

IMPLEMENTATION

Tips for Initiating Your Own ERAS Cardiac Program

Form an ERAS Cardiac Team Identification of A Program Coordinator

The ERAS Cardiac coordinator is paramount, with responsibilities for education, troubleshooting, monitoring, and data collection. This team member is often a registered nurse or nurse practitioner. Engagement of nursing staff in peer-to-peer education is vital for success as many ERAS Cardiac interventions are nursing-based.

Identification of Specialty Champions

Surgeons and anesthesiologists may utilize varied approaches and preferences leading to rejection of standardization. Many physician preferences are born out of experi-

ence and training as opposed to evidence. Successful implementation requires all to adopt a standard approach without deviation. Surgeon and anesthesiologist champions are essential and these should ideally be empowered to represent their respective groups or partners.

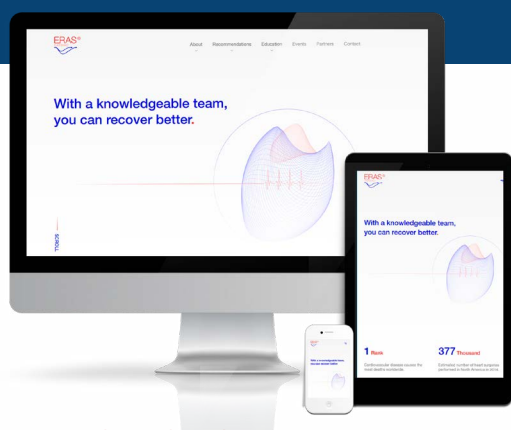
Champions should also be identified from the following areas as able based on local cardiac surgery models of care: intensivist, nursing, pharmacy, and perhaps cardiology, physical therapy, and advance practice providers. A pharmacy champion has been found to be essential in determining potential medication interactions particularly in

populations involving immunosuppression and other complex medical conditions.

Agreed-Upon Interventions

Consensus recommendations for some of the basic ERAS Cardiac interventions are available elsewhere on the website. Recognize that many ERAS interventions have been applied in surgical patients of other specialties not undergoing cardiopulmonary bypass, extracorporeal support, hypothermia, and hemodynamic manipulations commonplace in cardiac surgery. Literature review coupled with outside expert consultation will facilitate consensus-building among local stakeholders. When consensus is unable to be reached on

>> continued on page 3



ANNOUNCING NEW WEBSITE

Visit our new site at ERAScardiac.org

IN THE NEWS

MORE NEWS AT ERASCARDIAC.ORG

December 21, 2018

ERAS Cardiac Society Welcomes Two New Executive Board Members.

October 25, 2018

ERAS Cardiac Society Featured at Dedicated Session at European Association for Cardio-Thoracic Surgery in Milan

June 19, 2018

ERAS® Cardiac Society Officially Joins ERAS® Society

April 30, 2018

ERAS® Cardiac Society Releases Consensus Statement of Best Practices to Speed Recovery after Heart Surgery

April 12, 2018

ERAS® Cardiac Society Named Official Heart Surgery Representative for ERAS Society

MORE INSIDE

- **Synopsis:** Biomarkers to Reduce Acute Kidney Injury
- **Implementation:** Tips for Initiating Your Own ERAS Cardiac Program
- **Summary:** ERAS Expert Recommendations for Cardiac Surgery
- New Board Members
- Presentation Calendar
- Get Involved

COLLABORATION

Encare ERAS-C Audit System Being Built

The ERAS Cardiac Society is collaborating with Anesthesiologists and Cardiac Surgeons at Brigham and Women's Hospital in Boston, MA to develop a Cardiac ERAS audit tool which will eventually be available via Encare (encare.net). This tool will allow Cardiac Surgery programs to achieve continuous quality improvement and maintain gains realized by implementing ERAS pathways. The ERAS Cardiac Society

is collaborating with Anesthesiologists and Cardiac Surgeons at Brigham and Women's Hospital in Boston, MA to develop a Cardiac ERAS audit tool which will eventually be available via Encare. This tool will allow Cardiac Surgery programs to achieve continuous quality improvement and maintain gains realized by implementing ERAS pathways.

