SCA 2011 Board of Directors and Committee Nominees

President Elect

Scott T. Reeves, MD

Scott T. Reeves, MD, MBA is the John E. Mahaffey, MD endowed Professor and Chairman of Anesthesia and Perioperative Medicine at the Medical University of South Carolina. He has been a member of the Society of Cardiovascular Anesthesiologists since 1994 and is completing his term as Secretary Treasurer of the Society. He has served on the Program Committee from 2001-2008 and was Program Chairman for the annual meetings in 2007 and 2008. Dr. Reeves was co editor of the 2005 SCA monograph, *Fundamental Applications of Transesophageal Echocardiography*. He has served on the SCA Board of Directors since 2006 and the SCA Foundation Board of Directors since 2010. As an SCA Board Member, he has been an advocate for programs to increase international representation, promote safety research and education as a society priority and to promote enhanced fellowship and postgraduate training in cardiothoracic anesthesiology. He is also a committee member of the National Board of Echocardiography Advanced PTExAM, vice chairman of the Intraoperative Council of the ASE and vice chairman of the cardiothoracic tract for the ASA annual meeting.

Secretary/Treasurer

Linda Shore-Lesserson, MD

Dr. Linda Shore-Lesserson is Professor of Anesthesiology and Director of Cardiovascular Anesthesiology at Montefiore Medical Center in New York. Dr. Shore-Lesserson graduated from the University of Pennsylvania where she graduated magna cum laude and was a member of Phi Beta Kappa honorary society. She also received her medical degree from the University of Pennsylvania. She was an anesthesiology resident and spent a specialty year in cardiothoracic anesthesia at Mount Sinai School of Medicine. She is a diplomate of the National Board of Medical Examiners, American Board of Anesthesiology, and National Board of Echocardiography.

Dr. Shore-Lesserson serves on research, administrative, and academic departmental committees at Montefiore. She is the incoming Chair of the TEE Certification in Perioperative Echocardiography Test Writing Committee. In addition, she has served as Chair of the Program Committee for the Society of Cardiovascular Anesthesiologists, and is now on the Board of Directors of the SCA. She is the Chairperson for the Cardiovascular Track for the Annual Meeting of the American Society of Anesthesiologists from 2007-2011. She is also a member of the Committee on Blood Management of the American Society of Anesthesiologists, and sits on the Scientific Program Committee for the New York State Society of Anesthesiologists PGA Annual Meeting. She served as a member of the Associate Editorial Board for *Anesthesia & Analgesia* until 2010 and is now a Guest Editor and Liaison Editor for the SCA-section of *Anesthesia & Analgesia*. She serves on the Editorial Board of the *Journal of Cardiothoracic and Vascular Anesthesia* and is Section Editor of the Case Conference Section of this journal.

Research interests lie in the field of hemostasis and thrombosis as it relates to cardiovascular disease. Research grants have been received from medical industry sources and a philanthropic organization. The results of her research have been published in high impact peer reviewed journals. She lectures frequently at national and international scientific meetings having accomplished more than 100 visiting professorships and invited lectures.

Board of Directors

Two at-large positions open

Lebron Cooper, MD

Lebron Cooper, MD is Assistant Professor of Clinical Anesthesiology at the University of Miami Miller School of Medicine. He currently serves as Chief of Anesthesiology and site director for cardiothoracic anesthesia at the University of Miami Hospital and Director of Clinical Operations at Sylvester Comprehensive Cancer Center at University of Miami. He has been a member of the Society of Cardiovascular

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Get Involved

One of the most important responsibilities of the leadership of the SCA is to reach out to the membership for direction. Likewise the memberships’ responsibility is to provide the leadership with feedback.

A recent example of this is the membership survey conducted by the SCA office this fall. There was an outstanding response rate of 24%. Thanks to each of you who took the time to answer the survey and provide feedback. The Board of Directors and the Membership Committee are continuing to review the results and respond to comments and suggestions. The leadership encourages you to get involved in the Society’s ongoing activities.

One of the key topics mentioned by members was the selection of leaders of the Society, and you have a chance to play a role in that process in the coming months. The slate of individuals nominated by the membership and the nominating committee for elected positions in 2011 is included in this newsletter. Elections open February 1, 2011 on the SCA website (member login required). Please make sure to vote.

There is yet another opportunity to “vote”. At the 2011 education meetings, the course directors and faculty will be utilizing an audience response system. These systems can measure your learning and help the SCA, as well. Please be sure to participate.

Member involvement in the numerous committees of the SCA is invaluable. Next spring the composition of the committees will change. Look over the choices and talk to the committee chairs to see if you can join. The committees and chairs are listed on the SCA website at http://www.scahq.org/sca3/contact.html.

The SCA website will soon be another opportunity for member interaction. Both the membership and the Board of Directors have recognized the need to update our site: www.scahq.org. Over the past year the Electronic Communications Committee, Chaired by Michael Eaton, and the BOD worked closely together to create a vision for the website. This vision was translated into a request for proposals (RFP). The RFP was sent to numerous vendors and Hindsite Interactive, Inc. was chosen to perform the redesign. The new site is expected to be live in early 2011 and will offer numerous advantages:

- Easy navigation
- An online cardiac manual with rapid access to important clinical questions
- A fellowship lecture series to improve the education of all Cardiothoracic Anesthesia Fellows
- Interactive CME offerings

Your contributions are critical to the strength of our Society. There are many opportunities for you to get involved in the SCAs activities. Please take advantage of them.

Exploring SCA’s Potential Participation in the Society of Thoracic Surgeons’ Adult Cardiac Surgery Database

The SCA has been exploring opportunities to develop a database for its membership to be used for continuous clinical quality improvement and hypothesis generation that could lead to future important investigation in our specialty. The Board of Directors has been discussing various strategies to create such a database with the STS over the last 18 months. These strategies would involve a cooperative relationship with the STS which would enable shared data resources.

The SCA now wishes to explore the level of interest among programs who might participate in the database as there would be a need for minimal involvement on the part of the SCA to proceed forward.

The SCA would have approximately 100 to 125 new data fields/variables in the database. For the SCA to participate in the database, a minimum of 100 programs would need to be involved. The cost per program would be approx $3000 one time start-up fee and approximately $2000 annually thereafter.

Please respond yes or no to the likelihood of your program’s willingness to participate in a SCA database. You’ll find a form at the bottom of this item in the web version of this newsletter.
Anesthesiologists since 1996. He has served on the SCA Scientific Program Committee for the past three years and has moderated the Thoracic Session, the Electrophysiology Session, and the Hands-on Thoracic Workshop at the Annual Meeting. He has been an active senior presenter of PBLD sessions at the Annual Meeting, working with junior faculty members to encourage their participation. He serves on the Steering Committee for the SCA FOCUS Initiative and is Chair of its PR Committee. As an SCA Board Member, he hopes to work with other members to adopt creative ways of increasing participation of fellows and young practitioners at the Annual Meeting and as Society members, to continue promoting fellowship training recognition in cardiothoracic anesthesiology, and to work to advance mutual goals of anesthesiologists, surgeons, nurses, perfusionists and others involved in the care of the cardiothoracic surgery patient.

