subsequently) will be invaluable in determining the best ways to present the data.

**The Pilot Phase of KPI Implementation**

A maximum of 50 laboratories (from a range of specialties) that have assessments due between October 2013 and March 2014 will be invited to participate in the pilot. UKAS will inform the relevant laboratories once they have been selected. Participation will not be a requirement for CPA or UKAS accreditation. However, in the interests of ensuring that the KPIs are measurable and fit for purpose, UKAS, the College, ACB and IBMS encourage all requested laboratories to participate.

It is recognised that this pilot process is taking place at the same time as the rollout of ISO 15189, which will require additional effort from both laboratories and assessors. The performance of a laboratory with regard to the KPIs will not directly determine accreditation status, but the information provided (or not) may help the assessors to plan the CPA visit. Assessment of a pathology service with respect to accreditation against ISO 15189 will take priority, and planning has been focussed on ensuring that the KPI pilot

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**Figure 1:**
**Groups with an Interest in the Clinical Impact of Laboratory Services**

The Seven Domains of KPIs for Pathology

1. Senior staff in a Department. Numbers, arrangements for cover, appraisal and professional development.
2. Training and education. Training future laboratory staff; undergraduate, postgraduate and primary care teaching.
3. Repertoire of tests and integrity of the reporting results of tests. Data transmission, demand management, test repertoire, analytical quality and incident reporting.
4. Engagement with patients and users. Communication of results to patients; survey of opinions of patients and clinical users.
6. Timeliness of reports and clinical advice. Critical results communication; reporting turnaround times in all specialties.
The process will not impact adversely upon the on-site assessment. The pilot phase will run as follows.

1. Laboratories will be asked to collate the information/evidence supporting their conformity with KPIs in advance of an assessment visit and to record their own assessment of conformity on a simple template (Excel spreadsheet).

2. The reporting template and supporting information will be returned to UKAS for circulation to the assessment team, before the visit takes place.

3. The assessment team will evaluate the information provided and complete the reporting template. It may be necessary to verify some information during the visit, but this should be minimal.

4. UKAS will collate and anonymise the information provided in the reporting template and forward it to the College for analysis.

5. A draft summary/report will be prepared for discussion with KPI working groups and the CPA Professional Advisory Committee before finalising for the Steering Group.

6. Direct feedback on the process, its value and difficulties will be collected from laboratories and assessors by an online survey.

**2014 and Beyond**

The report on the pilot process will be considered by the Steering Group with the intention that, after any necessary amendments, the KPI process will continue as an integral part of CPA/UKAS assessments, with anonymised information collated by the College.

It is important that the value of each KPI is monitored and that criteria are refined in the light of experience. New KPIs are likely to be developed to cover new topics or specialist areas and laboratories and assessors and Fellows of the College and IBMS are invited to propose topics for consideration by the multidisciplinary working groups.

As experience develops, the KPI data should allow laboratories to benchmark their performance against nationally agreed standards of good service delivery of demonstrable clinical importance.
Demand Management and Appropriate Requesting

Elizabeth Palmer and Gina Sanki, Prince Charles Hospital, Merthyr Tydfil

The All Wales Clinical Biochemistry Audit Meeting was held in Neville Hall Hospital in Abergavenny and was well attended. The focus for all sessions followed the theme for demand management from Health Boards across Wales

Local Demand Management Minimum Retesting Intervals (MRIs)

Dr Angharad Shore presented how MRIs are in use as part of demand management in Abertawe Bro Morgannwg University Health Board (ABMU) and how they were modified in 2012 to align with the All Wales LIMS (AWLIMS) (which is due to be implemented in Wales later this year); e.g. 7 day repeat intervals for FSH, LH and Prolactin. By implementing the duplicate rules ABMU made a total saving of approximately £2000 on just tumour marker requests since October 2012.

Dr Catherine Bailey presented how Aneurin Bevan Health Board use “Kerberos” software to control test requesting using MRIs and restricted test lists. Requests that do not comply with their minimum retest intervals are bounced and the user provided with the previous result and the date that the initial result was produced. This software has reduced the number of tests run but does not seem to have educated users in decreasing their requests.

