

OPERATING ROOMS OF THE FUTURE ©

Hybrid Technologies

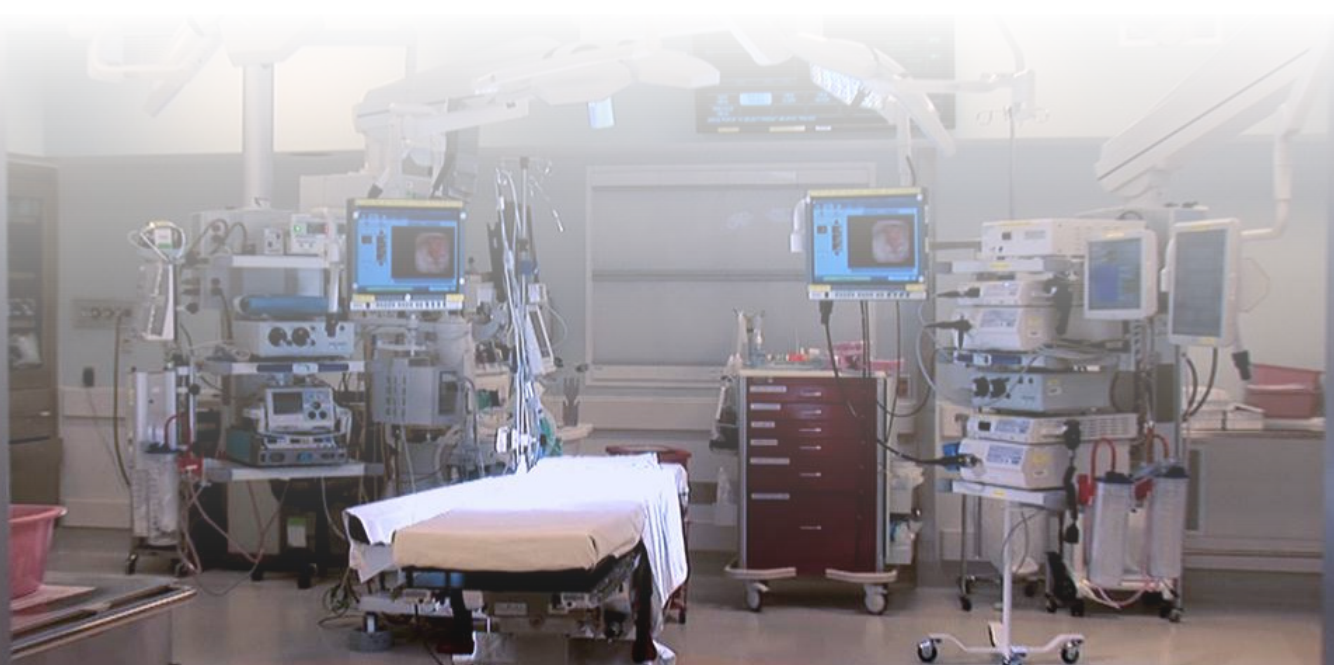
May 2 – 4, 2010

Metro Toronto Convention Centre

See what the future holds
for cardiac and general thoracic surgery



PROGRAM GUIDE



Operating Rooms of the Future: Hybrid Technologies©

May, 2010

Welcome to the **Operating Rooms of the Future: Hybrid Technologies©** exhibit. These two multipurpose interventional operating room suites demonstrate integrated digital imaging diagnostics, radiological, catheterization and surgical capabilities and truly exemplify what the future offers for cardiac and general thoracic surgery.

Hybrid operating rooms allow surgeons and their colleagues to perform combined open, minimally invasive, image guided and/or catheter-based procedures in the same OR in the same operative setting. These interdisciplinary, multifunctional rooms bring technology to the patient with the goals of maximizing patient care, improving overall outcomes and decreasing time in the hospital. The juxtaposition of technologies allow for innovation in surgical approaches and procedures unimaginable till now.

The hybrid OR is not just the combination of equipment and technology into one procedural suite, but rather it is the embodiment of a collaborative working environment. This environment fosters the ability to think of new ways to care for patients requiring complex procedures.