**Michael P. Eaton, MD**

Michael P. Eaton, M.D. is an Associate Professor of Anesthesiology in the Teacher-Clinician-Scholar Track at the University of Rochester in Rochester, NY where he is also the Vice-Chair for Clinical Affairs and Director of the CT Anesthesia Fellowship. He has been a member of the Society of Cardiovascular Anesthesiologists since 1994. He currently serves as Chair of the SCA Electronic Communications Committee, of which he has been an active member since 2003. This committee is primarily responsible for oversight of the SCA website, including its ongoing comprehensive redesign. Dr. Eaton also serves on the SCA Web-based education task force, which is developing a series of lectures for Cardiothoracic Anesthesia Fellows, and the SCA Task Force on Educational Activities. As a board member, Dr. Eaton will continue to improve the website to make it a resource for residents, fellows and attendings alike. He will also pursue the SCA’s continued participation in discovery, encouraging research and guiding focus toward areas of acknowledged need.

**Steven H. Ginsberg, MD**

Steven H. Ginsberg is an Associate Professor of Anesthesiology at UMDNJ Robert Wood Johnson Medical School. He has been a member of the Society of Cardiovascular Anesthesiologists since 1998. He is integrally involved with resident and fellow education at Robert Wood Johnson Medical School, and has won the coveted Teacher of the Year Award. He has also been awarded the Robert Wood Johnson Medical School Faculty Achievement Award for his work as Program Director, to establish and maintain the ACGME-approved Cardiothoracic Anesthesia Fellowship. In 2009 he was instrumental in establishing the SCA Web-based Fellowship Education Committee. Dr Ginsberg led efforts by this committee to establish the “Featured Lecture Series”, in which nationally-recognized cardiac anesthesiologists present various lectures concerning topics which may be difficult to obtain at a local level.

**C. David Mazer, MD**

David Mazer, M.D. is a Professor and Vice-Chair for Research in the Department of Anesthesia at the University of Toronto. He is actively engaged in clinical practice and research in anesthesia and critical care, and has been a member of the Society of Cardiovascular Anesthesiologists since 1986. He currently serves as a member of the ASA Educational Track Subcommittee on Cardiac Anesthesia, the SCA Bylaws Committee and the SCA/STS Blood Conservation Task Force. Previously, he was a member of the SCA Annual Meeting Program Committee, a speaker at the Cardiopulmonary Bypass and Annual Meetings and Canadian representative on the SCA Board of Directors. He has also been a Co-Chair and steering committee member of the World Congress of the World Society of Cardio-Thoracic Surgeons. His first anesthesia job was in Inuvik, Northwest Territories, so he appreciates the issues for both non-academic and academic practice. Dr. Mazer has been an advocate for collaboration between anesthesiologists and others involved in the care of the cardiothoracic surgical patient, for the generation and translation of new knowledge into clinical practice, for promotion of fellowship and resident interest in cardiothoracic anesthesiology and for education of clinicians involved perioperative care.

**David A. Zvara, MD**

Dr. Zvara is currently serving a one-year term on the Board of Directors and is running for reelection. His past service to the Society is highlighted by a term as Chair of the Annual Meeting Program Committee (2007-2009), Vice-Chair of the Program Committee (2003-2007), Program Committee member (2000-2003), Newsletter Committee (1995-2000), and member of the TEE Program Committee (2006-2008). In addition to these duties, Dr. Zvara has presented original research, refresher course material, PBLD material, workshops and TEE related educational material at many of the Society meetings and the ASA.

Dr. Zvara has been an active member since 1989 at which time he presented his work at the 11th Annual SCA Meeting in Seattle, Washington. Currently, Dr. Zvara is the Professor and Chairman at the University of North Carolina at Chapel Hill. “I am most proud of my role in expanding the educational venues offered by the SCA,” Zvara said. “Each year, I placed an emphasis on reaching out to new members, new speakers, new educators, researchers and clinicians. If elected to the Board, I am most interested in continuing this work to include a broader base of clinicians and better represent the interests of cardiovascular anesthesiologists at home and abroad. We must continue to find ways to best serve our membership as our profession changes and as our educational formats evolve.”

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Jonathan L. Kraidin, MD

Jonathan Kraidin, M.D. is an Associate Professor of Anesthesiology at Robert Wood Johnson University Hospital/UMDNJ. He has been an Associate Oral Board Examiner since 2003 and oversees his department’s mock oral board program. He is the section head for Thoracic Anesthesia, and is actively involved with residency training within his cardiothoracic section. He is one of two anesthesiologists at his program involved with onsite training for performing minimally invasive port-access heart surgery.

Marc E. Stone, MD

Marc E. Stone, MD is Associate Professor of Anesthesiology and Program Director of the Fellowship in Adult Cardiothoracic Anesthesiology at the Mount Sinai School of Medicine in New York. He has been a member of the Society of Cardiovascular Anesthesiologists since 1999. Dr. Stone has been a frequent speaker at the Annual meeting and has also served as a member of the Scientific Program Committee for the Annual Meeting. Dr. Stone has been co-director of the annual CME course “Annual Symposium: Clinical Update in Anesthesiology, Surgery and Perioperative Medicine” since 2000 and is familiar with current CME regulations.

Alina M. Grigore, MD

Alina M Grigore, MD, MHS, FASE is an Associate Professor of Anesthesiology at the University of Maryland School of Medicine and Director of the Division of Cardiothoracic Anesthesiology. She has been a member of the Society of Cardiovascular Anesthesiologists since 1996. She is currently part of the Interdisciplinary Professional Practice Committee where she is actively involved in developing the “Guidelines for the Practice of Cardiopulmonary Bypass in Adults”. She is also part of the ASE Bylaws and Ethics Committee and she has served on the SCA Research Committee and SCA Scientific Program Committee. She has been a speaker at the SCA and ASA Annual Meetings and a speaker at the SCA Annual Update on Cardiopulmonary Bypass Meetings. As a SCA active member, she has been an advocate for enhanced, active collaboration with other cardiac subspecialties and for advanced knowledge and clinical skills of cardiovascular and thoracic anesthesiologists.

Alexander Mittnacht, MD

Alexander Mittnacht, M.D. is an Associate Professor of Anesthesiology at the Mount Sinai School of Medicine in New York, NY. He specializes in both adult and pediatric cardiac anesthesia, and is the Director of Pediatric Cardiac Anesthesia at the Mount Sinai Medical Center New York. His research interests include fast-tracking in pediatric cardiac anesthesia, tissue oximetry in children undergoing surgery for congenital heart disease and in adults undergoing procedures in the electrophysiology lab. Dr. Mittnacht has been a member of several committees, including Education and Curriculum, Simulation, and Transfusion Medicine. In addition, he is a regular participant in the Northern New England Cardiovascular Study Group.

NOMINATING COMMITTEE

Two elected positions open

Michael J. Andritsos, MD

Michael Andritsos, M.D., is an Assistant Professor in the Clinical Track at The Ohio State University Medical Center where he serves as Director of Cardiothoracic and Vascular Anesthesiology. He received his residency and fellowship training at Washington University in St. Louis. He currently is involved in The Ohio State University Medical Center serving on numerous committees for patient safety. He dedicates his time to resident and fellow cardiothoracic education, particularly in echocardiography where he developed an elective rotation in perioperative TEE for residents. He has been a member of the Society of Cardiovascular Anesthesiologists since 2003, and has been actively involved as a speaker, moderator and abstract reviewer at the annual meeting over the past 3 years.

