

John Gerald Byrne, MD

CURRICULUM VITAE

Date Prepared: March 7, 2013

Office Address: Department of Cardiac Surgery
Vanderbilt University Medical Center
Nashville, TN 37232-8818

Home Address: 923 Lynnwood Blvd.
Nashville, TN 37205

Work Phone: 615-343-9195

Work Email: john.byrne@vanderbilt.edu

Work FAX: 615-343-5234

Place of Birth: San Jose, California

Education:

1982	BS	Biochemistry	University of California, Davis
1987	MD:	Medicine	Boston University
2013	MBA	Business	Emory University

Postdoctoral Training

7/87-6/89:	Intern and Junior Resident	General Surgery	University of Illinois Affiliated Hospitals
7/89-6/92:	Research Fellow	Cardiac Surgery	Brigham & Women's Hospital, Harvard Medical School
7/92-6/95:	Senior and Chief Resident	General Surgery	University of Illinois Affiliated Hospitals
7/95-6/97:	Resident/Chief Resident	Cardiothoracic Surgery	Brigham and Women's Hospital

Faculty Academic Appointments

7/97-6/98:	Instructor	Surgery	Harvard Medical School
7/98-6/02:	Assistant Professor	Surgery	Harvard Medical School
7/02-6/04:	Associate Professor	Surgery	Harvard Medical School
7/04-3/13	Professor	Surgery	Vanderbilt University School of Medicine
7/09-3/13:	Professor	Medicine	Vanderbilt University School of Medicine

Appointments at Hospitals/Affiliated Institutions

6/97-7/04:	Associate Surgeon	Surgery	Brigham and Women's Hospital
6/01-7/04:	Associate Physician	Medicine	Brigham and Women's Hospital
7/04-3/13:	Associate Surgery	Surgery	Vanderbilt Medical Center
7/09-3/13:	Associate Physician	Medicine	Vanderbilt Medical Center

Other Professional Positions:

Consultative Health Care Responsibilities

2005	Consultant	Medical College of Wisconsin
2007	Consultant	University of Minnesota
2010	Consultant	University of Chicago
2012	Strategic Committee Member	Data Safety Monitoring Board, Emory University

Major Administrative Leadership Positions

Local:

1997-1999:	Director	Cardiac Surgery Research Laboratory	Brigham and Women's Hospital
2000-2004	Director	Cardiac Surgery Education	Brigham and Women's Hospital
2000-2004	Director	Cardiothoracic Residency Program	Brigham and Women's Hospital
2003-2004	Associate Chief	Cardiac Surgery	Brigham and Women's Hospital
2004-2013	Chairman	Cardiac Surgery	Vanderbilt University Medical Center
2004-2013	Associate Director	Cardiothoracic Residency Program	Vanderbilt University Medical Center
2004-2013	Medical Director	Perfusion Services	Vanderbilt University Medical Center
2006-2013	Surgeon-in-Chief	Surgery	Vanderbilt Heart and Vascular Institute (VHVI)
2007,09,12	Course Director	Vanderbilt Valve Symposium	Vanderbilt University Medical Center

Committee Service

Local:

1997-2004:	Member	Credentials Committee Department of Surgery	Brigham and Women's Hospital
1997-2004:	Member	Surgical Education Comm. Department of Surgery	Brigham and Women's Hospital
1997-2004:	Member	Ethics Committee	Brigham and Women's

			Hospital
2000-2004:	Member	Committee for Student Education, Department of Surgery	Brigham and Women's Hospital
1997-2004:	Member	Contracts Committee Cardiovascular Service Line	Partners Healthcare, INC
2000-2004:	Member	Committee for Resident Work Hours	Partners Healthcare, INC
2000-2004:	Member	Review Group Signature Initiatives	Partners Healthcare, INC
2000-2004:	Member	Strategic Planning Workgroup	Brigham and Women's Physicians Organization
2000-2004:	Member	Specialty Development Workgroup	Brigham and Women's Physicians Organization
2004-2013	Co-Chair	Executive Committee	Vanderbilt Heart and Vascular Institute (VHVI)
2004-2013:	Member	Cardiovascular Oversight Committee	Vanderbilt University Medical Center
2004-2013:	Chair	Cardiac Surgery Management Committee	Vanderbilt University Medical Center
2004-2013:	Member	Promotions and Tenure Committee, Department of Surgery	Vanderbilt University Medical Center
2004-2013:	Member	Outreach and Network Group	Vanderbilt Heart and Vascular Institute
2004-2013:	Member	Marketing Committee	Vanderbilt Heart and Vascular Institute
2004-2013:	Member	Compensation Committee	Vanderbilt Heart and Vascular Institute
2004-2013:	Member	Operations Council	Vanderbilt Heart and Vascular Institute

2004-2013:	Member	Quality Council	Vanderbilt Heart and Vascular Institute
2004:	Member	Search Committee Chief Executive Officer	Vanderbilt Heart and Vascular Institute
2007:	Member	Search Committee Chair of Anesthesia	Vanderbilt University School of Medicine
2008:	Member	Search Committee Chair of Radiology	Vanderbilt University School of Medicine

Professional Societies

1987-	American College of Surgeons
1994-	Warren H. Cole Society (Illinois Surgical Alumni Assn.)
1995-	Massachusetts Medical Society
1995-	Cook County Hospital Surgical Alumni Association
1997-	Society of Thoracic Surgeons
2004:	Moderator, Annual Meeting Scientific Sessions
2005:	Committee on Graduate Medical Education
2007:	Member Workforce Committee on the Surgical Management of Endocarditis
2009-12:	Member Abstract Selection Committee
1997-	Society of Brigham Surgical Alumni
1998-	American College of Chest Physicians
1999-	American College of Cardiology
2002:	Member Abstract Selection Committee

2003-2008:	Moderator, Annual Meeting Scientific Sessions
2007:	Member, Educational Planning Summit
2008:	Member, Surgeons Scientific Council
2009:	Member, Cardiology Training and Workforce Committee
2009:	Member, Structural Heart Disease Council (SCAI)
2009:	Member, Writing Committee, Structural Heart Disease Training
2010:	Member, Writing Committee, Cardiac Catheterization Laboratory Standards
2010:	Member, Live Programs Committee
2010:	Member, Clinical Competence and Training Committee
2011:	Member, Writing Committee, ACC/AHA guidelines for Coronary Artery Bypass Grafting (CABG)
2011-	Co-Chair, Surgeons Scientific Council
2013:	Co-Chair, Symposium on high risk revascularization
2013:	Interventional Scientific Council
2000-	American Heart Association
2004-05, 09, 12	Member Abstract Selection Committee
2004, 2009:	Moderator, Annual Meeting Scientific Sessions
2010	Writing Committee Coronary Artery Bypass Grafting (CABG) Guidelines
2001-	Irish Cardiac Society
2002-	Association for Academic Surgery

- | | | |
|--------------|--|--|
| | 2002: | Moderator, Scientific Sessions |
| 2002- | Massachusetts Society of Thoracic Surgeons | |
| 2002- | American Association for Thoracic Surgery | |
| | 2004: | Cardiothoracic Residents Committee |
| | 2004-2008 | Member Abstract Selection Committee |
| | 2005 | Co-Chair, Cardiothoracic Residents Committee |
| | 2009 | Representative to the American College of Surgeons |
| | 2010-2012 | Co-Chair, Operating Room of the Future |
| | 2013 | Chair, Adult Cardiac Surgery Post-Graduate Program |
| 2002- | Thoracic Surgery Director's Association | |
| 2002- | Society of University Surgeons | |
| 2002- | Society of Heart Valve Disease | |
| 2004- | Canby Robinson Society (Vanderbilt Medical Alumni) | |
| 2005- | American Board of Thoracic Surgery | |
| | 2005-2010, 2012 | Guest Examiner |
| 2010- | American Surgical Association | |

Grant Review Activities

- | | | |
|-------------------|--|----------------------------|
| 2008-2009: | Radiology, Imaging and Surgery Grant Peer Review | American Heart Association |
|-------------------|--|----------------------------|

Editorial Activities

Editorial Boards

2000-2002:	Editorial Board Member	CT Digest, www.ctdigest.com
2002-	Editorial Board Member	Adult Cardiac Surgery section, web-based comprehensive TSDA curriculum
2005-present:	Editorial Board Member	Journal of Cardiac Surgery
2005-2007:	Associate Editor	Annals of Thoracic Surgery
2008-	Editorial Board Member	Journal of Thoracic and Cardiovascular Surgery
2009-	Associate Editor	Thoracic Surgery News

Other Editorial Roles

1998-	Guest Reviewer	The Journal of Heart & Lung Transplantation
1998-	Guest Reviewer	Journal of the American College of Cardiology
1998-	Guest Reviewer	The Journal of Surgical Research
1999-	Guest Reviewer	Coronary Artery Disease
1999-	Guest Reviewer	The European Journal of Cardiothoracic Surgery
2000-	Guest Reviewer	The Lancet
2001-	Guest Reviewer	CHEST
2001-	Guest Reviewer	The Journal of Heart Valve Disease
2002-	Guest Reviewer	Circulation
2002-	Guest Reviewer	Surgery
2003-	Guest Reviewer	Journal of the American Medical Association

Honors and Prizes

1991:	American Heart Association Massachusetts Affiliate	Research Fellowship
1993:	University of Illinois	The Majarakis Travel Scholarship Award in Surgery
2003:	Brigham & Women's Hospital	Hippocrates Humanitarian Award
2004:	Vanderbilt University Medical CTR	Perioperative Innovation Award

Report of Funded and Unfunded Projects

Past

<u>Year (s) funded</u>	<u>Role on project</u>	<u>Funding source grant type & number</u>	<u>Direct Costs</u>
1999-2004	Co- investigator	St. Jude Medical, INC 1999P009989	\$195,930.41

AVERT Artificial Valve Endocarditis Reduction Trial: This trial, sponsored by St. Jude Medical was designed to compare the incidence of endocarditis (a life-threatening, postoperative infection) in valves with and without Silzone coating. Silzone may have the potential to reduce the incidence of endocarditis in valve procedures.

1999-2003	PI	St. Jude Medical, INC
-----------	----	-----------------------

"ACT" Aortic Comparative Trial. This was a retrospective study to compare the long-term clinical outcome of patients who underwent aortic valve replacement with St. Jude Medical and Medtronic-Hall mechanical prostheses.

2000-2004	Co-investigator	EMBOL-X	\$30,450.00
-----------	-----------------	---------	-------------

Multi-center clinical study of safety of the EMBOL-X intra-aortic filtration system in patients undergoing CABG or valve surgery requiring cardiopulmonary bypass. We evaluate the effectiveness of using an intra-aortic filtration system for the prevention of particulate emboli and the reduction of significant postoperative complications associated with particulate emboli.