Dr Gail Curtis presented an overview of the current LIMS in place across the three North Wales Hospitals. The MRI for all three hospitals started off originally the same. However, over the year each hospital has adapted their MRIs slightly. As the North Wales Hospitals now have a single on call rota it was discussed how these differences can sometimes cause confusion.

Vetting Test Requests

Selected sendaway requests are vetted by the Duty Biochemist at ABMU to check that the test requested is appropriate, saving on unnecessary requests being sent. The saving is approximately £18,500 pa. In Aneurin Bevan, selected sendaway requests are again vetted by the Duty Biochemist, saving approximately £8000 over a six month period.

Dr Dave Hullin presented how every tumour marker request is vetted by a Duty Biochemist at Royal Glamorgan Hospital, Cwm Taf LHB and if the request is thought to be inappropriate then the sample is rejected and stored for one month. They now see a decrease in requests due to the education of GPs.

In Hywel Dda Biomedical Scientists review request forms for Bence Jones Proteins analysis and the requests for anti-TTG are vetted and requests are rejected if inappropriate or no clinical details are given.
Change in Form Format

In ABMU removal of some tick boxes from request forms over a three year period 2010-2013 caused a decrease in B12, folate and CRP requests but seemed to have no effect on the number of PSA and ferritin requests. Last year in Aneurin Bevan, a four week trial was implemented on a small number of wards where users were given blank forms with no tick boxes to see if this would decrease the number of inappropriate requests. The only decrease seen was a reduction in the number of Calciums requested from MAU, which has now resulted in a change in the “MAU Profile” of tests. There are also Renin/Aldosterone questionnaires and NT-ProBNP forms in use at Aneurin Bevan which allow completion of all relevant patient history (including drug history) prior to testing. A redesign of request forms and removing some tickboxes in Royal Glamorgan Hospital lead to a decrease in B12, folate and thyroid function test requests from A&E.

Appropriate Requesting

In ABMU “Patient flags” are in use; one example Angharad gave was if a patient is known to be stable on thyroxine then this results in a “TFT” request being TSH only. This flagging system saves approximately £13,000 pa in reagent costs alone. Dr Hullin presented that in guidelines published in 2010 it was suggested that 346,000 HbA1cs should have been requested for the monitoring of diabetic patients, the actual number carried out in Wales was 297,000, illustrating that demand management also encompasses under-requesting as well as over-requesting. Dr Curtis highlighted that the issue of access of results requested from different locations as a possible cause for over-requesting of tests. Electronic requesting and a central database is expected to improve the situation.

Demand Management in Primary Care

Dr Soha Zouwail from Cardiff and Vale University Health Board presented a different aspect on demand management looking at benchmarking requesting profiles from primary care. Cardiff and Vale serves a GP population of approximately 500,000. The laboratory medicine-primary care liaison group meet four times a year and are attended by GP representatives and are chaired by a chemical pathologist. These meetings highlight service changes (e.g. obsolete tests, specialist only tests) and also new guidelines.

Data showed that some GP practices are “over-requesting” in comparison to others within their locality. Once it was highlighted to these GPs that they are “outliers” in terms of requesting within their locality a reduction in the number of test requests was seen from these practices.

The way forward for this work with primary care is the monitoring of laboratory activity which will be recorded in primary care as part of QP/QOF; linking the disease prevalence to the levels of associated requesting (to look for both under- and over-requesting); future auditing; test requesting will also feature in GP trainee’s competencies at some surgeries.

Using Data to Assess Appropriateness and Patterns in Testing

The guest speaker Dr Owen Driskell NIHR HCS Research Fellow from Keele University gave an excellent presentation on how the laboratory can use its data to assess the appropriateness and patterns of testing. Owen presented data from his research fellowship which focused on the prevalence of HbA1c testing in diabetic patients. Current NICE guidelines state that HbA1c should be measured at 2-6 monthly intervals until the patient’s blood glucose level is stable and once stable at 6 monthly intervals. Owen’s data showed that 20% tests in primary care are performed too soon and 30% of tests are performed too late. A recent article “Diabetes kidney damage tested ‘missed’” from the BBC was brought to the audience attention and it was stressed to the audience’s potential danger of testing patients too late. The Quality and Outcomes Framework (QOF) requires testing frequency of less than 15 months which was suggested to be too wide. Comparison of primary and secondary care data showed that secondary care testing appears to be in an ad hoc manner which raised the question as to
whether secondary care has access to primary care requests and results.

