

7:00 am – 10:00 am

Location printed on ticket



STS University

Course 1: Valve-Sparing Aortic Root Replacement*Course Director: Duke E. Cameron, Baltimore, MD*

This course will provide a comprehensive review of valve sparing aortic root replacement (VSRR) surgery, from basic anatomy and physiology of the aortic root to technical aspects of the procedure and its evolution and modifications. Special attention will be given to the role of the remodeling versus reimplantation procedures, sizing and choice of various root prostheses, and special clinical circumstances (bicuspid aortic valve, late aortic dilatation after congenital heart operations, and pediatric aneurysm). A wet lab will provide the opportunity for course participants to meet with experts for detailed and personalized sessions on technical pointers and will highlight the many variations and modifications of the procedure.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Describe the indications, evolution, results, and technical version of VSRR.
2. Explain anatomy and physiology of aortic root.
3. Discuss leaflet repair and anuloplasty methods.
4. Describe special circumstances when VSRR may or may not be appropriate.

Course 2: Endoscopic Management of Barrett's Esophagus*Course Co-Directors: Thomas J. Watson, Rochester, NY and Daniel L. Miller, Atlanta, GA*

FINANCIAL DISCLOSURE D.L. Miller, speaker, Ethicon Endo-Surgery, scientific advisory board, Synovis Surgical Innovations, speaker, Power Medical

Barrett's esophagus (BE) is a common pathologic finding on upper endoscopy and is a pre-malignant condition. A subset of patients with BE will progress to develop dysplasia or, of most concern, invasive adenocarcinoma. A number of endoscopic technologies and techniques are evolving to eliminate BE with or without dysplasia and offer the potential to avoid subsequent esophagectomy for high-grade dysplasia or cancer. The practicing thoracic surgeon should be well-versed in the appropriate application of such procedures, including the relative indications, contraindications, efficacy, and risks. This course is intended to review the experience to date regarding the outcomes of these endoscopic therapies, comparing them to traditional esophagectomy, as well as to provide hands-on exposure to the devices and their application in various animate and inanimate models.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Discuss issues relevant to patient selection for endoscopic treatment of Barrett's Esophagus.
2. Describe the options available for mucosal resection (ablation of Barrett's Esophagus).
3. Utilize various technologies available for endoscopic treatment of Barrett's Esophagus.

Course 3: Advanced Skills Set for Cardiothoracic Residents*Course Director: Bruce W. Lytle, Cleveland, OH*

This course will provide training in specific advanced skills for residents training in cardiac surgery. Senior surgical faculty with specialization in coronary and valvular heart disease will provide didactic and hands-on laboratory experience. Didactic sessions will concentrate on the technical aspects and pitfalls associated with reoperative coronary artery bypass, aortic valve replacement, and mitral valve repair. The faculty will share lessons they have learned and discuss surgical procedures in a how-to-do-it algorithm format. Hands-on laboratory experience will include new technologies in the performance of proximal and distal coronary anastomoses, performance of a variety of mechanical and bioprosthetic aortic valves, and performance of a variety of new and classic mitral valve repair techniques.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Describe the anatomy of the aortic root.
2. Discuss the choices for aortic valve replacement.
3. Describe the technical aspects of aortic valve replacement.
4. Describe the technical aspects of aortic root operations.

Course 4: Thoracoscopic Lobectomy*Course Co-Directors: Thomas A. D'Amico, Durham, NC and Robert J. McKenna, Jr., Los Angeles, CA*

FINANCIAL DISCLOSURE T.A. D'Amico, speaker, Covidien, consultant, Scanlan; R.J. McKenna, teach VATS lobectomy course each month, Ethicon

This course is designed to demonstrate the effectiveness of thoracoscopic lobectomy. The session will include several didactic lectures summarizing the important advantages and reviewing the technical aspects of thoracoscopic lobectomy. This session will include an interactive discussion session, designed to address critical conceptual and technical aspects of the strategy and to facilitate the adoption of this technique. Following the didactic session, there will be a practical laboratory experience utilizing a novel tissue model and state-of-the-art thoracoscopic instrumentation, providing experience with thoracoscopic lobectomy under close supervision with experienced proctors.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Discuss the definition, strategies, and instrumentation needed for a complete thoracoscopic anatomic lobectomy.
2. Comprehend the potential outcomes benefits of thoracoscopic resection as compared to thoracotomy.
3. Discuss the strategies of thoracoscopic hilar dissection and the management of difficult clinical situations.
4. Assess the utility of thoracoscopic lobectomy to optimize outcome for patients with early stage non-small cell lung cancer.
5. Obtain practical experience with a novel model, learning the appropriate operative technique associated with successful completion of thoracoscopic lobectomy.