Angus A. Christie, MD

Angus Christie, MD is the Director of Research and the Associate Residency Director in the Department of Anesthesiology at Maine Medical Center. He is a graduate of the University of North Carolina at Chapel Hill School of Medicine and completed his residency at UNC. Following residency, he finished a fellowship in Cardiothoracic Anesthesia and Critical Care Medicine at Duke University. Since arriving in Maine, he is actively involved in education at both the departmental and institutional level. Currently, he chairs the Scholarship Oversight Committee and is a member of several committees, including Education and Curriculum, Simulation, and Transfusion Medicine. In addition, he is a regular participant in the Northern New England Cardiovascular Study Group.

Alina M. Grigore, MD
of the Society of Cardiovascular Anesthesiologists since 1998. He has been part of SCA sponsored meetings as faculty since 2003, and has assisted in many workshops on transesophageal echocardiography as well as handheld ultrasound applications.

Michael H. Wall, M.D.

Michael H. Wall, M.D., F.C.C.M. is a Professor of Anesthesiology and Cardiothoracic Surgery at Washington University in St. Louis. He has been a member of the Society of Cardiovascular Anesthesiologists since 1992. He has served as a member of the SCA International Committee and SCA Newsletter Committee. He currently is a member of the SCA Annual Meeting Program Committee, FOCUS Fundraising and FOCUS Public Relations Committees. He was a co-founder of and continues to coordinate the SCA's Mentorship program and has been a speaker at the Annual Meeting and Workshops. He is a member of the ABA Critical Care Examination Committee, a Senior Editor of the ABA In-Training Examination, member of the ABA Maintenance of Certification Exam Committee and an Associate Examiner for the ABA Oral Examination. As coordinator of the SCA Mentorship program he has encouraged medical students, residents and fellows to pursue careers in cardiothoracic anesthesiology and critical care and to become active members of the SCA. He has been an advocate for promoting the specialties of cardiothoracic anesthesiology and cardiothoracic critical care, echocardiography and ultrasound education as an integral component of anesthesiology residency and cardiothoracic and critical care fellowship training.

Mentor Program to be held at Annual Meeting & Workshops

Dr. Michael Wall is organizing the Mentor Program at the Annual Meeting for participating residents, fellows and young faculty (within first 3 years of practice). This year 20 residents, fellows and young faculty will be chosen and paired with an active SCA member for one-on-one networking. This is a great chance to meet an SCA member from another institution to discuss future career and research pathways and an opportunity to explore how to become involved with the SCA.

The program will occur on Saturday April 30, 2011 from 5:45-6:45 pm. If a resident, fellow or young faculty member of the SCA is interested in participating, he or she should notify Dana Gibson in the SCA office by email to dana@societyhq.com.

Junior faculty have the opportunity to submit challenging or unique echo cases for presentation at the Annual Meeting. Submit online at scahq.com.*

The deadline for submission is January 15, 2011

DRUG & INNOVATION UPDATE

New Antiplatelet Agents

By Mojca Remskar Konia, MD
University of Minnesota

Aspirin and clopidogrel are considered standard of care in patients at risk for thrombotic events. Despite demonstrated benefits, there are significant shortcomings to both agents. These include: variability in the inhibitory response of platelets, delayed platelet inhibition, prolonged time to recovery of platelet function, bleeding, and in-stent thrombosis.

Several new anti-platelet agents that may overcome some of the limitations of currently available agents are in different stages of basic and clinical investigation. We will review a few of these agents.

I. ADP RECEPTOR INHIBITORS

Prasugrel (FDA approved)

Prasugrel is the third-generation thienopyridine. It is a specific, irreversible antagonist of the platelet adenosine 5'-diphosphate (ADP) P2Y12 receptor. The ingested pro-drug gets metabolized to an active metabolite in vivo. The drug has several advantages over clopidogrel including: a higher peak inhibitory effect on platelet aggregation, a more rapid onset of action (1 hour), and a lower incidence of non-responsiveness. Phase II study JUMBO-TIMI 26 studied clopidogrel and prasugrel regimens in 900 patients undergoing elective or urgent PCI plus stenting (1). In this safety study, which was not powered to assess efficacy, prasugrel was associated with a reduction in composite end-point of 30-day major adverse cardiac events and the end-point of myocardial infarction and recurrent ischemia. Of note was there was a significantly lower rate of coronary target vessel thrombosis (5.7% vs. 7.9%; P<0.024). Prasugrel was however associated with an increased risk of major bleeding (1.7% vs. 1.2%; P=0.59) (1).

Subsequently, the TRITON-TIMI 38 trial compared prasugrel and clopidogrel in 13,608 patients undergoing PCI including coronary stenting (2). This study confirmed the superior efficacy of prasugrel over clopidogrel (9.9% vs. 12.1% patients experienced primary end-point of death from cardiovascular causes, nonfatal MI, or non-fatal stroke — hazard ratio for prasugrel vs. clopidogrel 0.81, 95% CI 0.73-0.90, P=0.001) (2). The rate of TIMI major and minor bleeding was higher in the prasugrel group (hazard ratio 1.31, 95% CI 1.11-1.56, P=0.002). In spite of the increased risk of bleeding, the net clinical benefit was in favor of prasugrel, especially in patients with diabetes mellitus who had a 30% relative risk reduction in the primary end-point without any difference in major bleeding. Three subgroups of patients with less net clinical benefit or clinical harm were identified: patients with a history of stroke or transient ischemic attack, elderly patients as defined being >75 years of age, and patients weighing < 60kg in which this drug should be avoided.

Cangrelor (not FDA approved)

Cangrelor is non-thienopyridine reversible selective and specific antagonist of P2Y12 receptor. It is administered intravenously and has a rapid onset of activity, a short half-life (3-5 minutes) and reversibility (complete reversal of platelet inhibition in 20-50 minutes). Phase I and II trials demonstrated a good safety profile and superior platelet inhibition induced by cangrelor compared to clopidogrel. Initial enthusiasm was, however, tempered by the results of both the CHAMPION and CHAMPION-PLATFORM trials (3,4). The CHAMPION trial included 8,877 patients with ST-elevation myocardial infarction or non-ST elevation acute coronary syndrome who were assigned to either 600 mg of clopidogrel or cangrelor 30 microg/kg bolus iv followed by 4 microg/kg/min infusion (3). Cangrelor was administered 30 minutes before PCI and continued for 2 hours after PCI. At 48 hours no benefit over clopidogrel was demonstrated in reducing the composite end-point of death from any cause, myocardial infarction or ischemia-driven revascularization.

The CHAMPION-PLATFORM trial enrolled 5,362 patients who were randomly assigned to cangrelor or placebo at the time of PCI followed by 600 mg of clopidogrel (4). Primary end-point was a composite of death, myocardial infarction, or ischemia-driven revascularization at 48 hours. The study was stopped due to unlikely superiority of cangrelor over placebo for the primary end-point at interim analysis. One possible advantage of cangrelor might be the elimination of the need for administration of a loading dose of an anti-platelet agent hours before PCI and its superior antiplatelet effect compared to clopidogrel. More data is necessary to support its clinical use—perhaps in settings when short-term, high intensity platelet blockade is necessary.

