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

RCPath Wales Symposium 2024

Friday 25th October 2024

Event to be held at the Hilton Hotel (Sophia Suite), Kingsway,
Greyfriars Road,
Cardiff, South Glamorgan, CF10 3HH

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General Information

Thank you for registering to attend the RCPath Wales Symposium 2023, which will be held **in-person only** at the Hilton Hotel (Sophia Suite), Kingsway, Greyfriars Road, Cardiff, South Glamorgan, CF10 3HHon **Friday 25th October 2024 at 1.30pm (Lunch being served from 12.30pm)**.

Certificates of attendance
Certificates of attendance will be emailed to all attendees, within a fortnight of the conference. This conference is eligible for 3 CPD credits.

Speaker presentations
Where permission has been given, speaker presentations will be available after the conference.

Feedback
A link to an online feedback form will be emailed to you after the conference, please do complete. All comments are confidential and will be taken into consideration in the development future conferences.

Trainee Forum with the President
An informal Trainee Forum with Dr Bernie Croal, RCPath President, will be held in-person only on **Friday 25 October 2024, 11.30am-12.30pm** (before the RCPath Wales Symposium). The forum will be held at the Bute Suite, Hilton Hotel, Kingsway, Greyfriars Road, Cardiff, South Glamorgan, CF10 3HH.

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RCPath Wales Symposium 2024

11:30 Trainee Forum with the President (held at the Bute Suite)

12:30 Lunch and Poster viewing

13:15 Registration

13:30 Welcome and introduction
Dr Anu Gunavardhan, *Chair of the RCPath Wales Regional Council*

13:40 National Pathology Programme and the Future of Pathology Services in Wales
Alan Deacon, *National Pathology Lead for NHS Wales*

14:05 Past, present and future of digital pathology
Dr Muhammad Aslam, *Betsi Cadwaladr University Health Board*

14:30 An evaluation of the Non-Invasive Prenatal Testing (NIPT) service in Wales for pregnancies where there are fetal anomalies on ultrasound scan
Sophie Bannister, *Trainee Clinical Scientist, All Wales Medical Genomics Service*

14:55 Implementation of the Pregnancy Related Rapid Sequencing (PRRS) Service in NHS Wales
Fiona Kerr, *Trainee Clinical Scientist, All Wales Medical Genomics Service*

15:20 Break

15:35 President update
Dr Bernie Croal, *RCPath President*

15:50 The Highs and Lows of Calculated Globulin
Dr Tariq El-shanawany, *Cardiff and Vale University Health Board*

16:05 An overview of porphyria services in Wales
Dr Danja Schulenburg-Brand, *Cardiff and Vale University Health Board*

3 Award winning poster presentations

16:25 Poster 1: An audit of referral patterns following perioperative anaphylaxis - the case for establishing a sustainable perioperative allergy network for Wales
Dr Mark Ponsford, *Clinical and Laboratory Immunology, Immunodeficiency Centre for Wales*

16:35 Poster 2: Introduction of Non-Invasive Prenatal Testing For Fetal RHD Genotype in Wales
Mrs Deborah Pritchard and Ms Felicity May, *Welsh Blood Service Cell Free Fetal DNA Implementation Project Team*

16:45 Poster 3: An audit of thyroid cytology: A North Wales experience
Dr Alistair Heath, Dr Muhammad Mehdi, Dr Iftikhar Rana, *Betsi Cadwaladr University Board, North Wales, UK*

16:55 Summary and close
Dr Anu Gunavardhan, *Chair of the RCPath Wales Regional Council*

3 CPD Credits can be claimed for attendance at this meeting

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Presenters

Dr Anu Gunavardhan
Dr Anu Gunavardhan was born in Kerala, completing her MBBS at Government Medical College Calicut and her MD in Pathology at Government Medical College Trivandrum. After passing the FRCPath exams and relocating to the UK, she was appointed as a Consultant Histopathologist at Glan Clwyd Hospital, North Wales, in 2016. She holds a Postgraduate Certificate in Medical Education from the University of Cardiff and is a Fellow of the Higher Education Academy (FHEA).

She has specialist interest in breast pathology and dermatopathology. Dr Gunavardhan is the Lead Breast Pathologist for the Betsi Cadwaladr Health Board and Quality Assurance Pathologist for Breast Test Wales.

As Chair of the Wales Regional Council, she provides professional leadership, helps maintain and develop high-quality pathology services at a national level, and promotes the College through various initiatives.

