

BMUS))) British Medical Ultrasound Society

NEWS

www.bmus.org – SUMMER 2015

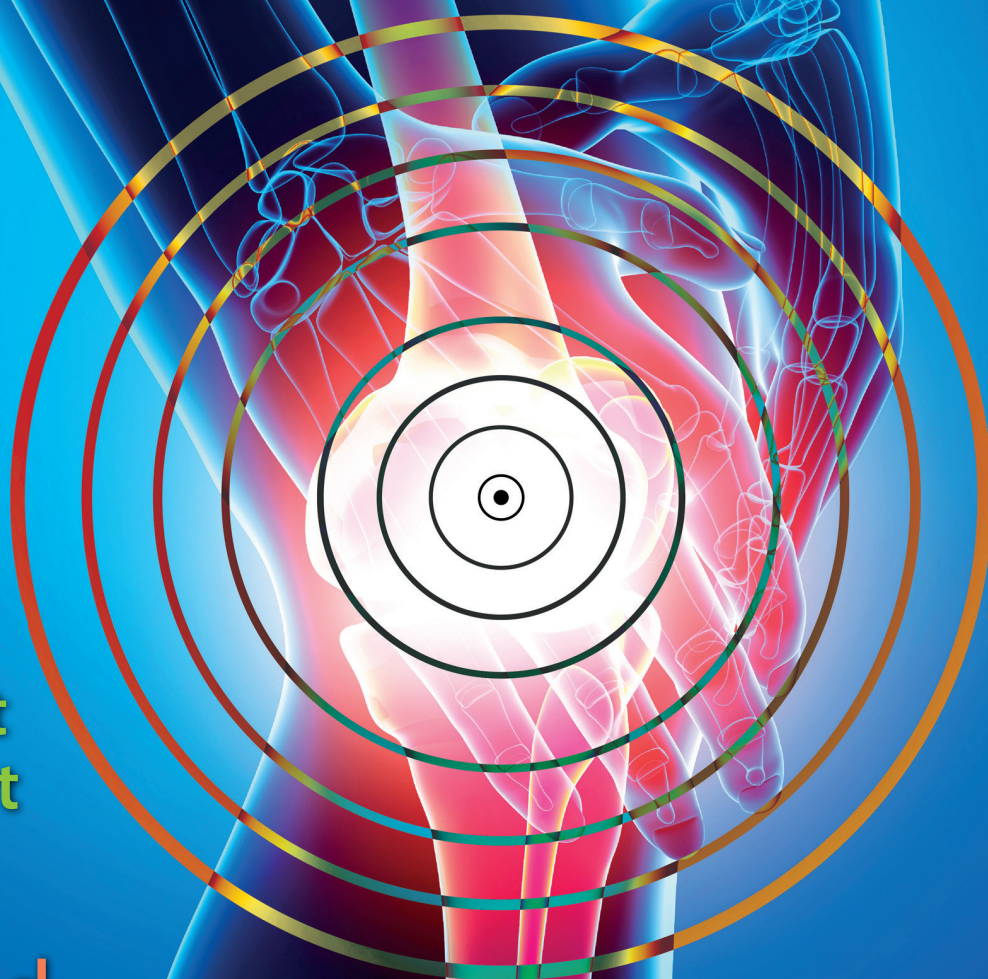
News from
the North

**BMUS
2015**

First Officer
Baby

Professional
Development
Officer Report

Ultrasound
Ears to the ground



Obituary:

Raymond Gosling, the distinguished British scientist who was involved in pioneering work that directly led to determining the molecular structure of DNA, died aged 88 on May 18th 2015. He was born on July 15th 1926; his father was an artist and furniture draughtsman and his mother an opera singer. He was educated at Preston Manor County Grammar School, Wembley, and then at University College London where he studied physics and graduated in 1947.