Ticagrelor (submitted for FDA approval)

Ticagrelor is an oral non-thienopyridine, which reversibly inhibits the ADP receptor. Complete platelet inhibition is achieved within 2 hours after dosing. The phase II DISPERSE II trial enrolled 990 patients and demonstrated ticagrelor’s safety, superior potency, rapid onset/offset of activity, and less interpatient response variability (5). The adverse effects of dyspnea and bradycardia were observed. Over 24 hours the effect of ticagrelor was observed to decrease from 99% to 57%, which raised some concerns of its efficacy in noncompliant patients.

The Phase III PLATO trial enrolled 13,408 patients. Patients were randomly assigned to ticagrelor and placebo (180 mg loading dose followed by 90 mg twice a day) or to clopidogrel and placebo (300-600 mg loading dose, followed by 75 mg/day). All patients were treated with aspirin. The primary end-point was cardiovascular death, myocardial infarction, or stroke. The trial demonstrated an advantage of ticagrelor over clopidogrel in prevention of cardiovascular events, MI and death (9.0% vs. 10.7%, Hazard ration 0.84, 95% CI 0.75-0.94; p=0.0025) with no significant increase in bleeding (11.6% vs. 11.5%, hazard ration 0.99, 95% CI 0.89-1.10; p=0.8805) (6). Ticagrelor may become an agent of choice in patients with acute coronary syndrome for whom the invasive strategy is planned.

II. PROTEASE-ACTIVATED RECEPTOR (PAR)-1 INHIBITORS (not FDA approved)

Vorapaxar

The novel agent vorapaxar (SCH 530348) prevents thrombin-induced activation of platelets by inhibition of protease-activated receptor (PAR)-1. The generation of fibrin remains intact thereby possibly decreasing the risk of bleeding. The agent is rapidly absorbed, its maximal effect of > 90% inhibition is within 1 hour, and slowly eliminated (terminal half-life >72 hours). It has been primarily investigated as an agent that may produce additional benefit on top of standard anti-platelet treatment regimens with no significant increase in bleeding complications.

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Drug & Innovation Update, continued

The Phase II TRA-PCI trial enrolled 1,031 patients scheduled for angiography and possible elective stenting. Patients were assigned to different loading and maintenance doses of SCH 530348 in addition to aspirin, clopidogrel, and an antithrombin agent. No statistically significant increase in the rate of bleeding was observed in the SCH 530348 group compared to the standard of care group (2.8% vs. 3.3%) (7). There was a trend toward a reduction in cardiovascular events which was observed, but the study was not powered to establish this efficacy. The results of 2 major phase III trials (TRACER and TRA-2P-TIMI 50 trial) are anticipated that will determine the utility of this drug in clinical practice.

III. THROMBOXANE INHIBITORS (not FDA approved)

Picotamide

Picotamide acts as a dual inhibitor of TXA2 synthase and thromboxane receptors. PGE2 and prostacyclin production are preserved. It has no effect on the ADP receptor. Besides its anti-platelet action, the agent has been demonstrated to have anti-proliferating effects on smooth muscle cells and anti-migrating effects on myocytes. The DAVID study randomized 1,209 patients with peripheral artery disease and type-2 diabetes to picotamide 600 mg bid or aspirin 320 mg qd for 24 months. The study demonstrated a reduction in all-cause mortality from 5.5% in aspirin group to 3% in picotamide group (45% relative risk reduction, with a number needed to treat of 40 patients for 2 years to prevent one death), but did not demonstrate significant differences in mortality plus non-fatal vascular events (8). Major bleeding events were fewer with picotamide than with aspirin. It may be that this agent will gain utility in patients with increased TXA2 production. Risk factors for increased TXA2 production include: obesity, metabolic syndrome, high-grade hypercholesterolemia, and inflammatory states in which the effects on smooth muscle cell proliferation and endothelial dysfunction may be important. Further studies however are necessary to allow for proper positioning of this agent among anti-platelet agents.

Overall, there are several potential agents that offer exciting possibilities for antiplatelet therapy. Currently, the long half life of clopidogrel and aspirin coupled with their benefits in reducing thrombotic complications make them difficult to titrate, especially in perioperative settings. This in turn increases the risk of bleeding. Newer agents with shorter half-lives would be ideal for the perioperative setting and enhance our ability to optimally provide care for patients but need to have their safety profiles adequately addressed before they become mainstays in therapy.

REFERENCES

Efficacy of catheter ablation and surgical CryoMaze procedure in patients with long-lasting persistent atrial fibrillation and rheumatic heart disease: a randomized trial

Xu Liu, Hong-Wei Tan, Xin-Hua Wang, Hai-Feng Shi, Ying-Ze Li, Feng Li, Li Zhou, Jia-Ning Gu *Eur Heart J.* 2010; 31(21):2633-2641

**Reviewer:** Richa Dhawan, MD
*University of Chicago Medical Center*
*Chicago, IL*

**Abstract Excerpt:**

This is a randomized study comparing the efficacy of atrial fibrillation treatment between patients undergoing circumferential pulmonary vein isolation ablation (CPVI) after valvular surgery and patients with concomitant Maze procedure at the time of the valve operation. A total of 99 patients with chronic atrial fibrillation and rheumatic heart disease were randomly placed into either Group A who then underwent CPVI 6 months after valve surgery or Group B in which patients had a Maze procedure at the time of the valve operation. The mean follow-up periods were 15 ± 5 and 20 ± 8 months in Groups A and B respectively.

Baseline characteristics and surgical procedures performed were similar in both groups. At the end of a 12-month follow-up, the freedom from atrial arrhythmias was higher in Group B than in Group A (82% vs. 55.2%, P<0.001). There were 22 patients in Group A that experienced a recurrence of atrial arrhythmias that required a redo ablation. Of these patients 8 converted to sinus rhythm. A total of 35 patients (71%) in Group A were in sinus rhythm at the end of the study period. 10 patients in Group B had a recurrence of atrial tachycardia. Of these, 6 patients had repeat catheter ablation and 4 patients converted to sinus rhythm. A total of 44 patients (88%) in Group B were in sinus rhythm at the conclusion of the study.

**Reviewers’ Comments:**

Chronic atrial fibrillation (AF) in patients with rheumatic heart disease (RHD) can be difficult to treat. These patients are generally on long-term anticoagulation and anti-arrhythmic therapy. Patients may present around 50-60 years of age with significant involvement of the mitral or aortic valve necessitating surgery. The decision to either replace or repair the valve is based on multiple factors, however pre-existing use of anticoagulation may sway the decision towards replacement. This can have significant implications for patients and their long-term outcomes. If the likelihood of remaining free from atrial arrhythmias is significant, then these patients may be better candidates for mitral valve repair. Interestingly 67% of patients that had a recurrence in Group B were successfully treated with a repeat catheter ablation. This is much higher than if these patients had a primary catheter ablation without the Cox Maze procedure. The Cox Maze radiofrequency ablation may be beneficial in making these patients more amenable to treatment in the future even if it does not necessarily afford short-term benefits.

Monitoring patients for AF can be difficult as they may go in and out of sinus rhythm without symptoms. The authors used a holter monitoring device to assess postoperative AF, but they may have missed paroxysmal episodes and overestimated successful conversions.