Alan Deacon
Alan Deacon is the National Pathology Programme Lead at the NHS Wales Executive. With a background as a Biomedical Scientist in Cellular Pathology, he is a Fellow of the Institute of Biomedical Science and has been a Chartered Scientist with The Science Council since 2004. He is currently a National Council Member of the Institute of Biomedical Science as well as a member of several industry National and European Pathology Advisory Boards. His career spans over 35 years, during which he has worked in both public and private healthcare sectors, always with a focus on improving Pathology services. He has a keen interest in workforce development and advanced clinical practice and was Chair of the West Midlands Pathology Workforce Planning Committee for several years. In 2012 he played a pivotal role in creating and delivering the Cellular Pathology module for Aston University's Biomedical Science degree. In recent years, Alan has held several senior leadership roles in the NHS, where he has been involved in service redesign and organisational collaboration as well as introduction of novel technologies and working practices. Since moving to Wales in 2022, his efforts have been centred on applying systemic leadership to effect positive change both within Pathology services and also the wider health system. Alan lives with his family in North Wales and outside of work enjoys endurance (ultra) running, collecting vinyl records, appreciating Scottish malt whisky and getting to grips with learning to speak Italian, the latter of which represents a renaissance in language learning following a dark age stretching back to O levels and the mid 1980's!

Dr Muhammad Aslam
Consultant Pathologist
Betsi Cadwaladr University Health Board
All Wales Clinical Lead for digital pathology project

Dr. Muhammad Babar Aslam, MBBS, FRCPATH, MBA (Health care); a consultant pathologist in Betsi Cadwaladr University Health Board. He had special interest in using digital pathology and AI platforms to improve the services across all the specialties and had led innovative projects like all Wales AI deployment in prostatic pathology followed by breast AI project. He had various management roles in the NHS. Currently, he is also national clinical lead for Wales to support digital pathology and AI implementation projects.

Sophie Bannister
Sophie began her career at the AWGL in Cardiff in 2020 as a Genetic Technologist, where she spent many hours pipetting and developed an understanding of the technical aspects of genetic services in healthcare. Whilst in this role Sophie also studied part-time towards an MSc in Genomic Medicine at Swansea University.

Sophie's current role at the AWGL is a trainee Clinical Scientist working as part of the Rare Disease section. Specifically, she is a part of the Reproductive and Neonatal Team who provide the NIPT service in Wales.

Fiona Kerr
Fiona is a Trainee Clinical Scientist at the All Wales Medical Genomics (AWMGS) laboratory in the Rare Disease service. The Rare Disease service investigates potential germline variants utilising the patients clinical features and family history to identify a potentially causative variant. Fiona is involved in the analysis and reporting of prenatal and neonatal patients with congenital abnormalities, including appropriate follow up testing for these families. She is currently in the process of completing her portfolio with the aim of becoming a registered Clinical Scientist.

Dr Bernie Croal
President
Dr Bernie Croal is an NHS chemical pathologist from Aberdeen specialising in intravenous nutritional support. He also oversees laboratory services at the Cleveland Clinic in London via TDL. He is a science and medicine graduate, and has trained in general medicine, chemical pathology and Health Services/Public Health Research. He has spent a long career in various leadership roles within NHS Scotland including clinical director and regional lead for pathology, NHS Scotland demand optimisation lead and chair of the Scottish Clinical Biochemistry Network (SCBN).
He was the President of the Association for Clinical Biochemistry and Laboratory Medicine (ACB-UK). He is a fellow of both the Royal College of Physicians and Surgeons of Glasgow and the Institute of Biomedical Science.
Within RCPath he has chaired many committees, been Scotland Regional Council Chair for 9 years and a Trustee for 13 years. He also served as College Vice President from 2011 to 2014.

Dr Tariq El-shanawany
Tariq El-Shanawany is a consultant clinical immunologist at University Hospital of Wales, and clinical lead for adult allergy services. He graduated in medicine from Cambridge University and Guy's and St Thomas' Medical School, and after general medical training specialised in clinical immunology in Cardiff. He is chief/principle investigator for several studies and his research interests include urticaria and hereditary angioedema. Tariq has previously been an advisor to Welsh Government and is currently an Executive Council member of the Association of Clinical Pathologists and Lead Examiner for the FRCPath Immunology Viva.

Dr Danja Schulenburg-Brand
Danja qualified as a Chemical Pathologist in 2009 in South Africa and has been supporting the Cardiff Porphyria Service since 2016 following her appointment as consultant to the Department of Metabolic Medicine, University Hospital of Wales.
She was appointed as Clinical Lead of the porphyria service in 2021, managing patients with acute and cutaneous porphyria across Wales, Scotland and England as well as leading the Cardiff Specialist Porphyrin Laboratory. She is chair of the British and Irish Porphyria Network and serves on the International Porphyria Network's expert panel for acute porphyria and is also a member for the drug safety in acute porphyria IPNET working group. She is the porphyrin advisor for the Welsh External Quality Assessment Scheme for laboratories' Steering Committee.