He initially worked as a hospital physicist at the King's Fund and Middlesex Hospital before joining John Randall's Biophysics Research Unit at King's College London as a research student in 1949. Randall was the Wheatstone Professor of Physics who had established the unit with the support of the Medical Research Council to investigate the structure of living material. Ray was assigned to work closely with his academic supervisor, Maurice Wilkins, to explore the use of X-ray diffraction for analysing the structure of DNA. Samples of DNA, initially from rams' spermatozoa and later calf thymus glands, were prepared and X-ray diffraction photographs were then obtained after replacing air in the equipment with hydrogen to prevent backscattering of X-rays and thus increase the clarity of diffraction patterns. During the process the samples fortuitously formed microcrystallites, and Wilkins and Gosling produced the first X-ray diffraction photograph at King's College of what was later described as the pure form of crystalline "A" DNA.

In 1951 Randall arranged for Rosalind Franklin to join the Unit to take forward the studies on X-ray diffraction crystallography; Gosling was then directed to collaborate closely with Franklin, who also became responsible for his academic supervision. During the next two years they worked together to refine the technique of X-ray diffraction photography, enabling sharper DNA images to be obtained. In May 1952 Gosling was directly involved in obtaining the important "photograph 51" which gave crucial clues to the dimensions and angles of the DNA "B" form. For discovering the double helix structure of DNA, Watson and Crick (Cambridge University), together with Maurice Wilkins from King's College, were awarded the Nobel Prize for Physiology or Medicine in 1962. Rosalind Franklin had died four years earlier from ovarian cancer and was not considered, as the award is not given posthumously.

Ray completed his PhD in 1954 and then obtained lecturing posts in physics at Queen's College, St Andrews University, and then at the University of the West Indies in Jamaica where his research focused on investigating the development of atherosclerosis in animal models. He returned to the UK in 1967 and his career entered a new phase when he was appointed that year as a Senior Lecturer and then Reader in Physics Applied to Medicine at Guy's Hospital Medical School; he was subsequently awarded a personal chair in Physics Applied to Medicine in the Department of Radiological Sciences in 1984, where he was affectionately known to all as Ray.

At Guy's Hospital, Ray established the Non-Invasive Ultrasonic Angiology Unit in 1976. His research there was pivotal in the development of non-invasive assessment of vascular disease and he was considered to be one of the founding fathers of Vascular Ultrasound for his work in Doppler signal processing, haemodynamics and arterial compliance. With his PhD students, Brian Coghlan and Graeme Taylor, he was responsible for the development of one of the early spectral analysers used for processing Doppler signals, producing blood velocity waveforms for diagnosing vascular disease. He was keenly interested in the dynamics of blood flow and with John Woodcock, also one of his PhD students, he described the Pulsatility Index for measuring blood velocity waveforms, which continues to be used today in vascular diagnosis. At this time ultrasound instrumentation consisted of simple continuous and pulsed wave Doppler devices with spectral analysers. It is testament to his insight that under his direction the Unit developed techniques that led to the provision of a diagnostic clinical vascular ultrasound service; the Department has continued to flourish and today provides an extensive service at Guy's and St Thomas' Hospitals.

Ray supervised many PhD and MD students and working with him was both exciting and rewarding. He was considered as one of the last gentleman scientists, arriving at work "after the streets had been aired" and happily working into the evenings. Not infrequently discussions with members of the Unit continued in the Horseshoe Inn – which made the dialogue all the more vocal and impassioned! Ray was always very cheerful but could drive his secretaries to despair with last minute requests to type an



important document that had often been jotted down on the back of an envelope. He made amends though by treating the Unit to a trip to the Henley Regatta, one of his passions. These were indeed halcyon days and all in the Unit felt privileged to have the opportunity of working with him at such an exciting time in the development of vascular ultrasound diagnosis.

Ray was instrumental in creating the Intercalated BSc in Radiological Sciences, which remains popular with medical students today as the Intercalated BSc in Medical Imaging. He was a superb lecturer and passionately extolled the importance of understanding Womersley's theories – the complex mathematical equations scribbled furiously on the blackboard left students in awe of his presentation. He was often invited to speak at National and International meetings; perhaps the most prestigious was his delivery of the Kinmouth lecture at the Vascular Society in 1993. This important lecture was usually reserved for eminent vascular surgeons and his invitation was clearly an indication of the high esteem in which he was held by his peers and colleagues.

