



Newsletter

The Society for Vascular Technology of Great Britain & Ireland

Issue 88. Spring 2015

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Dates for the diary 2015

SVT ASM Abstract Submission Deadline
4th September

SVT Resit Exams
7th September (details TBC)

VASBI Annual Meeting,
The Midland Hotel, Manchester
24th and 25th September

CEUS EVAR Study Day
20th October (details TBC)

SVT ASM
Bournemouth International Centre
12th November

VS ASM
Bournemouth International Centre
11th-13th November

BMUS ASM,
The City Hall, Cardiff
9th-11th December

Welcome to the Spring edition of the SVT Newsletter

Welcome to the first electronic only edition of the SVT newsletter! Please feel free to email me with any feedback on this new format. As always I would like to extend thanks to all contributors who sent in articles for this season's issue.

Remember the Newsletter is continually looking for original contributions. This doesn't always need to be a long referenced paper, you can also send in interesting case studies, images, discussion of new techniques, review a new textbook, your experiences of equivalence, IQIPS, centralisation of services etc. The newsletter and website are a great way to share our knowledge and experiences. Please email me anything that you think would be of interest to members of the society. I would also welcome any comments on items published in this edition.

I know it seems a long way off but it's already time to start thinking about the

ASM and any abstract submissions you would like to make. Our new conference secretary Dominic Foy is already working on the program for Bournemouth this year.

The SVT is also looking for members to fill upcoming vacancies on the education committee, you'll find more information on this inside. I would encourage members to get involved as being on a SVT committee is a great experience, allowing you to meet other members and contribute to our profession in a different way.

I hope you all enjoy the Spring e-newsletter and hope you are having some Spring sunshine too!

The next Newsletter will be the Summer Issue, and the closing date for receiving articles will be 3rd July 2015.

Helen Dixon
Newsletter Editor
Email: newsletter@svtgbi.org.uk

President: Tanyah Ewen • **Vice President:** Tracey Gall • **Past President:** Vicky Davis • **Membership Secretary:** Sara Causley
Conference Secretary: Dominic Foy • **Treasurer:** Georgie Fenwick • **Newsletter Editor:** Helen Dixon • **Web Site Manager/**
Job Adverts: Jacqui George • **SVT Website:** www.svtgbi.org.uk • **SVT email:** office@svtgbi.org.uk



SVT 2015
Annual Scientific Meeting
Bournemouth International Centre
Thursday 12th November 2015

In collaboration with the Vascular Society AGM
11th to 13th November 2015

SVT Abstract deadline 4th September

Please go to www.svtgbi.org.uk during the summer for more details on abstract submission, registration, programme details and accommodation



Important information for all clinical scientists and healthcare science practitioners

Are you a practicing Clinical Scientist or a Healthcare Science Practitioner?
Did you train before the Modernising Scientific Careers programme was introduced?
Is public and patient safety your priority?

If you have answered yes to any one or more of these questions, then read on, this information is important to you.

The Academy for Healthcare Science offers an equivalence process that leads to eligibility to apply to join an NHS recognised and supported register. Gaining 'equivalence' means that all your previous training, qualifications, professional development and invaluable experience can be recognised and validated against the new career framework. You will then be eligible to join the Health and Care Professions Council register (for Clinical Scientists) or the Academy for Healthcare Science accredited register (for Healthcare Science Practitioners). This register is accredited by the Professional Standards Authority (PSA), and is the only one of its kind to be so.

Being on one of these registers offers a considerable degree of assurance around patient safety, quality, competence and commitment to your employers, your colleagues and your patients. Although, for some, registration remains voluntary, employers are increasingly making registration a condition of employment so gaining equivalence, and then registration, opens up routes for career progression previously unavailable to you. Equivalence can cost as little as £50.

For more information about equivalence and registration visit our website at www.ahcs.ac.uk. You will also find the PSA report on accredited registers there.

We look forward to hearing from you.

Ann Donald Scientist of the Year 2014

Congratulations to Richard Pole who was awarded Ann Donald Scientist of the Year 2014!

Richard Pole has been a member of the SVT since 1995 and an accredited clinical vascular scientist for over 15 years. During this time he has been a member of the education committee for six years and supported various education events and AGM's.

Richard started working within a small team in the vascular studies unit of a university teaching hospital and is now the operations director of an independent vascular diagnostic provider managing over 40 members of staff and overseeing the running of several fulltime and part time services.

Richard was nominated by his colleague Tracey Gall for the work he has done on achieving the IQIPS accreditation at not just one hospital site but at 5 different sites, Tracey said this about Richard's achievements:

"Richard is eligible for this award for being the first to apply for this accreditation and for his dedication to maintaining a high quality of service and keeping a positive patient experience at the forefront of what we do. As the only organisation in the UK to hold this prestigious accreditation as well as achieving CQC accreditation and ISO 9001 certification Richard has undertaken a phenomenal amount of work in producing documentation, policies and innovative service changes to achieve this".

Richard was asked by the SVT to give a presentation at the AGM regarding this process and he has since been contacted by other members interested in undertaking this process. Richard has been happy to share his experiences with them.

Ann Donald Scientist of the Year Award 2015

Call for Nominations



An annual award for the scientist who has performed the best original research or been the most innovative in the promotion of vascular ultrasound.

The annual prize of £500 will be awarded to 'the scientist who has performed the best original research or been the most innovative in the promotion of vascular ultrasound during the year'.

How to nominate someone for the award: Nominations for this award can be made in writing using the application form on the SVT website. www.svtgbi.org.uk/resources/anndonald You may either nominate yourself or another, in recognition of achievements over the past year or so. Applications must be completed in full, with supporting evidence and two others to support your nomination.

