



COUNCIL FOR VASCULAR ULTRASOUND COMMUNICATION

The International Practice of Vascular Ultrasound

A vascular ultrasound (VUS) professional is an individual who uses diagnostic ultrasound to assist in the diagnosis and treatment of a wide variety of vascular disorders. The practice of VUS varies among different countries. In many high income countries including the United States, UK, some European countries and some of the developed Asian countries, VUS studies are performed by vascular sonographers. The sonographers are usually non-medical doctor healthcare professionals who use ultrasound for diagnosis. They are an important member of the vascular team, as they work with a high level of independence. They prepare the patients for the diagnostic procedures, acquire high quality visual images, analyze the information, and summarize the technical findings. Physicians typically interpret the images and correlate the findings with the clinical presentation before drawing up the final report.

In many parts of Asia and some European countries, VUS studies are performed by medical doctors—often vascular surgeons, angiologists, and radiologists. The physicians also do the interpretation and the final reporting of the studies. What is important from the patient care point of view is the accuracy of the diagnostic studies. The interests of patient are best served by the provision of a service which offers maximal clinical benefit with trained personnel who have the appropriate skills for the performance and interpretation of ultrasound examinations.

The increasing applications of VUS imaging in medical practice, together with the increasing availability of affordable ultrasound scanners, means that more medical facilities are using ultrasound equipment in their diagnostic armamentarium, including in middle and low-income countries. Given the workforce dynamics in the developing world, it is critical to ensure that there are adequate numbers of skilled providers who can perform ultrasound imaging studies. This is likely to involve the training of sonographers and nurses, so it is important that consideration be given to setting up suitable training programs for them.

In North America and Europe, where sonographers currently practice VUS, there are comprehensive training programs. The common philosophy of these training programs is to promote best VUS practice through the accreditation of the programs, which requires high standards of knowledge and practical scanning skills. They are strictly regulated, with well developed schemes for the evaluation and accreditation of the trainees. To ensure consistency and patient safety, the sonographer exiting from the program demonstrates broad-based knowledge, good judgement, and ability to acquire and optimize the appropriate images and data for sonographic screening and interpretation by the interpreting physician.

In the countries where the VUS studies are conducted by medical doctors, the VUS training is principally part of their fellowship (or equivalent) training (vascular surgery or radiology fellowship). The fellows undertake training in the performance and interpretation of the VUS studies. But most developing countries do not have national regulatory bodies for the accreditation of the VUS programs, nor are

there any specific credentials for VUS practice. With more countries likely to adopt sonographers to perform the VUS studies, there is a strong need for requisite sonographer credentialing and accreditation. A move toward a standard international credentialing process could be useful in the best interests of vascular patients internationally.

The ASE promotes excellence in cardiovascular imaging internationally. Many of the guidelines for imaging have been translated into different languages, and the ASE welcomes international participants on committees, at scientific sessions and on its councils. We are committed to facilitating advancements in diagnostic imaging in both the developed and developing regions and welcome your input on new opportunities to foster international collaborations in the area of vascular imaging.



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STANDARDS FOR CAROTID STENOSIS DIAGNOSIS

There is currently considerable variability in the interpretative criteria that vascular ultrasound laboratories use to define carotid artery stenosis on duplex studies. The ASE is a sponsoring organization for the Intersocietal Accreditation Commission (IAC) Vascular Testing. The current ASE representatives to the IAC Vascular Testing Board of Directors are Susana Perese, RVT, FASE and Naomi Hamburg, RPVI, FASE.

The IAC Vascular Testing Board recently published a white paper on Carotid Stenosis Interpretation, which can be found at <http://intersocietal.org/vascular/forms/IACCarotidCriteriaWhitePaper1-2014.pdf>. The document notes that variable criteria for internal carotid artery (ICA) stenosis may lead to differing diagnoses for the same study interpreted at different labs. A survey by IAC in 2012 found that over two-thirds of laboratories support a single set of ICA diagnostic criteria. The IAC Vascular Testing Board of Directors went on to recommend the use of the Society of Radiologists in Ultrasound (SRU) Consensus criteria by laboratories without rigorous internally validated criteria. The IAC Board of Directors has formed a multidisciplinary Carotid Diagnostic Criteria committee to develop validated diagnostic criteria.

We would like your thoughts about a move toward standardized carotid diagnostic criteria. Does your laboratory currently use the SRU consensus criteria or a modification? Do you have your own internally validated criteria? How do you feel about standardized, validated carotid criteria for IAC accredited vascular laboratories? We are interested in your feedback. Please post your answers, questions, and concerns on the Vascular Council's discussion area at www.connect.ase.org.