



INSIDER

YOUR INSIDE LOOK AT THE ISMICS ANNUAL MEETING

28-31 May 2014
Marriott Copley Place
Boston, Massachusetts

2013-2014 BOARD OF DIRECTORS

President

Francis D. Ferdinand, MD

Past President

Alan H. Menkis, MD

President-Elect

Volkmar Falk, MD

Vice President

Gregory P. Fontana, MD

Secretary

Paul F. Grundeman, MD, PhD

Treasurer

Vinod H. Thourani, MD

Directors

Niv Ad, MD

Tohru Asai, MD

Johannes Bonatti, MD

Anson Cheung, MD

Changqing Gao, MD

Mattia Glauber, MD

Young Tae Kim, MD, PhD

Francesco Maisano, MD

Daniel L. Miller, MD

Simon C. Moten, MD

L. Wiley Nifong, MD

Robinson Poffo, MD

Ralph A. Schmid, MD

Piotr Suwalski, MD, PhD

Editor, INNOVATIONS

Ralph J. Damiano, Jr., MD

Managing Editor, INNOVATIONS

Carol Blasberg

Executive Director

Aurelie J. Alger, JD

Associate Executive Director

Elizabeth Chouinard

Industry Relations

Stan Alger

Yvonne Grunebaum

Meeting Director

E.J. Weldon

Meeting Manager

Jillian West

Meeting Coordinator

Emma Celeste

Membership Coordinator

Adam Denhard

Managing Editor, ISMICS Insider

Lorraine M. O'Grady

Highlights of the 2014 Meeting

Francis D. Ferdinand Focused on "Quality Drives Innovation"

A highlight of the ISMICS annual meeting was the Presidential Address, given by Francis D. Ferdinand, MD, on Friday afternoon.

During his introduction, President-Elect Volkmar Folk noted that Dr. Ferdinand has "served in almost every thinkable position in ISMICS – raising sponsorships, acting as a great teacher and fabulous recruiter, working tirelessly on behalf of the organization; he is truly the ISMICS ambassador."

In keeping with the theme of this year's meeting, Dr. Ferdinand focused on "Quality Drives Innovation" and noted that "it is easy to be an innovator when everyone is going in your direction, but in 1997 when the ISMICS founders created the society, such was not the case." He recognized and applauded these innovators for the foundation they built for the specialty and the impetus they provided for the technical successes we have achieved over the past decade.

Focusing on five elements of Quality (Data, Database, Process Initiatives, Quality Improvement, and Outcomes) Dr. Ferdinand outlined his key points.

"Drowning in information, but starving for knowledge."

We have more and more information (big data) coming at us. "In the STS database, the Adult Cardiac Surgery component alone contains more than 4.5 million surgical records and continues to grow. It captures more than 350 individual data points on each patient and represents approximately 95 percent of all adult cardiac surgery centers throughout the United States. We need to measure and manage this data all the time. We need to provide clinical oversight and actively engage in the process."

"Big data needs to be complemented by big judgment."

The STS database, ACS's NSQIP, and the ACC NCDR Registry provide the framework to effectively manage the process, but how your institution uses the data determines the dynamics of change. To deliver patient centered care at the hospital level, there is a need to measure patient satisfaction and to ensure that patients receive the care they need from the entire clinical team. "You can do

(continued on page 3)



Michael Mack Delivers Kit Arom Lecture



"Don't be limited by what you think you know; this impairs us from thinking outside of the box."

-Michael Mack, MD

In introducing ISMICS Past President Dr. Michael Mack, Francis D Ferdinand noted that the first time he heard Dr. Mack speak was at ISMICS 2001 in Munich, "I thought he knew more about the cardiology trials than most cardiologists." He also noted that Dr. Mack, while president of the STS, worked closely with then ACC president David Holmes, in developing the TVT Registry and it is "this type of bridge building and collegiality that builds consensus" and ultimately will facilitate implementing and evaluating new treatment options.

Dr. Mack focused his presentation in looking back at his professional career making note of the things "I would do differently, how I could have done it better, and how my lessons can help others through these same challenges." In keeping with the overall ISMICS mission of "innovation and technological advancement" and the overriding innovation theme of this year's meeting, Dr. Mack provided three resources of recommended reading for attendees: Toby Cosgrove's Presidential Address at the AATS Annual Meeting in 2000; "The Innovator's Dilemma" by Clayton Christiansen; and "Outliers" by Malcolm Gladwell.