The deadline for nominations is 31st October 2015, and the prize will be awarded at the 2015 AGM if we receive an appropriate nomination.

Bubbles

Mel Williams, Worcester Royal Hospital

Superiority of chlorhexidine 2%/ alcohol 70% wipes in decontaminating ultrasound equipment.
Shukla B et al. *Ultrasound* 2014; 22:135-140.

Original research undertaken in the UK hypothesizing that routinely available hospital wipes containing chlorhexidine gluconate 2% and alcohol 70% would be more effective than current soap and water cleaning methods of ultrasound (US) equipment.

This hypothesis was assessed by several methods:

- Laboratory experiments were designed to ascertain whether using the wipes protocol was better than current soap and water protocols for decontaminating US equipment.
- A survey was also conducted to find

out current practises of cleaning US equipment in hospitals in England.

- A review of current cleanliness of the authors own hospital US probes was undertaken as well as performance of a limited accelerated aging process to denote whether the use of wipes reduced function or appearance of the US equipment.

The laboratory experiment designed involved contaminating 20 US probes (C60X, Sonosite Ltd) with a microbial broth (containing *Escherichia coli*, vancomycin-resistant enterococcus (VRE) and methicillin-resistant *Staphylococcus aureus* (MRSA)). The probes were swabbed and analysed to confirm that the probes were suitably contaminated prior to the cleaning procedure. 10 probes each were cleaned with a soap and water

method and a Sani-cloth CHG 2% wipe method respectively, all probes were allowed to air dry. Repeat swabbing and analysis were undertaken.

Probes were left for 24 hours and then recontaminated with the broth and re-swabbed and analysed again to see any residual effects of the cleaning methods.

The results indicated that both cleaning methods were successful at decontaminating the probes after the initial microbial broth exposure. When recontaminated after 24 hours, the soap and water cleaned probes become contaminated once more whereas the Sani-Cloth CHG 2% cleaned probes remained clean, this occurred with re-contamination both immediately post cleaning and after the probe had been left for 24 hours.

Postal surveys were sent to 164 hospitals with an overall response rate of 71.3% (93 responded via post, with a further 24 contacted via telephone). 74.4% utilised disinfectant wipes to decontaminate ultrasound probes (a variety of brands with alcohol and alcohol free wipes were utilised). 5.1% specifically used chlorhexidine-containing products. 8.5% utilised soap and water or a clean cloth. The author acknowledges that the 71 % response rate from the survey could have led to non-response bias in their results.

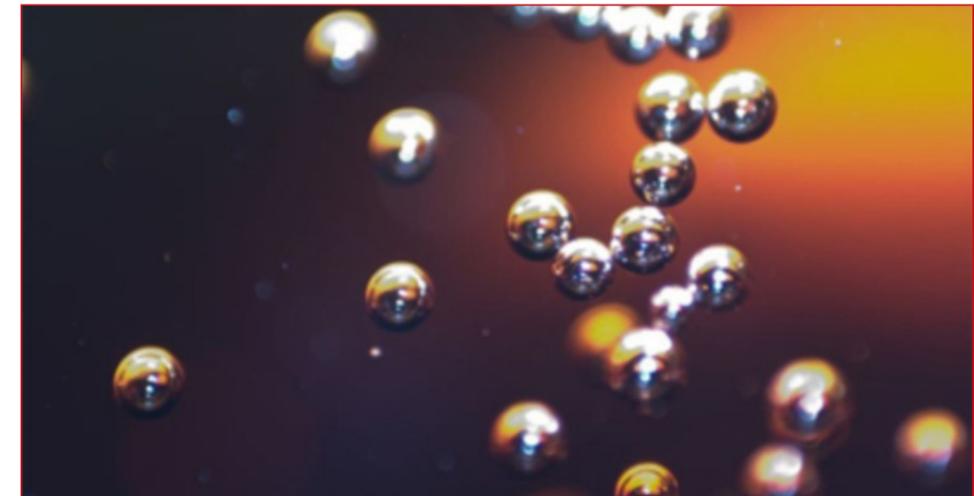
Within the authors hospital a non-touch technique was utilised to swab four components of 7 US machines—the monitor, cable, handle and head of the probe on equipment in the emergency setting which included the operating theatre, emergency department and intensive care unit. No prior notice was given to the departments prior to the swabs being taken during a normal working day, US equipment in each area was believed to have been cleaned with soap and water and was ready for patient use.

Initial review indicated that 57% (4) of the machines were heavily contaminated with bacteria, mostly *Bacillus* (60.4%), with *Micrococcus*, *Diphtheroids*, *Flavobacterium* and

coagulase negative *Staphylococcus* also present. (Handle and monitor swabs grew the most bacterial colonies). Following the initial study of microbiology plates of the swabs which were examined by blinded lab staff for number of colonies formed, a review of practice was introduced and with the use of a Sani-Cloth CHG 2%, the US equipment (probe head, handle and cable) was thoroughly wiped every morning and before and after each use. Repeat-swabbing and analysis

the short duration of the accelerated ageing process. It acknowledged that longer term studies of the use of wipes were needed as many departments tend to hold ultrasound machines for a number of years.

The paper concluded that Sani-Cloth CHG 2% wipes were quick, inexpensive and convenient for decontaminating US probes effectively against a standard method of soap and water and they appeared to have



of the equipment was undertaken after 2 weeks of this process being implemented within the hospital. The repeat swab analysis review found significantly lower bacterial load on the ultrasound machines.