SYNOPSIS:

BIOMARKERS TO REDUCE ACUTE KIDNEY INJURY

Acute Kidney Injury (AKI) complicates 22-36% of cardiac surgical procedures, doubling total hospital costs. Even minor elevations in serum creatinine following cardiac surgery have been associated with decreased survival. Most importantly, AKI predicts an increased long-term mortality rate independent of other risk factors even when kidney function has recovered. Despite this, clinicians have limited tools to identify patients at risk of AKI immediately after cardiac surgery. Current diagnostic criteria for AKI rely on changes in serum creatinine

as 1 hour after starting cardiopulmonary bypass.

In a recent study, high risk postoperative cardiac surgical patients (identified by positive urinary biomarkers) assigned to an intervention bundle had a significant reduction in subsequent AKI. The bundle consisted of the avoidance of nephrotoxic agents, discontinuation of ACE inhibitors and angiotensin II receptor blockers for the first 48 h after surgery, close monitoring of serum creatinine and urine output, avoidance of hyperglycemia for the first

“A BETTER STRATEGY TO REDUCE AKI IS TO USE POSTOPERATIVE URINARY BIOMARKERS TO TARGET PATIENTS AT HIGHER RISK FOR AKI.”

(SCr) or urine output, which reflect kidney function, as a surrogate for injury. Single values of SCr underestimate the degree of dysfunction. Thus, the diagnosis of AKI is typically delayed from the renal insult. A better strategy to reduce AKI is to use postoperative urinary biomarkers to target patients at higher risk for AKI. Two novel renal biomarkers, insulin-like growth factor-binding protein 7 (IGFBP7) and tissue inhibitor of metalloproteinases-2 (TIMP-2) are upregulated during renal stress and can predict AKI as early

72 hours after surgery, consideration of alternatives to radiocontrast agents, and close hemodynamic monitoring by using a non-invasive catheter to optimize volume status and hemodynamic parameters according to a pre-specified algorithm. Another randomized trial of biomarker directed interventions demonstrated a 66% reduction in moderate and severe AKI following noncardiac surgery. Patients in the intervention group spent fewer days in the ICU and hospital yielding a net savings of more than \$2,000 per patient.

Kuitunen A, Vento A, Suojaranta-Ylinen R, Pettila V. Acute renal failure after cardiac surgery: evaluation of the RIFLE classification. *The Annals of thoracic surgery*. 2006;81(2):542-6.

Hu J, Chen R, Liu S, Yu X, Zou J, Ding X. Global Incidence and Outcomes of Adult Patients With Acute Kidney Injury After Cardiac Surgery: A Systematic Review and Meta-Analysis. *Journal of cardiothoracic and vascular anesthesia*. 2016;30(1):82-9.

Fuhrman DY, Kellum JA. Epidemiology and pathophysiology of cardiac surgery-associated acute kidney injury. *Curr Opin Anaesthesiol*. 2017;30(1):60-5.

Xie X, Wan X, Ji X, Chen X, Liu J, Chen W, et al. Reassessment of Acute Kidney Injury after Cardiac Surgery: A Retrospective Study. *Intern Med*. 2017;56(3):275-82.

Lassnigg A, Schmid ER, Hiesmayr M, Falk C, Druml W, Bauer P, et al. Impact of minimal increases in serum creatinine on outcome in patients after cardiothoracic surgery: do we have to revise current definitions of acute renal failure? *Crit Care Med*. 2008;36(4):1129-37.

Hobson CE, Yavas S, Segal MS, Schold JD, Tribble CG, Layon AJ, et al. Acute kidney injury is associated with increased long-term mortality after cardiothoracic surgery. *Circulation*. 2009;119(18):2444-53.

Bellomo R, Kellum JA, Ronco C. Defining acute renal failure: physiological principles. *Intensive Care Med*. 2004;30(1):33-7.

Mayer T, Bolliger D, Scholz M, Reuthebuch O, Gregor M, Meier P, et al. Urine Biomarkers of Tubular Renal Cell Damage for the Prediction of Acute Kidney Injury After Cardiac Surgery-A Pilot Study. *Journal of cardiothoracic and vascular anesthesia*. 2017;31(6):2072-9.

Meersch M, Schmidt C, Hoffmeier A, Van Aken H, Wempe C, Gerss J, et al. Prevention of cardiac surgery-associated AKI by implementing the KDIGO guidelines in high risk patients identified by biomarkers: the Pre-AKI randomized controlled trial. *Intensive Care Med*. 2017;43(11):1551-61.