Ray contributed to numerous scientific journals, books and conferences. He was awarded a DSc by the University of the West Indies and elected as a Fellow of King's College London; he remained in post until retiring in 1991 with emeritus status. Many have been greatly saddened by his death. Heartfelt sympathies go to his wife, Mary, his four sons and grandchildren.

Soundrie Padayachee

Consultant Clinical Scientist
Ultrasonic Angiology Department, Guy's &
St Thomas NHS Foundation Trust

Roger Lewis MD, FRCP

Emeritus Consultant Physician, Guy's &
St Thomas' NHS Foundation Trust

News from the North

When we last spoke, the general election was 13 days away and yet it now seems so long ago. Summer has finally arrived in Scotland – kids are off school and we hope for a little more sunshine than in previous years.

Firstly, just an update to remind you of the continuing progress in the organisation of the 2015 Annual Scientific Meeting which will be held in the beautiful setting of Cardiff City Hall from 9-11 December 2015. The program is almost complete and Nick Dudley, our scientific chair and his team have put together a truly exceptional program – details of which are on the following pages. Similarly to previous years, we are running distinct streams to enable you to follow specific clinical or research threads and to choose between attending the whole meeting or a combination of single days. In addition we have an exceptional manufacturer's exhibition this year. So... I have just booked my flights from Edinburgh to Cardiff with Flybe – significantly cheaper than flying to London! Additionally, a further airline search has revealed that many European cities have flights directly to Cardiff, so we especially invite all our European ultrasound colleagues to attend our conference. We look forward to welcoming you all to Wales in December.

On a sadder note, in this newsletter we include the obituary for Professor Ray Gosling, another of our honorary members, who was one of the major developers of vascular ultrasound and developed the concept of the pulsatility index. Interestingly, until I read Soundrie's obituary, I hadn't realised that he was involved in the race to establish the structure of DNA and was co-author with Rosalind Franklin on one of the three DNA double helix papers published in Nature in 1953.

Recently, I have just returned from the Artimino conference, (previously known as the New England Doppler Conference), which was held in Helsingborg, Sweden this year. The conference focuses on the physics, bioengineering and clinical applications of ultrasound. I can assure you that ultrasound is alive and well with many new ultrasound techniques currently under development and which we are likely to see implemented on our scanners in the next 5-10 years.

Ultrasound has once again been in the BBC news with evidence from the Universities of Sheffield and Bristol suggesting that stubborn chronic wounds such as pressure sores, heal more quickly after insonation using routine ultrasound equipment. Although the study was performed on mice, if the results prove to be translational to humans, this will be of huge benefit to the NHS.

More good news is that the revised BMUS website is now live and as you register for the ASM you will be welcomed to our new-style pages. We hope you will enjoy the new format and we are always pleased to hear feedback or ideas on how we can improve the site.

I will sign off now and look forward to catching up again in the Autumn newsletter.

Carmel Moran
BMUS President

5 reasons why ultrasound students should attend BMUS 2015 in Cardiff this December



- 1 Identify and decide your specialist practice area:** Ultrasound 2015 **programme** is varied and wide-reaching, suitable for all practitioners, which will help you identify and decide your area of specialisation.
- 2 Know your future mentors and experts:** A wonderful platform to learn about prominent and renowned ultrasound experts in your area of interest
- 3 Connect with your future colleagues:** Make connection with your future colleagues early-on in your career by attending our **social and networking events**
- 4 First-hand information on the latest US research news:** Our **poster** and **paper** presenters will ensure you stay up-to-date with the latest US research and developments
- 5 Experience the Hub of Ultrasound:** visit our technical exhibition – **Hub of Ultrasound** – to talk to UK's leading manufacturers, learn about the latest ultrasound machines during their demon-strations, have fun at the welcome reception and win prizes too!

This is why you must attend Ultrasound 2015.

Turn to page 4 for more details



Eclectic programme & unique venue await BMUS 2015 delegates

Nick Dudley, Chair of Scientific and Education Committee

BMUS 9th – 11th December

The BMUS annual scientific meeting to be held in the beautiful Cardiff City Hall this December is the meeting all involved in ultrasound will want to attend. Prospective delegates should register now to benefit from the heavily discounted early bird registration rate and to guarantee a place for the ever popular “hands on” integrated training days.