Partnerships between the different OR vendors is key to getting an optimized room layout. This is what we are trying to show in the ORs of the Future; multiple vendors in one room that combine their products into one environment with a seamless workflow.

We hope you will spend some time in the exhibit and take the opportunity to get valuable first-hand experience in the benefits that hybrid technologies can offer. To make this a true learning experience for you, proctors will be stationed in the ORs during program breaks, lunches, etc. to guide you through the hybrid ORs and to answer any questions that you may have about the equipment displayed.

We wish to thank Olympus, Philips, Siemens and the other participating companies for collaborating with AATS to construct the **Operating Rooms of the Future: Hybrid Technologies©** exhibit here at the Annual Meeting.

In conjunction with the **Operating Rooms of the Future: Hybrid Technologies©** exhibit, on Monday and Tuesday we are offering a course on Building the Hybrid OR of the Future©. The program will explain what a hybrid operating room is, what it can accomplish for a hospital, and will provide a road map for how to install hybrid operating rooms at a hospital. A complete agenda follows on page 8.

Enjoy the **Operating Rooms of the Future: Hybrid Technologies©** exhibit.

Sincerely,

Raphael Bueno, MD
Associate Chief
Division of Thoracic Surgery
Brigham and Women's Hospital

&

John Byrne, MD
Chairman
Department of Cardiac Surgery
Vanderbilt Heart & Vascular Institute



The American Association for Thoracic Surgery wishes to thank the following companies for helping to make the Operating Rooms of the Future: Hybrid Technologies© possible.

MAJOR CONTRIBUTORS



PARTICIPATING COMPANIES

- Applied Fiberoptics
- ATS Medical
- ClearCount Medical Solutions, Inc.
- Ethicon Endo-Surgery
- Genesee Biomedical
- ImaCor Inc.
- Medela, Inc.
- Plasma Surgical
- Scanlan International, Inc.
- Somanetics Corp.
- superDimension Inc.
- Terumo Cardiovascular Systems

OR OF THE FUTURE PROCTORS

The following people have donated their time to guide you through the hybrid OR.

- Raphael Bueno, MD, Brigham & Women’s Hospital
- John Byrne, MD, Vanderbilt Heart & Vascular Institute
- Steven D. Cassivi, MD, Mayo Clinic
- Hiran Fernando, MD, Boston Medical Center
- Gregory Fontana, MD, Cedars-Sinai Medical Center
- Marie Hasselblad, RN, Vanderbilt Heart & Vascular Institute
- Jeff High, RN, Vanderbilt Heart & Vascular Institute
- Steven J. Hoff, MD, Vanderbilt Heart & Vascular Institute
- Shaf Keshavjee, MD, Toronto General Hospital
- Michael Liptay, MD, Rush University Medical Center
- David Mason, MD, The Cleveland Clinic
- Georg Nollert, MD, Siemens AG
- Bernard Park, MD, Memorial Sloan-Kettering Cancer Center
- Alec Patterson, MD, Washington University
- Vinod Thourani, MD, Emory University School of Medicine
- Mathew Williams, MD, New York-Presbyterian/Columbia
- Kazuhiro Yasufuku, MD, Toronto General Hospital

PARTICIPATING COMPANIES – PRODUCT LISTINGS

APPLIED FIBEROPTICS

100 E. Chestnut Avenue Chicago, IL 60559 USA

Gemini Plus Camera Headlight -- Capturing the surgeons viewing perspective of surgery for the entire surgical team to observe, educate, and record. The camera and light can be manipulated as one with an auto-focus range of 12-36 inches. Providing television video output and USB viewing and record-ability simultaneously.

www.vitalcor.com

ATS MEDICAL, INC.