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Poster competition winners

Poster 1
Dr Mark Ponsford
Dr Ponsford is a Welsh Clinical Academic Trainee in the final year of Allergy, Clinical and Laboratory Immunology at the Immunodeficiency Centre for Wales. This audit was inspired by blending clinical and laboratory disciplines with data science skills developed during his PhD, and identifies major capability gaps in specialist service provision for Wales.

Poster 2
Dr Felicity May is Deputy Head of Transplantation Services at the Welsh Blood Service and a Consultant Clinical Scientist in Histocompatibility and Immunogenetics.

Deborah Pritchard is Head of Transplantation Services at the Welsh Blood Services and a Consultant Clinical Scientist in Histocompatibility and Immunogenetics.

Poster 3
Dr Alistair Heath
Alistair Heath is a trainee histopathologist in North Wales and a fellow in the fellowship in clinical AI. Alistair has a background in Python and C# coding and has attended the European congress on digital pathology symposium as well as other summits concerning the introduction of artificial intelligence into histopathology. Alistair has worked alongside IBEX in demonstrating clinical effectiveness in their breast and prostate models and looks forward to developing neural network based artificial intelligence systems in everyday pathology practice.

Abstracts

National Pathology Programme and the Future of Pathology Services in Wales
Alan Deacon, National Pathology Lead for NHS Wales

The presentation will provide an overview of the work of the National Pathology Programme in the context of the newly created NHS Wales Executive as well as a positive vision of the future for Pathology services in Wales.

Past, present and future of digital pathology
Dr Muhammad Aslam, Betsi Cadwaladr University Health Board

An evaluation of the Non-Invasive Prenatal Testing (NIPT) service in Wales for pregnancies where there are fetal anomalies on ultrasound scan
Sophie Bannister, Trainee Clinical Scientist, All Wales Medical Genomics Service

Learning points:

1. The source of cell-free fetal DNA and how it is tested for
2. The application of non-invasive prenatal testing (NIPT) as part of the Antenatal Wales Screening Programme for Down, Edwards and Patau syndromes
3. The application of NIPT for ongoing pregnancies with fetal anomalies identified on ultrasound scan

The All-Wales Genomics Laboratory (AWGL) has offered a Non-Invasive Prenatal Testing (NIPT) service for pregnant patients in Wales since May 2018. NIPT is available for patients with an increased chance (>1 in 150) of trisomy 13, 18 and/or 21 following combined or quad screening. It is also available to known carriers of a Robertsonian translocation involving chromosomes 13 or 21 or patients who have had a previous pregnancy or child with trisomy 13, 18 or 21. In collaboration with our local Fetal Medicine centre and Clinical Genetics service, a pilot study was launched in January 2022 to evaluate the clinical utility of further extending our NIPT service to include pregnancies with fetal anomalies on ultrasound scan, in instances where the patient does not wish to have an invasive test.

A literature review was performed in order to identify a set of fetal ultrasound indications which show a strong association (>10%) with common aneuploidy. Based on this information, the study inclusion criteria were defined as follows - multiple fetal anomalies strongly suggestive of trisomy 13, 18, or 21; isolated atrioventricular septal defect (AVSD); isolated exomphalos; duodenal atresia associated with other anomalies; isolated pleural effusion; or isolated cystic hygroma.

In this presentation, we will be reviewing the testing pathways and results from the first two years of this service, as well as examining how the offer of NIPT as an alternative to invasive testing for this patient cohort affected the management of their pregnancies

Implementation of the Pregnancy Related Rapid Sequencing (PRRS) Service in NHS Wales
Fiona Kerr, Trainee Clinical Scientist, All Wales Medical Genomics Service

Learning points:

1. An understanding of the background and clinical utility of whole exome sequencing in the investigation of major fetal structural abnormalities.
2. Gain an understanding of the testing pathway for the PRRS service.

3. The diagnoses that can be identified through this service and the implications for pregnancy management and reproductive risks.

The clinical utility of whole exome sequencing (WES) for the investigation of a fetus with major structural anomalies is well-established. The testing may occur in the setting of an ongoing pregnancy, where the test result may influence patient management of the pregnancy. It also has a role in the testing of post-mortem samples from a non-ongoing pregnancy, to rule out a genetic cause which could have potential recurrence risks for any future pregnancies. In many instances, the couple are often pregnant again meaning that an urgent result is required.