**All Wales LIMS**

Dr Gethin Roberts reviewed Demand Management rules that have been implemented into the All Wales LIMS. It was stressed that some of the current intervals need to be amended to fit into clinical practice following introduction of the MRI’s at some Welsh Hospitals e.g. reduction of MRI for tumour markers to fit in with chemotherapy clinics. It was agreed that new consensus MRI need to be agreed and finalised before the introduction of the All Wales LIMS. The management of tests requested on paper that are rejected by MRI’s are a current challenge. It is, however, anticipated that electronic requesting via the Welsh Clinical Portal will highlight to the requestor if a test is within a MRI. They will be provided with the previous result and a choice of whether to proceed. A link to the Welsh Pathology Handbook and compulsory clinical information tick boxes e.g. ‘On thyroxine’ will hopefully encourage appropriate requesting. After Dr Owen Driskell’s presentation the audience discussed how useful it would be to capture this information so that the benefits of MRI in terms of cost savings could be audited.

The meeting concluded with a discussion on the difficulties of demand management in the age of paper requesting. It was reiterated that the MRI for the All Wales LIMS need to be agreed and incorporated into the new system. Although a lot of the content of the presentations looked at demand management in terms of over requesting it was emphasised the importance of looking at under-requesting (as highlighted by the number of HbA1cs requested for diabetic monitoring) to improve patient management, and also the importance of appropriate requesting.

The meeting was very informative and encouraged lots of discussion and sharing of practices for improved demand management.
ACB News Crossword

Set by Rugosa

Walking in Ibiza . . .
This month an even more exciting idea . . . Ibiza, dance capital of the Med is also a great place for a quiet walking holiday out of season! Just fly in early season, from Easter say, until early to mid-June, and stay in a rural hotel for great walking in a beautiful climate. Flights can be as cheap as £16 each way if you use a carry on case and wear your boots on the plane! St Juan is an excellent base; see www.sienteibiza.com/en/ for rural hotels in the area where www.hotelruralibizacanfuster.com, pictured, is well worth a look!

Across
6 Estimate from student given an easy problem (7)
7 Police substitute a drug (5)
9 Most frequently observed fashion (4)
10 Where French signed in twister as native (10)
11/13/17 Our mobile program turns postnatal blues eye-opening pink! (3,5,6,2,3)
15 Superiority in hedgefunds (4)
17 See 11
18 Deliberately holding back bitterness (4)
19 Milk-derived cocktail mixture not OK (6)
20 Bitter denunciation from family following return of assistance (8)
23 They comply with revision of cell name (10)
26 Rent wrench (4)
27 Go to this world to hide (5)
28 Forged signatures no use for this polypeptide (7)

Down
1 Energy transferred by altering physical state of exceptional tan athlete (6,4)
2 No double first for poor analysis of causes of cell disruption (6)
3 Metal tip (4)
4 Get older company for this demographic (3,5)
5 Narrative thread (4)
6 Scent produced by non-sterile Alstroemeria (5)
8 Could end urinal use taking place during daytime (7)
12 Reportedly remained sober (5)
14 Royal orb at restoration establishment for tests (10)
16 Derive yield as separate molecules in solution (7)
17 Strip: male relative rings hot production (8)
21 Images giving rise to a form of discrimination (6)
22 Strike head scholar (5)
24 Separate element (4)
25 A gentile turned up for Hindu practice (4)

Last month’s solution
HAMPshire Hospitals NHS Foundation Trust  
Family and Clinical Support Services Division  

Senior Clinical Scientist (Clinical Biochemistry) Band 7  
£30,764 - £40,558, Permanent Contract  

We are looking for an enthusiastic Clinical Scientist to join our existing team of 2.25 WTE Consultants in the Biochemistry Department at Hampshire Hospitals NHS Foundation Trust (HHFT). HHFT was formed as a result of the integration of Basingstoke and North Hampshire NHS Foundation Trust and Winchester and Eastleigh Healthcare NHS Trust in January 2012. HHFT serves a population of approximately 600,000 across Hampshire and parts of West Berkshire and provides a comprehensive range of acute services in addition to a number of important tertiary services that have regional or national significance. As a Foundation Trust we are considered innovative with a reputation for high standards and high performance.