Through his long and distinguished career, Dr. Mack has faced many challenges and has experienced many successes. He had many words of advice for ISMICS attendees. Dr. Mack's advice included, "Don't be limited by what you think you know; this impairs us from thinking outside of the box." As an example, Dr. Mack referenced Henning Anderson, the Danish cardiologist who invented the transcatheter aortic valve valve in 1992. "He drew the design of a valve inside a stent on a napkin on a plane and

(continued on page 5)



Medtronic

Find Opportunity in Change

Change is nothing new to Cardiac Surgeons

And with change comes opportunities...

opportunities that matter.

Visit us at booth 404, and at Sim City where you can test your skills through hands-on simulation.

MICS Mitral Valve Repair and MICS CABG simulation: see the access and visualization you can achieve through a small thoracotomy and test your sewing skills for anastomosis or annular suturing.

CoreValve® Procedural Simulation: learn more about the CoreValve System, practice key imaging steps and test your skills on our virtual CoreValve deployment app.

CoreValve System: Please reference the Instructions for Use for more information regarding indications, warnings, precautions and potential adverse events. To download the complete Instructions for Use visit: manuals.Medtronic.com

CAUTION: Federal law (USA) restricts this device to sale by or on the order of a physician.
CoreValve is a registered trademark of Medtronic CV Luxembourg S.a.r.l.

UC201500159 EN
© Medtronic, Inc. 2014. All Rights Reserved

Dr. Ferdinand's Address *(continued from page one)*

the most amazing procedure, but if the patient does not go home with secondary prevention measures, you have failed. Clinical Coordination and physician collaboration are critical for the planning and implementation of each patients' care plan."

Dr. Ferdinand outlined how his institution manages the data effectively with the important factors to consider: Development and adoption of a data flow process; data management staff capable of writing and running robust queries; and physician champions and team members who provide clinical oversight and are actively engaged in the process of quality improvement.

Quality improvement is achieved when all team members have a role, are actively engaged in the process, and are focused on the ultimate goal of advancing quality and patient safety. "Transparency of data is paramount and every aspect of the patient care process needs to be revealed, dissected and evaluated so that key process initiatives can be developed, refined and modified."

Dr. Ferdinand also reviewed the key concepts of Innovation and Deliberate Practice. Using pro golfer Tiger Woods as an example, he explained the concept of deliberate practice, which was recently described by Geoff Colvin in his book: "*Talent is Overrated: What Really Separates World Class Performers from Everyone Else.*" and based on the pioneering work on *expertise* by K Anders Ericsson, PhD. Designed to specifically improve performance, "it isn't work and it isn't play." It can be repeated a lot and feedback is constantly available. It is highly demanding mentally and it isn't much fun. "Tiger's dad was a retired Green

Beret (Special Forces) military officer who became a bit of a "golf nut" and he trained Tiger like he would train a soldier. That level of training had never been seen before in the world of golf."

Dr. Ferdinand challenged the audience to define innovation. "What is innovation? What does it look like? What is required? Look at the coronary stent. Truly an amazing innovation. But what about the internal mammary artery – a tissue-engineered, antithrombotic, atherosclerotic-resistant "device" with a documented patency of 35 years? Is that an innovation? Perhaps how we use it is the innovation!"

Dr. Ferdinand talked about the "drivers" of innovation; the training necessary, the skill sets required and how skill acquisition acts as a *springboard* to enable one to utilize additional and newer technological *platforms* that can help us



advance to the next level. "We must practice lifelong learning and refrain from intellectual and institutional inertia. We know things will change and we need to learn to use and develop the newest technologies."

To further illustrate the concept of innovation, Dr. Ferdinand told the story of Everett M. Rogers, PhD. Although corn might not appear at first to be innovative, it provided the groundwork for Dr. Rogers' defining work "*The Diffusion of Innovations*" in which he proposed that utilization of any new innovation or idea depends on individuals categorized as innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%) and laggards (16%). These categories, provide a common language for innovation researchers and Dr Ferdinand highlighted the fact that the ISMICS membership is composed of the Innovators and Early Adopters. "Dr. Rogers' work was a direct result of his

father, an Iowa corn farmer. His father loved electro-mechanical farm innovations, but was resistant to biological and chemical innovations, so he was reluctant to use a hybrid seed corn. During the drought of 1936, he watched his

crop wilt, while his neighbor's hybrid seed corn stood tall. This experience led Dr. Rogers to his theory and model on innovation.