Accelerated ageing was assessed by wiping a C60X sonosite probe 250 times utilising a Sani Cloth CHG 2% wipe (the probe was allowed to dry between wipes). 14 ultrasonographically experienced staff from anaesthetic, radiology and emergency departments were individually surveyed to assess the pre-treated probe and the untreated probe. All staff noted no difference in the functionality of the two probes but with some differences in visual inspection, which included the pre-treated probe looking newer and very slightly cleaner. The authors noted that there is a possibility of long term damage with possible reduction in image brightness with linear array probes, and that the limitation of this experiment was

no detrimental effect in the short term on the US probe. The authors Trust have introduced these wipes into their cleaning protocol. The survey response indicated variations in the nations cleaning protocols and highlighted the need for evidence based guidelines for the decontamination of Ultrasound Equipment.

Summative clinical competency assessment: A survey of ultrasound practitioners' views.
Harrison, G. *Ultrasound* 2015; 23:11-17.

Original research determining the best way to assess clinical competency in ultrasound. There were 116 respondents to a voluntary anonymous online survey focused at contacts from the Consortium for the Accreditation of Sonographic Education (CASE) and details distributed at the British Medical Ultrasound Society (BMUS) 2011 conference. 64% of respondents were radiographers by original profession

and the majority of respondents were mentors or assessors in relation to clinical education roles (49% of BMUS members are radiographers). Largely, the survey suggested that summative, final competency assessments should take place in a clinical department, with 81% agreeing that assessments should be performed on real patients rather than on simulated/standardised patients. 84% agreed that 2 people should assess the trainee with 66% suggesting an element of external moderation be included.

97% agreed that a national standard for competency assessment was needed. 89% somewhat agreed that just one resit attempt should be allowed with 61% agreeing on two resit attempts. Only 14% agreed that any number of resit attempts should be available. Authors acknowledge that limitations of the survey include bias through self-selecting respondents (those with probable interests in clinical education/training/assessment were likely to answer) and a low response rate. Also noted as a limitation was the use of the Likert scale format on specific questions, whereby some questions were left unanswered and some had multiple responses.

The authors recognise that since the survey was carried out in 2011, improvement and modernisation of simulation technology has increased and therefore opinions on questions relating to this may now have altered.

The conclusions from the paper acknowledge the potential concerns when there is a lack of standardisation utilising the example of the published Francis report, which suggests that consistency is required in competency assessment of nurses and that therefore national standards are required and that this should also be applied to Ultrasound similarly.

The online survey respondents lent towards standardised competency assessments with internal monitoring and some external moderation of final assessments. The preference for

trainees to have some assessments during unplanned routine lists within the clinical department to simulate the working environment after they are deemed competent was also favoured.

Future considerations since the survey was undertaken were noted as funding for training has now been reduced in the health service. Simulator use as part of the assessment process has already been introduced with some potential issues already arising from this method of assessment. However simulator use could negate issues relating to independence of assessors when assessing our future trainees.

What makes a good ultrasound report?

Edwards H, Smith J, Weston M. *Ultrasound* 2014; 22: 57-60.

A concise paper detailing the ideals of ultrasound report writing in relation to answering the clinical question originally asked. Reasoning for poor report writing is explored as well as educational resources available to improve on such. A final five-point framework is suggested as useful when constructing our ultrasound reports.

The paper acknowledges the continuing importance of accurately written clinical diagnostic reports comprising part of a patient's permanent medical record and influencing their medical management. Ultrasound reports are as such open to and of medico legal importance, especially as the vast majority of hospitals archive static ultrasound images representative of a real time scan process.

Important points when reporting were detailed as being: concise, accuracy, clarity and logical structure with an effort to answer the clinical question asked and include differential diagnoses and suggestions for further management if appropriate.

Additionally it was noted that when constructing a report avoidance of repetition, tautology,

superfluous words and technical jargon should be practised.

The five point framework addresses issues and examples under the subtitles of; Clinical History, Area examined; Description of findings, Interpretation of the findings and finally the Conclusion.

The authors comment on the future of ultrasound reports being standardised, which would facilitate teaching, research and audit and also minimise referring clinician confusion.

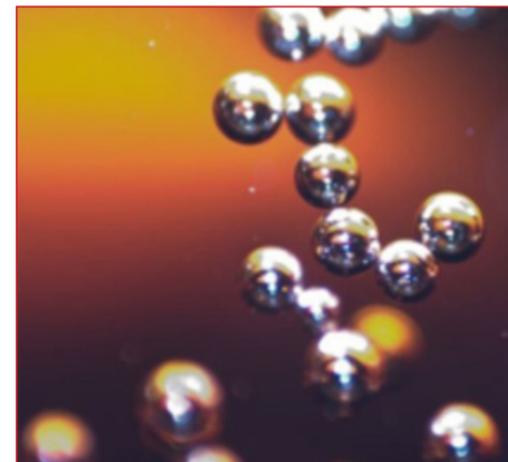
They conclude that the various points discussed within the paper will communicate important information obtained on ultrasound examinations in an effective and efficient manner, in an increasingly competitive market.

ESSAY.

Reviewing the curriculum for physics and technology in postgraduate sonographer courses.

Oates, C. *Ultrasound* 2015; 23:42-47.

A relevant modern review of the subject of physics and technology taught to those in medical ultrasound training. Including the perception of physics being a difficult to understand subject by students, options to make the subject more relevant and easier to learn, as well as discussing the future of who may teach this subject and what the module content may contain. An interesting read for all whether you are the student, the lecturer or operating an ultrasound machine.



CPD Questions

Spring 2015

The Questions are centred on the NICE (National Institute for Health and Care Excellence) guidelines on Venous Thromboembolism, taken from pathways.nice.org.uk.