Khwaja A. KDIGO clinical practice guidelines for acute kidney injury. *Nephron Clin Pract*. 2012;120(4):c179-84.

Gocze I, Jauch D, Gotz M, Kennedy P, Jung B, Zeman F, et al. Biomarker-guided Intervention to Prevent Acute Kidney Injury After Major Surgery: The Prospective Randomized BigPAK Study. *Annals of surgery*. 2017.



Founding Board Members of ERAS®-Cardiac Society

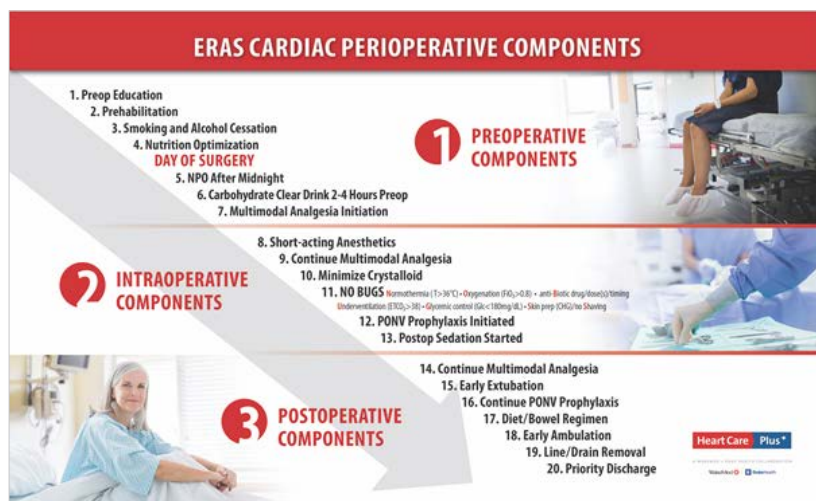
EXECUTIVE BOARD Two New Members Join Executive Board

The Society for Enhanced Recovery After Cardiac Surgery (ERAS Cardiac) is pleased to announce the addition of two new members to the Executive Board. Dr. Rawn Salenger is a cardiothoracic surgeon from the University of Maryland and Dr. Michael C. Grant is a Cardiothoracic Anesthesiologist and Critical Care Physician from the Johns Hopkins Medical Institutions. Their full profiles are available on [our website](#).

PUBLISHED STUDY

Journal of Thoracic and Cardiovascular Surgery

Anticipated in early 2019 are the published results of a non-randomized cohort study of a comprehensive US-based ERAS Cardiac program led by Judson Williams MD MHS (cardiac surgeon), Gina McConnell RN (ERAS champion and CTICU educator), and William Bradford MD (cardiac anesthesiologist). Co-authors include Peter Smith MD (Duke University) and Daniel Engelman MD (Baystate Medical Center). Key findings were presented in San Diego at the AATS demonstrating reductions in postoperative opioid use, GI complications, and hospital length of stay. Pictured below is an overview of the basic protocol components.



Hospital length of stay was reduced by a full day, along with reductions in ICU length of stay, GI complications, and opioid requirements. Congratulations to Dr. Judson Williams and his team from WakeMed Health and Hospitals (Raleigh, NC) for publishing their results from the first US-based ERAS Cardiac Program. The article is due for print with the *Journal of Thoracic and Cardiovascular Surgery* this month.

The full manuscript can be read at: www.jtcvs.org

COVER STORY
Nursing 2018

ERAS Cardiac was featured on the cover of *Nursing 2018*! The featured report focuses on the design and implementation of an ERAS Cardiac program from a multidisciplinary perspective. The group from Raleigh, NC, USA also discusses some of the common obstacles to implementation of an ERAS Cardiac program.

The full manuscript can be read at NCBI.com.

ERAS® CENTERS OF EXCELLENCE PROGRAM

**WakeMed Health and Hospitals (Raleigh, NC)
Named As First ERAS® Center of Excellence**

The Society for Enhanced Recovery After Cardiac Surgery believes it is important to recognize institutions which have demonstrated exceptional efforts pursuing enhanced recovery programs. WakeMed Raleigh, Durham, was selected based on past, ongoing, and future endeavors, having demonstrated achievements in four essential areas:

1. Comprehensive and dispassionate self-evaluation, with the identification of targets for improvement
2. Selection and implementation of evidence-based intervention bundles spanning the entire perioperative period
3. Robust data collection and audit, with process feedback for the ERAS® team
4. Contributions to the greater ERAS® community through knowledge generation and dissemination, education, and collaboration
5. For more information about our ERAS Centers of Excellence Program

For more information about the program and how to become an ERAS® Center for Excellence, please visit our website.