Course 5: Tracheobronchial Interventions: New Tools for the Thoracic Surgeon*Course Director: Sudish Murthy, Cleveland, OH*

Successful management of tracheobronchial disease requires a thorough understanding of the techniques and tools available for intervention, including familiarity with both rigid and flexible applications. With a fundamental grasp of these basics, a variety of diseases can be effectively diagnosed and managed. Such processes include: malignant and benign tracheal stenosis, emphysema, difficult airway control, and lung cancer.

This course is designed to introduce both thoracic surgeons and interventional pulmonologists to innovative approaches used in the diagnosis and management of tracheobronchial diseases. Course attendees will have the opportunity to gain hands-on experience with interventional bronchoscopic techniques, rigid bronchoscopy, endobronchial ultrasound, navigational bronchoscopy, and airway control with direct laryngoscopy. Specific work stations will include flexible bronchoscopy simulator; endobronchial emphysema therapy; endobronchial ultrasound (EBUS); navigational bronchoscopy; rigid bronchoscopy; and proximal airway control.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Perform flexible bronchoscopy.
2. Deploy endobronchial emphysema valves.
3. Discuss endobronchial ultrasound.
4. Successfully place a rigid bronchoscope.
5. Control the proximal airway with a suspension laryngoscope.

Course 6: Mitral Valve Repair: Minimally Invasive Approaches and Repair Techniques*Course Director: A. Marc Gillinov, Cleveland, OH*

FINANCIAL DISCLOSURE A.M. Gillinov, principal investigator for clinical trials, Medtronic, principal investigator for clinical trials, St. Jude Medical, principal investigator for clinical trials, Sorin Group, speakers bureau, Medtronic, speakers bureau, St. Jude Medical, speakers bureau, Edwards Lifesciences, minority equity interest, Viacor, consultant, Edwards Lifesciences, consultant, St. Jude Medical, consultant, Medtronic

This course on surgical mitral valve repair provides the participant the most up-to-date information on approaches to the mitral valve and on basic and advanced techniques for mitral valve reconstruction. Surgeons with expertise in minimally invasive surgery illustrate mini-thoracotomy, partial sternotomy and robotic approaches to the mitral valve. Basic and advanced techniques for posterior leaflet repair (quadrangular and triangular resection, sliding repair, folding plasty) are covered, as well as approaches for anterior leaflet repair (chordal replacement, chordal transfer, edge-to-edge repair).

Learning Objectives: Upon completion of this program, participants will be able to:

1. Choose an appropriate minimally invasive approach to mitral valve surgery.
2. Employ standard and advanced repair techniques to correct prolapse.

Course 7: Atrial Fibrillation Surgical Ablation: Concomitant and Stand-Alone: Why, How and Results*Course Director: Patrick M. McCarthy, Chicago, IL*

FINANCIAL DISCLOSURE P.M. McCarthy, advisory board, Medical CV, consultant, Medtronic

This course will provide physicians and associated professionals information on the latest surgical techniques for the treatment of atrial fibrillation. Experts will guide through the current recommendations for surgical treatment options and patient management. The presentations will share results of clinical trials and discuss the risks associated with pre-operative atrial fibrillation. Patient selection criteria to match the patient to the approach will be reviewed. Techniques for treatment of atrial fibrillation will include the following approaches: classic Maze, atrial fibrillation surgery with concomitant cardiac operations, and stand-alone atrial fibrillation procedures via bilateral thoracotomy. Panel discussion will provide dialogue with experts on when and how to perform surgical treatment of atrial fibrillation with concomitant procedures. Participants will be given hands-on instruction with a variety of the latest energy courses available to perform atrial fibrillation surgery. Wet lab stations will provide participants the ability to review anatomical targets and create lesions from various energy sources and examine the resulting scar lines.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Discuss issues regarding management of patients undergoing surgical treatment of atrial fibrillation.
2. Describe the adverse effects of pre-operative atrial fibrillation and how to determine surgical treatment options.
3. Evaluate the classic Maze and the stand-alone, minimally invasive surgical techniques to treat atrial fibrillation.
4. Evaluate the state of the art energy sources for ablation lesions via hands-on analysis of equipment.