3905 Annapolis Lane, Suite 105, Minneapolis, MN 55447 USA

ATS Medical will feature the ATS CryoMaze® Ablation System which is the only surgical cardiac ablation option that can safely and effectively complete all lesions in the "gold standard" Cox-Maze III procedure with a single product and one energy source.

www.atsmedical.com

CLEARCOUNT MEDICAL SOLUTIONS

101 Bellevue Road, Suite 203, Pittsburgh, PA 15229 USA

SmartWand-DTX™: Detection You Can Count On (seen in General Thoracic ORF)

For the most comprehensive detection system, ClearCount offers an affordable and fully reusable detection system that can also be used to validate sponge counts. The wand locates sponges in the patient or OR, providing type and quantity, and may be useful in validating manual counts.

SmartSponge® System: The Only Count Reconciliation and Detection System (seen in Cardiac ORF)

The SmartSponge System is a revolutionary device for the purpose of reconciling surgical sponge counts. The system is used to identify RFID tagged surgical items that are scanned in before the case, then counted out during and after the case. The system also features a reusable SmartWand that may be used to locate a missing sponge within the patient or OR.

www.clearcount.com

DRAEGER MEDICAL INC.

3135 Quarry Road, Telford, PA 18969 USA

Developed for facilities where space is a premium, Dräger's Fabius Tiro® anesthesia machine combines the latest ventilation and gas delivery technologies with an ergonomic and compact design. Adding the functionality of the Dräger Infinity® patient monitoring allows you to create a workplace environment that is a sound investment into the future.

www.draeger.com

ETHICON ENDO-SURGERY, INC.

4545 Creek Road, Cincinnati, Ohio 45242 USA

The Ethicon Endo Surgery® Rotating Endoscopic Scissors are a monopolar electrosurgical instrument intended for cutting, dissecting and cauterizing soft tissue during endoscopic procedures. The Ethicon Endo-Surgery® Flexible Maryland Dissectors has application in endoscopic procedures to facilitate dissection of tissue. The Ethicon Endo-Surgery® Flexible Bipolar Hemostasis Forceps are intended for use in endoscopic procedures where fusion of vessels or tissue bundles is performed. The device can be used on vessels up to 3 mm and bundles as large as will fit in the jaws of the instrument. The forceps are designed for use with an ERBE VIO Electrosurgical Generator (ESU) System. It is not recommended for use with other manufacturer's generators. The Echelon Flex™ Endopath® Stapler – designed to respect tissue. System-wide tissue



compression and optimal staple formation, even in thick tissue. The strength of the solid, one-piece, precision-machined anvil construction enables Echelon Flex to deliver continuous system wide compress in a wide range of tissue thickness.

www.ethiconendo.com

GENESEE BIOMEDICAL, INC.

1308 S. Jason Street, Denver, CO 80223 USA

Innovation Changing Life The Genesee BioMedical Sternal Valve Retractors are unique versatile devices that minimize patient injury while maximizing exposure. The curved rack with hinged arms allow the retractor to hug the patient's body unobtrusively and open the sternum in a nature curvature protecting the ribs.

www.geneseebiomedical.com

IMACOR, INC.

50 Charles Lindbergh Blvd., Suite 200, Uniondale, NY 11553 USA

ImaCor showcases the ClariTEE™ probe, a miniaturized, indwelling transesophageal echocardiography monitoring system that allows direct visualization of cardiac size and function in the ICU up to 72 hours. The ClariTEE probe allows intensive care clinicians to easily assess cardiac preload, intravascular volume status and left ventricular systolic function over time.

www.imacormonitoring.com

MAQUET, INC.

45 Barbour Pond Drive, Wayne, NJ 07470 USA

MAGNUS is an OR table system designed to improve the entire workflow and efficiency in the OR. Its modular table top can be easily adapted to support any kind of surgery. The extreme range of adjustments (80 degree trend/reverse trend and 45 degree of tilt) makes this OR table system ideal for minimally invasive surgery. The advanced patient transport system helps to minimize patient transfer. The new carbon fiber table with highly accurate synchronized equipment and real time control offers a fully synchronized Hybrid OR. MAGNUS enables the fusion of a cathlab and an operating theater. The patient's real anatomy can be considered during the surgery and is designed to minimize complications and less surgery revisions by using the synergy of Interventional Cardiology & Cardiac Surgery.

www.maquet.com

MEDELA INC.