2000-2002	Co-investigator	Radiant Medical	\$18,700.00
-----------	-----------------	-----------------	-------------

Temperature management in surgery and critical care. This was a clinical study to prove that that Radiant Medical's temperature managements system can effectively warm or cool patients or maintain normothermia both during cardiac surgery and in the postoperative intensive care unit.

2001-2004 Co-investigator NIH-Duke University Medical Center \$163,044.00
Surgical Treatment for Ischemic Heart Failure (STICH) Trial

This multicenter international project addressed two specific primary hypotheses in patients with clinical heart failure (HF) and left ventricular systolic dysfunction (LVSD) who had coronary artery disease amenable to surgical revascularization, and conducted as two parallel randomized trials.

2007-2012 Co-investigator St. Jude Medical \$144,409

This was an Observational, Prospective Evaluation of the Trifecta Valve Clinical Investigation.

To evaluate the new aortic valve Trifecta

2010: Subcontract PI 1 RC1 HL100951-01 \$3810.00

Hybrid Revascularization vs Percutaneous Coronary Intervention: A Planning Grant
Goals: The overall objective of this study is to explore various aspects of Hybrid coronary revascularization (HCR) in order to inform the design of a pivotal comparative effectiveness trial of this emerging therapeutic

Report of Local Teaching and Training

I am the Associate Director of the Vanderbilt Cardiothoracic Residency Program. The primary goal of this three-year residency program is to train physicians for certification by the American Board of Thoracic Surgery. I spend approximately 10 hours per week, working with these young men and woman in training, mentoring them to excel in the field of academic cardiothoracic surgery.

As Chairman of Cardiac Surgery, I moderate our weekly M+M and co-moderate weekly combined cardiology/cardiac surgery valve and structural heart disease conference as well as the cardiac catheterization conference. I also directly supervise cardiothoracic residents and fellows in the operating room, the ICU and clinic. In this capacity, I personally and individually teach residents and fellows the details of the operative and clinical practice of cardiac surgery. I also mentor research fellows and Vanderbilt medical students in the Emphasis program and teach Vanderbilt medical students during their core surgery clerkships and senior electives in cardiac surgery. In my capacity as Associate Program Director, I coordinate activities related to the Vanderbilt Cardiothoracic Residency program.

Research teaching:

My research centers primarily on clinical outcomes. I mentor medical students, residents and fellows to evaluate the results of newer approaches to heart surgery such as image-

guided surgery, hybrid procedures, minimally-invasive valve surgery, and re-operative valve surgery, as well as risk factors for early and late adverse outcomes of other operations.

Major Research Interests:

Imaging in cardiac surgery
Valve surgery
Hybrid procedures
Re-operative valve surgery
Minimally invasive cardiac surgery

Report of Trainees:

1997-1998	Lishan Aklog, M.D.	Chief, CV Surgery/Chair, Heart and Lung Institute/St. Joseph's Hospital & Medical Center, Phoenix, AZ
1997-1998	Jose Garcia, M.D.	Associate Professor of Surgery, Division of CT Surgery, University of Maryland Medical Center
1997-1998	R. Bruce Garlick, M.D.	Holy Spirit Northside Medical Centre, Australia
1997-1998	James Rawn, M.D.	Division of Cardiac Surgery, Brigham and Women's Hospital, Boston, MA Instructor in Surgery, Harvard Medical School
1997-1998	Olivier Ghez, MD (LAB)	Consultant in Paediatric and Congenital Heart Surgery, Royal Brompton Hospital, London
1997-1999	Daniel Engelman, M.D.	Assistant Clinical Professor, Department of Surgery, Baystate Medical Center, Springfield, MA
1997-1999	Sudish Murthy, M.D.	Surgical Director of the Center of Major Airway Disease, Cleveland Clinic, Cleveland, OH
1997-1999	Yong Shin, M.D.	Chief of Cardiovascular Surgery, Kaiser Permanente, Sunnyside Medical Center, Clackamas, Oregon

1997-1999	Jeffrey Martin, MD (LAB)	Carolina Cardiac Surgery, Columbia SC
1998-1999	Ian Nicholson, M.D.	Royal Alexandria Hospital for Children, Sydney, Australia
1998	Umer Sayeed-Shah, MD (LAB)	Director, Prime Capital Group, LLLP Cambridge, MA
1998-1999	Umer Sayeed-Shah, M.D.	Director, Prime Capital Group LLLP, Cambridge, MA
1998-1999	Mark Danton, MD (LAB)	Children's Hospital, Glasgow, Department of Cardiac Surgery
1998-1999	Kathryn Quadracci Flores (LAB)	New York, NY
1998-2000	Farzan Filsoufi, M.D.	Associate Professor of Surgery, Associate Chief, Cardiac Surgery, Mount Sinai Medical Center, New York, NY
1998-2000	Raja Flores, M.D.	Professor of Cardiothoracic Surgery, Chief Thoracic Surgery, Mt. Sinai Medical Center, New York, NY
1998-2000	Neil Worrall, M.D.	Northwest Heart & Lung Surgical Associates, Spokane, WA
1998-2000	Michael Hsin, MD (LAB)	Division of Cardiothoracic Surgery, The Chinese University of Hong Kong, Hong Kong China, Assistant Professor Chinese University of Hong Kong
1999-2000	Brian deGuzman, M.D.	Associate Chief, Cardiovascular Surgery, Heart and Lung Institute/St. Joseph's Hospital and Medical Center, Phoenix, AZ
1999-2001	Philip Linden, M.D.	Associate Professor of Surgery, Case Medical Center/University Hospitals, Chief, Division of Thoracic Surgery Cleveland, OH
1999-2001	Yolanda Colson, M.D.	Associate Professor of Surgery, Division of Thoracic Surgery, Brigham and Women's Hospital, Boston, MA

1999-2001	Yan Katsnelson, M.D.	Founder of the Chicago Heart Institute and Chicago Vein Clinic, Attending Cardiothoracic Surgeon, Alexian Brothers Medical Center, Elk Grove Village, IL
1999-2002	James Greelish, M.D.	Director of Cardiothoracic Surgery, CaroMont Health, Gastonia, NC, Associate Clinical Professor, Columbia University
2000-2001	James Dygert, M.D.	Deceased
2000-2001	Manu Mathur, M.D.	Royal North Shore Hospital, Sydney, Australia
2000-2001	Wayne Lipson, M.D.	Cardiovascular and Thoracic Surgery, St. Mary's Medical Center, Huntington, WV
2000-2002	Tomislav Mihaljevic, M.D.	Chief of Staff, Chair Heart and Vascular Center, Cleveland Clinic, Abu Dhabi
2000-2002	Michael Chang, M.D.	Southern California Kaiser Permanente Group, Los Angeles, CA
2001	Peng Seah, M.D.	John Hunter Hospital; Lake Macquarie Private Hospital; Newcastle Private Hospital, Australia
2001-2002	David Lai, M.D.	Australia
2001-2002	Ramji Mehrotra, M.D.	Indraprastha Apollo Hospitals, New Delhi, India
2001-2003	Michael Mitchell, M.D.	Associate Professor of Surgery, Children's Hospital of Wisconsin, Milwaukee, WI
2001-2003	David Mason, M.D.	Department and Thoracic and Cardiovascular Surgery, Cleveland Clinic, Cleveland, OH
2001-2004	Prem Shekar, M.D.	Assistant Professor of Surgery, Division of Cardiac Surgery, Brigham and Women's, Boston, MA
2001-2004	John Maurice, M.D.	Westside Thoracic Associates, Newport Beach, CA

2002	Tomas Gudbjartsson, M.D.	Professor of Surgery, Lund University Hospital, Department of Cardiothoracic Surgery, Reykjavik, Iceland
2002-2003	Sanjay Sharma, M.D.	Fremantle Hospital, Perth, Australia
2002-2004	Afshin Ehsan, M.D.	Associate Professor of Surgery, Director CT Residency Program, Director, Cardiac Surgery ICU Tufts Medical Center, Boston, MA
2002-2004	Lambros Zellos, M.D.	Director of Thoracic Surgery Henry Dunant Hospital, Athens, Greece
2003-2004	Hrvoje Gasparovic, M.D.	Associate Professor of Surgery, Division of Cardiac Surgery University Hospital Rebro Zagreb, Croatia
2003-2004	Paul Pirundini, M.D.	Division of Cardiothoracic Surgery, Cape Cod Hospital, Hyannis, MA, Instructor in Surgery, Harvard Medical School
2003-2004	Meena Nathan, M.D.	Division of Cardiac Surgery Children's Hospital Boston and Connecticut Children's Hospital, Instructor in Surgery, Harvard Medical School
2003-2005	Sidharta Gangadharan, M.D.	Assistant Professor of Surgery, Harvard Medical School, Division of Thoracic Surgery, Beth Israel Deaconess Medical Center, Boston, MA
2003-2004	Raymond Chen, M.D.	Kaiser Permanente, Los Angeles, CA
2003-2004	Derek Brinster, M.D.	Associate Professor of Surgery, Director, Thoracic Aortic Surgery, Virginia Commonwealth University, Medical College of Virginia, Richmond, VA
2003-2004	Michael Davidson, M.D.	Assistant Professor of Surgery Director Endovascular Cardiac Surgery, Division of Cardiac Surgery, Brigham and Women's Hospital, Boston, MA
2004-2005	Tarek Absi, MD	Vanderbilt University, Department of Cardiac Surgery, Nashville, TN

		Assistant Professor, Vanderbilt University School of Medicine
2004-2007	Robert DuBose, MD	Northwest Surgical Associates, Portland, OR
2006-2008	Tammy Baxter, MD	Thoracic Surgery, University of Miami, Miami FL
2006-2009	Jared Antevil, MD	Cardiothoracic Surgery, Portsmouth Naval Medical Center, Portsmouth, VA
2007-2010	Alex Karavas, MD	Bedford, NH
2007-2010	Marzia Leacche, MD	Division of Cardiac Surgery, Brigham and Women's Hospital, Boston, MA
2008-2011	Dan Cuadrado	Department of Cardiothoracic Surgery, Vanderbilt University Medical Center, Nashville, TN

Report of Local and Regional, National & International Invited Teaching and Presentations

“Those sponsored by outside entities are so noted.”