IMPLEMENTATION:**TIPS FOR INITIATING YOUR OWN ERAS CARDIAC PROGRAM**>> *continued from page 1*

certain interventions, leaving those areas future iterations of the ERAS Cardiac platform is advised as standardization is a key driver of success.

Leverage Local Expertise

Carefully consider your areas of local expertise. For example, a program with experience and expertise in parasternal nerve blocks should consider this intervention as part of the opioid-reducing measures in the protocol. Another health system may benefit from an expert in patient-reported outcomes or renal biomarkers, and these components may be utilized as well.

Utilize The Electronic Medical Record

Engage the local electronic medical record (EMR) experts for building automated preoperative and postoperative order sets. Utilize the EMR to alert medication interactions and highlight important preoperative testing and laboratory results which may trigger action for preoperative medical optimization. Standardization of order sets electronically

Input from All Stakeholders**Identify Barriers**

All stakeholders including patients should be given a voice in the design phase of the ERAS Cardiac program. With input from all relevant stakeholders, the ERAS Cardiac team will quickly identify barriers to the implementation of a working protocol.

Tailoring to one's own health system and environment of care is vital to success. Some common barriers are listed below.

Identify Enablers

Program enablers may include individuals from nursing, physical therapy, technicians, or perhaps cardiologists with a desire to improve patient care and these persons prove invaluable. Site-based grant funding for any component of the ERAS Cardiac program should be investigated, particularly with health system focuses on preventing readmission, reducing length of stay, and opioid reduction.

Education

Surgeons, anesthesiologists, administration/management, nurse educators, ICU nurses, nurse anesthetists, advanced practice providers, step-down nurses, dieticians, pharmacists, and outpatient, preoperative, intraoperative and discharge staff must all be invited, educated, and participated in realizing the implementation of a new standardized pathway. Education becomes a continuous process as new hires are a reality in each phase of care from preoperative secretary staff to intraoperative nursing to postoperative advance practice providers.

Audit, Continuous Process Monitoring, Evaluation, and Improvement

Monitoring is undertaken at the outset of ERAS Cardiac initiation for identifying protocol deviations, searching for adverse

events, and achieving the continuous education and quality improvement at the core of the ERAS Cardiac program. The nurse or advance practice provider champion assumes the role of primary responsibility for ERAS Cardiac-related deviations, concerns or potential adverse events, and facilitating process improvements.

All licensed independent providers and nurses providing patient care carefully monitor patient well-being, however, consider utilizing dedicated data analysts to prospectively collect and monitor program outcomes and progress. Engage the information technology experts within your local electronic medical record system to facilitate data capture.

Conclusion

ERAS Cardiac is an example of value-based care applied to cardiac surgery with goals of earlier recovery, cost reduction, and reduction in opioid use. Once assembled, the ERAS Cardiac team should meet frequently and move forward deliberately. An ERAS Cardiac coordinator, in many cases a cardiac surgery RN, is paramount. Engaged champions from each phase of care and each discipline are critical. Continuous quality improvement with assimilation of new evidence and monitoring of clinical outcomes will make an ERAS Cardiac program nimble and sustainable.

PROPOSED ERAS CARDIAC TIMELINE**Start**

- Core team identified

1-2 Months

- Literature, facility resources and provider preferences reviewed to develop pathway
- Metrics determined and baseline metrics before implementation recorded
- Obtain executive sponsorship and support

3-4 Months

- Education of providers along every component including changes to current treatment, new treatments, reasons for the change, and expectations of every provider

6 Months

- ERAS for Cardiac Surgery started practice-wide
- Opportunities for feedback to the core team including: barriers, compliance, successes, and areas to improve
- Core team remains in constant communication with one another when barriers arise
- Quick response by core team to address reported barriers and re-educate providers if necessary

9-12 Months

- Metrics analyzed for changes that have occurred, both positive and negative
- Consider appropriate alterations to pathway in response to negative changes
- Explore additional enhanced recovery

SUMMARY:

ERAS EXPERT RECOMMENDATIONS FOR CARDIAC SURGERY

Includes Class of Recommendation (COR) and Level of Evidence (LOE)

(Presented at AATS 2018)

Our ERAS Cardiac Society members care about helping patients achieve the best recovery possible, and to help their healthcare team achieve this goal. To do this we have reviewed hundreds of publications to come up with a set of recommendations that we

think can help improve the care and recovery of patients having heart surgery. We work hard everyday with experts around the world to find new ways to optimize the care people receive when they have their surgery.