Dr. Ferdinand also discussed the concept of continuous innovation; that is, even the best innovations can (and will) get disrupted. He referenced and reinforced the points made by this year's Keynote Speaker, Rory McDonald, PhD, from the Harvard Business School on *disruptive innovation* as well as the importance of recognizing *strategic inflection points* to better understand where and how change will occur. These concepts will better allow one to be a leader and driver of the process.

In conclusion, Dr. Ferdinand highlighted two concepts for thought: QUALITY - It gets "old." It gets "disrupted." It needs to be continuous – DRIVEN.

INNOVATION - It gets "old." It gets "disrupted." It needs to be continuous.

Look at the coronary stent. Truly an amazing innovation. But what about the mammary artery? Is that an innovation? Maybe how we use it is the innovation!"

ISMICS wishes to thank these companies for their support of the Society and for their commitment to developing minimally invasive surgery techniques and technologies:

PLATINUM LEVEL

MAQUET



Medtronic

GOLD LEVEL

AtriCure



Edwards Lifesciences

INTUITIVE
SURGICAL®



ST. JUDE MEDICAL™

SILVER LEVEL

SOLUTIONS®

BRONZE LEVEL



FEHLING SURGICAL
Instruments

SIEMENS



SORIN GROUP
AT THE HEART OF MEDICAL TECHNOLOGY

Dr. Cheng Provided a Reflection on Ten Years of ISMICS Consensus Statements



During Friday’s scientific session, Davy C H Cheng, MD, MSc, Distinguished University Professor & Chair, Department of Anesthesia & Perioperative Medicine and Professor, Critical Care Medicine, Western University, London, Ontario, Canada, who has partnered with ISMICS to provide the highest level of quality analysis. Dr. Cheng has been instrumental in working with ISMICS leadership on the development and publication of the Consensus Statements and he provided a reflection on the past 10 years of ISMICS consensus statement development.

Noting that it is “mission impossible to keep up to date on randomized clinical trials,” Dr. Cheng reviewed the 5 Steps to Evidence-Based Medicine:

1. Define the clinical question: Patient, Intervention, Comparator, Outcomes (PICO).
2. Find the best available evidence: Pubmed, Journals, guideline.gov, cochrane.org.
3. Evaluate the evidence for: Validity (closeness to truth), Importance (size of the effect) and Relevance (applicability).
4. Apply the evidence: Integrate with values, resources, and circumstances
5. Evaluate the process

He also stressed the importance of defining the quality of evidence. “Garbage in, garbage out. Aim for the highest level of evidence” and GRADE (Grades of Recommendation Assessment, Development, and Evaluation.)

Dr. Cheng outlined the process of consensus statement development and reviewed the ISMICS Consensus Conferences: convene consensus panel (international); search and retrieve ALL relevant evidence; perform systematic review and meta-analysis; panel reviews evidence for EACH outcome; make statements based on evidence; and derive recommendations.

Dr. Cheng also provided a summary of the number of citations of the ISMICS consensus statements, noting that in 2013 the total number of full-text views was 1,794 and the total number of times cited was 294.

He also provided the following impressive statistics:

- ◆ 8 Consensus Conferences have been published
- ◆ 64 Surgeons/Perfusion/Cardiologist/Anesthesiologists participants
- ◆ 293 comparative studies
- ◆ More than 1,000,000 patients
- ◆ 313 Outcome Meta-Analyses
- ◆ **69 recommendations, of which 55% based on Level A evidence**

In this last point, it is critical to highlight the extremely high quality of ISMICS Consensus Statements: 55% of recommendations were based on Level A evidence, 36% on Level B and only 9% on Level C. This compares to a recent survey of the ACC/AHA recommendations where only 11% were based on Level A evidence and 48% were Level C.

In summary, Dr Cheng noted that we are “better in 10 Years...but, critical gaps in the evidence remain”. For the continued development of high quality Consensus Statements addressing minimally invasive cardiothoracic surgery (MICS), issues that must be addressed include: Operator-dependence & learning curve: Need to account for in MA/SR & guidelines; Short-term studies: Too premature to measure relevant outcomes; Loss to follow-up and cross-overs: Often excluded from studies (!); Non-comparative reports: Case series and cohort studies; and Non-randomized studies: Retrospective or prospective cohorts.

