Wednesday 23 November

The morning session began with informative talks on the processes and diagnosis of popliteal artery entrapment, median arcuate ligament syndrome, thoracic outlet syndrome, and external iliac artery endofibrosis. This was immediately followed by a hands on scanning session, allowing you to see the syndromes and/or scanning techniques discussed. Vascular consultant input was then given regarding further cross sectional imaging of the same conditions, as well as surgical corrective procedures.

The afternoon session began with STP research proposals. Miss Piatkowska presented a well thought-out proposal regarding popliteal artery aneurysm surveillance and average growth rate. Miss Washak discussed a feasibility study of AI interpretation of vascular ultrasound scans, which proved to be too costly and time-consuming for an STP project, but would provide interesting results. Miss Alderson's proposal to audit her hospital's compliance with ESVS guidelines regarding two forms of carotid scanning prior to endarterectomy is very interesting in that it will provide several possible followup questions to research. Specifically, it would be interesting to see if those patients who are denied surgical intervention due to a second scan then return with new stroke symptoms. Miss Benbia proposed a system to more accurately demonstrate a patient's walking distance using Google Maps. Mr Santos questions whether a new Wells score criteria is needed for cellulitis patients, as historically the number of patients presenting with cellulitis and DVT is incredibly low. Miss Corby proposes service evaluation of patients' perceptions of their inpatient care. Overall, I feel that Miss Alderson's project has the potential to unlock a lot of valuable information.

Four presentations on AAA and EVAR surveillance. Mr Bredahl discussed the benefits of 3D ultrasound and it's increased accurately when compared to CT. Dr Modaresi focused on AAA and EVAR surveillance during the Covid-19 lockdowns between March 2020 and March 2021, and discovered that out of all of the patients on surveillance at his hospital, only one patient died due to aneurysm rupture. This patient was known to the doctors, and had repeatedly refused aneurysm repair. Prof. Antoniou discussed his review findings which showed that patients who were non-compliant with AAA / EVAR surveillance suffered no decreased long-term mortality compared to more compliant patients. These three presentations raise the question "Are we over scanning AAA/EVAR?" Mr Lee presented his findings regarding Brachial Flow-Mediated Dilatation and AAA repair. His findings suggest that FMD improves following AAA repair, and continues improving for long after.

The second afternoon session focused on iliofemoral thrombosis and it's treatment. Miss Wilton discussed mechanical thrombectomy procedures. Mr Greenstein presented the pros and cons of venous stent placement. Dr Schnatterbeck focused on the appropriate use and placement of iliac vein stents, and how to deploy them safely. Ms Galgerud spoke on the important role vascular ultrasound plays in the surveillance of vein stents and their continued patency.

A head of department meeting was held, discussing recruitment and employee training/retention. The main focus of discussion was the upcoming start of a new BSc apprenticeship, which would allow participants to study to their desired level of competence, then leave the program. Those apprentices could then be fully qualified to perform

examinations to their level of expertise, with the option to obtain more training later. SVT constitutional changes were proposed to allow for multiple levels of membership, as these technologists will not have AVS status. Discussions are in place for Society of Radiographers indemnity cover. A discussion/debate was held regarding hiring bonuses for recruiting new Vascular Technologists.

Thursday 24 November

The morning session began with recently completed study abstract presentations. Mr Knight discussed his retrospective study aimed at determining whether toe brachial indices could be used to detect significant and severe PAD. His findings were positive, and showed that TBI is a beneficial tool, with a TBI cut-off value of ≤0.23 for severe PAD. Mr Furlong discussed the findings of a survey of UK vascular labs that was conducted to improve the understanding of how peripheral bypass graft surveillance was practiced. SVS and ESVS provide differing recommendations for surveillance duration and timings. The findings of the survey showed that all laboratories who replied had specific surveillance guidelines in place, however they were highly variable across the UK. Mr Alexander performed an audit to determine the diagnostic yield of vascular ultrasound in kidney transplant patients, and identify significant risk factors which could be used as selection criteria to strengthen screening sensitivity. His study showed a low prevalence of carotid and iliac stenosis in these patients, however several risk factors were statistically significant, and it was therefore suggested that universal screening was inefficient, and selective screening based on risk factors should be encouraged instead. Mr Pason performed a service evaluation to determine whether iliofemoral vein stent patency was related to venous symptom resolution and improved quality of life. Questionnaires were sent to patients, which revealed that in-stent disease was not a predictor of venous symptoms or quality of life. Mr Hiscocks compared manual and automated ABPI techniques to determine whether autoABPI could be used as an accurate and primary examination method. His preliminary findings suggested that autoABPI was not sensitive or specific enough, and should not be used as the primary assessment for PAD. Miss Bishop discussed her findings regarding the effect of health literacy and socioeconomic deprivation on lower limb revascularisation outcomes. It was suggested that poorer health literacy was associated with a lower socioeconomic status, which was also a significant predictor for amputation. As health literacy is modifiable, and proper education could possibly improve potential health inequalities. Miss Davey discussed her study in which she used ultrasound to assess thoracic aortic aneurysms. She found that there was good visualisation of the aorta, with high sensitivity and specificity at 35 and 40mm, however specialist training is needed; this could potentially be used to assess TAA.

