About This CME Teaching Activity

The CME activity provides detailed information on the evaluation of the normal fetal heart both from an anatomic and functional approach. Detailed information on the use of three-dimensional ultrasound in fetal echocardiography and cardiac imaging in the early gestation is presented. The activity also provides a comprehensive evaluation of various cardiac malformations, involving abnormalities of the cardiac chambers and the outflow tracts.

Target Audience

This CME activity will greatly benefit physicians in the fields of obstetric imaging, fetal echocardiography and pediatric cardiology. Residents in obstetrics and gynecology, as well as fellows in maternal fetal medicine and pediatric cardiology, will also benefit greatly. It should also prove valuable to those physicians wanting to gain a more in depth knowledge of fetal echocardiography.

Scientific Sponsor

Educational Symposia

Accreditation

Physicians: Educational Symposia is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

Educational Symposia designates this enduring material for a maximum of 16.75 AMA PRA Category 1 Credit(s)™. Physicians should claim only the credit commensurate with the extent of their participation in the activity.

SA-CME: Credits awarded for this enduring activity are designated “SA-CME” by the American Board of Radiology (ABR) and qualify toward fulfilling requirements for Maintenance of Certification (MOC) Part II: Lifelong Learning and Self-assessment.

All activity participants are required to pass a written or online test with a minimum score of 70% in order to be awarded credit. (Exam materials, if ordered, will be sent with your order.) All course participants will also have the opportunity to critically evaluate the program as it relates to practice relevance and educational objectives.

Educational Objectives

At the completion of this CME teaching activity, you should be able to:

- Discuss indications for fetal echocardiography, review existing guidelines and the approach to patient counseling.
- Optimize ultrasound equipment for the use of 2D, 3D and Doppler in fetal echocardiography.
- Review the normal fetal cardiac anatomy.
- Describe the abnormalities of the venous system of the fetal heart.
- Discuss in detail anomalies of the cardiac chambers to include septal defects and anomalies of the right and left ventricle.
- Review in detail anomalies of the outflow tracts to include transposition of great arteries, tetralogy of Fallot complex and aortic arch abnormalities.

No special educational preparation is required for this CME activity.
A CME Teaching Activity

2017 Fetal Echocardiography: Normal and Abnormal Hearts

Designated for SA-CME

This enduring material activity counts towards the SA-CME requirement for the ABR, similar to a SAM activity

Faculty

Alfred Abuhamad, M.D.
Professor and Chairman
Department of Obstetrics and Gynecology
Vice Dean for Clinical Affairs
Eastern Virginia Medical School
Norfolk, VA

Tracy L. Anton, BS, RDMS, RDCS
Ultrasound Practitioner
University of California, San Diego Maternal - Fetal Care and Genetics

Mary T. Donofrio, M.D., FAAP, FACC, FASE
Director, Fetal Heart Program and Critical Care Delivery Service
Director, Advanced Cardiac Imaging Fellowship
Children’s National Health System

James C. Huhta, M.D.
Professor of Pediatrics
University of Florida
Tampa, FL

Wesley Lee, M.D.
Professor of Obstetrics/Gynecology
Division Director, Women’s and Fetal Imaging
Baylor College of Medicine

Jack Rychik, M.D.
Robert and Dolores Harrington Endowed Chair in Pediatric Cardiology
Director, Fetal Heart Program

Elena Sinkovskaya, M.D., Ph.D.
Assistant Professor
Director of Research
Division of Maternal-Fetal Medicine
Department of Obstetrics & Gynecology
Eastern Virginia Medical School
Norfolk, VA
Program

Session 1
Indications for Fetal Echocardiography - New Updates
Wesley Lee, M.D.

Specialized Delivery Room Planning for Fetuses with CHD
Mary T. Donofrio, M.D., FAAP, FACC, FASE

Screening for CHD in Early Gestation
Elena Sinkovskaya, M.D., Ph.D.

The Normal Four-Chamber View
Wesley Lee, M.D.