The social elements of the conference, including the conference dinner to be held in the stunning National Museum, are always a great attraction. The ticket price for the conference dinner offers good value and includes a drinks reception, a 3 course dinner and high quality entertainment with a Welsh flavour. Tickets are limited and are already in great demand - **Book early to avoid disappointment!**

The ASM programme is finalised and the detail of the sessions and invited speakers can be found on the BMUS 2015 conference website: www.bmus2015.org. The programme has the diversity expected of such a conference and offers specialist sessions with renowned experts, providing an event that will be of interest to many ultrasound practitioners.

The scientific programme has major streams each day to provide education in a range of specialties. The full programme offers great variety and interest for delegates attending for three days. However, BMUS are aware of difficulties in obtaining study leave so the programme has been designed to cover complimentary themes in one or two days for you to gain maximum benefit from your time at the meeting.

Delegates will enjoy a welcoming and unique environment and whether attending all or part of the conference should have a rewarding educational experience.

DAY 1 - WEDNESDAY 9TH DECEMBER

Day 1 offers something for abdominal ultrasound practitioners, managers and advanced sonographers, scientists, educationalists and those with an interest in the contribution physics and technology makes to practice.

Stream 1 – Abdominal Imaging

A day of Abdominal Ultrasound including correlative imaging, new technologies and potential pitfalls.

Topics covered: complementary imaging; ultrasound following indeterminate CT/MRI; fusion, elastography and contrast; pitfalls in the renal and hepato-biliary tracts.

Suitable for Sonographers and other professionals without experience in reviewing cross-sectional imaging, Consultant Radiologists, Registrars in training.

Stream 2 – Professional Issues

A half day of Professional Issues focused on discrepancy management and duty of candour. Delegates attending these sessions may also wish to attend the Quality Issues and Integrated Training sessions on day 2.

Topics include the clinical audit and discrepancy management processes. Mr Anthony Andrews of Bond Salon will lead a question and answer session on the impact of clinical audit processes, the implications of discrepancy meetings and the medico-legal impact of the duty of candour related to radiological errors.

Suitable for all those practicing in Ultrasound.

Stream 3 – Physics and Technology

A day of Ultrasound Physics, Science and Technology focused on new technologies and their clinical use, safety and standards and the Sonography/Physics interface.

Topics include microvascular imaging, matrix array probes, safety of elastography and contrast agents, equipment standards, training in Physics & Technology and the contribution of Physics to modern practice.

Suitable for Scientists, Sonographers, Radiologists, Manufacturers and Ultrasound Applications Specialists.

Integrated Training - DVT

Three hours of practical scanning with experts in the field, led by Professor Neil Pugh.

Suitable for trainees and those wishing to improve their practice.

The final event of **Day 1** is the **Donald, MacVicar, Brown (DMB) lecture**. BMUS is delighted to welcome Professor Peter Wells. The recipient of numerous honours and awards, Professor Wells holds the position of Distinguished Research Professor in the School of Engineering at Cardiff University and is known to all for his long history of contributions in the field of Ultrasound. He will be speaking on “The joy of research: is necessity the best mother of invention?”

DAY 2 – THURSDAY 10TH DECEMBER

Day 2 offers a broad mix of topics to suit vascular scientists and sonographers, those specialising in paediatrics, head and neck or gynaecology and provides a full day addressing quality issues that should be of interest to all. There are practical sessions to complement some of the lecture themes.

Stream 1 – Vascular Imaging in association with the SVT

A full day of Vascular Ultrasound focused on the vulnerable carotid plaque, venous pathology and non-atherosclerotic arterial disease.

Topics include the morphology of plaque and its investigation using elastography, venous syndromes and arterial disease in the popliteal fossa. The final session of the stream will be a debate on SVT recommendations for assessing the degree of carotid stenosis.

Suitable for all Vascular Scientists and Vascular Sonographers, Consultant Radiologists, Lead Vascular Clinicians and Specialist Registrars.