Course 8: Mechanical Circulatory Support for Cardiogenic Shock - Adult*Course Director: Edwin C. McGee, Chicago, IL***FINANCIAL DISCLOSURE** E.C. McGee, honoraria for speaking January 2008, CardiacAssist**REGULATORY DISCLOSURE** This presentation will describe the use of VentrAssist and Heartware whose FDA status are investigational.

Many non-transplant programs see patients with acute cardiogenic shock and chronic heart failure. The goal of this course is to discuss the mechanical assist devices currently available for the treatment of acute cardiogenic shock and chronic heart failure. Device selection, surgical techniques, patient management and outcomes for acute MI, postcardiotomy shock and myocardial recovery will be discussed. Several hands-on stations will demonstrate the differences and allow the participants to perform left ventricular, left atrial and pulmonary vein cannulation with temporary devices for acute cardiogenic shock. Continuous and pulsatile flow pumps will be functioning on mock loops for observation and demonstration. The current devices, surgical techniques, outcomes and requirements for mechanical circulatory support for chronic heart failure will be reviewed and demonstrated in mock loops. At the completion of the course, the participant will have additional knowledge and hands-on experience with continuous flow and pulsatile pumps for both temporary and chronic support.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Describe the differences between pulsatile and continuous flow pumps.
2. Perform LV apex cannulation.
3. Perform LA and pulmonary vein cannulation.
4. Discuss current outcomes for acute cardiogenic shock, bridge to transplant and destination therapy.

Course 9: Balloons, Stents, Devices and Hybrid Procedures for Pediatric Cardiac Surgeons*Course Director: Gordon A. Cohen, Seattle, WA***REGULATORY DISCLOSURE** This presentation describes the use of the Berlin Heart Excor whose FDA status is investigational, and stents which are FDA approved for the off-label use of these mechanical devices as a bridge to transplant stenting for hybrid procedures.

The course is designed to familiarize pediatric cardiac surgeons with various technologies that, in the past, have been limited to the cardiac catheterization laboratory. With the emergence of hybrid procedures involving both surgical and interventional cardiology techniques, there is an increasing need for pediatric cardiac surgeons to be aware of the different modalities and equipment that interventional cardiologists use in the cardiac catheterization laboratory. An understanding of the different options allows for the collaborative design of "hybrid procedures" combining the unique approaches offered by the surgeon and interventional cardiologist. In some centers where such a collaborative approach may not be possible, this course may help to expand the options available to the cardiac surgeon.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Discuss the complementary role that transcatheter treatments offer in the care of patients with congenital heart disease.
2. Identify specific transcatheter devices including indications, risks, benefits and alternatives.
3. Discuss which congenital heart conditions are amenable to hybrid approaches.
4. Outline the requirements to establish a successful hybrid program for congenital heart disease.

Course 10: Advanced Coronary Revascularization Techniques*Course Co-Directors: John D. Puskas, Atlanta, GA and Thomas A. Vassiliades, Atlanta, GA***FINANCIAL DISCLOSURE** J.D. Puskas, principal investigator, Medtronic, principal investigator, Maquet, speaker/honoraria, Medtronic, speaker/honoraria, Maquet, consultant/advisory board, Medtronic, consultant/advisory board, Maquet

This course on advanced coronary artery bypass techniques will provide an update on recent advances in surgical management of coronary artery disease through didactic and hands-on sessions. The course will consist of five 12-minute didactic presentations on off-pump coronary artery bypass grafting, multivessel small thoracotomy CABG, endoscopic atraumatic coronary artery bypass, anastomotic connectors, totally endoscopic coronary artery bypass, and multivessel small thoracotomy CABG. Following the didactic portion of the program a hands-on wet lab will provide six 20-minute intense interactions with a leading technology and/or technique.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Describe indications for and techniques of off-pump CABG, endoscopic, atraumatic CABG, multivessel small thoracotomy CABG and totally endoscopic CABG.
2. Describe the clampless proximal anastomotic devices and automated distal anastomotic device presently available on the market and how they are used.
3. Describe the indications for and techniques of endoscopic harvest of radial arteries and saphenous veins for CABG.
4. Describe the indications for and techniques of bilateral ITA harvest/grafting.