The Biochemistry Department provides a comprehensive 24/7 service and occupies purpose built laboratory facilities on both the Basingstoke and Winchester hospital sites. The Department has a workload of approximately 5 million tests per annum and carries out a range of specialist diagnostic tests in addition to the general diagnostic workload.

The successful applicant will have responsibility for the implementation and provision of scientific, clinical and professional aspects of the service in the Department of Biochemistry. This will involve reporting, interpretation of results, specialist advice and clinical liaison, with additional roles in teaching, audit, research and development.

You must have a 1st or 2(i) honours degree in Biochemistry or Chemistry and have completed an accredited Clinical Scientist training programme, with an MSc in Clinical Biochemistry or equivalent and be registered as a Clinical Scientist with HPC or in the final stage of preparation for assessment. You will also be expected to pursue further training and personal study towards Fellowship of the Royal College of Pathologists (FRCPath), subsequently maintaining CPD registration with the College and have enthusiasm to work in a team.

The Trust is situated in the middle of the M3 corridor with excellent road and rail links to London and the South Coast and is also very well placed for visiting the towns, villages and beautiful surrounding countryside of Hampshire, Berkshire, Oxfordshire and Wiltshire. The historic cities of Winchester and Salisbury are within easy reach as is the South Coast and New Forest.

For further details on applying for this role, please go to www.jobs.nhs.uk. Interested candidates are strongly encouraged to visit the department prior to shortlisting/interview. Please contact Dr Martyn Knapp (01256 313285), Dr Michelle Young (01256 313270) or Ms Teresa Teal (01962 863535 Ext 5799).

Closing Date: 18th November 2013  
Interview Date: 6th December 2013
SENIOR MEDICAL LABORATORY SCIENTIST
CHROMATOGRAPHY, SPECIALIST CHEMICAL PATHOLOGY, LABPLUS
AUCKLAND DISTRICT HELATH BOARD, NEW ZEALAND

LabPLUS is the laboratory service of Auckland District Health Board, providing general and specialist services to Auckland City Hospital and specialised laboratory testing for other laboratories throughout New Zealand. Auckland City Hospital is the main tertiary referral hospital for New Zealand providing specialist adult and paediatric services for the North Island and many national services.

This position is in the chromatography section of the Specialist Chemical Pathology department. It is a senior position requiring someone with previous experience of LC MS/MS. In addition, experience of the application of chromatographic methods to therapeutic drug monitoring, medico-legal drug testing and interpretation of specialised drug test results is desirable. The position is full-time.

The work requires experience and accuracy in method development, provision of routine analytical services and results interpretation. Attention-to-detail, excellent time management and computer skills are a pre-requisite. Experience with HPLC and GCMS in addition to LC MS/MS is essential.

A current annual practicing certificate and registration with the Medical Sciences Council of New Zealand is essential or qualifications and training which will be recognised and lead to registration.

For further information, please contact Colleen Harvey, Technical Head on (+64) 9 307 4949 ext 22050 or email colleenh@adhb.govt.nz or Esther Bathula, Recruitment Consultant on (+64) 9 639 0211 or email esther.bathula@adhb.govt.nz

To apply, please visit our job site www.careers.adhb.govt.nz and quote reference number: 048699.

Closing date: Thursday, 31 October 2013.

For the largest health sector job board in New Zealand, visit www.kiwibuildings.nz

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Deadline: 26th of the month prior to the month of publication

Training Posts: When applying for such posts you should ensure that appropriate supervision and training support will be available to enable you to proceed towards HCPC registration and the FRCPATH examinations. For advice, contact your Regional Tutor. The Editor reserves the right to amend or reject advertisements deemed unacceptable to the Association.
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