Local:

- 1997 Surgery for Massive Pulmonary Embolism, Core Curriculum Brigham and Women's Hospital, Boston, MA
- 1997 Minimally-Invasive Valve Surgery, Grand Rounds, Brigham and Women's Hospital,
- 1998 Mechanical Complications of Myocardial Infarction Core Curriculum Brigham and Women's Hospital, Boston, MA
- 1998 Recent Advances in Adult Cardiac Surgery, Brigham and Women's Hospital Center for Perfusion Research, Boston, MA
- 1998 Reoperation Aortic Valve Replacement, Cardiology Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 1998 Advances in Cardiac Surgery Lowell General Hospital, Grand Rounds, Lowell, MA
- 1999 Cardiothoracic Trauma Department of Surgery Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 1999 Reoperative CABG: Left Thoracotomy Approach, Cardiology Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 1999 Low Gradient Aortic Stenosis with CABG, Brigham Cardiac Valve Symposium, Boston, MA

- 1999 Aortic Valve Replacement After CABG, Brigham Cardiac Valve Symposium, Boston, MA
- 1999 Update Heart Valve Surgery, Cardiology Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 1999 Selection of Aortic Valve Replacement, Harvard Medical International Symposium, San Paulo, Brazil
- 1999 Mitral Valve Endocarditis, Harvard Medical International Symposium, San Paulo, Brazil
- 1999 Minimally-Invasive Aortic Valve Replacement, Harvard Medical International, San Paulo, Brazil
- 1999 Minimally-Invasive Mitral Valve Replacement, Harvard Medical International, San Paulo, Brazil
- 1999 Minimally-Invasive Coronary Artery Bypass Grafting, Harvard Medical International, San Paulo, Brazil
- 1999 Mechanical Complications of Myocardial Infarction, Harvard Medical International, San Paulo, Brazil
- 1999 Reoperation Valve Surgery, Harvard Medical International, San Paulo Brazil
- 2000 Update Heart Valve Surgery, Cardiology Grand Rounds, Brigham and Women's Hospital, Boston, MA
- 2000 Robotic Cardiac Surgery, Harvard Medical International Teleconference United Arabic Emirates
- 2002 Surgery in Rural Haiti: Brigham and Women's Department of Surgery Grand Rounds
- 2002 Moderate Aortic Stenosis with CABG Brigham Cardiac Valve Symposium, Boston, MA
- 2002 Cardiothoracic Trauma, Core Lecture, Harvard Medical School, Boston, MA
- 2003 Minimally Invasive Aortic Valve Surgery, Live Web-cast, Brigham and Women's Hospital, Boston, MA
- 2004 Cardiac Surgery Update, Department of Surgery Vanderbilt University Medical Center
- 2004 Mitral Valve Surgery, Postgraduate Symposia, Shelbyville, TN
- 2004 Mitral Valve Surgery, Postgraduate Symposia, Crossville, TN
- 2004 Mitral Valve Surgery, Postgraduate Symposia, Clarksville, TN
- 2004 Mitral Valve Surgery, Postgraduate Symposia, Tullahoma, TN
- 2004 Mitral Valve Surgery, Postgraduate Symposia, Jackson, TN
- 2005 Hybrid Procedures, Friesinger Society, Nashville, TN
- 2005 Image Guided Surgery American College of Cardiology, TN Chapter
- 2005 Update in Cardiac Surgery, "Cardiology 2005", Vanderbilt University Medical Center, Nashville, TN
- 2005 Image Guided Cardiac Surgery, Web Cast Vanderbilt University Medical Center
- 2006 Update in Cardiac Surgery "Cardiology 2006", Vanderbilt University Medical Center, Nashville, TN
- 2007 Update in Cardiac Surgery "Cardiology 2007", Vanderbilt University Medical Center Cardiac Surgery Grand Rounds, Nashville, TN
- 2008 Management of Massive Pulmonary Embolism "Cardiology 2008",

- Vanderbilt University Medical Center, Nashville, TN
- 2008 Aortic Dissection “Cardiology 2008”, Vanderbilt University Medical Center, Nashville, TN
- 2008 “Imaging and Heart Surgery”, Vanderbilt University Medical Center, Postgraduate Summer CME Course
- 2009 Pulmonary Embolus, CME Course, Vanderbilt Heart at Martin, TN
- 2009 Aortic Dissection, CME Course, Vanderbilt Heart at Martin, TN
- 2009 Aortic Dissection, Acute Cardiac Emergency Conference, Vanderbilt University, Nashville, TN
- 2012 Cardiology Grand Rounds: Big Med. Vanderbilt University

National

- 2000 Improved Results for Ischemic Mitral Regurgitation International Symposium on Ischemic Mitral Regurgitation, Monterey, CA: *Improved Sponsored by Edwards Lifesciences*
- 2001 Minimally Invasive Valve Surgery: Is it Really Better? American College of Chest Physicians, Philadelphia, PA
- 2001 Mechanical vs. Tissue Valves, American College of Chest Physicians, Philadelphia, PA
- 2003 Surgical Pulmonary Embolectomy, American Heart Association Symposium. Orlando, FL
- 2004 Ischemic Mitral Regurgitation, American Society for Echocardiography, San Diego, CA
Sponsored by Amr Soc Echocardiography
- 2004 Mitral Valve Surgery Society of Cardiovascular Anesthesiology, San Diego, CA
Sponsored by Soc CV Anest
- 2004 Reoperation Valve Surgery, American College of Chest Physicians, Tuscon, AZ
- 2005 Hybrid Valve/PCI Procedures Brigham Valve Symposium, Boston, MA
- 2006 Emergencies in Valvular Heart Disease, American College of Cardiology Scientific Sessions, Atlanta, GA
- 2006 Percutaneous Valves vs Standard Valve Surgery, American College of Cardiology, Scientific Sessions, Atlanta, GA
- 2006 Objective Assessment of Operative Skills, Thoracic Surgical Directors Association, Chicago, IL
- 2006 Hybrid Procedures, Visiting Professor, St. Joseph’s Hospital, St, Paul, MN
Sponsored by St Josephs Hospital
- 2006 Image Guided Cardiac Surgery, Visiting Professor, Sacred Heart Hospital, Spokane, WA
Sponsored by Sacred Heart Hospital
- 2007 Adult Cardiac Surgery, American Academy of Cardiovascular Perfusion, Syracuse, NY
- 2007 Complications Following Prosthetic Valve Implantation American College of Cardiology, New Orleans, LA

- 2007 Imaging in Coronary Surgery and Hybrid Procedures, American Association for Thoracic Surgery Annual Meeting, Washington, DC
- 2007 Moderator, The Hybrid Suite and Routine Angiographic Assessment after CABG, Transcatheter Cardiovascular Therapies Annual Meeting
- 2007 Clinical Applications and Beyond, American College of Cardiology Education Planning Summit, New York, NY
- 2008 The Hybrid Operating Room, The Society of Thoracic Surgeons Annual Meeting, Fort Lauderdale, FL
- 2008 Current status of the Hybrid CV Operating Room, Society of Thoracic Surgeons, TECH-CON, Fort Lauderdale, FL
- 2008 The Hybrid Approach for Complex Coronary and Valve Disease: Does one Size Fit All? American College of Cardiology Annual Meeting
- 2009 Hybrid Revascularization: Society of Thoracic Surgeons, TECH-CON, San Francisco, CA
- 2009 American College of Cardiology Course Director, Postgraduate symposia: Surgeon-Cardiologist collaboration
- 2009 The Catheterization Laboratory of the Future: The Hybrid Laboratory American College of Cardiology Course Postgraduate symposia Surgeon-Cardiologist Collaboration
- 2009 American College of Cardiology Course Director, Postgraduate symposia: Surgeon-Cardiologist Collaboration
- 2009 Hybrid Revascularization American College of Cardiology Postgraduate Symposia Surgeon-Cardiologist Collaboration
- 2009 Imaging in Coronary Surgery, American Association for Thoracic Surgery Annual Meeting, Postgraduate Course, Boston, MA
- 2009 Optimal CABG: OPCAB vs. On Pump vs. Hybrid American for Thoracic Surgery Annual Meeting, Postgraduate Course, Boston, MA
- 2009 AATS Postgraduate Symposia: Optimal CABG: OPCAB vs. on pump vs. hybrid
- 2009 The Hybrid Operating Room, Visiting Professor, Cleveland Clinic Foundation, Cleveland, OH
Sponsored by Cleveland Clinic
- 2009 The Hybrid OR, Visiting Professor, University of Pennsylvania, Philadelphia, PA
Sponsored by University of Pennsylvania
- 2009 The Hybrid OR, Visiting Professor, University of Minnesota, Minneapolis, MN
Sponsored by the University
- 2009 The Hybrid OR, Visiting Professor, Duke University, Durham, NC
Sponsored by Duke University
- 2009 The Hybrid OR, Visiting Professor, Pennsylvania State University, Hershey, PA
Sponsored by Penn State
- 2009 Moderator, Transcatheter Cardiovascular Therapeutics, San Francisco, CA
- 2009 Does Removing Financial Incentives Alter Revascularization Decisions? The Vanderbilt Experience, Transcatheter Cardiovascular Therapeutics, San Francisco, CA

- 2009 Hybrid Valve Surgery and PCI Strategies, Transcatheter Cardiovascular Therapeutics, San Francisco, CA
- 2009 Hybrid Revascularization Can it Be Cost-Effective? Transcatheter Cardiovascular Therapeutics, San Francisco, CA
- 2009 Hybrid Cath Labs 2: The New Multidisciplinary “Melting Pot” and Impact on Surgical Therapies, Transcatheter Cardiovascular Therapeutics, San Francisco, CA
I think travel was covered by TCT for all these
- 2009 CABG/PCI/Hybrid procedures, Key Note Speaker, American Heart Association Annual Scientific Session, Orlando, FL
- 2010 Debated Staged vs Simultaneous Hybrid CABG/PCI, American College of Cardiology Postgraduate Symposium, Atlanta, GA
- 2010 Hybrid Revascularization: The Surgeons Perspective, American College of Cardiology Postgraduate Symposium, Atlanta, GA
- 2010 How to Organize a Modern Heart Center, Integrated Cardiovascular Repair Workshop, University of Maryland, Baltimore, MD
Sponsored by University of Maryland
- 2010 Hybrid Coronary Revascularization—Is it an Option? EPIC Postgraduate Symposium, Emory University Medical Center, Atlanta, GA
Sponsored by Emory University
- 2010 Characteristics of a Successful Hybrid Program, 5th International Symposium on Hybrid Approach on Congenital Heart Disease, Columbus OH
Sponsored by Ohio State University
- 2011 Visiting Professor, Mayo Clinic, Rochester MN
Sponsored by the Mayo Clinic
- 2011 Hybrid Operating Room, American College of Cardiology Annual Meeting, New Orleans, LA
- 2011 Moderator, American Association for Thoracic Surgery Annual Meeting, Philadelphia, PA
- 2011 Course Director, Building the Hybrid Operating Room of the Future, American Association for Thoracic Surgery Annual Meeting, Philadelphia, PA
- 2011 Minimally Invasive Mitral Valve Replacement, American Surgical Association Annual Meeting, Miami, FL
- 2012 Visiting Professor, Intermountain Health, Salt Lake City, UT
Sponsored by Intermountain Health
- 2012 Moderator, Operating Room of the Future, American Association for Thoracic Surgery Annual Meeting, San Francisco, CA