Course 11: Cardiopulmonary Bypass Update*Course Director: Joseph F. Sabik, III, Cleveland, OH***FINANCIAL DISCLOSURE** J.F. Sabik, III, speaker bureau, Medtronic

Cardiopulmonary bypass (CPB) remains a widely applied and necessary tool in cardiac surgery. Despite advances in off-pump cardiac surgery and the effects of percutaneous coronary interventions on the volume of coronary artery bypass surgery, the successful application of CPB methods has been, and predictably will continue to be, a mainstay of cardiac surgery. Unfortunately, didactic education and hands-on experience in the elements of CPB is lacking in many cardiothoracic residency programs. Furthermore, significant advances continue to occur in the field of CPB, making it challenging for the practicing cardiac surgeon to maintain an up-to-date, current working knowledge of the technical and scientific advances. This issue is perhaps most striking in the areas of minimally invasive cardiac surgery, pediatric cardiac surgery, and neurologic monitoring during CPB. This course is designed for recently certified residents, seasoned cardiac surgeons, and perfusionists. The goals include developing a basic understanding of “standard” CPB, reviewing current advances in the use of CPB in special circumstances including minimally invasive and including robotic cardiac surgery and pediatric cardiac surgery, experiencing dealing with CPB emergencies, and understanding the use of neurologic monitoring during CPB. This course will emphasize small group, hands-on instruction by experts in these areas.

Learning Objectives: Upon completion of this program, participants will be able to:

1. Identify the components of, and be able to set up, a basic cardiopulmonary bypass circuit.
2. Apply specialized cardiopulmonary bypass and monitoring techniques for selected clinical situations (e.g., minimally invasive procedures, neurologic monitoring).
3. Describe available options and techniques to facilitate cardiopulmonary bypass for pediatric cardiac surgery.
4. Identify and deal with emergencies during cardiopulmonary bypass.

Course 12: RFA, Stereotactic Radiosurgery and Brachytherapy: Methods to Treat NSCLC in Patients with Co-Morbidities That Prevent Lobectomy*Course Director: Bryan F. Meyers, St. Louis, MO*

The course will be a thorough introduction to interventions that are possible to treat non-small cell lung cancer in patients who are clinical stage I but who have comorbidities that make lobectomy a high risk proposition. An introduction will place some recommendations on selecting patients who would be considered too high risk for lobectomy. To follow will be an introduction of three modalities: sub-lobar resection with brachytherapy, stereotactic radiation therapy and radiofrequency ablation. In each of these modalities, there will be a didactic description of the technique and the outcome, but emphasis will be placed on the actual requirements placed on a thoracic surgeon desiring to perform these procedures. The final half of the three-hour course will be devoted to hands-on sessions allowing the course participants the ability to prepare and place brachytherapy seeds at the margins of sub-lobar resections, to practice making RFA lesions with leading versions of the available technology, and to gain familiarity of the basics of stereotactic radiation treatment planning with an emphasis on what would be required from a surgeon to be an active contributor and to be compensated for that involvement. Course instructors will be asked to share specific techniques in the therapies described, but also asked to discuss steps taken that led to the institution of such programs at their institutions. There will be an acknowledgement that in many cases the development of the program is by far more challenging than the execution of the specific intervention.

Learning Objectives: Upon completion of this program, participants will be able to:

1. State the commonly accepted indications for sub-lobar resection with or without brachytherapy for patients with stage I non-small cell lung cancer.
2. Describe the general concept of treatment planning for stereotactic radiosurgery for early stage lung cancer.
3. Comprehend the general concepts of radiofrequency ablation and make an informed decision about the value of beginning a program offering such therapy.
4. Compare and contrast the two non-surgical therapies (SRS and RFA) and develop personal algorithms about their use in non-surgical candidates with stage I lung cancer.