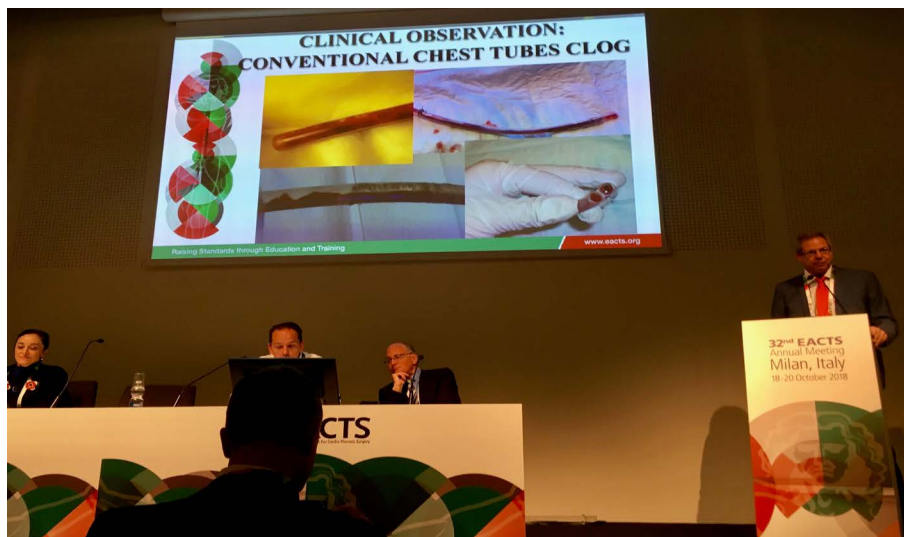
COR	LOE	Recommendations
I	A	Tranexamic acid or epsilon aminocaproic acid is recommended during on-pump cardiac surgical procedures.
I	B-R	Perioperative glycemic control is recommended.
I	B-R	A care bundle of evidenced based best practices is recommended to reduce surgical site infections.
I	B-R	Goal directed therapy is recommended to reduce postoperative complications.
I	B-NR	A multimodal, opioid-sparing, pain management plan is recommended postoperatively.
I	B-NR	Persistent hypothermia after CPB should be avoided in the early postoperative period.
I	B-NR	Maintenance of chest tube patency is recommended to prevent retained blood.
I	B-NR	Postoperative systematic delirium screening is recommended at least once per nursing shift.
I	C-LD	Smoking and hazardous alcohol consumption should be stopped 4 weeks before elective surgery.
IIa	B-R	Early detection of kidney stress and interventions to avoid acute kidney injury are recommended following surgery.
IIa	B-R	Rigid sternal fixation can be useful to improve/accelerate sternal healing and reduce mediastinal wound complications.
IIa	B-NR	Prehabilitation is recommended for patients undergoing elective surgery with multiple comorbidities or significant deconditioning.
IIa	B-NR	An insulin infusion is recommended to treat hyperglycemia in all patients postoperatively.
IIa	B-NR	Strategies to ensure extubation within 6 hours of surgery are recommended.
IIa	C-LD	Patient engagement tools, including online/application-based systems to promote education, compliance, and patient-reported outcomes are recommended.
IIa	C-LD	Chemical thromboprophylaxis is recommended following surgery.
IIa	C-LD	Preoperative measurement of hemoglobin A1c and albumin is recommended.
IIa	C-LD	Preoperative correction of nutritional deficiency is recommended when feasible.
IIb	C-LD	A clear liquid diet may be continued up until 2-4 hours before general anesthesia.
IIb	C-LD	Preoperative carbohydrate loading may be considered before surgery.
III (No Benefit)	A	Stripping or breaking the sterile field of chest tubes to remove clot is not recommended.
III (Harm)	B-R	Hyperthermia (>37.9 C) while rewarming on cardiopulmonary bypass is potentially harmful and should be avoided.