International

- 2005 “Sighted” Cardiac Surgery, Argentine Cardiovascular Congress, Buenos Aires, Argentina
- 2010 The Operating Room of the Future, American Association for Thoracic Surgery Postgraduate Program Co-Director, Toronto, CANADA
- 2010 Discussant, American Association for Thoracic Surgery Annual Meeting, Toronto, CANADA

Report of Education to Patients and Service to the Community

2001-2004:	Visiting Surgeon	Hospital Bon Sauveur, Cange, Haiti
2010-present:	Board of Directors	Juvenile Diabetes Research Foundation, TN Chapter
2010-present:	Board of Directors	Castaneda Foundation Hospital, Guatemala City, Guatemala

Books, Monographs, Articles and Presentations in other Media

Local News Media:

- 2005 The Hybrid OR. Vanderbilt Reporter
- 2005 One Stop Heart Care, The Tennessean
- 2005 “Sighted” Cardiac Surgery. Channel 5, Nashville, TN
- 2006 The Hybrid OR, Nashville Medical News
- 2006 Man survives massive blood clot, Fox 17, Nashville, TN
- 2006 Kentucky woman benefits from the Vanderbilt hybrid OR, Fox 17
- 2006 Massive pulmonary embolism, Channel 2 and Fox 17, Nashville, TN
- 2006 Does stress cause heart disease?, Channel 2, Nashville, TN
- 2007 Vanderbilt Recruits Local Physicians. Nashville Business Journal
- 2007 Reforms needed if care to be affordable. The Tennessean
- 2007 Vanderbilt Heart Ranks 21st in the Nation, USNEWS. The Tennessean
- 2011 Trans-catheter aortic valve implantation trial. Nashville Medical News
- 2011 Trans-catheter aortic valve implantation trial. TN Academy of Family Physicians
- 2011 Trans-catheter valve implantation available at Vanderbilt The Tennessean
- 2011 TAVI performed at Vanderbilt. The Reporter July.
- 2011 Physician Profile. Nashville Business Journal, July.
- 2012 Trans-catheter valve therapies, Channel 5 News, Nashville, TN

National News Media:

- 2004 Un-blame the victim; President Clinton’s Surgery: Heart Disease Causes May Vary. New York Times.
- 2005 Dual strategy fixes valve and artery heart disease. Reuters.
- 2005 Prior Angioplasty Lowers the Risk for Heart Valve Replacement Angioplasty ACC News
- 2005 Angioplasty may replace bypass for more patients who are also receiving a new heart valve. Medical Study News
- 2005 Hybrid Procedure is Alternative to CABG/Valve Surgery. Today in Cardiology
- 2005 For Heart Disease, A Joint Effort. Washington Post.

- 2005 Heart disease: Hybrid procedure uses bypass, angioplasty at same time. Washington Post
- 2006 Hybrid OR. XM Radio
- 2006 President Ford's Cardiac Procedure. ABC News
- 2006 Artificial Heart Transplants. ABC News
- 2006 The Hybrid OR. World Wide Internet News
- 2006 Hybrid OR good for heart patents. Cath Lab Digest
- 2006 Cardiac Surgery Outcomes. ABC News
- 2007 Heart Disease in Women. Bloomberg News
- 2007 Beating Heart Transplant, ABC news
- 2009 "It's amazing what you find when you look" Imaging CABG results can minimize graft defects. The heart.org
- 2009 Hybrid cath lab OR integrated PCI, CABG capabilities. tctmd.com.
- 2009 Completion angiography useful after CABG and hybrid revascularization. Reuters Health
- 2009 The Hybrid OR. XM Radio
- 2009 Cardiosource ACCEL ACC 2009: Hybrid CV procedures July 2009 Vol. 41, No. 7.
- 2009 Cardiosource ACCEL ACC 2009: Cath Lab of the future
- 2009 Beating Heart Surgery may be Riskier. ABC News
- 2010 Hybrid procedures gaining ground. Philadelphia Enquirer
- 2011 Taking Hybrid ORs to the Heart: New facilities bring marriage of diagnostic imaging and cardiac surgery. Modern Healthcare
- 2012 Heart Failure Patients Seek 'Cheney Pump' ABC News
- 2012 Pimp My OR. CardioSource WorldNews.

Report of Clinical Activities and Innovation

Current Licensure and Certification:

- 1988 Massachusetts Medical License
- 1990 Illinois Medical License
- 1996-06: American Board of Surgery
- 1998 American Board of Thoracic Surgery
- 2004: Tennessee Medical License

Clinical:

I have been a practicing adult cardiac surgery at the attending surgeon level for 15 years. My clinical practice encompasses the entire spectrum of adult cardiac surgery. My clinical office is located in the Vanderbilt Heart Institute. Special areas of interest include image-guided surgery, valve surgery, re-operative valve surgery, mitral valve reconstruction, surgical interventions for heart failure, coronary artery disease and homograft root replacement and hybrid strategies. My patient volume is approximately 200 cases per year done at Vanderbilt University Medical Center.

Clinical innovations

Imaging in cardiac surgery

Valve surgery

Hybrid procedures

Re-operative valve surgery

Minimally invasive cardiac surgery

Peer reviewed publications

1. **Byrne JG**, Couper GS, Sun SC, Laurence RG, Cohn LH. Cardiac-derived thromboxane mediates reperfusion injury in the isolated rat heart. *Surgical Forum* 1990;41:250-1.
2. Reimold SC, **Byrne JG**, Caguioza ES, Lee CC, Peigh PS, Laurence RG, Cohn LH, Lee RT. Load-dependence of the aortic effective regurgitant orifice area in a sheep model of aortic regurgitation. *J Am Coll Cardiol* 1991 Oct; 18(4):1085-90.
3. Lee CC, Appleyard RF, **Byrne JG**, Laurence RG, Cohn LH. Inhibition of leukotrienes improves global function and reduces ventricular irritability after acute regional ischemia and surgical reperfusion. *Surgical Forum* 1991;42:278-80.
4. Masetti P, DiSesa VJ, Schoen FJ, Sun SC, **Byrne JG**, Appleyard RF, Laurence RG, Cohn LH. Ischemic injury before heart transplantation does not cause coronary arteriopathy in experimental isografts. *J Heart Lung Transplant* 1991 ul-Aug;10(4):597-9.
5. **Byrne JG**, Appleyard RF, Lee CC, Couper GS, Sholl FG, Laurence RG, Cohn LH. Controlled reperfusion of the regionally ischemic myocardium with leukocyte-depleted blood reduces stunning, the no-reflow phenomenon and infarct size. *J Thorac Cardiovasc Surg* 1992 Jan;103(1):66-72.
6. Sun SC, Appleyard RF, Masetti P, **Byrne JG**, Laurence RG, Marsh JD, Cohn LH. Improved recovery of heart transplants by combined use of oxygen-derived free radical scavengers and energy enhancement. *J Thorac Cardiovasc Surg* 1992 Sep;104(3):830-7.
7. **Byrne JG**, Smith WJ, Murphy MP, Couper GS, Appleyard RF, Cohn LH. Complete prevention of myocardial stunning, contracture, low-reflow and edema after heart transplantation by blocking neutrophil adhesion molecules during reperfusion. *J Thorac Cardiovasc Surg* 1992 Dec;104(6):1589-96.
8. **Byrne JG**, Appleyard RF, Sun SC, Couper GS, Sloane JA, Laurence RG, Cohn LH. Cardiac-derived thromboxane A₂: An initiating mediator of reperfusion injury? *J Thorac Cardiovasc Surg* 1993 Apr;105: 689-93.

9. **Byrne JG**, Appleyard RF, Sun SC, Couper GS, Laurence RG, Cohn LH. Thromboxane A2 mediates reperfusion injury after heart preservation. *J Heart Lung Transplant* 1993 Mar-Apr;12(2):256-62.
10. **Byrne JG**, Murphy MP, Smith WJ, Couper GS, Appleyard RF, Cohn LH. Prevention of CD18-mediated reperfusion injury enhances the efficacy of UW solution for 15-hour heart Preservation. *J Surg Res* 1993 Jun;54(6):625- 30.
11. Lee CC, Appleyard RF, **Byrne JG**, Cohn LH. Leukotrienes D4 and E4 produced in myocardium impair coronary flow and ventricular function after two hours of global ischemia in rat heart. *Cardiovasc Res* 1993 May;27:770-3.
12. Horvath K, Smith WP, Laurence RG, **Byrne JG**, Schoen FJ, Cohn LH. Improved short and long term recovery after acute myocardial infarct treated by transmyocardial laser revascularization. *Surgical Forum* 1993;44: 220-2.
13. Hartz RS, **Byrne JG**, Park J, Levitsky S, Rich S. Predictors of mortality in pulmonary thromboendarterectomy. *Ann Thorac Surg* 1996 Nov;62(5):1255-60.
14. Balaguer JM, **Byrne JG**, Cohn LH. Orthotopic pulmonic valve replacement with a pulmonary homograft as an interposition graft. *J Card Surg* 1996 Nov-Dec;11(6):417-420.
15. **Byrne JG**, Aranki SF, Cohn LH. Aortic valve operations under deep hypothermic circulatory arrest for the porcelain aorta: "No-touch" technique. *Ann Thorac Surg* 1998;65(5):1313-5.
16. Martin JS, **Byrne JG**, Ghez OY, Sayeed-Shah U, Grachev SD, Laurence RG, Cohn LH. LV powered coronary sinus retroperfusion reduces infarct size in actively ischemic pigs. *Ann Thorac Surg* 2000 Jan: 69(1)84-9.
17. **Byrne JG**, FitzGerald DJ, Aranki SF. Simultaneous selective cerebral perfusion and systemic circulatory arrest through the right axillary artery for aortic surgery. *J Card Surg* 1998 Jul;13(4):236-8.
18. **Byrne JG**, Aranki SF, Adams DH, Rizzo RJ, Couper GS, Cohn LH. Mitral valve surgery after previous CABG with functioning IMA grafts. *Ann Thorac Surg* 1999 Dec;68(6):2243-7.
19. **Byrne JG**, Adams DH, Mitchell ME, Cohn LH. Minimally invasive direct access for repair of atrial septal defects in adults. *Am J Cardiol*.1999 Oct 15;84(8):919-22.