Questions

Prophylaxis

1. A patient's risk of VTE Vs. risk of bleeding is considered before offering pharmacological prophylaxis. State two risk factors for bleeding as per the NICE VTE pathway.
2. Not all forms of mechanical or pharmacological prophylaxis are suitable for patients at high risk of VTE. One form of mechanical prophylaxis that NICE support is the GEKO device. What nerve does this device stimulate?
3. During cost modelling, what are the estimated cost savings of using the GEKO device compared with no prophylaxis per patient?

Diagnosing VTE

4. In order to be allocated a point on the Two-Level Wells Score, what circumferential difference should be present in the symptomatic leg.?
5. What Two-Level Wells Score indicates 'DVT likely'?
6. If a DVT is 'not likely', what is the next step as recommended by NICE?
7. What does the D-Dimer test measure?

Treating VTE

8. According to NICE, how much does a three month period of treatment with Rivaroxaban cost?
9. Whilst considering the evidence for the use of Rivaroxaban as a treatment for DVT and PE, what positive association did they attribute to Rivaroxaban Versus Warfarin treatment with regards to the patient's quality of life?

Please forward answers to:

Miss Heather Griffiths
Vascular Laboratory, Suite 3
University Hospital Lewisham
SE13 6LH
Or heather@vascularsolutions.co.uk

Emailed answers can be acknowledged at your request. **Closing Date: June 30th 2015**

Answers to Questions for the Autumn 2014 newsletter

1. Venous stenoses can be resistant to conventional PTA as a result of dense fibrous strands incorporated into the venous neointimal layer or scar tissue from recurrent puncture trauma to the venous wall
2. Suboptimal PTA was defined as a residual stenosis of >30%
3. 36 patients with AVFs in the CBA arm and 35 patients with AVFs in the HPBA arm
4. 18 out of 71



Spring 2015 Trainee Competition

1. Name two types of medical research study
2. In terms of medical statistics and research explain the following terms: Bias, Sensitivity & Specificity
3. P-value : When is it used and What does it mean

Please send answers to Siobhan Meagher, Chair of the education committee on siobhan.meagher@luht.scot.nhs.uk. The winner will receive a £25 book token and have their answers printed in the Summer newsletter.



Winter 2015 Trainee Competition Results!

The following winning answers to our previous trainee competition are from Jeny Anton Trainee Vascular Scientist West Herts NHS Trust who will receive the £25 book token.

The Safety of Ultrasound

1. Discuss ultrasound wave propagation in terms of pressure, frequency, wavelength and velocity.

Sound waves propagate through a medium by the vibration of molecules (longitudinal waves). Regular pressure changes occur within the wave with alternative areas of compression, which are areas of high pressure and amplitude and areas of rarefaction which are areas of low pressure.

Wavelength is the distance between two areas of maximal compression or

rarefaction, so the distance a sound wave travels during one complete cycle of wave. In ultrasound, the wavelength is important because it determines the penetration of the ultrasound wave and the image resolution. The wavelength itself depends on frequency and the speed of sound in the medium. It is given by the equation: $v = \lambda \times f$

This means that the wavelength is inversely proportional to frequency. The frequency is the number of wavelengths that pass per unit time and is measured as the number of cycles per second in hertz (Hz). The frequency of a sound wave is determined by the crystal used in the ultrasound transducer. However it can be varied by the operator within set limits. So, the higher the frequency (and the smaller the wavelength), the lower the penetration and better image resolution.

The propagation velocity is the speed an ultrasound wave propagates through a medium and is determined by compressibility and density of the tissue it travels through. In soft tissue the velocity is at 1540 m/s and the ultrasound machine assumes this speed for all human tissue a sound wave travels through.

2. What is attenuation of ultrasound?

Attenuation is the decrease in intensity, power and amplitude of a sound wave as it travels through the medium and is measured in decibels (dB). So the farther the ultrasound wave travels the more attenuation occurs.

Attenuation of sound in tissue is directly related to the distance travelled by the ultrasound and to the operating frequency used, which explains why we can image deeper with lower frequency. Attenuation occurs due to absorption of ultrasound energy (and conversion to heat), reflection, refraction and scattering. More attenuation occurs (and therefore the beam penetration is reduced) by increased distance from the transducer, scanning media with mismatched acoustic impedance and using high frequency transducers.

3. The two mechanisms for the effect of ultrasound on tissue are heating and mechanical effects including cavitation and radiation pressure. Please describe these effects including recognised safe parameters.

Depending on the duration of ultrasound exposure, the frequency and intensity of the ultrasound beam and acoustic power, significant biological effects can occur which are often divided in thermal and non-thermal effects.

Thermal effects

As the ultrasound beam travels through tissue, some energy is lost through absorption and this absorbed energy is converted into heat causing a rise in temperature in the tissue.

The amount of heat produced depends on:

- The attenuation coefficient of tissue
- Operating frequency
- Intensity of ultrasound beam
- Exposure time

This means that a tissue with a high absorption coefficient such as bone has high thermal effects. Equally important is the thermal characteristic of the tissue being scanned to dissipate heat to surrounding areas which has a dampening effect on heat generation. Also the higher the operating frequency used the higher the absorption and therefore the higher the potential to generate heat. Intensity is greatest at focus, which is where the beam width is narrowest. A wider beam width reduces the rate and degree of temperature rise by permitting the energy to be distributed over a larger perfusion area. Intensity can be changed by the operator controls such as power output,

scan depth and mode of operation e.g. continuous vs. pulsed Doppler mode.

Non-thermal effects

Ultrasound energy can also create mechanical forces independent of thermal effects, such as cavitation and radiation pressure.