Class of Recommendation (COR)

Class (Strength) of Recommendation	Class I (Strong)
Class (Strength) of Recommendation	Class IIa (Moderate)
Class (Strength) of Recommendation	Class IIb (Weak)
Class (Strength) of Recommendation	Class III: No Benefit (Moderate)
Class (Strength) of Recommendation	Class III: No Harm (Strong)

Level of Evidence (LOE)

Level (Quality) of Evidence	Level A
Level (Quality) of Evidence	Level B-R (Randomized)
Level (Quality) of Evidence	Level B-NR (Non-randomized)
Level (Quality) of Evidence	Level C-LD (Limited Data)
Level (Quality) of Evidence	Level C-EO (Expert Opinion)



Dr. Louis Perrault from ERAS-Cardiac Society presents at the 32nd EACTS Annual Meeting in Milan, Italy.

UPCOMING PRESENTATIONS:

Jan 2019 - San Diego, CA USA

Society of Thoracic Surgeons 55th Annual Meeting

Presenting multimodal anesthetic ERAS best practices. Also presenting utilization of novel informatics platform for ERAS implementation. Presenting on multidisciplinary team formation, implementation and institutional experience.

March 23-24 2019 - Dallas, TX

Evidence Based Perioperative Medicine

March 10-12, 2019 - London, England

Society for Cardiothoracic Surgery in Great Britain and Ireland

Dedicated Session (Note that this mtg replaces the ISICEM in Brussels which is scratched)

April 25-27 2019 - Washington, DC

American Society for Enhanced Recovery

April 2019 - Miami, FL, USA

38th Annual Meeting of the Association of Physician Assistants in Cardiovascular Surgery

Presenting "Acute Kidney Injury Prevention After Cardiac Surgery", "Transition to Value Based Care", and "Alternative Post-op Pain Management" in an ERA of ERAS

May 2019 - Liverpool, UK

7th ERAS® World Congress

May 2019 - Toronto, Canada

American Association of Thoracic Surgery 89th Annual Meeting

Organizing Independent ERAS Cardiac Symposium with graded abstracts

May 2019 - Chicago, IL, USA

Society of Cardiovascular Anesthesiologists (SCA) Annual Meeting

Workshop: Enhanced Recovery After Cardiac Surgery. Presenting on how to develop and implement a program, multimodal analgesia, opioid sparing anesthesia and early extubation, fluid management and goal-directed perfusion, regional analgesia hands-on workshop

October 2019 - Washington, DC

STS Critical Care Meeting

October 2019 - Orlando, FL, USA

American Society of Anesthesiologists (ASA) Annual Meeting

Plenary Session: TBD topics

October 2019 - TBD, USA

First ERAS®Cardiac World Congress/STS Critical Care Conference

Half day symposium

EACTS – Lisbon October 3-5th

TBD – UK, Australian, Asian, Mexican CT Societies

AHA – Philadelphia Nov 16-18th

RECENT PRESENTATIONS:

Review our presentations on our website
erascardiac.org

OUTCOMES

Reducing ICU Hospital Re-admissions after Cardiac Surgery

Dan Engelman

December 10, 2018

REVIEW

Fast Track Cardiac Surgery Revisited and Enhanced

Richard Engelman

December 12, 2018

IMPLEMENTATION

Implementing an ERACS Program

Seenu Reddy

December 12, 2018

TARGETS

Modern Chest Tube Strategies to Reduce Complications and Costs

Louis Perrault

December 12, 2018

TARGETS

Options for Sternal Closure and Prevention of Wound Infection

Marc Gerdisch

December 12, 2018

TARGETS

Multimodal Approaches to Reduce Postoperative AKI

John Kellum

December 12, 2018

TARGETS

Perioperative Glycemic Control and Early ERAS Cardiac Data

Judson Williams

December 12, 2018

TARGETS

The Impact of Frailty and the Value of PREHAB

Rakesh Arora

December 12, 2018

OUTCOMES

Evidenced or Entrenched

Kevin Lobdell

December 12, 2018

REVIEW

History of ERAS and Why it is the Standard of Care

Gudren Kunst

December 12, 2018

OUTCOMES

Modeling and Validating: EcoJustifications for ERAS Cardiac Interventions

Edward Boyle

December 12, 2018

TARGETS

Enhanced Recovery by Minimizing Opioid Use After Cardiac Surgery

Eric Roselli

December 12, 2018

ERAS®-Cardiac Society Members

EXECUTIVE BOARD

Daniel Engelman, M
President, Cardiac Surgeon
Baystate Medical Center,
Springfield MA, USA