20. **Byrne JG**, Aranki, SF, Adams DH, Couper GS, Cohn LH. Reoperative aortic valve replacement: Partial upper hemisternotomy versus conventional full sternotomy. *J Thorac Cardiovasc Surg* 1999 Dec; 118(6):991-7.
21. Sayeed-Shah U, Mann M, Martin JS, Grachev SD, Dzau V, **Byrne JG**, Cohn LH. Turbo TMR™- gene therapy enhanced TMR produces sustained benefit in the treatment of ischemic heart disease. *Surgical Forum* 1999;50: 117-9.
22. Engleman DT, Adams DH, **Byrne JG**, Aranki SF, Collins JJ Jr, Couper GS, Allred EN, Cohn LH, Rizzo RJ. Impact of body mass index and albumin on morbidity and mortality after cardiac surgery. *J Thorac Cardiovasc Surg* 1999 Nov; 118 (5):866-73.
23. Jaklitsch MT, **Byrne JG**, Mery C. Thymoma encasing last patent vein graft to heart. *J Thorac Cardiovasc Surg* 1999 Sep; 118(3):561-3.
24. Sayeed-Shah U, Reul RM, **Byrne JG**, Aranki SF, Cohn LH. Combination TMR and gene therapy. *Semin Thorac Cardiovasc Surg* 1999 Jan;11 (1):36-9.
25. **Byrne JG**, Mitchell ME, Adams DH, Couper GS, Aranki SF, Cohn LH. Minimally invasive direct-access mitral valve surgery. *Semin Thoracic Cardiovasc Surg* 1999 Jul;11 (3):212-22.
26. Cohn LH, Adams DH, Couper GS, Aranki SF, Rizzo RJ, **Byrne JG**, Collins JJ. Minimally invasive cardiac valve surgery. *J Am Coll Cardiol.* 1999;14 :1-4.
27. **Byrne JG**, Adams DH, Couper GS, Rizzo RJ, Cohn LH, Aranki SF. Minimally invasive aortic root replacement. *Heart Surgery Forum* 1999;2:326-9.
28. Martin JS, Sayeed-Shah U, **Byrne JG**, Danton MH, Flores KQ, Laurence RG, Cohn LH. Excimer vs. CO2 transmyocardial laser revascularization: Effects on regional LV function and perfusion. *Ann Thorac Surg* 2000 Jun;69 (6):1811-6.
29. **Byrne JG**, Karavas AN, Elhalabi A, Cohn LH. Myocardial neutrophil sequestration during reperfusion of the transplanted rabbit heart. *J Heart Lung Transplantation* 2000 Aug;19 (8):786-91.
30. **Byrne JG**, Aranki SF, Cohn LH. Repair versus replacement of mitral valve for severe ischemic mitral regurgitation. *Coron Artery Dis.* 2000 Feb;11(1):31-3.
31. **Byrne JG**, Gilfeather MS, Couper GS. Technique for blood conservation in ABIOMED BVS 5000 VAD exchange. *Ann Thorac Surg* 2001 Feb;71 (2):742-4.
32. Danton MH, Sarsam MA, **Byrne JG**, Campbell NS, Jones JM, Campalani G. Clinical and hemodynamic performance of the Toronto SPV bioprosthesis. *J Heart Valve Dis* 2000 Sep;9(5):644-52.

33. **Byrne JG**, Karavas AN, Adams DH, Aklog L, Aranki SF, Couper GS, Rizzo RJ, Cohn LH. Partial upper re-sternotomy for aortic valve replacement or re-replacement after previous cardiac surgery. *Eur J Cardiothor Surg* 2000; Sep;18 (3):282-6.
34. **Byrne JG**, Hsin M, Adams DH, Aklog L, Aranki SF, Couper GS, Rizzo RJ, Cohn H. Minimally invasive direct access heart valve surgery. *J Card Surg* 2000 Jan-Feb; 15(1):21-34.
35. **Byrne JG**, Aklog L, Adams DH. Assessment and management of functional or ischaemic mitral regurgitation. *Lancet* 2000; 355 (9217):1743-4.
36. **Byrne JG**, Karavas AN, Cohn LH, Adams DH. Minimal access aortic root, valve and complex ascending aortic surgery. *Curr Cardiol Rep* 2000 Nov; 2(6):549-57.
37. **Byrne JG**, Aklog L, Adams DH, Cohn LH, Aranki SF. Reoperative CABG using left thoracotomy: A tailored strategy. *Ann Thorac Surg* 2001; 71:196-200.
38. Flores RM, **Byrne JG**. Aortic valve replacement with an anomalous left circumflex coronary artery encircling the aortic annulus. *J Thorac Cardiovasc Surg* 2001 Feb;121 (2):396-7.
39. Danton MH, **Byrne JG**, Flores KQ, Martin JS, Hsin M, Laurence RG, Cohn LH, Aklog L. Modified glenn connection for acutely ischemic right ventricular failure reverses secondary left ventricular systolic dysfunction. *J Thorac Cardiovasc Surg* 2001;122:80-91.
40. **Byrne JG**, Karavas AN, Aklog L, Adams DH, Cheung A, Cohn LH, Aranki SF. Aortic valve reoperation after homograft or autograft replacement. *J Heart Valve Dis.* 2001;10:451-7.
41. **Byrne JG**, Mihaljevic T, Lipson WE, Smith B, Fox JA, Aranki SF. Composite stentless valve with graft extension for combined replacement of the aortic valve, root and ascending aorta. *Eur J Cardiothorac Surg* 2001 Aug; 20(2):252-6.
42. Aklog L, Filsoufi F, Flores K, Chen R, Cohn LH, Nathan N, **Byrne JG**, Adams DH. Does coronary artery bypass grafting alone correct moderate ischemic mitral regurgitation? *Circulation* 2001 Sep 18; 104(12 Suppl 1):I68-75.
43. Mihaljevic T, **Byrne JG**, Cohn LH, Aranki SF. Long term results of multi-valve endocarditis. *Eur J Cardiothorac Surg* 2001 Oct; 20(4):842-6.
44. **Byrne JG**, Karavas A, Adams DH, Aklog L, Aranki SF, Filsoufi F, Cohn LH. The preferred approach for mitral valve surgery after CABG: Right thoracotomy,

- hypothermia and avoidance of LIMA-LAD graft. *J Heart Valve Dis* 2001;10:584-590.
45. Anderson CA, Filsoufi F, Farivar RS, Aklog L, **Byrne JG**, Adams DH. Liberal use of delayed sternal closure for postcardiotomy hemodynamic instability. *Ann Thorac Surg* 2002;73:1484-8.
 46. Adams MR, Orford JL, Blake GJ, Wainstein MV, **Byrne JG**, Selwyn AP. Rescue percutaneous coronary intervention following coronary artery bypass graft--a descriptive analysis of the changing interface between interventional cardiologist and cardiac surgeon. *Clin Cardiol* 2002 Jun;25(6):280-6.
 47. **Byrne JG**, Karavas AN, Filsoufi F, Mihaljevic T, Adams DH, Aklog L, Cohn LH, Aranki SF. Aortic valve surgery after previous CABG with functioning IMA grafts. *Ann Thorac Surg* 2002;73:779-84.
 48. Aklog L, Sepic J, Filsoufi F, **Byrne JG**, Adams DH. Open inferior vena caval anastomosis during bicaval heart transplantation. *Ann Thorac Surg* 2002;73:671-672.
 49. Greelish JP, Soltesz EG, **Byrne JG**. Valve surgery in octogenarians with "porcelain" aorta and aortic insufficiency. *J Card Surg* 2002;17:285-8.
 50. Aklog L, Williams CS, **Byrne JG**, Goldhaber SZ. Acute pulmonary embolectomy: a contemporary approach. *Circulation* 2002;105:1416-9.
 51. Elzschig HK, Mihaljevic T, **Byrne JG**, Ehldrs R, Smith B, Shernan SK. Echocardiographic evidence of right ventricular remodeling after transplantation. *Ann Thoracic Surg* 2002;74:584-6.
 52. Elzschig HK, Lekowshi RW, Shernan SK, Nedeljkovic SS, **Byrne JG**, Ehldrs R, Aranki SF. Intraoperative transesophageal echocardiography to assess septic coronary embolism. *Anesthesiology* 2002;97:1627-9.
 53. Karavas AN, Filsoufi F, Mihaljevic T, Aranki SF, Cohn LH, **Byrne JG**. Risk factors and management of endocarditis after mitral valve repair. *J Heart Valve Dis* 2002;11:660-4.
 54. Danton MH, **Byrne JG**, Hsin M, Laurence R, Cohn LH, Aklog L. Right ventricular volume measurement using the conductance catheter method: Validation in excised porcine hearts. *ASAIO J* 2002;48:514-9.
 55. **Byrne JG**, Karavas AN, Colson, YL, Bueno R, Richards WG, Sugarbaker DJ, Goldhaber SZ. Cardiac decortication (epicardiectomy) for occult constrictive cardiac physiology after left extrapleural pneumonectomy. *CHEST* 2002;112:2256-9.

56. Adams DH, Filsoufi F, **Byrne JG**, Karavas AN, Aklog L. Mitral valve repair in redo cardiac surgery. *J Card Surg* 2002;17:40-45.
57. Filsoufi F, Aklog L, Adams DH, **Byrne JG**. Management of mild to moderate aortic stenosis at the time of coronary artery bypass grafting. *J Heart Valve Dis* 2002;11 Supplement I:S45-9.
58. Phillips BJ, Karavas AN, Aranki SF, Cohn LH, Rawn JD, Mihalevic T, **Byrne JG**. Management of mild aortic stenosis during coronary artery bypass surgery: An update, 1992-2001. *J Card Surg* 2003;18:507-11.
59. **Byrne JG**, Gudbjartsson T, Karavas AN, Mihaljevic T, Phillips BJ, Aranki SF, Rawn JD, Cohn LH. Biological vs. mechanical aortic root replacement. *Eur J Cardiothorac Surg* 2003;23:305-10.
60. **Byrne JG**, Karavas AN, Mihaljevic T, Rawn JD, Aranki SF, Cohn LH. Role of the cryopreserved homograft in isolated elective aortic valve replacement. *Am J Cardiol* 2003;91:616-9.
61. Greelish JP, Cohn LH, Leacche M, Mitchell ME, Karavas AN, Fox JA, **Byrne JG**, Aranki SF, Couper GC. Minimally invasive mitral valve repair suggests earlier operations for mitral valve disease. *J Thorac Cardiovasc Surg* 2003;126:365-71.
62. Farivar SR, Cohn LH, Soltez EG, Mihaljevic T, Rawn JD, **Byrne JG**. Transcriptional profiling and growth kinetics of endothelium reveals differences between cell derived from porcine aorta vs. aortic valve. *Eur J Cardiothorac Surg* 2003;24:527-534.
63. Soltesz EG, van Pelt F, **Byrne JG**. Emergent cardiopulmonary bypass for bupivacaine cardiotoxicity: Case report and review of the literature. *J Cardiothorac Vasc Anest* 2003;17:357-8.
64. Gudbjartsson T, Mathur M, Mihaljevic T, Aklog L, **Byrne JG**, Cohn LH. Hypothermic circulatory arrest for the surgical treatment of complicated adult coarctation of the aorta. *J Am Coll Cardiol* 2003;41(5):849-51.
65. Leacche M, Katsnelson Y, Arshad H, Mihaljevic T, Rawn JD, Sweeney MO, **Byrne JG**. Delayed presentation of totally avulsed right superior vena cava after extraction of permanent pacemaker lead. *Pacing Clin Electrophysiol* 2004;27 :262-3.
66. Adams DH, Filsoufi F, **Byrne JG**, Aklog L. Current results of combined CABG and mitral annuloplasty in patients with moderate mitral regurgitation. *J Heart Valve Dis* 2004; 13:747-53.