1101 Corporate Drive, McHenry, IL 60050 USA

Medela Thopaz sets new standards in thoracic drainage therapy by integrating the suctions source with a digital display of the therapy's progress. The digital monitoring of the treatment alerts healthcare professionals in the early detection of any problems while providing objective data for rapid decision making. This revolutionary compact system empowers physicians to safely fast tract patients from the operating room to discharge from the hospital.

www.medela.com

MEDTRONIC, INC.

7611 Northland Drive N., Minneapolis, MN 55443 USA

We're committed to *Innovating for Life* by pushing the boundaries of medical technology. Medtronic, global leader in medical technology, offers a comprehensive product portfolio to support the Hybrid OR of the Future; transcatheter and surgical tissue valves, endovascular stent graft systems, surgical ablation devices, OPCAB, cannulae and perfusion products.

www.medtronic.com

OLYMPUS AMERICA, INC.

3500 Corporate Pkwy, Center Valley, PA 18034 USA

Olympus offers the most versatile endoscopic video system, EVIS EXERA II. Compatible with any Olympus scope, rigid or flexible, this universal platform can be used with the EndoEYE® -- the world's first 5 mm deflatable-tip video laparoscope. Integrate further with ENDOALPHA™, and control your OR equipment from a single touch screen.

www.olympussurgical.com

PHILIPS HEALTHCARE

22100 Bothell-Everett Highway, Bothell, WA 98021 USA

Philips Allura Xper cardiovascular X-ray systems are designed to deliver enhanced imaging with superb performance for all cardiac projections, and our iE33 ultrasound system with Live 3D TEE and QLAB can assist interventional procedures and provide comprehensive quantitative information to support critical decisions. Our cardiology informatics solutions help you manage patient information throughout the cardiovascular care continuum.

www.medical.philips.com/us/company/aboutus

PLASMA SURGICAL, INC.

1125 Northmeadow Parkway, Suite 100, Roswell, GA 30076 USA

PlasmaJet® technology sets a new standard in surgery, Plasma Surgery. Harnessing aerospace technology and the unique properties of plasma, PlasmaJet offers surgeons a multi-functional tool for clean, precise surgical cutting and coagulation on tissue and bone with minimal collateral damage. The PlasmaJet® is also used for aerostasis on lung tissue and thermal surgical tumor destruction.

www.plasmasurgical.com

SCANLAN INTERNATIONAL, INC.

1 Scanlan Plaza, St. Paul, MN 55107

For almost a century, Scanlan International has been a leader working with surgeons to provide high quality, precision surgical instruments. Hybrid/ Operating Rooms of the Future will include SCANLAN® instruments and Single-use products for minimally invasive cardiac (MICS), thoracoscopic (VATS), beating heart CABG, and conventional cardiac, thoracic and vascular procedures.

www.scanlaninternational.com

SIEMENS MEDICAL SOLUTIONS USA, INC.

51 Valley Stream Parkway, Malvern, PA 19355 USA

Imaging System: Artis zeego with Large Display: Learn all about the exceptional flexibility and unique imaging applications with our Artis zeego, the first-ever interventional C-arm system to employ robotic technology. Witness live our full-color 56-inch High Resolution Artis zee Large Display that lets you view multiple inputs simultaneously to give you the "whole picture" directly at bedside. Coupled with just ONE monitor, ONE keyboard and ONE mouse in the control area, this really is the OR of the Future.

Cardiac Ultrasound System: Angiographic imaging will be supported by ACUSON SC2000™ volume imaging ultrasound system which represents the latest in the evolution of echocardiography delivering instantaneous, full-volume images of the heart in one single heartbeat – without gating or stitching.

Imaging Informatics: Axiom Sensis will provide Hemodynamic Monitoring - an essential component of any Cardiac Hybrid OR or Cardiac Cathlab. Axiom Sensis is integrated with both Artis zeego and syngo Dynamics to provide seamless data exchange and reporting. syngo Dynamics is a multimodality dynamic image review, archiving, and reporting system that draws on Siemens' long history of expertise in cardiology. The



system has been designed to help caregivers provide optimal patient care by improved efficiency of clinical procedures through intuitive, evidence-based reporting, improved workflow and fast, easy access to important patient data.