Cavitation

Ultrasound produces an oscillating pressure wave which propagates through the tissue. This propagating pressure wave can cause micro-bubbles within the tissue to form, grow, and oscillate in size and at sufficiently high intensities and pressure cause bubbles to collapse. Gas-containing tissues (e.g. lungs, intestines) are most susceptible to the effects of acoustic cavitation. Ultrasound wavelength is also important in bubble formation and growth: short wavelength ultrasound (observed at higher frequencies) does not provide sufficient time for significant bubble growth; therefore, cavitation is less likely to occur under these circumstances compared with long wavelengths.

There are two forms of cavitations:

- Stable (non-inertial)
- Unstable (transient or inertial)

In stable cavitation small micro-bubbles in the medium are forced to oscillate in the presence of ultrasound. Cavitation bubbles go through phases of expansion and contraction

as they oscillate with the varying ultrasound pressure wave. This is safe.

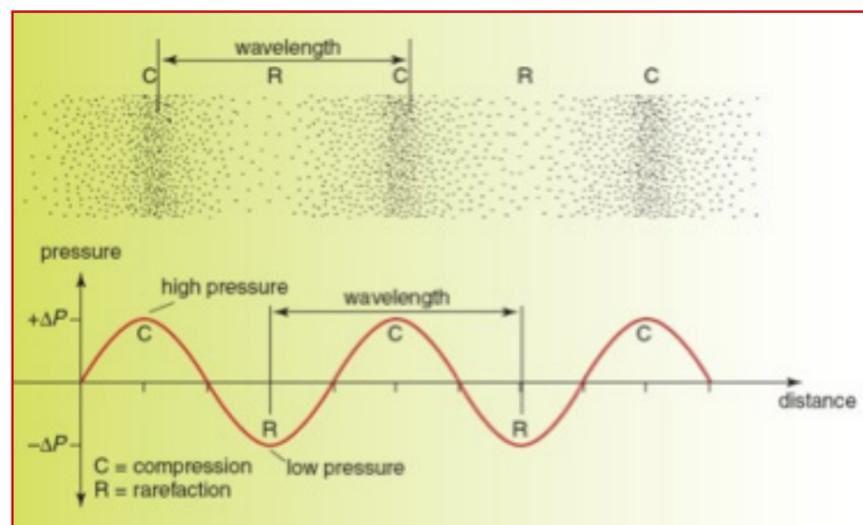
Unstable cavitation has the greatest damaging potential. The intensity if the ultrasound field is high enough to cause oscillations of the micro-bubbles to become so great that bubbles collapse generating high pressures and temperature to a localized area. This has the greatest potential to cause biological damage.

The thermal index (TI) and mechanical index (MI) were introduced to provide the operator with an indication of the potential for ultrasound-induced bioeffects. The TI provides an on-screen indication of the relative potential for a tissue temperature rise.

TI is the ratio of acoustic power produced by the transducer to the power required to raise the temperature in the tissue by 1 °C. MI provides an on-screen indication of the relative potential for ultrasound to induce an adverse bioeffect by a non-thermal mechanism such as cavitation. The BMUS safety guidelines states that $MI > 0.3$ = risk of capillary bleeding $MI > 0.7$ = cavitation risk $TI > 0.7$ = embryonic/foetal exposure limited

4. What does 'ALARA' stand for?

"ALARA" stands for "As Low As Reasonably Achievable" and is a principle that recommends to always choosing the option that will minimize patient exposure.



Taken from Ultrasound in Medical Physics, Genesis

Volume Flow Puzzle

Here are some questions to get you thinking about how volume flow is calculated. Fill in the grid and use the number in column C to answer the final question.



Across

- A. Calculate the flow volume in ml/min in a vessel with a diameter of 6mm and average flow velocity of 1.5m/s.
- B. A vessel with a radius of 2mm has a flow volume of 754ml/min. Find the time averaged mean flow velocity (TAMV) in cm/s.
- C. Find the cross sectional area in mm² of a vessel with a diameter of 4.8mm.
- D. Express 9.15x10⁻³ litres/second in ml/min.

Down

- A. How many litres of fluid will it take to fill a container with a volume of 2m³.
- B. Find the volume of a cylinder in cm³, if it has a length of 65cm and a radius of 5cm.
- D. Calculate the flow volume in ml/min in a vessel with a radius of 6mm and average flow velocity of 75cm/s.

	A	B	C	D
A				
B				
C				
D				

If the number in column C represents the flow volume in ml/min, in an ascending aorta with a diameter of 2cm, what is the TAMV in cm/s?

Answers to the crossword in our Winter 2015 edition.

Across: 6.Focus 9. write priority 10.section width 13.pulse repetition frequency 14.zoom 16.power Doppler 18.chroma map 19.caliper 20.angle correction

Down: 1.Harmonic imaging 2.Wall filter 3.Sample volume 4.Invert 5.Preset 7.Depth 8.Time gain compensation 11.baseline 12.dynamic range 15.print 17.freeze

SVT Study Day Review: Physics, 31st March 2015

Hannah Williamson, Vascular Studies Unit, Royal Free London NHS Foundation Trust

The SVT Physics revision day was held at the University Hospital in Coventry. It seemed to be easy for most people to get to from all parts of the country. The hospital itself was big, bright and airy, which was a nice change for me coming from a high rise London hospital. The day was held in the Clinical Science building, which had plenty of comfortable rooms to work in. Study sessions were organised into four separate blocks covering; Maths and Equations, Basic Principles of Ultrasound, Principles of

Imaging and Haemodynamics. The tutors on the day were Davinder Virdee, Ed Ramage, Siobhan Meagher and Matt Bartlett, who were all very knowledgeable and approachable. Each session followed a similar format consisting of practice questions and enough time to have any queries fully answered. After three one hour sessions, we broke for an hour lunch where we were given vouchers to spend in the canteen. The food was great, especially the 'Mac n Cheese', which set us up for the afternoon!