67. Danton MHD, Greil GF, **Byrne JG**, Hsin M, Cohn LH, Maier S. Right ventricular volume measurement by conductance catheter. *Am J Physiol* 2003;285: H1774-85.
68. Mihaljevic T, Couper GS, **Byrne JG**, Paul S, Nathan NS, Aranki SF, Cohn LH. Echocardiographic localization of left ventricular free wall rupture after minimally invasive mitral valve replacement. *J Cardiothorac Vasc Anesthesia*. 2003;17:733-5.
69. Rogers SO, Leacche M, Mihaljevic T, Rawn JD, **Byrne JG**. Surgery for anomalous origin of the right coronary artery from the left aortic sinus: *Ann Thorac Surg* 2004;78:1829-31.
70. Mihaljevic T, Paul S, **Byrne JG**, Leacche M, Farivar RS, Soltesz EG, Rawn JD, Cohn LH. Robotic mammary takedown and off pump bypass surgery for single vessel disease of the left anterior descending coronary artery. *Am J Cardiol* 2003;92:1222-4.
71. Leacche M, Rawn JD, Mihaljevic T, Lin J, Karavas AN, Paul S, **Byrne JG**. Outcomes in patients with normal serum creatinine and with artificial renal support for acute renal failure developing after coronary artery bypass grafting. *Am J Cardiol* 2004;93:353-6.
72. Paul S, Mihaljevic T, Leacche M, Landzberg MJ, Ho CY, Blake GJ, **Byrne JG**. Postinfarction ventricular septal defect with pseudoaneurysm repair after failed percutaneous closure. *Ann Thorac Surg*. 2005 Feb;79(2):701-3.
73. Mihaljevic T, Paul S, Leacche M., Rawn JD, Aranki SF, O'Gara PO, Cohn LH, **Byrne JG**. Tailored surgical therapy for acute native mitral valve endocarditis. *J Heart Valve Dis*. 2004;13:210-6.
74. **Byrne JG**, Leacche M, Paul S, Mihaljevic T, Rawn JD, Shernan SK, Couper GS, Lewis EF, Fang JC, Mudge GH, Stevenson LW. Risk factors and outcomes for "vasoplegia syndrome" following cardiac transplantation. *Eur J Cardiothorac Surg* 2004;25:327-32.
75. Lewis, EF, Tsang SW, Fang JC, Mudge GH, Jarcho JA, Flavell C, Nohria A, Givertz MM, Couper GS, **Byrne JG**, Stevenson LW. Frequency and impact of delayed decisions regarding cardiac transplantation on long-term outcomes in patients with advanced heart failure. *J Am Coll Cardiol* 2004;43:794-802.
76. Tatli S, O'Gara PT, Lambert J, Kwong R, **Byrne JG**, Yucel EK. MRI of atypical lipomatous hypertrophy of the interatrial septum. *Am J Roentgenol* 2004;182:598-600.

77. Shekar PS, Leacche M, Farnam KA, Hernandez CG, Couper GS, **Byrne JG**. Surgical management of complications of percutaneous coronary rotational atherectomy interventions. *Ann Thorac Surg* 2004;78:e81-2.
78. Mihaljevic T, Unic D, **Byrne JG**, Cohn LH. Minimally invasive valve surgery: What the pathologist should know. *Cardiovascular Pathology* 2004;13:176-81.
79. **Byrne JG**, Leacche M, Agnihortri AK, Paul S, Bueno R, Mathisen DJ, Sugarbaker DJ. The use of cardiopulmonary bypass during resection of locally advanced thoracic malignancies: A 10-year two-center experience. *CHEST* 2004;125:1581-6.
80. **Byrne JG**, Karavas AN, Gudbjartsson T, Leacche M, Mihaljevic T, Rawn JD, Cohn LH, Aranki SF. Left anterior descending coronary endarterectomy: Early and late results in 196 consecutive patients. *Ann Thorac Surg* 2004;78:867-73.
81. Gasparovic H, **Byrne JG**. The use of a femoral arterial cannula for effective dilation for percutaneous femoral venous cannulation. *J Card Surg* 2005;20:68-9.
82. Paul S, Nathan M, **Byrne JG**, Aranki SF. Transmyocardial laser revascularization. *J Cardiothorac Vasc Anesth* 2004;18:85-92.
83. Gasparovic H, Bueno R, Rybicki FJ, Baughman KL, Capodilupo RC, Leacche M, **Byrne JG**. Sarcoidosis of the aortic root. *J Thorac Cardiovasc Surg* 2004;128:761-2.
84. Paul S, Mihaljevic T, Rawn JD, Cohn LH, **Byrne JG**. Aortic valve replacement in patients with severely reduced ventricular function. *Cardiology* 2004; 101:7-14.
85. Unic D, Mihaljevic T, Leacche M, Gasparovic H, Albert MA, **Byrne JG**. Surgical treatment of large left main coronary aneurysm. *Thorac Cardiovasc Surg* 2004;52:1-2.
86. Mihaljevic T, Cohn LH, Unic D, Aranki SF, Couper GS, **Byrne JG**. 1,000 Minimally invasive valve operations: Early and late results. *Ann Surg* 2004; 240:529-34.
87. Anderson C, Shernan SK, Leacche M, Rawn JD, Paul S, Mihaljevic T, Jarcho JA, Stevenson LW, Fang CT, Lewis EF, Couper GS, Mudge GH, **Byrne JG**. Severity of intraoperative tricuspid regurgitation predicts poor late survival following cardiac transplantation. *Ann Thorac Surg* 2004; 78:1635-42.
88. Filsoufi F, Aklog L, **Byrne JG**, Cohn LH, Adams DH. Current results of combined CABG and mitral annuloplasty for patients with moderate ischemic MR. *J Heart Valve Dis* 2004;13:747-53.

89. Gasparovic H, Nascimben L, Kindelberger DW, **Byrne JG**. Idiopathic inflammatory aneurysm of the ascending aorta. *Ann Thorac Surg* 2005 Nov;80(5):1912-4.
90. **Byrne JG**, Karavas AN, Leacche M, Unic D, Rawn JD, Couper GS, Mihaljevic T, Rizzo RJ, Aranki SF, Cohn LH. Impact of concomitant CABG on hospital survival after aortic root replacement. *Ann Thorac Surg* 2005;79 :511-6.
91. Bhatt DL, Aranki SF, **Byrne JG**, Bhatia D, Metha S, Mills R. Issues in the management of antiplatelet therapy in patients undergoing surgical revascularization. A roundtable discussion. *J Inv Cardiol* 2005; 17:1-5.
92. **Byrne JG**, Leacche M, Unic D, Rawn JD, Simon DI, Rogers CD, Cohn LH. Staged initial percutaneous coronary intervention followed by valve surgery ("hybrid approach") for patients with complex coronary and valve disease. *J Am Coll Cardiol* 2005;45:14-8.
93. Leacche M, Unic D, Goldhaber SZ, Rawn JD, Aranki SF, Couper GS, Mihaljevic T, Rizzo RJ, Cohn LH, Aklog L, **Byrne JG**. Modern surgical treatment of massive pulmonary embolism: Results in 47 consecutive patients after rapid diagnosis and aggressive surgical approach. *J Thorac Cardiovasc Surg* 2005; 129:1018-23.
94. Gregory SA, Yepes CB, **Byrne JG**, D'Ambra MN, Chen MH. Atrial endocarditis--The importance of the regurgitant jet lesion. *Echocardiography* 2005; 22;426-30.
95. Mihaljevic T, Paul S, Leacche M, Rawn JD, Cohn LH, **Byrne JG**. Valve replacement in women of childbearing age: Influences on mother, fetus and neonate. *J Heart Valve Dis* 2005;14:151-7.
96. Unic D, Leacche M, Paul S, Rawn JD, Aranki SF, Couper GS, Mihaljevic T, Rizzo RJ, Cohn LH, O'Gara PT, **Byrne JG**. Early and late results of isolated and combined heart valve surgery in patients > or =80 years of age. *Am J Cardiol*. 2005 Jun 15;95(12):1500-3.
97. Gasparovic H, Rybicki FJ, Millstine J, Unic D, **Byrne JG**, Yucel K, Mihaljevic T. Three dimensional computed tomographic imaging in planning the surgical approach for redo cardiac surgery after coronary revascularization. *Eur J Cardiothorac Surg*. 2005 Aug;28(2):244-9.
98. Perez A, Ito H, Farivar RS, Cohn LH, **Byrne JG**, Rawn JD, Aranki SF, Zinner MJ, Tilney NL, Brooks DC, Ashley SW, Banks PA, Whang EE. Risk factors and outcomes of pancreatitis after open heart surgery. *Am J Surg*. 2005 Sep;190(3):401-5.