Point of Care Diagnostic Systems: RAPIDPoint 400/405 Analyzers deliver blood gas and electrolyte results in just 60 seconds with central lab accuracy right at the point of care. The Stratus® CS Acute Care™ Diagnostic System delivers lab-quality cardiac marker results at the point-of-care. Reliable cardiac marker results, right where you need them.

www.siemens.com/surgery

SKYTRON

5085 Corporate Exchange Blvd. SE, Grand Rapids, MI 49512 USA

Skytron and Philips will be exhibiting a state-of-the-art hybrid room suite, creating a versatile environment which saves clinicians critical time and flexibility to perform open and complex MIS procedures in the same room. The combination of Skytron's vast OR experience with Philips' expertise in interventional x-ray imaging provides optimal solutions for surgical and image guided thoracic and cardiovascular procedures.

www.skytron.us

SOMANETICS CORPORATION

1653 East Maple Road, Troy, MI 48083 USA

Somanetics INVOS System is the clinical reference standard in cerebral/somatic oximetry. Its regional oxygen saturation (rSO2) has been proven to improve outcomes after surgery in patients >2.5 kg. rSO2 is a reading of site-specific brain/body tissue perfusion adequacy.

www.somanetics.com

STERIS CORPORATION

5960 Heisley Road, Mentor, OH 44060 USA

An important part in every OR are the OR lights and booms. STERIS will be providing their HD360° Hybrid Suite solution featuring superior illumination from their Harmony LED surgical lighting and visualization system along with flexible and customized Equipment Management Systems (booms) and Harmony OR Integration to enable a full range of procedural capability all in one suite.

www.steris.com/healthcare/surgical

SUPERDIMENSION

161 Cheshire Lane, Suite 100, Plymouth, MN 55441 USA

The superDimension i•Logic™ System is the most advanced and complete lung navigation system. Using GPS-like navigation, i•Logic has the ability to diagnose, stage, and prepare to treatment lung lesions in a single procedure enhancing efficiency and improving patient outcomes.

www.superDimension.com

TERUMO CARDIOVASCULAR SYSTEMS

6200 Jackson Road, Ann Arbor, MI 48103 USA

Vasutek Terumo's Gelweave™ gelatin-sealed woven branched grafts with radiopaque markers suitable for debranching and associated hybrid procedures¹

Terumo® Advanced Perfusion System¹ heart-lung machine with ROCSafe™ Hybrid Perfusion System.