Judson Williams, MD, MHS
Vice President, Cardiac Surgeon
WakeMed Heart & Vascular,
Raleigh, NC, USA

Alex Gregory, MD
Secretary, Cardiac Anesthesia
University of Calgary, Canada

Ed Boyle, MD
Treasurer, Cardiac Surgeon
St. Charles Medical Center, Bend
Oregon, USA

Rakesh Arora, MD, PhD
Cardiac Surgeon
University of Manitoba,
Winnipeg, Canada

V. Seenu Reddy, MD, MBA, FACS
Director of Industry Relations, Cardiac
Surgeon
Centennial Heart & Vascular Center,
Nashville, TN, USA

Marjan Jahangiri, MBBS, MS, FRCS,
FRCS (CTh)
Cardiac Surgeon
St. Georges University of London

ADVISORY BOARD

Albert Cheung, MD
Cardiac Anesthesia
Stanford University Medical Center,
Stanford, CA, USA

Richard Engelman, MD
Cardiac Surgeon
Baystate Medical Center,
Springfield, MA, USA

Marc W. Gerdisch, MD
Cardiac Surgeon
Franciscan Health Heart Center,
Indianapolis, IN, USA

Michael Grant, MD
Anesthesiology and Critical Care
Medicine
Johns Hopkins, Baltimore, MD, USA

Karim Jabr, CCP, LP, CSSBB
Cardiovascular Perfusion
Navicent Health Medical Center,
Macon, GA, USA

Ali Khoynzhad, MD
Cardiac Surgeon
Long Beach Memorial Heart & Vascular
Institute, Long Beach, CA, USA

Jerrold H Levy, MD, FAHA, FCCM
Cardiac Anesthesia
Duke University Medical Center,
Durham, North Carolina, USA

Kevin Lobdell, MD
Cardiac Surgeon
Carolinas Healthcare System,
Charlotte, North Carolina, USA

Louis Perrault, MD
Cardiac Surgeon
Montreal Heart Institute,
Montreal, Quebec, Canada

Eric Roselli, MD
Cardiac Surgeon
Cleveland Clinic, Cleveland, OH, USA

Rawn Salenger, MD
Cardiac Surgeon
University of Maryland,
Baltimore, MD, USA

Alex Zarbock
Cardiac Anesthesia
University of Munster,
Munster, Germany

Mary Zellinger
Critical Care Nursing
Emory University Hospital,
Atlanta, Georgia, USA

SUBJECT MATTER EXPERTS

Keith Allen, MD
Cardiac Surgeon
Mid America Heart and Lung
Surgeons, Kansas City, MO, USA

Ramon Arreola-Torres
Cardiac Surgeon
West National Medical Center, Mexico

John Augoustides, MD
Cardiac Surgeon
Penn Medicine Clinical Care,
Philadelphia, PA, USA

Walid Ben Ali, MD
Cardiac Surgeon
Montreal Heart,
Montreal, Quebec, Canada

Jessica Brown, MD
Cardiac Anesthesia
Southern Methodist,
Houston, TX, USA

Andre Denault, MD
Cardiac Anesthesia
Montreal Heart,
Montreal Quebec, Canada

Jill Engel, RN
Cardiac Nursing
Duke University Medical Center,
Durham, North Carolina, USA

Nick Fletcher, MBBS, FRCA, FFICM
Cardiac Anesthesia
St. Georges University of London,
London SW17 ORE, UK

Bram Geller, MD
Critical Care, Cardiology
Penn Medicine Clinical Care,
Philadelphia, PA, USA

Kamrouz Ghadimi, MD
Cardiac Anesthesia
Duke University School of Medicine,
Durham, North Carolina, USA

Hilary P. Grocott, MD, FRCPC, FASE
Cardiac Anesthesia
University of Manitoba,
Winnipeg, Canada

Jacob T Gutsche, MD, FASE, FCCM
Cardiovascular Critical Care
University of Pennsylvania,
Philadelphia, PA, USA

Matthias Kirsch, MD
Cardiac Surgeon
Centre Hospitalo Universitaire
Vaudois, Lausanne, Switzerland