99. Dang NC, Topkara VK, Leacche M, John R, **Byrne JG**, Naka Y. Left ventricular assist device implantation after acute anterior wall myocardial infarction and cardiogenic shock: A two-center study. *J Thorac Cardiovasc Surg*. 2005 Sep;130(3):693-8.
100. Greelish JP, Eagle SS, Zhao DX, Deegan RJ, Crenshaw MH, Balaguer JM, Ahmad RM, **Byrne JG**. Management of new onset mitral regurgitation with intraoperative angiography and intraoperative PCI. *J Thorac Cardiovasc Surg* 2006;131(1)239-40.
101. Leacche M, Winkelmayr WC, Paul S, Lin J, Unic D, Rawn JD, Cohn LH, **Byrne JG**. Predicting survival in patients requiring renal replacement therapy after cardiac surgery. *Ann Thorac Surg* 2006;81(4):1385-92.
102. Paul S, Leacche M, Unic D, Couper GS, Macgillivray TE, Agnihotri AK, Cohn LH, **Byrne JG**. Determinants of outcomes for postcardiotomy VAD placement: An 11-year, two institution study. *J Card Surg* 2006;21(3)234-37.
103. Kumar S, Piana RN, **Byrne JG**. Image-guided surgical ligation of the supreme branch of LIMA: A case report. *Innovations*. 2006;1 (vol 5): 1-2.
104. Tharpe C, Greelish JP, Hood R, **Byrne JG**, Zhao DX. Use of the percusurge guard wire distal balloon occlusion system as an endovascular clamp during off pump CABG with LIMA-LAD. *J Invasive Cardiol* 2006;18:E267-E269.
105. Greelish JP, Ailiwadi M, Balaguer JM, Ahmad RM, Petracek MR, Zhao DX, **Byrne JG**. Combined percutaneous coronary intervention (PCI) and valve surgery. *Current Opinion in Cardiology* 2006;21(2):113-7.
106. Webb DP, Warhooover MT, Eagle SS, Greelish JP, Zhao DX, **Byrne JG**. Argatroban in short term percutaneous ventricular assist due to heparin induced thrombocytopenia. *J Extra Corpor Technol* 2008;40(1)130-4.
107. Webb DP, Deegan RJ, Greelish JP, **Byrne JG**. Oxygenation failure during cardiopulmonary bypass prompts new safety algorithm and training. *JECT* 2007;39:188-191.
108. Ryzhov S, Solevkova NV, Goldstein AE, Lamparter M, Fleenor T, Young PP, Greelish JP, **Byrne JG**, Vaughan DE, Biaggioni I, Hatzopoulos AK, Feoktistov I. Adenosine receptor-mediated adhesion of endothelial progenitors to cardiac microvascular endothelial cells. *Circ Res* 2008;102(3)356-63.
109. Umakanthan R, Leacche M, Petracek MR, Kumar S, Solenkova N, Kaiser CA, Greelish JP, Balaguer JM, Ahmad RM, Ball SK, Hoff SJ, Absi TS, Kim BS, **Byrne JG**. Safety of minimally invasive mitral valve surgery without aortic cross clamp. *Ann Thorac Surg* 2008;85(5):1544-49.

110. Umakanthan R, Dubose R, **Byrne JG**, Ahmad RM. Preoperative optimization of multi-organ failure following acute myocardial infarction and ischemic mitral regurgitation by placement of a transthoracic intra-aortic balloon pump. *Heart Surg Forum*. 2010 Oct;13(5):E342-4.
111. Leacche M, Balaguer JM, Umakanthan R, **Byrne JG**. Prosthetic valve sparing aortic root replacement: An improved technique. *Interact Cardiovasc Thorac Surg*. 2008;7(5):919-21.
112. Flemming GA, Murray KT, Yu C, **Byrne JG**, Greelish JP, Petracek MR, Hoff SJ, Brown NJ, Pretorius M. Milrinone use is associated with postoperative AF following cardiac surgery. *Circulation* 2008;118(16):1619-25.
113. Leacche M, Balaguer JM, **Byrne JG**. Role of cardiac surgery in the post myocardial infarction patient with heart failure. In: *Current Heart Failure Reports* 2008; 5(4):204-10.
114. **Byrne JG**, Leacche M, Vaughan DE, Zhao DX. Hybrid cardiovascular procedures. *JACC Interventions* 2008;1(5):459-68.
115. Garcia A, **Byrne JG**, Bueno R, Flores RM. Aneurysm of the main pulmonary artery. *Ann Thorac Cardiovasc Surg* 2008;14:399-401.
116. Zhao DX, Leacche M, Balaguer JM, Boudoulas KD, Damp JA, Greelish, JP, **Byrne JG**. Routine intra-operative completion angiography after CABG and “1-stop” hybrid revascularization: Results from a fully integrated hybrid cath lab/OR. *J Am Coll Cardiol* 2009;53:232-241.
117. Antevil J, Umakanthan R, Leacche M, Brewer Z, Solenkova N, **Byrne JG**, Greelish JP Idiopathic mitral valve disease in a patient presenting with axenfeld-riege syndrome. *J Heart Valve Dis* 2009;18:349-51.
118. Leacche L, Balaguer JM, **Byrne JG**. Intra-operative graft assessment. *Semin Thorac Cardiovasc Surg* 2009;21: 207-212.
119. El Bardissi AW, Balaguer JM, **Byrne JG**, Aranki SF. Surgical therapy for complex coronary artery disease. *Semin Thorac Cardiovasc Surg* 2009; 21:199-206.
120. Umakanthan R, Leacche M, Petracek MR, Zhao DX, **Byrne JG**. Combined PCI and minimally invasive heart valve surgery for high risk patients. *Current Treatment Options in Cardiovascular Medicine* 2009; 11: 492-98.

121. Umakanthan R, Brewer ZE, **Byrne JG**, Ahmad RM. Use of the hybrid operating room for AVR in a patient with anomalous left circumflex. J Thoracic Cardiovasc Surg 2010 Jun;139(6).
122. Antevil JL, Karavas AN, **Byrne JG**, Riedel BJ, Petracek MR .Pulmonary artery catheter deviation on chest roentgenogram after cardiac operation: A sign of tamponade. Ann Thorac Surg. 2010 Jan; 89(1):281-3.
123. Antevil JL, Karavas AN, Selby JH, **Byrne JG**. Use of a hybrid operating room to diagnose and treat delayed coronary spasm after mitral valve repair. J Thorac Cardiovasc Surg 2010 Aug;140(2):e25-7.
124. Levin R, Leacche M, Petracek MR, Deegan RJ, Eagle SS, Thompson AM, Pretorius M, Solenkova NV, Umakanthan R, Brewer ZE, **Byrne JG**. Extending the use of the pulmonary artery catheter for safe minimally invasive cardiac surgery. J Cardiothorac Vasc Anesth 2010 Aug;24(4):568-73.
125. Umakanthan R, Petracek MR, Leacche M, Solenkova NV, Eagle SS, Thompson AM, Ahmad RM, Greelish JP, Ball SK, Hoff SJ, Absi TS, Balaguer JM, **Byrne JG**. Minimally invasive right lateral thoracotomy without aortic cross-clamping: An attractive alternative to repeat sternotomy for reoperative mitral valve surgery. J Heart Valve Dis 2010 Mar;19(2)236-43.
126. Umakanthan R, Brewer ZE, **Byrne JG**, Ahmad RM. Use of the hybrid operating room for AVR in a patient with anomalous left circumflex. J Thoracic Cardiovasc Surg 2010 Jun;139(6).
127. Chatterjee S, Eagle SS, Adler DH, **Byrne JG**. Incidental discovery of an ascending aortic thrombus: Should this patient undergo surgical intervention? J Thoracic Cardiovasc Surg 2010 Jul; 140(1)
128. Ahmad RM, Umakanthan R, Lawson M, Leacche M, Solenkova NV, **Byrne JG**. Nonsurgical management of traumatic cardiac pseudoaneurysms. J Thoracic Cardiovasc Surg 2010 Apr;139(4)
129. McClure RS, Narayanasamy N, Wiegerinck E, Lipsitz S, Maloney A, **Byrne JG**, Aranki SF, Couper GS, Cohn LH. Late outcomes for aortic valve replacement with the Carpentier-Edwards pericardial bioprosthesis: Up to 17-Year follow-up in 1,000 patients Ann Thorac Surg 2010 May;89(5) 1410-6.
130. Umakanthan R, Dubose R, **Byrne JG**, Ahmad RM. Preoperative optimization of multi-Organ failure following acute myocardial infarction and ischemic mitral regurgitation by placement of a transthoracic intra-aortic balloon pump. Heart Surgery Forum. 2010 Oct; Vol 13. No. 5.

131. Feldman T, Ruiz CE, Hijazi ZM; **Byrne JG**; SCAI Structural Heart Disease Council. The SCAI Structural Heart Disease Council: Toward addressing training, credentialing, and guidelines for structural heart disease intervention. *Catheter Cardiovasc Interv*. 2010 Oct 1;76(4):E87-9. IP 2.36.
132. Greelish JP, Chatterjee S, **Byrne JG**. Recurrent atrial myxoma: Resection for Carney complex through a minimally invasive approach. *J Card Surg*. 2010 Sep;25 (5) 519-21.
133. Leacche M, Umakanthan R, Zhao DX, **Byrne JG**. Surgical update: Hybrid procedures, do they have a role? *Circulation Cardiovasc Interv*. 2010 Oct 1;3(5):511-8.
134. DiSalvo TG, Acker MA, Dec GW, **Byrne JG**. Mitral valve surgery in advanced heart failure. *J Am Coll Cardiol* 2010;55:271-82.
135. Solenkova NV, Umakanthan R, Leacche M, Zhao DX, **Byrne JG**. The new era of cardiac surgery: Hybrid therapy for cardiovascular disease. *Innovations* 2010 Nov;5(6):388-93.
136. Umakanthan R, Leacche L, Zhao DX, Gallion AH, Mishra PC, **Byrne JG**. Hybrid options for treating cardiac disease. *Semin Thorac Cardiovasc Surg*. 2011 Winter;23(4):274-80.
137. Hoff SJ, Ball SK, Leacche M, Solenkova NA, Umakanthan R, Petracek MR, Ahmad RM, Greelish JP, Walker K, **Byrne JG**. Results of completion angiography after minimally invasive off pump CABG. *Ann Thorac Surg* 2011 Jan;91(1):31-6; discussion 36-7.
138. **Byrne JG**, Rezai K, Sanchez JA, Bernstein RA, Okum E, Leacche M, Balaguer JM, Bridges CR, Higgins RSD. Surgical management of endocarditis. The Society of Thoracic Surgeons Clinical Practice Guidelines. *Ann Thorac Surg* 2011 Jun;91(6):2012-9.
139. Greelish JP, Leacche M, Solenkova S, Ahmad RA, **Byrne JG**. Improved mid-term outcomes for “Type A” (central) pulmonary emboli treated surgically. *J Thorac Cardiovasc Surg* 2011 Dec;142(6):1423-9. Epub 2011 Apr 9.
140. **Byrne JG**. The American Heart Association/American College of Cardiology Foundation guidelines for coronary artery bypass grafting: 2011 updates. Writing Committee Members, Hillis LD, Smith PK, Anderson JL, Bittl JA, Bridges CR, Byrne JG, Cigarroa JE, Disesa VJ, Hiratzka LF, Hutter AM Jr, Jessen ME, Keeley EC, Lahey SJ, Lange RA, London MJ, Mack MJ, Patel MR, Puskas JD, Sabik JF, Selnes O, Shahian DM, Trost JC, Winniford MD; ACCF/AHA Task Force Members, Jacobs AK, Anderson JL, Albert N, Creager MA, Ettinger SM, Guyton RA, Halperin JL, Hochman JS, Kushner FG, Ohman EM, Stevenson W, Yancy