Stream 2 – Paediatrics

A half day of paediatric imaging focusing on the acute abdomen and the urinary tract.

Topics include the acute abdomen, contrast in abdominal trauma, UTI investigation and surgery and the paediatric renal transplant.

Suitable for Consultant Radiologists, Registrars in training, Advanced Practitioners, student Sonographers and all delegates involved in paediatric imaging.

Stream 3 – Head and Neck

A half day programme of lectures follows a half day practical training session. Lecture topics include the salivary glands, the larynx, the history and development of head and neck ultrasound and complementary techniques. Practical sessions will include teaching of the anatomy, live demonstrations and scanning by delegates; advance materials will be provided.

Suitable for Consultant Radiologists, Specialist Registrars, Sonographers and all delegates involved in head and neck imaging.

Stream 4 – Quality Issues

A half day of lectures complemented by a half day practical training session.

The sessions begin with demand management and an overview of the 2015 joint ScoR and BMUS professional standards document, culminating in debates on outsourcing and undergraduate training of sonographers. Practical sessions will include introductions to Governance, QA and infection control followed by delegates performing the BMUS recommended QA tests supported by experienced demonstrators; protocols will be provided.

Suitable for Sonographers with management responsibilities and all those with QA responsibilities.

Stream 5 – Gynaecology

A half day focusing on ultrasound of the uterus and ovaries.

Suitable for Consultant Radiologists, Specialist Registrars and Sonographers.

Day 2 also includes the Young Investigators' session. In this session presenters aged 35 years and under have the opportunity to win a trip to present their work at Euroson 2016 in Leipzig.

DAY 3 – FRIDAY 11TH DECEMBER

A feature of Day 3 is the full and varied MSK imaging programme. Following the success and high demand for the programme last year we have organised a fundamental MSK programme for those delegates starting out on MSK imaging and a parallel and complementary advanced MSK programme. This advanced programme is designed to offer updated training and development for practitioners who want to share their experience and hear what is new and advancing in this rapidly expanding field of practice. To support this exciting MSK programme two hands on workshops are to be delivered, again supporting both the fundamental and advanced programmes. There is also a full day of obstetrics covering a varied and interesting range of topics.

Stream 1 – MSK Imaging - Fundamental Techniques

A full day programme providing an introduction to shoulder ultrasound, rotator cuff pathology, dynamic MSK ultrasound and ultrasound appearances of benign and malignant 'lumps and bumps', complemented by 3 hours of practical training.

Suitable for those with an interest in MSK ultrasound, and a sound knowledge of ultrasound instrumentation but little practical experience in MSK scanning.

Stream 2 – MSK Imaging - Advanced Techniques

A full day focused on the latest techniques and management pathways working with experts in their field. Topics include the groin, foot and ankle and rheumatoid arthritis. In Rugby World Cup year the WRU National Team Doctor will give his perspective on the use of diagnostic imaging.

Suitable for those who already work in MSK ultrasound and are wishing to further and broaden their experience



Stream 3 – Obstetrics

A full day covering a broad range of subjects in Obstetric Ultrasound.

Topics include fetal cardiac abnormalities; an update on FASP; challenges in Obstetric Ultrasound in scanning of placenta, fetal CNS and skeletal dysplasias; fetal surgery; followed by case based discussions in Fetal Medicine.

The **Peter Twining Memorial Lecture** this year "Screening for serious fetal cardiac anomalies – friend or foe?" is given by Dr Trish Chudleigh. Trish is Advanced Practitioner Manager and Lead Sonographer of the Rosie Ultrasound Department of Cambridge University Hospitals NHS Foundation Trust and is well known for her contributions to the field of Obstetric Ultrasound.

Practical Training Sessions BMUS 2015

As always the BMUS ASM offers the best in hands on tuition and experience for delegates. There are 5 hands on practical training sessions to be held at the 2015 ASM offering a mixture of integrated training and expert advice and guidance. Delegates have the opportunity to extend and practice their range of skills, whilst developing new techniques and a greater understanding of the imaging technologies available from different manufacturers.

Where appropriate delegates receive the relevant materials prior to attendance to maximise their learning opportunities.