Do You Know the Answer? Images/Clips
Alfred Abuhamad, M.D.
Elena Sinkovskaya, M.D., Ph.D.

Session 2
Ventricular Septal Defects: Frequency, Diagnosis and Genetic Associations
Elena Sinkovskaya, M.D., Ph.D.

Atrioventricular Septal Defects: Diagnosis & Management
Mary T. Donofrio, M.D., FAAP, FACC, FASE

Anomalies of the Tricuspid Valve: Tricuspid Atresia, Ebstein Anomaly and Tricuspid Dysplasia
James C. Huhta, M.D.

Hypoplastic Left Heart Syndrome
Jack Rychik, M.D.

Session 3
Hands-on Scanning - Session I: Fetal Cardiac Imaging in Early Gestations
Alfred Abuhamad, M.D.

Congestive Heart Failure in the Fetus: Diagnosis, Management and Prognosis
James C. Huhta, M.D.

Single Ventricle Anomalies: Prenatal diagnosis and Prognosis
Jack Rychik, M.D.

Fetal Arrhythmias: Approach to Diagnosis and Management
Elena Sinkovskaya, M.D., Ph.D.

Case Presentation 1
Elena Sinkovskaya, M.D., Ph.D.

Session 4
Hands on Scanning - Session II: Approach to the Assessment of Fetal Rhythm Disorders
Elena Sinkovskaya, M.D., Ph.D.

Panel Discussion - Question and Answer Session: Fetal Ventricular Anomalies and Arrhythmias
Faculty

Optimizing Fetal Cardiac Images: Gray Scale and Color Doppler
Tracy L. Anton, BS, RDMS, RDCS

Session 5
Normal Anatomy of the Outflow Tracts
Wesley Lee, M.D.

Tetralogy of Fallot and Double Outlet Right Ventricle
Mary T. Donofrio, M.D., FAAP, FACC, FASE

Transposition of the Great Arteries
Jack Rychik, M.D.

Do You Know the Answer? Images/Clips
Alfred Abuhamad, M.D.
Elena Sinkovskaya, M.D., Ph.D.
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Program

Session 6
Genetic Associations with Congenital Heart Disease
Alfred Abuhamad, M.D.

Corrected Transposition of the Great Arteries
Elena Sinkovskaya, M.D., Ph.D.

Anomalies of the Pulmonary Valve
James C. Huhta, M.D.

Segmental Approach to the Assessment of the Fetal Venous System
Alfred Abuhamad, M.D.

Session 7
Hands-on Screening - Session III: The Fetal Echocardiogram - Grey Scale and Color Doppler
Tracy L. Anton, BS, RDMS, RDCS

Fetal Ductus Arteriosus: the Good, the Bad and the Ugly
James C. Huhta, M.D.

Aortic Arch Anomalies
Jack Rychik, M.D.

The Normal and Abnormal Three Vessel Trachea View
Alfred Abuhamad, M.D.

Case Presentation 2
Wesley Lee, M.D.

Session 8
Hands-on Scanning - Session IV: The Use of Three and Four-Dimensional Ultrasound in Cardiac Imaging
Wesley Lee, M.D.

Panel Discussion - Question and Answer Session: Genetic Associations, the Great Arteries and Inflow Outflow Tracts
Faculty

Standard Fetal Echocardiography: Protocols and Techniques
Tracy L. Anton, BS, RDMS, RDCS

Fetal Cardiac Imaging in Early Gestation
Alfred Abuhamad, M.D.

Three and Four Dimensional Ultrasound in Cardiac Imaging
Wesley Lee, M.D.

Session 9
Brain-Heart Relationship of Fetal Cardiac Malformations
Mary T. Donofrio, M.D., FAAP, FACC, FASE

Cardiac Function Techniques: Tissue Doppler, M-mode and Speckle Tracking
Elena Sinkovskaya, M.D., Ph.D.

Hands-On Demo
Alfred Abuhamad, M.D.

Panel Discussion - Question and Answer Session: Early Gestational Imaging and Advanced Imaging Techniques
Faculty