Gudrun Kunst, MD PhD, FRCA, FFICM
Cardiac Anesthesia
King's College Hospital,
Denmark Hill, UK

Michael Manning, MD, PhD
Cardiac Anesthesia
Duke University, Durham, NC, USA

Gregg Nelson, MD, PhD
Secretary of the ERAS® Society
University of Calgary,
Calgary, Alberta, Canada

Tom Nguyen, MD
Cardiac Anesthesia
Memorial Hermann Texas Medical
Center, Houston, TX, USA

Prakash A. Patel, MD, FASE
Cardiac Anesthesia
University of Pennsylvania,
Philadelphia, PA, USA

Nathalie Roy, MD, FRCSC
Cardiac Surgeon
Boston Children's Hospital,
Boston, MA, USA

Michael Sander, MD
Cardiac Anesthesia
University of Giessen und Marburg,
Germany

Christian Stoppe, MD
Cardiac Anesthesia
Aachen University, Aachen, Germany

Vinod Thourani, MD
Cardiac Surgeon
Medstar Heart and Vascular Institute,
Washington, DC, USA

Keenan Yount, MD
Cardiac Surgeon
University Virginia,
Charlottesville, VA, USA

OUR MISSION

The mission of the ERAS® Cardiac Society is to develop protocols to improve recovery through research, education, audit and implementation of evidence-based practice.

Who we are

ERAS® stands for Enhanced Recovery after Surgery, and we improve surgical care and recovery through research, education, audit, and implementation of evidence-based practices. In early 2017, a group of cardiac surgeons, anesthesiologists, and intensivists first met to establish the Enhanced Recovery After Cardiac Surgery (ERACS®) Society to achieve these goals for patients undergoing heart surgery. This initial organization's work led to the publication of the first-ever expert consensus recommendations for a cardiac surgical enhanced recovery protocol. We have since joined with the ERAS® Society and have established an organization of multinational experts representing all aspects of healthcare delivery. ERAS® Cardiac is a non-profit organization with the mission to develop evidence-based expert consensus statements promoting best practice recovery practices. The goal is to provide hospitals with better guidance for developing local protocols that are part of a continuous quality improvement process for better patient care, and reduce postoperative complications and costs after heart surgery.

ERAS® Society

The ERAS® Society is an international organization with enhanced recovery guidelines for several surgical sub-specialties. Beginning as the ERAS® Study Group in 2001, team leaders Professor Ken Fearon (University of Edinburgh) and Professor Olle Ljungqvist (Karolinska Institutet) spearheaded the developments made in multimodal surgical care. The ERAS® Study Group soon discovered that there were a variety of local traditions in practice, as well as an inconsistent application of evidence-based best practices. This prompted the group to examine the process of change from tradition to best-practice. Since its inception, the ERAS® Society has expanded to include several subspecialties, emphasized the benefits of standardized best-practices across the continuum of the perioperative period, highlighted the importance of data-driven self-evaluation, and promoted the improvement of patient care.

Our Organizational Structure

Our ERAS® Cardiac Society is made up of experts from around the world, including participation from all members of the healthcare team. Our members strive to implement enhanced recovery principals at their local institutions while advancing improved patient care internationally through collaboration, education, and dissemination of up-to-date knowledge regarding optimal perioperative care. Our organization is divided into an Executive Board, Advisory Board, and a pool of Subject Matter Experts.



Corporate financial support will be used to promote the mission of the ERAS® Cardiac Society. We are committed to standardizing best practice surrounding the preoperative and perioperative care of cardiac surgical patients through expert consensus, review of the literature and open communication. This unrestricted support does not represent the ERAS® Cardiac Society's support or agreement to promote any pharmaceutical, device, or technology related to the sponsors.

For more information and to become a sponsor please contact:

V. Seenu Reddy, MD, MBA, Director of Sponsor Relations, ERAS® Cardiac Society
email: vsreddymd@gmail.com

FOR MORE INFORMATION:



To learn more about our organization, including our board members and upcoming meetings:

WWW.ERASCARDIAC.ORG



Cheryl Crisafi MSN, RN, CNL Cherylerasc@gmail.com
Nurse Coordinator ERAS® Cardiac Society

Donna Frankel donnaerasc@gmail.com
Office Manager ERAS® Cardiac Society

V. Seenu Reddy, MD, MBA vsreddymd@gmail.com
Director of Sponsor Relations ERAS® Cardiac Society