The afternoon followed with a one hour revision session and ended with an hour talk on QA and safety. This last session proved to be really helpful. QA and safety is often loosely covered throughout training, so this talk provided the trainees with the essentials that we need to know. It was a great day to also meet trainees from other hospitals who you would never usually meet. As a STP student studying at Newcastle University it was great to meet other STP students from the Manchester University cohort and in house trainees from around the country.

Good luck to everyone for the exam!

SVT Study Day Review: Vascular Technology, 1st April 2015

Michael Davis, University Hospital Coventry

I attended the SVT vascular technology theory exam study day at University Hospital, Coventry. Being a member of the team working in the vascular lab at Coventry I knew the venue and facilities well. The clinical sciences building

(CSB) at Coventry is a purpose built venue for teaching, training, and conferences etc, therefore, it provided the ideal comfortable and relaxed setting for the study day.

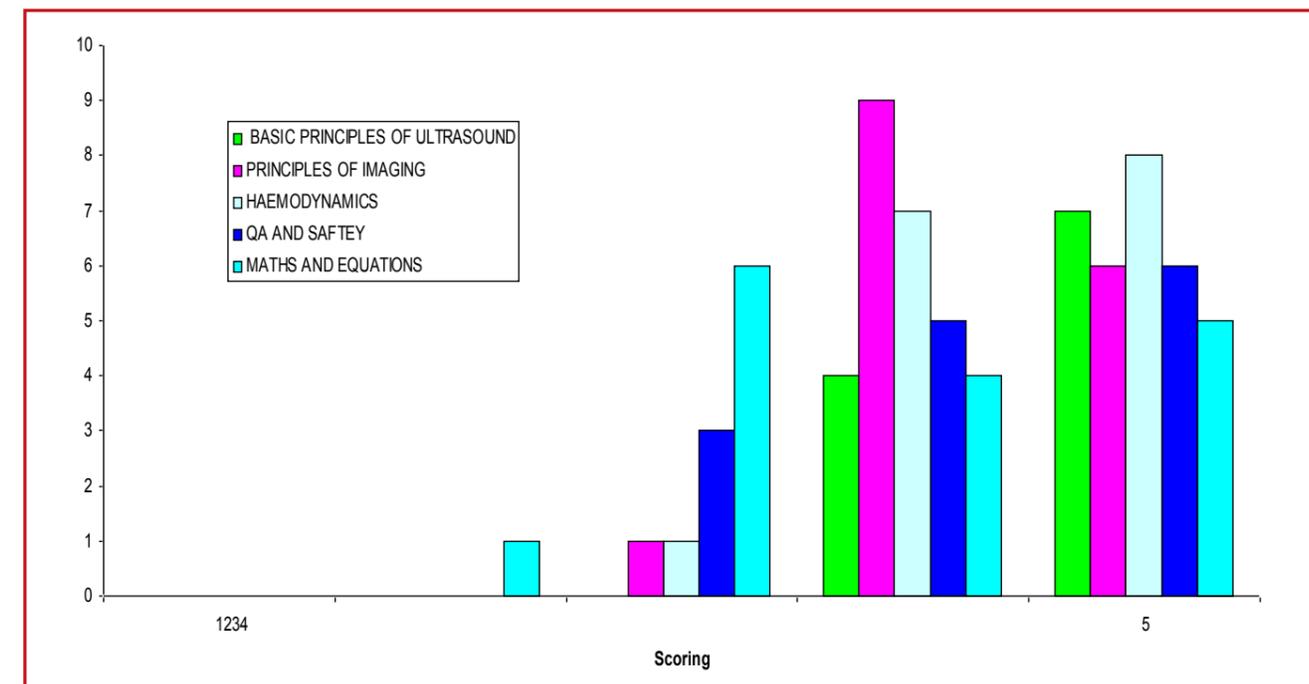
After registration, the day began with an explanation of how the day would run. There were to be five sessions, each one hour long, covering the different areas of the syllabus. The topic areas were gross anatomy, lower limb arterial disease, upper limb arterial disease and abdomen, cerebral arterial disease, and venous disease.

Each hour began by being given 20-30 multiple choice questions on the topic area, largely made up of questions from past papers, and being allowed approximately 15 minutes to attempt to answer as many questions as possible. Following this the remainder of the time was spent going through the answers and talking around the subject areas covered in the question. Then at the end of each hour the tutor, rather than the students, rotated onto the next group, which was a little thing, but meant very little disruption to how the day ran.

I found the format of the teaching for the day a great way of learning, as it allowed me to identify my areas of strength and weakness. Also, having past paper questions means, I now have a better idea of the style of questions to expect in the exam. Overall, the day ran very smoothly, was extremely worthwhile, and has given me a great starting point to now kick on with my revision for the exam in May.

Physics Study Day Feedback

Total number of candidates registered for the physics study day was 27 candidates. Out of the 16 feedback forms we received 7 candidates had not started their revision yet and 9 had begun. Most candidates felt the revision day had occurred at the right time. Some of the feedback comments for the revision day were:



Physics Study Day Feedback (Continued from previous page).