Some predictors for failure of the Cox Maze procedure that have been described include chronic atrial fibrillation, an enlarged left atrium, and RHD. Interestingly, the success rate for freedom from atrial arrhythmia for patients with RHD in this study is higher than that found in previous studies. A limitation of the trial was that atrial size measurements were not addressed and differences in atrial dimensions may have explained some of the differences demonstrated. Also, categorization of patients into the type of surgery and outcomes may have further yielded important differences. Overall, this paper suggests that concomitant Cox Maze approach results in decreased atrial fibrillation versus a circumferential pulmonary vein isolation ablation approach.

**Fluids after cardiac surgery: A pilot study of the use of colloids versus crystalloids**


**Reviewers:** Ryan R Hood, MD and Jenny Kwak, MD
*Loyola University Medical Center*
*Maywood, IL*

**Introduction**

Controversy exists over the use of colloids versus crystalloids in critically ill patients. Though physicians believe that colloids better maintain and expand intravascular volume, there are few studies showing these benefits. In fact, some studies have shown that albumin and hydroxyethyl starch (HES) may increase morbidity and mortality (1-3). The authors of this study argue that previous studies were not adequately based on physiologic principles, contending that a cardiovasucular flow-based model should be used to assess volume responsiveness. Using a flow-based model, they sought to determine if administration of HES would decrease the use of catecholamines in a cardiac intensive care unit (ICU) on postoperative day (POD) 1 as compared to the use of crystalloid. Multiple other secondary end-points were also investigated.

**Methods**

The authors enrolled 262 participants who were scheduled to undergo cardiac surgery at a Canadian tertiary care hospital. Exclusion criteria included absence of a pulmonary artery catheter, presence of an intra-aortic balloon pump, use of HES after priming of the cardiopulmonary bypass pump, surgeon request, and excessive bleeding immediately after surgery. Patients were randomized to receive either HES or saline postoperatively. Fluid was administered in 250 mL aliquots, up to a maximum of 1 L, using an algorithm based on cardiac index, systolic or mean arterial blood pressure, central venous pressure, or urine output. The primary endpoint was the use of catecholamines on POD 1. Secondary endpoints included total catecholamine use, time on catecholamine therapy, chest tube drainage, fluid balance, renal function, blood product use, cardiac index, central venous pressure, hospital length of stay, ICU length of stay, percentage of patients discharged within 24 hrs, mediastinitis, pacing, and arrhythmias.

**Results**

The HES group had significantly fewer patients requiring catecholamines on POD 1 (p=0.001). The HES group also received a lower dose of catecholamines, required catecholamines for a shorter time period, required fewer fluid boluses, and had a lower fluid balance. HES administration did not affect chest tube drainage, ICU length of stay, time until ICU discharge, renal

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function, requirement of renal replacement therapy, or transfusion of packed red blood cells, cryoprecipitate, or platelets. A greater number of patients in the HES group required transfusion of fresh frozen plasma. Fewer patients in the HES group had courses complicated by infection or cardiac pacing.

**Reviewers' Comments**

Magder et al found that the use of HES for fluid resuscitation decreased catecholamine requirement in patients recovering from open heart surgery if dosing is based on cardiovascular flow parameters. They also evaluated coagulopathy/bleeding and renal dysfunction, two major safety concerns regarding HES administration. Rates of renal dysfunction were not increased with the use of HES in this study, even when administered to patients with chronic renal insufficiency. More patients in the HES group required FFP than those in the saline group. However, as the authors point out, bleeding is difficult to analyze, and the physical properties of HES may increase intravascular hydrostatic pressure and subsequent chest tube drainage. The authors did not discount the possibility that a higher intravascular volume may lead to dilution of clotting factors, potentially increasing bleeding. The authors concluded that the use of a flow-based model to guide fluid administration conferred all the hemodynamic advantages of colloid administration while avoiding the risks/side effects that have been seen in previous studies. The study is limited by its relatively small sample size, single study population, and the use of somewhat arbitrary reference points in the flow-based algorithm. Nevertheless, the authors offer an interesting method for fluid administration in postoperative cardiac patients, and have shown, at least in one sample population, that conservative and physiologically based administration of HES can offer hemodynamic stability without causing renal dysfunction.

**References**


**Prediction models for prolonged intensive care unit stay after cardiac surgery: Systematic review and validation study**


**Reviewers: Geoffrey Hayward**, MD, MPH; Bala Subramaniam**, MD, MPH
* Resident in Anesthesia
**Assistant Professor of Anesthesia, Harvard Medical School
Beth Israel Deaconess Medical Center, Boston, MA

**Background:**

Risk prediction models in cardiac surgery have been developed typically to predict mortality. However, with decreasing mortality rates, these models tend to overpredict mortality especially in high-risk patients. However, an attempt has been made to use these models to predict postoperative ICU length of stay as a means to assist in resource allocation and planning. In this study, a systematic review was conducted of existing models and their ability to predict ICU length of stay greater than 48 hours. The best models were validated in a prospective data set from a single hospital.

**Methods:**

The authors conducted a systematic review of the literature to identify algorithms which predicted prolonged post-operative ICU length of stay (>48 hours). Predictive algorithms were considered for further examination if inclusion criteria were met. Using an independent cohort of more than 11,000 Dutch post-cardiac surgical patients for which data including ICU length of stay was available, the calibration and accuracy of each of these predictive models was scored. In their comparison on model performance, discrimination and calibration were key focus. The discrimination aspect of the analysis was to determine the extent to which the model distinguished between patients with and without a prolonged ICU stay. The calibration aspect described the extent to which the predicted probability of a prolonged ICU stay reflected the true probability of a prolonged ICU stay.

**Results:**

20 different prediction models were identified by the literature review 14 of which were ultimately judged to meet inclusion criteria. Six models were developed for patients undergoing cardiac surgery in general and 8 other models focused on patients undergoing coronary artery bypass grafting. Each algorithm was applied to the independent sample with prolonged ICU length of stay defined as >48 hours. The Parsonnet model (1) showed the best discrimination (Area under the receiver operating characteristic curve (AUC=0.75), followed by the Euro SCORE (AUC=0.71) (2). Calibration plots were drawn to assess the calibration performance of the predictive models. Most of the models followed the ideal calibration line.

**Conclusions:**

In this validation of prediction models for prolonged ICU length of stay, Parsonnet and Euro SCORE fared better in identifying patients who were destined to stay in the ICU more than 48 hours.

**Comments:**

Previous work in the field has validated the Parsonnet score as a means of cardiac surgical risk stratification (3) while there may be some debate about the accuracy of EURO Score risk stratification (4). Etta et al have used an independent dataset to assess the validity of using these and other algorithms for predicting prolonged post operative ICU stay and found that the Parsonnet and Euro SCORE were the most predictive. In general, models with an AUC<0.70 cannot be used in clinical practice. Using these results may help to direct future research to further refine predictive techniques to identify risk factors which can predispose cardiac surgical patients to prolonged ICU stays, and further elucidate the length of the stay. The recently proposed STS risk indices need validation studies in large datasets to properly assess if they predict a prolonged ICU stay in postoperative patients.

Improved knowledge of how patients’ co-morbidities will affect their recovery and impact their outcomes has far reaching implications. It may help surgeons identify patients who are poor surgical candidates and may have prolonged postoperative courses. It may also have an effect on hospitals that could use such data to alter staffing and other resource allocation.