	Day 1	Day 2	Day 3
am	DVT Integrated Training Part 1	Head and Neck Integrated Training	MSK Advanced "Hands on" Practical Session
pm	DVT Integrated Training Part 2	Quality Workshop	MSK Basic "Hands on" Practical Session

Exhibition

The ASM would not be complete without the Technical Exhibition. BMUS appreciates the support of major equipment suppliers and smaller companies and organisations involved in ultrasound. The exhibition provides an opportunity for delegates to catch up with the latest equipment developments and often produces something new and exciting. The manufacturers always contribute to the educational content of the meeting and are a major part of its social success.

The organisers look forward to meeting you at the not to be missed 2015 BMUS ASM at Cardiff City Hall in December!

Register now to guarantee access to this fantastic programme at bargain discount rates. Early Bird registration closes **27th September 2015**. Don't worry though if you can't make this deadline, registration is open up to and at the meeting in December.

www.bmus2015.org

Professional Development Officer Report

Pamela Parker

For those of you reading this who are existing BMUS members I am speaking to the converted, but for those of you who are reading a copy you've found in lying around can I ask you why you are not a member of BMUS? Do you know what you're missing? First and foremost BMUS membership supports your profession. We are experiencing a period of high demand and staff shortages throughout the UK. Pressure is coming from many directions to change education for sonographers. Feedback from the membership survey undertaken earlier in the year demonstrates a strength of feeling both in favour and against a move to undergraduate education. BMUS is able to represent your views to the bodies with the funding and the drive to change education, but only if you are a member. I urge you to join and have your voice heard. Results and feedback from the BMUS survey will be published shortly in the Ultrasound journal, which of course members receive as part of their subscription.

The main aim of BMUS is to promote medical ultrasound as a profession. As professional development officer my role is broadly as follows:

- To develop and provide professional standards for the practice and science of medical ultrasound for the benefit of Society members in all disciplines
- To develop professional and educational materials for members, and to maintain these standards
- To develop links and professional materials with other organizations with an interest in medical ultrasound and to maintain good working relationship with these organizations to the benefit of BMUS members.
- To develop the BMUS website and other electronic media for the benefit of members and to promote the Society through the website
- To promote the Society as an effective resource for ultrasound practitioners and scientists.

Would you like to help BMUS gain more income?

Did you know that that BMUS can receive an additional 20p in the £ as Gift Aid from HMRC?

A recent Gift Aid claim has highlighted that only 39% of BMUS members are currently signed up for BMUS to receive this valuable additional income.

The only conditions are
that you are a UK taxpayer and
that BMUS holds a completed a Gift Aid declaration form from you

A form is included with this mailing, please complete and return - it is really this simple. BMUS will then be able to secure this additional funding.

Thank you

giftaid it

Ultimately all of these activities are undertaken to support ultrasound practitioners in their everyday practice. However, to be able to undertake these activities I, and my fellow BMUS officers and council members, need support from the ultrasound profession by you joining the society. With the recent advent of quarterly subscriptions BMUS membership is affordable and tax deductible in most cases. BMUS membership brings with it access to on line education, access to the Ultrasound journal, access to the members only pages of the website and reduced delegates rates at study days and conferences.

If you have visited the BMUS website recently you may have noticed some changes occurring. We are in the process of revamping and updating the website. This is a surprisingly lengthy process but as you visit the website over the coming months I'm sure you'll be pleased with the new and improved site. The site for the Annual Scientific Meeting is now live. With the improvements that have been made booking for the ASM will be much easier. Don't forget that early bird registration requires payment before the early bird date expires so book now to enjoy benefits of reduced registration rates. Payment by Trust invoices will require a purchase order number and the address of your finance department on booking so please have these to hand. Sadly BMUS has experienced Trusts not paying registration fees resulting in delegates having to pay on arrival at the ASM; a situation which is frustrating for both parties and one that can be avoided by providing the details we need in advance.