1 Indication and products subject to local regulatory approval.

www.terumo-cvs.com

BUILDING THE HYBRID OR OF THE FUTURE – AGENDA

May 3, 2010 -- Monday, Afternoon Sessions

Constitution Room 107

- 2:00 p.m.-2:15 p.m. **Introduction**
David Sugarbaker, MD, Chief, Division of Thoracic Surgery, Brigham & Women's Hospital, Boston, MA, Raphael Bueno, MD, Associate Chief, Division of Thoracic Surgery, Brigham and Women's Hospital, Boston, MA, and John Byrne, MD, Chairman, Department of Cardiac Surgery, Vanderbilt Heart & Vascular Institute, Nashville, TN
- 2:15 p.m.-2:45 p.m. **Making the Case for a Hybrid OR**
Patricia Wynn, Senior Consultant of Strategic Research, The Advisory Board Company, Washington, DC, and Joseph E. Bavaria, MD, Vice Chief, Division of Cardiovascular Surgery, Director, Thoracic Aortic Surgery Program, Hospital of the University of Pennsylvania, Philadelphia, PA
- 2:45 p.m.-3:15 p.m. **Identifying the Players for a Hybrid OR**
Marie Hasselblad, RN, Administrative Director Invasive Cardiology, Director, Cardiothoracic Operating Rooms, Vanderbilt Heart & Vascular Institute, Nashville, TN, and Vinod H. Thourani, MD, Assistant Professor of Cardiothoracic Surgery, Associate Director, CTS Clinical Research Unit, Emory University School of Medicine, Atlanta, GA
- 3:15 p.m.– 3:30 p.m. **Discussion**
- 3:30 p.m.- 3:45 p.m. **Break**
- 3:45 p.m.– 4:15 p.m. **The Hybrid OR: Architectural Issues**
Charles Martin, AIA, Principal, NBBJ, Seattle, WA, and Jeff High, RN, BA, ASN, Charge Nurse Cardio-Thoracic Surgery, Vanderbilt Heart & Vascular Institute, Nashville, TN
- 4:15 p.m.– 4:45 p.m. **Challenges Encountered Along the Way in Building a Hybrid OR**
Raphael Bueno, MD, Brigham and Women's Hospital, Boston, MA, Mathew R. Williams, MD, Surgical Director, Cardiovascular Transcatheter Therapies, New York-Presbyterian/Columbia, New York, NY, and Georg Nollert, MD, Director Global Marketing, Interventional Cardiology and Hybrid OR Healthcare Sector, Siemens AG
- 4:45 p.m.– 5:15 p.m. **The Hybrid OR: Philosophy of Equipment Selection**
Julian M. Goldman, MD, Director of Interoperability, and Janice Crosby, Director, Business Development, Center for Integration of Medicine & Innovative Technology (CIMIT), Boston, MA
- 5:15 p.m.– 5:30 p.m. **Toronto General Hospital: Lessons Learned**
Kazuhiro Yasufuku, MD, PhD, Toronto General Hospital, Toronto, ON, Canada
- 5:30 p.m.- 5:45 p.m. **Discussion**
- 5:45 p.m. **Adjourn**

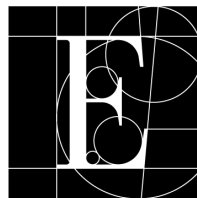


May 4, 2010 -- Tuesday, Morning Sessions

Constitution Room 107

- 8:00 – 8:30 a.m. **The Hybrid OR: Specific Design Features**
Michael J. Mack, MD, CT Surgery Associates of North Texas, Dallas, TX
- 8:30 – 9:00 a.m. **The Hybrid OR: Marketing a Hybrid**
Michele Toungette, MSHA, MMHC, Chief Business Development Officer, Vanderbilt Heart & Vascular Institute, Nashville, TN
- 9:00 – 9:30 a.m. **Financial Aspects of Building a Hybrid OR**
Gina Cronin, Administrator, Cleveland Clinic, Cleveland, OH and Michael Schroyer, COO, St. Vincent Heart Center of Indiana, Indianapolis, IN
- 9:30 – 10:00 a.m. **The Hybrid OR: Cardiac Clinical Outcomes**
Steven J. Hoff, MD, Assistant Professor of Cardiac Surgery, Vanderbilt Heart Institute, Nashville, TN, and Mike Davidson, MD, Division of Cardiac Surgery, Brigham & Women's Hospital, Boston, MA
- 10:00-10:15 a.m. **Discussion**
- 10:15 -10:40 a.m. **Break**
- 10:40-11:10 a.m. **Brigham & Women's Thoracic Hybrid & Vanderbilt Cardiac Hybrid: Lessons Learned**
Raphael Bueno, MD, Associate Chief, Division of Thoracic Surgery, Brigham and Women's Hospital, Boston, MA
John Byrne, MD, Chairman, Department of Cardiac Surgery, Vanderbilt Heart & Vascular Institute, Nashville, TN
- 11:10-11:25 a.m. **Discussion**
- 11:25-11:45 a.m. **Closing**
Raphael Bueno, MD, Associate Chief, Division of Thoracic Surgery, Brigham and Women's Hospital, Boston, MA
John Byrne, MD, Chairman, Department of Cardiac Surgery, Vanderbilt Heart & Vascular Institute, Nashville, TN

We Wish to Thank



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for their support of this program.

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