**References**


**Safety of Recombinant Activated Factor VII in Randomized Clinical Trials**
Levi M, Levy JH, Andersen HF, Truloff D

**Reviewer: Nanhi Mitter, MD**
*Johns Hopkins Hospital*
*Baltimore, MD*

**Excerpt from Paper’s Abstract:**
Levi et al. present a pooled analysis of published randomized, placebo-controlled trials of recombinant activated Factor VII (rFVIIa) when used as an off-label indication. A total of 35 randomized clinical trials conducted between 1996 to 2008 were included (29 of these trials were funded by Novo Nordisk and 6 were investigator initiated-trials). A total of 4468 subjects were studied (4119 patients and 349 healthy volunteers). All reported adverse events were classified by the authors as arterial thromboembolic events, venous thromboembolic events or an event that was not deemed to be due to thromboembolism. Dose categories were also determined to include low (> 80 ug/kg), medium (80-120 ug/kg) and high (> 120 ug/kg). The rate of arterial thromboembolic events (TEs) was found to be higher in patients receiving rFVIIa compared to placebo (5.5% vs 3.2%, P=0.003), especially in patients older than 65 years of age (9.0% vs. 3.8%, P=0.003). In the subset of patients greater than 75 years of age, the rate of arterial TEs was 10.8% in the rFVIIa group vs. 4.1% in the placebo group (P=0.02). Venous TEs rates were similar in both groups. The incidence of coronary TEs was 2.9% in the rFVIIa group and 1.1% in the placebo group (P=0.002).

**Reviewer’s Comments:**
rFVIIa is currently FDA approved for those patients with Hemophilia A or B who have developed antibodies to Factor VIII or IX. These indications have been extended to include “the treatment of episodes of bleeding and the prevention of episodes of bleeding related to surgical or invasive procedures in patients with congenital and acquired hemophilia and factor VII deficiency”. The half-life of rFVIIa is about 2.5 hours and the recommended dose is 90ug/kg. The use of this hemostatic agent can lead to systemic activation of the coagulation system resulting in thromboembolic events. The true thromboembolic rate is difficult to ascertain from the literature because many of the studies include patients receiving concomitant antiocoagulants although it has been described to be about 1-2% in an analysis of 483 published studies which consisted of uncontrolled and retrospective studies.

The results of the current analysis are important but several points are noteworthy. First, this study was funded by Novo Nordisk. Second, the extrapolation of this data to cardiac surgical patients should be done with caution as only 267 of the 4468 patients (6%) were from studies performed on the cardiac surgical patient population. Thirdly, the indications for usage were varied among the different studies, i.e., not all of the studies included the rFVIIa for treatment of only central nervous system bleeding but rather a combination of off-label indications such as central nervous system bleeding, or bleeding due to liver diseases, trauma and other causes. It would also be interesting to see an analysis of the studies that were performed in each category. Finally, as the authors state, one limitation stems from the time span of the studies included (12 years). Because patients in the trials included in this analysis were receiving concomitant antiocoagulants, it is difficult to determine how these results would differ (or not) if these drugs weren’t present.

Overall, Levi et al. state that although the incidence of arterial TEs are significantly increased in patients receiving rFVIIa compared to placebo while the rate of venous TEs was similar between the two groups. Further studies are necessary to determine the scope of this problem in specific patient populations.

**References:**

**Transcatheter Aortic-Valve Implantation for Aortic Stenosis in Patients Who Cannot Undergo Surgery**
*New England Journal of Medicine* 2010;363:1597-1607

**Reviewer: Nanhi Mitter, MD**
*Johns Hopkins Hospital*
*Baltimore, MD*

**Excerpt from Paper’s Abstract:**
Leon et al. present a prospective, randomized active-treatment controlled trial to evaluate transcutaneous aortic valve implantation (TAVI) compared to standard therapy in 358 patients (between 2007-2009) who were deemed not suitable for cardiac surgery by at least two surgeon investigators in 21 centers internationally (17 located in the US). The primary end point measured was death from any cause and secondary end points included the rate of death from cardiovascular causes, NYHA functional class, the rate of repeat hospitalization due to valve-related or procedural related complications, stroke, valve performance and bleeding. In those patients in the standard therapy group, 83.8% underwent balloon aortic valvuloplasty and the rate of death from any cause after 30 days (p=0.41) and one year (p<0.001) was 5.0% and 50.7% respectively compared to 2.8% and 30.7% respectively in the TAVI group. The incidence of major strokes at 30 days was 5.0% and 1.1% in the TAVI and the standard group respectively (p=0.06) and at 1 year was 7.8% and 3.9% respectively (p=0.18). The composite of major stroke and death from any cause was significantly lower in the TAVI group compared to the standard therapy group. There was a higher incidence of major vascular complications in the TAVI group (16.2%) vs. the standard group (11%, p<0.001). At one year, 74.8% of patients in the TAVI group were asymptomatic or had mild symptoms (NYHA class I or II) compared to 42.0% of the patients in the standard group (p<0.001). According to echocardiography data, the mean aortic valve area in the TAVI group increased from 0.6 +/-0.2 cm2 to 1.5 +/-0.5 cm2 at 30 days.

**Reviewer’s Comments:**
TAVI has been performed since 2002 and for this study was accomplished with general anesthesia utilizing transesophageal echocardiography. The Ed-
wards SAPIEN heart-valve system is a trileaflet bovine pericardial valve and a balloon-expandable, stainless steel support frame that is inserted via a 22- or 24- French sheath via the femoral artery. This study reveals that TAVI is a superior alternative to standard therapy in patients who are deemed unsuitable for surgery. In addition, the rate of death in the TAVI group was not significantly different compared to the standard therapy group. Also, the reduction of symptoms in the TAVI group at one year is remarkable as well as the valve performance as evidenced by the echocardiographical data.

Follow-up data on these patients is needed to determine long term valve performance and long term patient outcomes. Furthermore, studies could be performed comparing TAVI with aortic valve replacements to explore the applicability and indications for this procedure. As experience increases with this procedure and as newer devices with cerebral protection devices are developed, end points will be affected. This is one limitation to this study. In fact, as the authors state, the earlier generation delivery systems (as used in this study) are potentially more likely to cause neurologic complications. Other limitations include the exclusion of other patient subgroups such as those with coronary stenoses and severe peripheral vascular disease and the fact that the study is funded by Edwards Lifesciences.

Overall, this is a very important study as it will alter the current approach to the management of this already complicated and challenging patient population. Future work in identifying long term outcomes in these patients should be targeted. In conclusion, based on the data from this trial, the authors state that TAVI should be the new standard of care for patients with aortic stenosis unsuitable for cardiac surgery. It will be interesting to see whether these results encourage this approach in other patients with aortic valve disease requiring aortic valve replacements.

Echocardiographic predictors for persistent functional mitral regurgitation after aortic valve replacement in patients with aortic valve stenosis


Reviewer: Bala Subramaniam, MD, MPH
Assistant Professor of Anesthesiology, Harvard Medical School.
Director of Cardiac Anesthesia Research, Staff Anesthesiologist, Beth Israel Deaconess Medical Center, Boston, MA.