Basic Principles of Ultrasound:

- Excellent, explained everything well, very informative
- Good range of questions
- More questions

Principles of Imaging:

- Good extra notes given
- Well explained, at good tempo, informative
- More questions

Haemodynamics:

- Good Session
- Excellent, explained everything very well
- Good session, emphasised importance of knowing equations

Maths:

- Longer session needed
- Too many questions for time allocated
- Very good mix of questions, good practice in changing units

QA and Safety:

- Well explained at a good tempo
- Very informative, very good handouts
- Would be good to have example questions like the other sessions

Overall comments:

Practice questions are really helpful
Some benefits of doing some rotations before others
Good day

Education Committee Vacancies

Help your society

BMUS/Venous Forum Representative

This role involves being the main contact for the SVT with the Venous Forum and BMUS and to create awareness of Venous Forum and BMUS activities/events amongst the SVT membership. The role also involves co-ordinating ultrasound symposium content and speakers as part of the annual Venous Forum (currently on a biennial basis) and for the annual BMUS Scientific meeting.

Theory Exam Officers x2: Physics and Technology

These roles involve writing and marking the theory exam papers, post exam evaluation of poorly answered questions and evaluate them with the education committee. Other tasks associated with these roles are to collate and evaluate exam questions submitted by SVT members.

Exam Registration Officer

This role currently involves setting up the exam registration form, opening and closing registration forms as well organising exam venues and invigilators. We would like to expand this role to include assisting the current exam officers.

Typically members attend 3-4 meetings per year in London (expenses paid).

Being involved is interesting and a great experience. It's a fantastic opportunity to make new contacts and learn from colleagues.

If you are interested please contact: siobhan_meagher@luht.scot.nhs.uk



Volunteer Register

Voluntary registration is available with the Society of Radiographers

Why register: The volunteer register allows members of the public and employers to confirm that the vascular scientist undertaking their examination is appropriately qualified

There is no fee if you are PII SVT member of the Society of Radiographers

Information on how to register can be found at:
<https://www.sor.org/practice/ultrasound/register-sonographers>



Letter to The Editor

I always welcome feedback and comments on the newsletter so was delighted when I received the email below from one of our colleagues in Australia....

Dear Helen,

Greetings from sunny Queensland and thanks for all your hard work putting together the SVT newsletter. I always enjoy receiving and reading my copy.

In response to your question I support the idea of an electronic version. Whilst I appreciate my mailed newsletter being sent to me in Australia, it would definitely save printing and distribution costs to send a pdf version, and would enable me to read the newsletter on my iPad. It seems to be the trend these days to go 'paperless'!

On another note, I greatly enjoyed reading Naavalah's story about her work experience in the USA. Her comments about her vascular scans needing to be interpreted by a doctor resonated with me, as it is a similar system here in Australia too. I run an independent vascular laboratory and although I write my own reports, these need to be 'verified' by a radiologist for Medicare to cover the cost of the scan. So it is different to the autonomy that we are used to in the UK.

I look forward to receiving the Spring edition to my email inbox.

Kind regards,

Lucy Watson

From The Editor

Dear Lucy,

Thank you so much for your feedback. I am glad to hear you enjoy the newsletter and hope the new e-newsletter is popular with all our members. It's great to hear from members from further afield especially in regards to the differences in practice.

Kind regards,

Helen Dixon, Newsletter Editor



Higher Specialist Scientific Training

Advancing your clinical and scientific skills for patient and public benefit

Salary: Locally determined by the employer to at least AfC Band 7

The NHS is offering a fantastic opportunity for clinical scientists to train and become eligible to apply for available consultant clinical scientist posts.

The Higher Specialist Scientific Training Programme (HSST) is a five-year programme that is equivalent to the standards of training undertaken by medical specialist registrars.

This innovative programme has been developed jointly between the Modernising Scientific Careers team, Medical Royal Colleges and scientific professional bodies.

If you see yourself as a future leader in healthcare science, then apply to join this ground breaking programme which offers bespoke workplace based training supported by an underpinning doctorate-level academic course.

LETB commissioned HSST training posts will be available in accredited training departments either as:

- **Direct entry** - new posts created specifically for the purpose of training and open to competition by application. For details on the direct entry posts please click on the following link;
 - <http://www.nshcs.org.uk/hsst-recruitment>
- **In service** - existing posts supported by employers. There are in service posts available in a range of specialisms including life sciences, physiological sciences and physical sciences. In service posts are not open to competition and only clinical scientists nominated by their employer who reach the standard for higher specialist scientific training are eligible to apply. If you are eligible to apply you must apply to be considered for entry into HSST and undertake the appointment process.



All applicants will be required to undergo a formal appointment and benchmarking process which will be overseen by the National School of Healthcare Science during 2015, with posts due to start at the earliest September 2015. Applicants must be HCPC registered as Clinical Scientists at the start of their training.

To apply and for full information about the opportunities available and details of the qualifications and experience please click on the following link; Applications will be open from 2nd March 2015.

<http://www.nshcs.org.uk/hsst-recruitment>

A detailed description of the HSST programme and its development is available in *Scaling the Heights: an overview of Higher Specialist Scientist Training (HSST) in Healthcare Science* <http://hee.nhs.uk/wp-content/uploads/sites/321/2014/01/Scaling-the-Heights-final.pdf>

Details of the HSST curricula can be found at: <http://www.networks.nhs.uk/nhs-networks/msc-framework-curricula/hsst-higher-specialist-scientist-training>

Modernising Scientific Careers



Science in healthcare DRIVING A MODERN NHS

Executive Committee Meeting Summary

January 2015

Conference: Emma Waldegrave reported good feedback from the ASM. Members would like to hear from other clinical and allied health professionals on areas of overlapping work, either relating to a patient's treatment or diagnostic workup. This would bring variety for members and other educational gains. There was good feedback on the student session which showed the SVT's support of trainees. The SVT workshop was a sold out event and members expressed a desire for more specialist workshops. Emma suggested that the running of the workshops should be treated as a separate job to the ASM (conference secretary role) and should have dedicated personnel for the planning and organization of it.

