#### **VILT** courses presented by



Muhammad Hasan, MBBCh, RPVI, RVT, RDMS, RDCS

Muhammad Hasan is currently the Director of the Department of Noninvasive Vascular Testing at Miami Cardiac & Vascular Institute of Baptist Hospital of Miami. He leads a team of 58 Board Certified Physicians, Registered Technologists and Registered Nurses.

In addition; working as learning/ education expert, course developer, clinical trainer, instructor, and reviewer for many national and international organizations such as Intersocietal Commission of Accreditation IAC, Society of Diagnostic Medical Sonography (SDMS), Society of Vascular Ultrasound (SVU), University of Texas (UT), Philips Clinical Education and more.

He is an adjunct professor at Nova Southeastern University, regularly published, given dozens of high profile societal lectures, and well respected as a vascular ultrasound leader and innovative pioneer.

### Courses

## Ultrasonography of Advanced Renovascular Disease (VASCSP001VILT)

This course for noninvasive vascular ultrasound technologists is developed to meet the need to standardize performance protocols and diagnostic criteria for noninvasive evaluation of renovascular disease. The course includes lectures and interactive case study. Program topics include a brief review of renal anatomy and physiology, pathophysiology of and sonographic evaluation of renal artery stenosis, chronic and endstage renal disease. Noninvasive vascular testing protocols and diagnostic criteria with case study correlations including DSA angiography, CTA and MRA will also be presented.

## Ultrasonography of Venous Thrombosis and Thromboembolism (VASCSP002VILT)

This 2-hour course includes lectures and interactive case presentations. Program topics include upper and lower extremity venous duplex sonography, comprehensive protocol for, evaluation of the upper and lower extremity peripheral veins, central veins of the head and neck, pelvic veins and the Inferior Vena Cava. This course provides a review of the essential protocols for venous duplex sonography for an experienced sonographer or a comprehensive overview for the beginner.

## The Basics of Transcranial Doppler Imaging (VASCSP003VILT)

This 2-hour program provides the essential skills needed for those performing Transcranial Doppler Imaging (TCDI). This course provides a review of the essential anatomy and acoutsic windows needed to perform TCDI examinations. Educational material will be presented in the form of detailed lectures as well as some correlative case study.

# 3D/4D Ultrasonography of Vascular Structures (VASCSP004VILT)

This 2-hour program provides an overview of the clinical value of the xPlane and 3D/4D imaging capabilities for improved accuracy, efficiency, and communication in vascular ultrasound imaging related to the XL14-3 transducer primarily. Educational material will be presented in the form of detailed lectures as well as some correlative case study.

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#### Courses

# Carotid Duplex Ultrasonography - Advanced Performance & Interpretation (VASCSP005VILT)

This 2-hour course for noninvasive vascular ultrasound technologists is developed to meet the need to standardize performance protocols and diagnostic criteria for noninvasive evaluation of extracranial carotid duplex ultrasound. The course includes lectures and interactive case study. Program topics include a brief review of extracranial and upper extremity anatomy and physiology, pathophysiology and sonographic evaluation of carotid artery stenosis, plaque morphology, as well as some of the tools that the EPIQ platform enables for increased clinical confidence. Noninvasive vascular testing protocols and diagnostic criteria with case study correlations including DSA angiography, CTA and MRA will also be presented.

### Noninvasive Diagnostic Lower Extremity Arterial Evaluation-Advanced Performance & Interpretation (VASCSP006VILT)

This 2-hour course includes lectures and interactive case presentations. Program topics include a brief review of the lower extremity arterial anatomy, physiology, pathophysiology, comprehensive protocol for ultrasound evaluation, case correlation with plethysmographic studies, hemodynamics of the peripheral arteries, diagnostic criteria with case study correlations including DSA angiography, CTA and MRA, as well as some of the tools that the EPIQ platform enables for increased clinical confidence.

## Hemodialysis Vascular Access: Pre-operative Vessel Mapping & Post-operative Surveillance (VASCSP007VILT)

This 2-hour course for noninvasive vascular ultrasound professionals who are performing or interpreting ultrasound for Hemodialysis access. The course includes lectures and interactive case study with program topics including a brief review of anatomy and physiology, pre-operative vessel mapping protocols for autogenous open and percutaneous fistula placement as well as graft placement, postoperative sonographic evaluation of the hemodialysis access, as well as some of the tools that the EPIQ platform enables for increased clinical confidence . Noninvasive vascular testing protocols and diagnostic criteria with case study correlations including DSA angiography, CTA and MRA will also be presented.

## Portal Hepatic Duplex Ultrasonography- Advanced Performance & Interpretation (VASCSP008VILT)

This 2-hour program provides an overview of the knowledge needed for those performing and interpreting hepato-portal vascular ultrasound exams both pre and post intervention. This course provides a review of the essential anatomy and physiology, sonographic appearance of normal and pathological findings, TIPS evaluation, as well as protocol and criteria for these evaluations. Educational material will be presented in the form of detailed lectures as well as some correlative case study