Introduction
The prevalence of concomitant moderate mitral regurgitation (MR) in patients with severe aortic valve stenosis presenting for surgery is significant. It is often left uncorrected as it is thought to improve after aortic valve replacement (AVR). However, a certain subset of MR may stay the same or even worsen and may lead to poor functional outcomes. Patients with myxomatous or rheumatic mitral valves are often surgically repaired or replaced at the same setting as AVR as they are not likely to improve. This study addressed the prediction of patients with persistent moderate MR after AVR using preoperative echocardiographic parameters.

Methods
110 patients with 2+ or 3+ MR at the time of AVR for aortic valve stenosis were left untreated. 52 patients had AVR and 58 had CABG and AVR. Patient prosthesis mismatch was addressed for AVR in all patients. A comprehensive preoperative and postoperative transthoracic echocardiography (TTE) was performed in all patients. In addition mitral valve (MV) tenting area and height were performed by TTE. MV tenting was defined as apical displacement of mitral leaflets in the apical 4-chamber view. Tenting height was defined as the minimal distance between the leaflet coaptation and the mitral annular plane, and tenting area was defined as the area enclosed by the annular plane and 2 leaflets in the 4-chamber view at the time of maximal MV closure in mid systole. A multivariable stepwise regression analysis was performed to identify factors associated with postoperative MR jet area. In addition, the sensitivity and specificity of various cut-off points for predicting persistent 2+ MR or more after AVR was determined.

Results
Eighty patients had MV tenting (mean 1.4 ± 0.5 cm²). Patients with tenting had increased left ventricular volumes, left ventricular mass, and left atrial size, lower ejection fraction, and more severe MR than those in the no-tenting group. MR improved in 51 of 80 (64%) patients with tenting by one degree after AVR in tenting group and in 25 of 30 (83%) patients in the no-tenting group. Multivariable regression analysis revealed that long-term atrial fibrillation and preoperative tenting area independently predicted postoperative MR jet area. Further analysis revealed that the sensitivity and specificity in predicting persistent MR after AVR were 72% and 82% for an MV tenting area > 1.4 cm² (AUC=0.81).

Discussion
MV surgery should be considered in patients in whom MR is expected to persist. Preoperative MV tenting area successfully predicts which patients are at risk for persistent MR and can be used in routine clinical practice in addition to other parameters.

Comment
While mild (1+) concomitant functional MR during AVR is left alone, severe (4+) MR is addressed during the same surgery. However, in patients with 2+ or 3+ MR, the management is unclear. The risk benefit ratio needs to be addressed with issues of double valve surgery mortality (unadjusted mortality is twice as high in MVR and AVR compared to AVR alone) versus the poor functional outcomes in untreated persistent MR and the potential for morbidity and mortality associated with a possible reoperation in the future. Based on the current available literature, persistent MR post AVR can be predicted in patients with moderate MR at the time of AVR, if they have any one of the following risk factors, a) dilated left atrium > 5 cm by TTE, b) atrial fibrillation, c) poor LVEF < 50%, or d) MV tenting area > 1.4 cm². This combination of risk factors might warrant MV surgery at the time of AVR and at the very least obtaining these values intraoperatively during TEE would be helpful in guiding the surgical management. However, it is important to note that short and long-term outcomes in patients with and without MV surgery during AVR have not been studied and future studies in this area are warranted.

References
Transfusion Requirements After Cardiac Surgery: The TRACS Randomized Controlled Trial


Reviewer: Hong Liu, MD
UC Davis Health System, Sacramento, CA

Background and Objective
Perioperative red blood cell transfusion is commonly used to address anemia, which is an independent risk factor for morbidity and mortality after cardiac operations. However, evidence regarding optimal blood transfusion practice in patients undergoing cardiac surgery is lacking. This study aimed to define whether a restrictive perioperative red blood cell transfusion strategy was as safe as a liberal strategy in patients undergoing elective cardiac surgery.

Methods
The Transfusion Requirements After Cardiac Surgery (TRACS) study was a prospective, randomized, controlled clinical trial conducted between February 2009 and February 2010 in an intensive care unit at a university hospital cardiac surgery referral center in Brazil. Consecutive adult patients (n = 502) who underwent cardiac surgery with cardiopulmonary bypass were eligible; analysis was by intention-to-treat. Patients were randomly assigned to a liberal strategy of blood transfusion (to maintain a hematocrit 30%) or to a restrictive strategy (hematocrit 24%). Composite end points included: 30-day all-cause mortality and severe morbidity (defined as: cardiogenic shock, acute respiratory distress syndrome, or acute renal injury requiring dialysis or hemofiltration) occurring during the hospital stay. The noninferiority margin was predefined at -8% (i.e., 8% minimal clinically important increase in occurrence of the composite end point).

Results
Hemoglobin concentrations were maintained at a mean of 10.5 g/dL (95% confidence interval [CI], 10.4-10.6) in the liberal-strategy group and 9.1 g/dL (95% CI, 9.0-9.2) in the restrictive-strategy group (P < 0.001). A total of 198 of 253 patients (78%) in the liberal-strategy group and 118 of 249 (47%) in the restrictive-strategy group received a blood transfusion (P < 0.001). Occurrence of the primary end point was similar between groups (10% liberal vs. 11% restrictive; between-group difference, 1% [95% CI, -6% to 4%]; P = 0.85). Independent of transfusion strategy, the number of transfused red blood cell units was an independent risk factor for clinical complications or death at 30 days (hazard ratio for each additional unit transfused, 1.2 [95% CI, 1.1-1.4]; P = 0.002).

Conclusion
Among patients undergoing cardiac surgery, the use of a restrictive perioperative transfusion strategy compared with a more liberal strategy resulted in noninferior rates of the combined outcome of 30-day all-cause mortality and severe morbidity.

Comments
The triggers for blood transfusion have been the center debate for many years. In 2007, the Society of Thoracic Surgeons and the Society of Cardiovascular Anesthesiologists issued clinical practice guidelines on perioperative blood transfusion and blood conservation in cardiac surgery. However, in a recent survey about half of the respondents indicated that they did not adhere to the recommended reduced hemoglobin cutoff points as transfusion triggers. Continued inappropriate transfusion among hospitals is a major concern. The rationale for implementing a restrictive transfusion strategy is based on many studies that have shown a lack of benefit and at the same time, substantially increased costs and adverse effects associated with RBC transfusion. These adverse effects include acute hemolytic and non-hemolytic reactions, transmission of viral and bacterial diseases, transfusion related acute lung injury, transfusion associated circulatory overload, and even increased mortality. Immunosuppression has also been associated with transfusion and may explain the higher risk of infection and recurrence of neoplastic diseases observed in transfused patients. Despite subsequent publications on transfusion practice guidelines, substantial variability in transfusion practices persisted.

This study by Hajjar et al reports results from a non-inferiority randomized controlled trial (RCT) comparing 502 patients undergoing cardiac surgery with cardiopulmonary bypass at a single referral center in Brazil, who were assigned to perioperative red blood cell (RBC) transfusion strategies aimed at maintaining hematocrit at or greater than 30% (hemoglobin approximately 10g/dL) vs. 24% (hemoglobin approximately 8 g/dL). The transfusion strategies resulted in transfusion rates of 78% and 47%, respectively. Despite the marked difference in transfusion rates, both groups had comparable mortality and morbidity outcomes. When putting these results in context with the results of multiple other studies suggesting transfusions are associated with worse outcomes, it should galvanize us to institute transfusion protocols in cardiac surgery and attempt to limit overall transfusions.
What is the SCA Foundation? Why does it need my support?