Prof Naylor spoke about the ESVS clinical practice guidelines on the management of carotid and vertebral artery disease. Guidelines recommend 2 forms of imaging prior to carotid endarterectomy, either US then CTA or MRA or a second US performed by a different sonographer. He suggested that NASCET calculations are inaccurate for patients with a large carotid bulb, but that ESCT calculations should be used instead. There has been a decline in they number of symptomatic carotid stenoses on a global scale, likely secondary to the improved uptake of statins used for treating PAD.

The second half of the morning was taken up with scientific presentations and case studies. Mrs Flint discussed her proposed project to determine the role/position of diagnostic imaging in the patient journey for those with active or healed venous ulceration, with the hope to enable a better understanding of service provision in the UK, identifying optimal/suboptimal practice, and improve patient care with the intention to optimise and standardise patient care pathways for venous leg ulcers. Mr Faqihi hopes to investigate arterial stiffness ad endothelial dysfunction roles in predicting AVF maturation outcomes. His findings suggest that Laser Flow Doppler and Intraoperative transonic readings show a strong indicator for predicting AVF maturation outcomes. Miss Parsons spoke about her service evaluation, which was conducted over 22 months, and included 65 patients. Patients with symptoms of giant cell arteritis were sent to a rapid access service, where they were seen in a central hub. At that point they received an US assessment of the temporal and axillary arteries. Since implementation of this service, the number of patients undergoing temporal artery biopsy has decreased. Mr Alexander discussed a case involving Leiomyosarcoma which was mistakenly diagnosed as femoral DVT. Vascular duplex examination of the femoral vein demonstrated mixed echogenic material, which was atypical for DVT, which also had channels of low resistant arterial flow within. MRI confirmed vascular tumour. Mr Sanoudos discussed his study to evaluate the feasibility, applicability, and accuracy of AI in detecting normal vs abnormal carotid artery disease. His study used 1 grey-scale image per patient taken at the bifurcation. The image was then cropped to 224 x 224 pixels and fed into the computer. His findings suggested that AI could be used as a stratification tool for tertiary referral, further imaging, and overall management. Mr Warner-Michel presented a case study regarding a 59-year-old woman who presented with multiple symptoms. US identified left ICA occlusion with an inflammatory halo. Further investigations revealed inflammatory stenosis of the right SFA and bilateral axillary arteries. This highlights the importance US can play in detecting giant cell arteritis in patients who are not on steroid therapy. Mrs Al-Haddad from NAAASP compared the use of inner to inner vs outer to outer AAA measurements. Her findings showed that there is a potential 3mm difference in diameter when using ITI vs OTO, which could delay a patient's referral to surveillance. Mr McKenna discussed a review of duplex versus clinical surveillance following endovascular treatment of lower limb PAD. ESVS 2019 guidelines suggest duplex surveillance @ 1-, 6-, and 12-months following stenting. The findings showed that patients undergoing duplex surveillance had a significant reduction in major amputations. Mr Furlong spoke about the impact of duplex surveillance on autogenous peripheral bypass grafts. This retrospective study indicated that the identification of graft threatening stenoses helped to inform treatment, and improved graft patency rates.

The afternoon session began with a presentation by Dr Deane on what is next for the vascular laboratory. Prof Cooper discussed AHCS equivalence. A debate was held between Emma Waldegrave and Rob James regarding whether STP graduates should attain SVT accreditation. While there was an argument that STP graduates should not need to obtain SVT due to their HCPC inclusion, the panel voted that accreditation was optimal. Assoc Prof Bredahl spoke about US education in Denmark and the ESVS. Dr Modaresi discussed the new document published by the SVT regarding recommended scan times and allowances, which is available on the SVT website for download. Mr McQuillan and Miss Woolery presented the importance of UKAS and IQIPS accreditation, and demonstrated where to go for further information and assistance.

The final session began with a presentation by Prof Rothwell regarding endarterectomy for newly symptomatic carotid artery disease. All evidence for intervention is based on 3 randomised trials from the 1980s and 1990s. Given the recent improvements in medical treatments, many have argued that these old trial results are no longer applicable, and that they should be repeated. Dr. Oates finished out the conference with a discussion of ultrafast ultrasound, real-time triplex mode, and real-time vector flow imaging.