10 YEARS OF ISMICS CONSENSUS STATEMENTS

- 2013 OPCAB/Off Pump Surgery
- 2012 TAVI
- 2011 Blood Management in Cardiothoracic Surgery
- 2010 Mini-Mitral Valve Repair or Replacement (MVR) vs. Conventional MVR: A Systematic Review & Meta-Analysis of Controlled Trials
- 2009 Atrial Fibrillation
- 2008 Stentless versus Stented Aortic Valves
- 2007 Video-Assisted Thoracic Surgery in Lung Cancer Resection: Is VATS Lobectomy Advancing Patient Care
- 2006 Transmyocardial Revascularization
- 2005 Endoscopic Vascular Harvesting
- 2004 Off-Pump Surgery



The tenth Expert Panel Consensus Conference was held in 2013 in Dublin, Ireland, chaired by Dr. John Puskas of Emory University, and focused on “OPCAB/Off-Pump Surgery.” Dr. Davy Cheng of London Health Sciences Centre in Ontario, Canada served as primary researcher and biostatistician.



15 ISMICS Innovation, Technologies, and Techniques in Cardiothoracic and Cardiovascular/Vascular Surgery

ANNUAL SCIENTIFIC MEETING

Berlin

3-6 June 2015

InterContinental Hotel Berlin
Berlin, Germany

International Society for Minimally Invasive Cardiothoracic Surgery

www.ISMICS.ORG

Mack Delivers Kit Arom Lecture *(continued from page one)*

patented the design in 1995 and look at where we are today. Coming full circle, 20 years after his design, Dr. Anderson's dad received a TAVR."

One of the key concepts that we are witnessing today is in imaging. "We are on the cusp of an explosion. Imaging is king. The sophistication and potential of 4D visualization will affect our pre-procedural assessment, our intra-procedural guidance, and our post therapy surveillance!"

Dr. Mack's additional advice, and what has helped him over his career, included:

- ♦ **Gain experience in another field.** I authored an atlas on endoscopic spine surgery and worked with other surgical specialists.

- ♦ **Learn to write a good scientific paper.** We struggle with how to tell a story in a scientific paper. It is important to do it well.

- ♦ **Learn to become a good public speaker.** It doesn't come naturally. I found a great speaking coach and he helped me to learn how to relate to an audience and get your message across. Go beyond the bullet points. Don't rely on your PowerPoint presentation. And strive to make the audience feel better about themselves and feel they have learned something when you are done.

- ♦ **Work with industry.** While we need to be cognizant of the abuses, it is wrong to be shameful of our relationships with industry. We need to form positive relationships or we cannot do what we do. The SYN-TAX and PARTNER trials are clear examples of the benefits of physicians and industry working together.

- ♦ **Don't do a randomized trial too early or too late.** There is an appropriate win-

dow. We were too early with the VATS lobectomy and we may have impaired the development. The technology was still in its infancy and as a result, we had a negative trial.

- ♦ **Timing is everything.** The mitral clip and 3D echo – 3D echo was not available when the mitral clip was invented but now with this technology, we can place the clip within a millimeter of where it needs to go.

- ♦ **Just because it is new, doesn't necessarily mean it's great.**

- ♦ **Comfort is the arch enemy of change.** Disruptive technology creates the breakthrough. It is all of the iterations and the refinements that come after the change that make the innovation.

- ♦ **Help reinvent the healthcare system.** Learn the concepts that will define the system and join the discussion on the development of the strategy that will fix the system.

- ♦ **Get out of the OR and get into clinic.** Develop a relationship with your cardiology colleagues. Work together to develop the right paradigm and have an adoptive attitude.

- ♦ **Control your own destiny or someone else will.**

More specific to the specialty, Dr. Mack encourages the development of a multi-specialty team that incorporates all aspects of patient care. "How a patient is treated depends a great deal on what "door" of the hospital they walk through. The procedure or treatment – PCI, CABG, Hybrid, Mitral Clip- is determined by who sees the patient first." Dr. Mack applauded ISMICS as the cornerstone of innovation in cardiac and thoracic surgery and encouraged the members to continue to push the field forward.