By Joyce A. Wahr, MD
Board Chair, SCA Foundation

For the past 30 years the Society of Cardiovascular Anesthesiologists (SCA) has been dedicated to enhancing the profession of cardiovascular anesthesia through research, education, and quality of patient care and did a find job of it! However, there was much more that the SCA wanted to do - the SCA has wanted to expand the research grants, and has been talking about a national research project to really improve cardiac anesthesia for many years, but there was only so much that could be done with membership dues. The Foundation was established to increase fundraising capacity to expand some of the key programs of the SCA and establish programs that are much needed. Over the past three years, the Foundation has been able to begin to do that – we have $2 million in research funding that wasn’t there three years ago, and have completed two of the three phases of FOCUS, the patient safety initiative in cardiac surgery. In addition, $75,000 has been committed to establish a leadership academy for our fellows and junior faculty. But sustaining these expanded and new programs requires support from all of our own members, even as we reach out to external funding agencies. Widespread support among our own members is the strongest evidence that other agencies should support the Foundation – if we don’t believe in it, why should they?

As we move into the end of our third year, we are asking every SCA member to consider how he or she can financially help support the Foundation. With your financial backing, we can accomplish the programs detailed below.

**Cardiovascular research**

Research plays a critical role in keeping advancing medical knowledge, but the SCA Foundation’s research funding plays a dual role. Your dollars, invested in research grants, do provide new knowledge about cardiovascular disease, but also give inquisitive and intelligent young researchers critical funding to establish their careers. The next great advance in cardiovascular anesthesia is likely to come from within the SCA and is likely to have been supported by member donations to the SCA Foundation. We need your support!

**Leadership Training and Mentoring**

Each of us is where we are as the result of timely and thoughtful mentorship. I wonder how much more we could have achieved with dedicated training in leadership, management, and business skills. Dr. Joel Kaplan, physician, educator, dean, chancellor, and past president of the SCA, has articulated an exciting vision for our fellows and junior faculty, a vision that puts them into positions of leadership within anesthesiaology, and also in the offices of chair, dean, and hospital CEO. We have great talent, but even great talent requires mentoring and training. With your help, we can provide dedicated leadership training and mentoring within our Society.

**FOCUS Patient Safety Initiative**

For many of us, the moment when we took the Hippocratic Oath at the conclusion of medical school remains the most moving of our career. It was at that moment that we fully committed ourselves to caring for our patients. We continue to aspire to flawless patient care, but the complexities of each case, the deficiencies of our systems, and the intricate interactions of our teams often defeat us.

FOCUS was conceived and initiated by the SCA as a way to understand the human factors that lead to less than perfect care and to design interventions to build flawless teams. This project is a collaboration of cardiac operative care societies – the SCA, AORN (nursing), AmSECT (perfusion), and STS (thoracic surgeons). The project, under the research direction of Peter Pronovost and the Quality Safety Research Group at Johns Hopkins University, has been neither easy nor inexpensive. However, the results are astonishing! With the incredible financial backing of the SCA Foundation and you, the SCA membership, this research project has progressed from “how do errors occur” to “what can be done” and now “let’s do something about it!”

The first phase of FOCUS involved systematic investigation into how and why errors occur in cardiac operating rooms. It has engendered three publications to date with many more on the way. Scientific observations were collated and analyzed in over 500 hours of coding and programming which led to the development of four teamwork tools that will be used by cardiac operative teams to eliminate error. The Agency for Healthcare Research and Quality recognized the pioneering nature of this work and has provided a $4 million grant to continue the effort. However, this money is devoted to infection prevention, only one aspect of the observed errors. Peer to peer assessment and operating room design are currently unfunded. Your dollars can provide critical infrastructure support while we continue to seek major institutional support for these other initiatives.

The SCA Foundation has been able to do amazing things in our three-year history through the visionary support of a handful of devoted leaders. Now we ask that every SCA member join them in providing personal financial support. You can make a charitable donation to the SCA Foundation through a visit to our website at www.scahqgive.org and give online. For more information on the SCA Foundation, you can email us at foundation@scahq.org or call us at 804-565-6324.

**Foundation Committee Work – Call for Nominations**

As we continue to build on the success of the past three years, we need to increase our skill set by expanding our volunteer base and structure. This is a great opportunity to build a network and work closely with some of the

**Continued, next page >>**
most talented SCA leaders. We are seeking enthusiastic and interested SCA members to join the Foundation as a committee member. The committee roles and responsibilities are listed below; we ask interested individuals to submit a letter of willingness to serve and the committee interested in serving on to John Melleky at johnm@scahq.org.

Roles and Responsibilities: Committee members will work under the direction of the committee chair to accomplish the mission of the SCA Foundation. Terms will be for 3 years, beginning at the SCA Annual Meeting each year. Virtually all committee work will be done via conference calls and electronic communication.

Governance Committee, Nancy Nussmeier, Chair. This committee is responsible for the structure and organization of the Foundation, including nominating new Board members, proposing a slate of Officers each year, and insuring that the bylaws, policies and procedures are up to date and in accordance with all applicable ethical and legal mandates. A total of six committee members are sought.

Finance Committee, Ellise Delphin, Chair. This committee is responsible for the overall financial plan of the Foundation, including oversight of our investment portfolio, setting and implementing goals to build the Foundation’s capacity while improving sustainability, setting and implementing the annual budget. Three members are sought.

Program and Grantmaking, Daniel Thys, Chair. This committee is responsible to work closely with the Society to set and oversee the programmatic goals of the Foundation, including oversight of the research grant program, the fellows and junior faculty leadership academy, and the FOCUS patient safety initiative. A total of seven members are sought.

Development Committee, Joyce Wahr, Chair. This committee is responsible for all of the fundraising efforts of the Foundation, including member-donor cultivation and recognition, submission of corporate and foundation grants, and cultivation of potential non-member donors. This committee is also responsible for all marketing and public relations efforts. Individuals with marketing or PR skills as well as those with close corporate ties are encouraged to join; a total of nine members are sought.

2011 Research Grants Deadline Approaching

By Hilary P. Grocott, MD, FRCPC, FASE
Chair, SCA Research Committee

If you have a good project plan and institutional support – apply for an SCA/IARS Starter Grant! It is a great opportunity and well worth the time and effort.

2010 SCA/IARS Starter Grant Awarded to:

Timo Brandenburger, M.D.
University Hospital Dusseldorf, Germany
Effects of microRNA-I knockdown on IGF-I and cMet expression and Impact on hypoxia-induced cell death in rat myoblast cells H9c2

At the heart of all research is the ultimate goal of positively impacting patients. At times, the link between research and patients can seem obscure, and often span a huge time chasm, but the fundamental reason these investigations are needed is to put the pieces together of an increasingly complex puzzle of human health and disease. Without the fundamental support that these types of grant programs provide, important advancements in our understanding of problems facing the patient undergoing cardiovascular and thoracic surgery could not have been made.

The SCA Foundation is proud to announce the 2011 Research Grants to be awarded:

- SCA/IARS Starter Grant - $25,000 a year for two years
- SCA/IARS Mid-Career Grant - $50,000 a year for two years.

Grant applications are due by January 14, 2011. Detailed information about the grant application can be found online at the SCA Foundation website at http://www.scahqgive.org/2011grants.asp