Education Committee: There have been some changes to the SVT education committee for 2015 and there are currently two vacant

roles to be advertised to members, BMUS/VF representative and exam registration and newsletter officer.

Exams: Theory exams will take place on 11th May at Charing Cross as usual. Rooms have been booked and registration will open online by 26th January. Holding the exams twice a year (instead of May exams and Sept resits) was discussed at the last meeting but it was decided to keep the usual system. Resit exams will take place in Sept.

Practical exams: There were 19 passes and 1 fail in the last membership year. Three have passed since then. We had at least 4 members get in touch last year whose membership had lapsed over 5 years and needed to re-take the exams. It was realised that there was no documentation for requirements for retaking the practical exams. Up until then we

had asked for a minimum of 100 scans in each of the modalities but after discussion the committee felt that a minimum number of scans was not required as long as all other conditions were met. The accreditation documentation will be amended to include this.

Study days: The advanced study day on contrast EVAR assessment took place at Wythenshawe hospital in October. Verbal feedback was generally good. Tracey Gall is hoping to run the study day again next October as BMUS have asked for one to be run for their members. On reflection the study day could be improved by preparing a pack of information to take away on practicalities and requirements of setting up the service, more time spent on looking at images and case studies and image interpretation and designing a feedback form to use.

The two day fundamentals of vascular ultrasound took place at Addenbrookes on 15th/16th Jan. Revision days are being organised for 31st March/ 1st April and registration will open for these at same time as exams. They are being held in Coventry and will follow the usual tutor style format. Tutors and practice questions will be required.

Venous Forum: We should be involved with the Venous Forum again this year and are usually asked to organise 4 speakers for the session. As we don't have a VF rep yet Tracey Gall will ask Michelle Bonfield (previous rep) for a VF contact and find out what is happening.

BMUS: The vascular day at the BMUS ASM in December was very well attended and received. We had some excellent speakers and the themes went down very well. The venue at Old Trafford cricket ground was also very good although our room lacked a proper desk for chairs to sit at making it seem quite informal. Tracey Gall suggested making the themes broader next time and just having a carotid, venous and arterial session which should encourage more papers to be submitted.

Newsletter: The newsletter will be trialed in an electronic format from the Spring 2015 edition. There has been good content submitted for the current edition.

Treasurer: Georgie Fenwick is taking over the role of treasurer. The SVT currently have £65,680.38 in the current account and £86,590.70 in the reserve account. Last years accounts have been sent for auditing. Reminders have been sent out for payment for outstanding job adverts. All expenses are up to date.

Professional Standards Committee: Professional Performance Guidelines continue to be developed and uploaded to website with suitable/relevant sample diagrams/proformas.

NICE: Matt Slater is currently keeping up to date with all things NICE related to SVT. Lila Elliott attended a NICE scoping workshop

on Hypercholesterolemia and hyperlipidaemia on the 15th of January.

Membership: The current membership is 446 with 431 ordinary members, 5 associate and 4 special interest. To date 43 people who were members last year have not paid subscriptions this year. These were issued with late penalty notices in October as well as automatically generated reminder emails. Five members standing orders are still set at £25, their subscriptions have not been added to the database and all have been contacted by post.

HSST: As mentioned at the AGM, the next phase of this project is working out the assessment process for the curriculum and mapping and populating the online assessment tool (OLAT).

AHCS: Tanyah Ewen provided an update from the last meeting of the Physiological Sciences – Joint Specialty Group. A one off meeting was held in May to discuss the scope and remit of the Professional Scientific Leadership Committee which is a key stakeholder group for the Academy for Healthcare Science. The Committee will bring together the two strands of identifying scientific and technological innovation and promoting its adoption in practice through developing scientific leadership across healthcare science. It has a key role in developing and promoting the vision of the Academy as it works alongside the professional bodies to speak with one clear voice for healthcare science. Participants at this meeting were invited in a personal capacity to contribute to shaping the scope and remit of the Committee. All three divisions of healthcare science were represented at the meeting. The group need to nominate three members to represent physiological sciences on this Committee.

NSHCS: Teresa Robinson has done an amazing job as our representative on the National School of healthcare science Themed CVRS board and Lead OSFA station writer up to now. The SVT owes Teresa a debt of gratitude for the hard work which

she has put into the STP programme and especially for co-ordinating last year's Vascular OSFAs which were recognised by the School for special mention due to their quality. Teresa has now handed both roles over to Alison Charig following the last Board meeting in November 2014 which they attended together.

OSFA's: Teresa and Alison attended the OSFA reflection day on 10th December in Birmingham. They were able to start reviewing the previous stations and begin to develop a plan to edit and improve the marking schemes to improve differentiation between different levels of competency. Two vascular stations have been chosen for the mock OSFA in February. The 9 stations for this year's live OSFA (21st July, London) need to be sent in by the end of April.

The next NSHCS Board meeting is 25th February.

VASBI: Significant progress has been made by Richard Craven in reconnecting with VASBI. The current chair of VASBI Dr Nicholas Inston has responded to emails and is keen to get RC involved as an SVT representative. Richard attended the VASBI AGM in September, had a small meeting with other sonographers and produced a presentation for the main AGM, which was received very well. Richard and Dr Inston are keen to keep close links with the SVT and PSC moving forward.

The SVT executive committee met on 16th April, a summary from this meeting will be printed in the next newsletter.

Committee Members 2015

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Past President

Vicky Davis

Vice President

Tracey Gall

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