From the ISMICS Annual Business Meeting



ISMICS Awards Presented at Annual Meeting

CONGRATULATIONS TO:

2014 ROBERT EMERY YOUNG INVESTIGATOR AWARD

Jurij Kališnik, MD

Profound Cardiac Autonomic Derangement Together with Altered Ventricular Repolarization Pave the Way to Postoperative Atrial Fibrillation

2013 BEST MANUSCRIPTS AWARDS

\$2,000 Award

Minimally Invasive Placement of a Novel Direct Epicardial Assist Device in a Porcine Heart Failure Model

Jeremy McGarvey, Norihiro Kondo, Manabu Takebe, Toru Shimaoka, Satoshi Takebayashi, Walter R.T. Witschey, Gerald A. Zsido, II, Joseph H. Gorman, III, James J. Pilla, Robert C. Gorman, University of Pennsylvania, Philadelphia, PA

\$1,000 Award

Right Mini-thoracotomy versus Median Sternotomy for Mitral Surgery in Patients with Chronic Renal Impairment: A Propensity Matched Study

Paul C. Tang, Mark W. Onaitis, Jeffrey G. Gaca, Carmelo A. Milano, Donald D. Glower, Duke University Medical Center, Durham, NC, USA

FINAL POSTER WINNERS

Robotic Mediastinal Nodal Exenteration Is Safe and Increases Upstaging for Early Stage Lung Cancer

Duy Nguyen, The University of Arizona Medical Center, Tucson, AZ, USA

Evaluation of a Novel Automated ePTFE Suturing and Coaxial Fastener System for Mitral Chordae Tendineae Replacement: Strength, Feasibility and Healing

Candice Y. Lee, University of Rochester Medical Center, Rochester, NY, USA,

For a list of the poster finalists, who presented their posters during Friday's scientific session, please see the Friday issue of the ISMICS Insider.

POSTERS, POSTERS AND MORE POSTERS

View all electronic posters presented at the ISMICS Annual Meeting online at <http://epostersonline.com/ismics2014/>

COR-KNOT[®]