'The BMUS profession standards group' has been hard at work this year producing documents that we hope will enhance and support practice. The **BMUS recommended audit tool** with accompanying explanatory notes was published in February 2015 and is not in use in many departments. The **professional issues study day** in October 2015 is being held to promote best practice and demonstrate how the audit tool can be used in conjunction with discrepancy meetings. A faculty of experts in this field are lined up to deliver what will be a highly educational but social day. To book your place visit :

www.bmus.org/conference-events/ce-studydays.asp

The second document that has been produced is the **Justification of Ultrasound Referrals Guideline**. This first draft was published in early June in an attempt to support departments in managing the ever increasing demand. This document outlines appropriate referrals for ultrasound examinations from primary care and compliments previously published documents such as iRefer. This is a live document and subject to change. Indeed the recent NICE guidance regarding referrals for suspected cancer (NG12) has generated some updates which will be published shortly. Both this document and the audit tool can be found in the members area of the BMUS website

Many of you will remember, and probably still refer to, the 2008 UKAS Professional Standards document. The BMUS professional standards group is working with the Society and College of Radiographers to update this essential document. The aim of both societies is to launch this at the BMUS ASM in Cardiff in December. What better reason to attend? And with reduced registration rates for BMUS members surely this is reason enough to subscribe and support your profession?

First Officer baby

The first BMUS Officer baby, Junior 'Honorary Secretary' Anice Tasma Chung-Paterson was born on the 4th of May 2015, weighing 7lb 6oz.

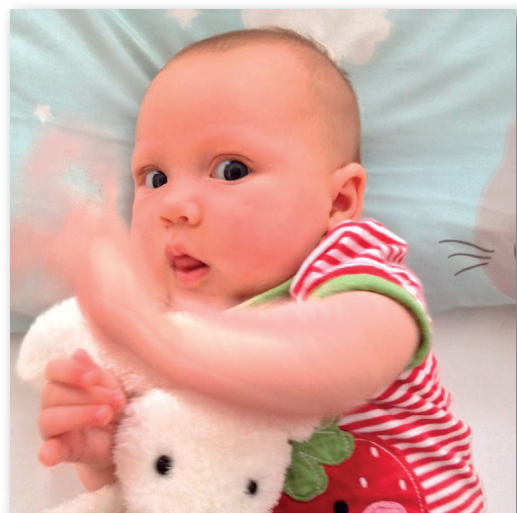
She was predicted by the midwife sonographer a few days before to be 8lb 1oz, so came in a bit lower than expected.

ULTRASOUND



Day 1

MRI



10 Weeks

OPTICAL



Anice looked pretty scary in her 20 week ultrasound, which was confirmed by MRI (as part of the University of Sheffield 'MERIDIAN' study). Fortunately, in reality she is pretty cute!

Ultrasound ears to the ground

snippets heard in ultrasound environs across the land in recent weeks.

"662 matches, 235,000 glasses of Pimm's, 28,000kg of strawberries, 80 aces from Serena, 109 decibel grunts from Sharapova and 4278 underwear issues from Nadal. That's Wimbledon in a nutshell."

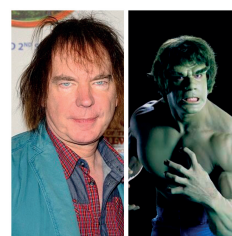


"Staycation booked. Staying home to shelter from the rain more like."

"I've scanned plenty of rabbits but this one was the size of a cow with a nifty nip to match. They call it **Godzilla**."



"Is it me or is Julian Lloyd Webber morphing into The Incredible Hulk??"



"You know you need to go back to school when your 5 year old speaks better Spanish than you from watching Dora the Explorer."



Dates for your diary

August

7th BMUS 2015 Abstract submission deadline

September

25th Paediatric ultrasound, Leeds Radiology Academy

27th Early bird BMUS 2015 registration deadline

October

14th Professional Issues, The Studio, Manchester

November

14th Gynaecology – Ultrasound Imaging and
Management, University College, Dublin

29th BMUS 2015 pre-registration closes

December

9th – 11th BMUS 2015, Cardiff City Hall
www.bmus2015.org

For further details
please contact:
bookings@bmus.org or
BMUS on 020 7636 3714

More events will be added shortly
Please check the website for updates -
www.bmus.org/conference-events/ce-studydays.asp