In Wales, following the successful implementation of Fetal Anomaly Gene Panel testing for ongoing pregnancies (R21) in 2022, there was an increasing clinical need to develop a comparable service specifically for the non-ongoing pregnancy cohort. This culminated in the launch of the Pregnancy Related Rapid Sequencing (PRRS) service by the All-Wales Genomics Laboratory in March 2023. The PRRS service is available on a trio or duo basis using WGS testing for blood samples and WES testing for other sample types. The paediatric disorders (R27) panel from panel app is applied for the first phase of analysis, followed by a second gene agnostic phase.

An audit of data from the first year of service has shown a diagnostic yield of 50% (8 out of 16 referrals). In this presentation, we will be reviewing the testing pathways, results and will evaluate the impact of a confirmed diagnosis on the management and decision-making for further pregnancies of this patient cohort.

President update
Dr Bernie Croal, RCPath President

The Highs and Lows of Calculated Globulin
Dr Tariq El-shanawany, Cardiff and Vale University Health Board

Learning point:

1. Both low and high calculated globulins can indicate underlying disease

High calculated globulins have long been recognised as a means of identifying patients who may have a paraprotein and hence possible haematological malignancy. The role of high calculated globulin in identifying other diseases, and the role of low calculated globulins will be discussed, along with the integration of these findings with the all Wales LIMS.

An overview of porphyria services in Wales
Dr Danja Schulenburg-Brand, Cardiff and Vale University Health Board

Learning points:
1. The porphyrias are a group of 8 rare disorders affecting haem metabolism in the liver or bone marrow. As such care of these patients are highly specialised
2. Biochemistry is the cornerstone of diagnosing symptomatic patients
3. Specialised laboratories and national clinical services are critically important to support people with rare disease but face many unique challenges.

This talk will provide a brief overview on porphyria, explaining what porphyria is, the main types, the different clinical phenotypes and diagnosis.

It will provide background on the Cardiff Porphyria Service and explain how services are provided to people in Wales and the greater United Kingdom. It will discuss the unique challenges faced by specialist laboratory services and national clinical services for rare diseases.

Poster 1: An audit of referral patterns following perioperative anaphylaxis - the case for establishing a sustainable perioperative allergy network for Wales
Dr Mark Ponsford & Dr Clare Dallimore, Dr Potteth Sudheer, Dr Tariq El-Shanawany, and Dr Laurence Gray

National guidance mandates specialist investigation for all cases of suspected perioperative allergy (NICE CG183, September 2014). Wales lacks a nationally-commissioned drug allergy service. Unidentified drug allergy carries the risk of a life-threatening future reaction. We set out to estimate the burden of un-investigated anaesthetic allergy in South Wales, by auditing referral patterns for individuals where tryptase results were suggestive of a perioperative anaphylaxis.

Poster 2: Introduction of Non-Invasive Prenatal Testing For Fetal RHD Genotype in Wales
Mrs Deborah Pritchard and Ms Felicity May, Welsh Blood Service Cell Free Fetal DNA Implementation Project Team

Haemolytic disease of the fetus/newborn (HDFN) is a condition arising from maternal-fetal RhD blood group incompatibility, where fetal red blood cells are destroyed by maternal antibodies. Routine antenatal anti-D prophylaxis (RAADP) is administered to all D-negative pregnant women to prevent alloimmunisation, however, approximately 40% carry a D-negative fetus where RADDP is unnecessary.

The Welsh Blood Service (WBS) and Antenatal Screening Wales collaborated to implement a non-invasive prenatal test for fetal RHD genotyping in Wales to allow targeted antenatal prophylaxis. An estimated 1500 women each year will benefit from the exclusion of RAADP after introduction of the test.

Poster 3: An audit of thyroid cytology: A North Wales experience
Dr Alistair Heath, Dr Muhammad Mehdi, Dr Iftikhar Rana, Betsi Cadwaladr University Board, North Wales, UK

In the UK, approximately 3,700 people are diagnosed with thyroid cancer annually. While thyroid cancer mortality has significantly decreased, about 400 deaths still occur each year. The rising detection of thyroid nodules through radiological investigations has led to increased use of cytology for diagnosis. To manage thyroid nodules, the Royal College of Pathologists (RCPath) established guidelines for thyroid cytology reporting, utilizing a five-category system (Thy1-Thy5). This audit reviews thyroid cytology samples processed by the Pathology Department at Ysbyty Glan Clwyd, North Wales, between January 2023 and July 2024. The audit aims to correlate cytology diagnoses with subsequent histological findings to assess diagnostic accuracy and identify areas for improvement.

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