INSTANT SECURITY

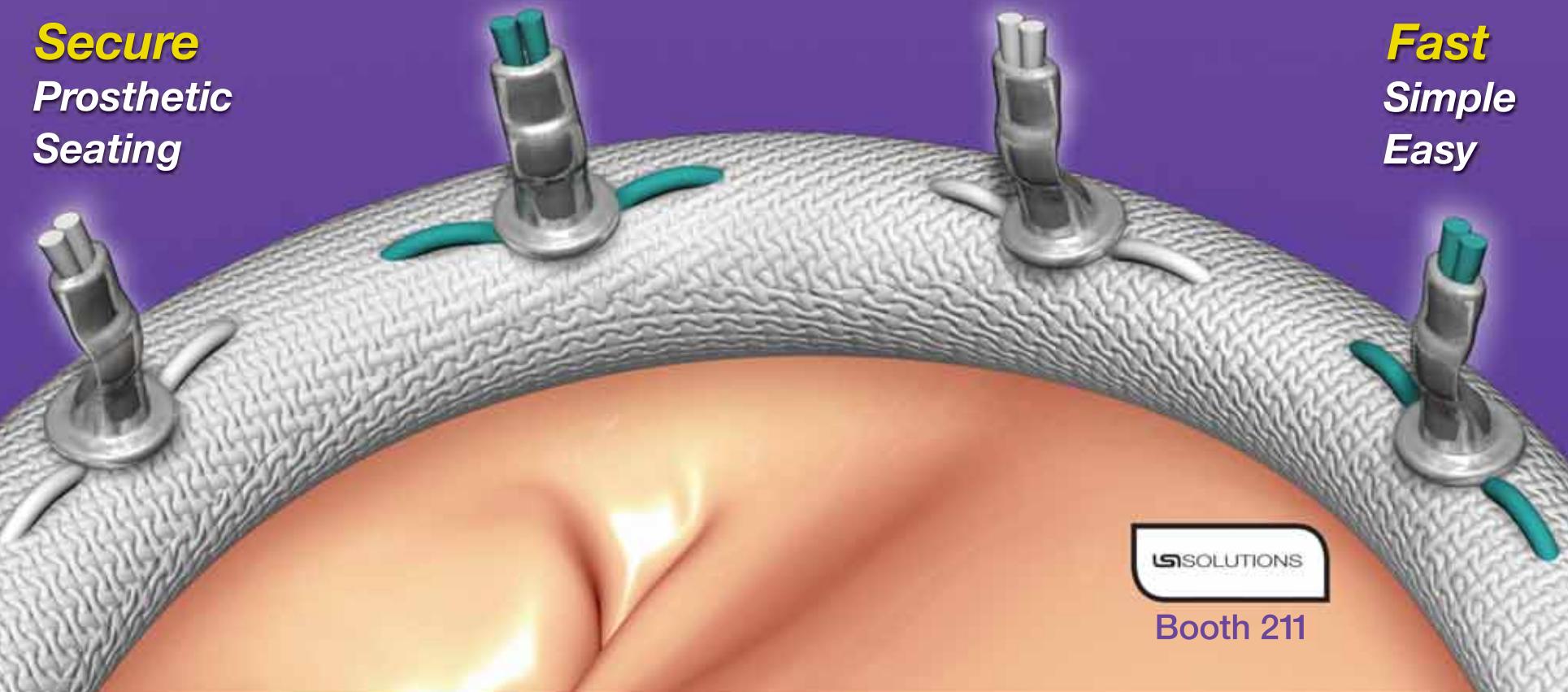


Strong
*Reliable
Knots*

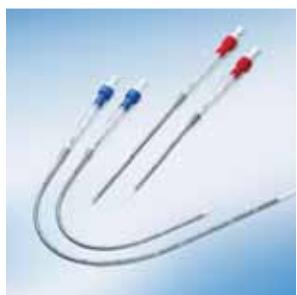
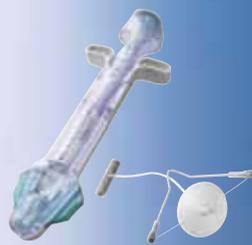
Controlled
*Suture
Tails*

Secure
*Prosthetic
Seating*

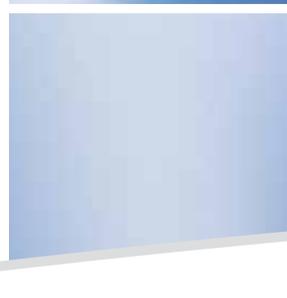
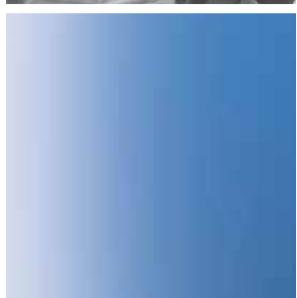
Fast
*Simple
Easy*



Booth 211



**PIONEER OF
THE PAST...
INNOVATOR OF
THE PRESENT.**



MAQUET
GETINGE GROUP



Dedicated to healthcare innovation for over 175 years.

Focusing on innovative therapy solutions, MAQUET provides you with the highest quality products to enhance patient care, promote OR workflows, and help achieve optimal outcomes. Our comprehensive portfolio includes:

- HYBRID OR
- ELITE-i™ Dual Lumen Catheters
- MIRA-i CS System for Minimally Invasive Cardiac Surgery
- TIGERPAW® System II LAA Occlusion System
- CARDIOHELP System
- HEARTSTRING III
- ACROBAT® System for Off-Pump Cardiac Surgery (OPCAB)
- VASOVIEW HEMOPRO® 2 Endoscopic Vessel Harvesting

**Attend the MAQUET
sponsored luncheon
symposium at ISMICS 2014**



**Scan for
more
information
and to
register**

Seating is limited, register today!
maquetevents.com/ismics-lunch-2014

MAQUET USA will donate \$250 to Make-A-Wish® for any single purchase order of \$50,000 or more (before tax, shipping and install) received between March 1, 2014 and February 28, 2015, with a minimum guaranteed contribution of \$50,000, up to a maximum of \$150,000. For more information about Make-A-Wish visit wish.org.

MAQUET is a registered trademark of MAQUET GmbH. • ELITE-i is a trademark of MAQUET GmbH. • ACROBAT and VASOVIEW HEMOPRO are registered trademarks of MAQUET Cardiovascular LLC. • TIGERPAW is a U.S. registered trademark of LAAX, Inc. • Copyright MAQUET Medical Systems USA or its affiliates. • ⚠ CAUTION: Federal (US) law restricts this device to sale by or on the order of a physician. Refer to Instructions for Use for current indications, warnings, contraindications, and precautions. MCV00028476 REVA

AT ISMICS 2014, VISIT MAQUET BOOTH #305

www.maquetusa.com