- CW. 2011 ACCF/AHA guidelines for coronary artery bypass graft surgery: A report of the American College of Cardiology Foundation/American Heart Association Task Force on Practice Guidelines. Published simultaneously in; J Thorac Cardiovasc Surg. 2012 Jan;143(1):4-34; Anesth Analg. 2012 Jan;114(1):11-45. Epub 2011 Nov 29.; J Am Coll Cardiol. 2011 Dec 6;58(24):2584-614. Epub 2011 Nov 7. ; Circulation. 2011 Dec 6;124(23):2610-42. Epub 2011 Nov 7.;
141. Petracek MR, Leacche M, Solenkova N, Umakanthan R, Ahmad RM, Ball SK, Hoff SJ, Absi TS, Balaguer JM, **Byrne JG**. Minimally invasive mitral valve surgery expands the surgical options for high-risks patients. Ann Surg. 2011 Oct;254(4):606-11.
 142. Leacche M, **Byrne JG**, Solenkova NS, Reagan BD, Mohamed TI, Fredi JL, Zhao DX. Comparison of 30 day outcomes of coronary artery bypass grafting surgery vs. hybrid coronary revascularization stratified by SYNTAX and EuroSCORE. J Thoracic Cardiovasc Surg Epub 2012 Apr 25. (Epub ahead of time)
 143. Billings FT, Pretorius M, Schildcrout JS, Mercalso ND, **Byrne JG**, Ikizler TA, Brown NJ. Obesity and oxidative stress predict kidney injury following cardiac surgery. J Amr Soc Nephrol 2012 Jul;23(7):1221-8. Epub 2012 May 24.
 144. Umakanthan R, Hoff SJ, Solenkova N, Wigger MA, Keebler ME, Lennehan A, Leacche M, DiSalvo TG, Ooi H, Naftilan AJ, **Byrne JG**, Ahmad RM. Benefits of ambulatory axillary intra-aortic balloon pump for circulatory support as bridge to heart transplant. J Thorac Cardiovasc Surg. 2012 May;143(5):1193-7 Epub 2012 Feb 24.
 145. **Byrne JG**, Leacche M. The American Heart Association/American College of Cardiology Foundation guideline for coronary artery bypass grafting: 2011 updates. J Thorac Cardiovasc Surg. 2012 Jan;143(1):35-6.
 146. Wagner CE, Bick JS, Webster BH, Selby JH, **Byrne JG**. Use of a miniaturized transesophageal echocardiographic probe in the intensive care unit for diagnosis and treatment of a hemodynamically unstable patient after aortic valve replacement. J Cardiothorac Vasc Anesth. 2012 Feb;26(1):95-7. Epub 2011 Mar 27.
 147. Cuadrado DG, Leacche M, **Byrne JG**. Minimally invasive surgery for valvular heart disease. Curr Treat Options Cardiovasc Med 2012 Dec;14 (6):584-93.
 148. Balaguer JM, Umakanthan R, Leacche M, **Byrne JG**. Minimally invasive cardiac surgery. Curr Probl Surg 2012 Sep; 49 (9):529-49
 149. Pretorius M, Murray KT, Yu C, **Byrne JG**, Billings FT 4th, Petracek MR, Greelish JP, Hoff SJ, Ball SK, Mishra V, Body SC, Brown NJ. Angiotensin-

- converting enzyme inhibition or mineralocorticoid receptor blockade do not affect prevalence of atrial fibrillation in patients undergoing cardiac surgery. *Crit Care Med* 2012 Oct;40(10):2805-12.
150. Leacche M, Zhao DX, Umakanthan R, **Byrne JG**. Do hybrid procedures have proven clinical utility and are they the wave of the future?: Hybrid procedures have no clinical utility and are not the wave of the future. *Circulation* 2012 May 22; 125 (20): 2504-10. Discussion 2510.
 151. Bashore TM, Balter S, Barac A, **Byrne JG**, Cavendish JJ, Chambers CE, Hermiller JB Jr, Kinlay S, Landzberg JS, Laskey WK, McKay CR, Miller JM, Moliterno DJ, Moore JW, Oliver-McNeil SM, Popma JJ, Tommaso CL. 2012 American College of Cardiology Foundation/Society for Cardiovascular Angioplasty and Interventions expert consensus document on cardiac catheterization laboratory standards update. A report of the American College of Cardiology Foundation Task Force on Expert Consensus documents. *J Am Coll Cardiol* 2012 Jun 12;59(24):2221-305. *Catheter Cardiovasc Interv* 2012 Sep 1;80(3):E37-49.
 152. Billings FT, Balaguer JM, C Y, Wright P, Petracek MR, **Byrne JG**, Brown NJ, Pretorius M. Comparative effects of angiotensin receptor blockade and ACE inhibition on the fibrinolytic and inflammatory responses to cardiopulmonary bypass. *Clin Pharmacol Ther* 2012 Jun;91(6)
 153. **Byrne JG**, Leacche M. Minimally invasive bypass surgery for stenosis of the left anterior descending artery: 10 year results from a randomized controlled trial. *JACC Cardiovasc Interv*. 2013 Jan;6(1):27-8.
 154. Balaguer JM, Yu C, **Byrne JG**, Ball SK, Petracek MR, Brown NJ, Pretorius M. Contribution of endogenous bradykinin to fibrinolysis, inflammation and blood product transfusion following cardiac surgery: A randomized trial. *Clin Pharmacol Ther* 2012 Dec 24 (Epub ahead of print)

Non peer-reviewed publications:

1. **Byrne JG**, Rice C. Invited Commentary. The effect of low-dose subcutaneous heparin on postoperative wound hematomas: A randomized clinical trial on inguinal hernia patients in Germany. *World J Surgery* 1995;19:419.
2. **Byrne JG**, Aranki SF, Cohn LH. Reply: Aortic valve replacement using circulatory arrest. *Ann Thorac Surg* 1998;66:2158-9.
3. **Byrne JG**, Cohn LH. Surgery for Complications of Myocardial Infarction. In: Verrier, Franco, (Ed) *Advanced Therapy in Cardiac Surgery*. BC Decker. 1999 pp 100-106.

4. **Byrne JG**, Aranki SF. Reply: Replacement of the ascending aorta and aortic valve with a valved stentless composite graft. *Ann Thorac Surg* 1999 Oct;68 (4):1444.
5. Smith B, Lekowski R, **Byrne JG**, Collard D. Transesophageal echocardiography diagnosis of aortic pseudoaneurysm after combined aortic valve replacement and coronary artery bypass graft surgery *Anesth Analg* 1999 Sep;89 (3):802.
6. **Byrne JG**, Chen R, Adams DH. Principles and Applications in Cardiac Surgery. *In: Humes HD (Ed) Kelly's Textbook of Internal Medicine* Lippincott 2000 pp 684-691.
7. **Byrne JG**. Results of revascularization in patients with severe left ventricular dysfunction. *CTDigest.com*, April 2000
8. **Byrne JG**. Long-term results of simultaneous carotid endarterectomy and myocardial revascularization with cardiopulmonary bypass used for both procedures. *CTDigest.com* May 2000.
9. Rawn J, Rosborough D, **Byrne JG**. Pathways for Coronary Artery Bypass Surgery. *In: Cannon and O'Gara Eds. Critical Pathways in Cardiology*, Lippincott 2001; pp147-154.
10. **Byrne JG**. Reply: Aortic valve replacement with an anomalous left circumflex coronary artery encircling the aortic annulus. *J Thoracic Cardiovasc Surg* 2001;122: 843.
11. **Byrne JG**, Mihaljevic T, Aranki SF. Reply: Valved stentless composite graft. *Eur J Cardiothor Surg* 2001;20:1277.
12. **Byrne JG**, Mihaljevic T, Aranki SF. Reply: The use of composite stentless valves with graft extension for the treatment of ascending aortic aneurysms. *Eur J Cardiothor Surg* 2001;20:1279.
13. Karavas AK, **Byrne JG**. Reply: Aortic valve replacement after previous CABG with functioning IMA graft. *Ann Thoracic Surg* 2002;74:1748
14. Karavas AN, Gates JD, **Byrne JG**. Cardiac Trauma. *In: Irwin and Ripple's Intensive Care Medicine*, 5th Edition. Lippincott-Raven 2003; pp 366-377.
15. Karavas AK, **Byrne JG**. Reply: Reoperative aortic valve replacement with patent internal thoracic artery and venous grafts. *Ann Thorac Surg* 2003;75:637b-638b.
16. Karavas AN, **Byrne JG**. Reply: Continuous retrograde cardioplegia simplifies aortic valve replacement in the presence of a patent internal mammary artery. *Ann Thorac Surg*. 2003;76:1338.

17. **Byrne JG**, Phillips BJ, Cohn LH. Reoperative Valve Surgery. In: Cohn LH, Cardiac Surgery in the Adult, 2nd Ed. McGraw Hill 2003; pp 1047-1056.
18. **Byrne JG**, Leacche M. Effect of prior malignancy on survival after cardiac surgery. *Ann Thorac Surg* 2004;77:1597.
19. Greelish JP, Phillips BJ, Fang JC, **Byrne JG**. Tricuspid Valve Surgery in Right Heart Failure. In: Contemporary Cardiology: Surgical Management of Congestive Heart Failure JC Fang and GS Couper, Eds Humana Press 2005. pp 97-122
20. **Byrne JG**. Reply: Concomitant Surgical Myocardial Revascularization Is Still the Gold Standard for Combined Valvular and Coronary Heart Disease. *J Am Coll Cardiol* 2005;46:1782-3.
21. Abbruzzese TA, Gates JD, **Byrne JG**. Cardiac and Thoracic Aortic Trauma. In: Manual of intensive care medicine. 4th Ed. Irwin, Rippe, Eds. Lippincott Williams & Wilkins 2006. pp 181-9
22. **Byrne JG**, Karavas AN, Couper GS. Postoperative Management Strategies in Cardiac Transplantation. In: Mudge, Heart Transplantation, WB Saunders 2006
23. Balaguer JM, Pirundini P, Scholl FG, **Byrne JG**. Assisted Circulation in Heart Failure. In: Cardiovascular Failure, Pathological Bases and Management 4th Ed. Fischer, Stein, Balaguer, Eds. 2006. pp 199-221.
24. **Byrne JG**, Leacche M. Reply: Surgical treatment of massive pulmonary embolism. *J Thoracic Cardiovasc Surg* 2006;131:504.
25. Ahmad RM, Wadlington F, Street T, Greelish JP, Balaguer JM, **Byrne JG**. Pathways for Coronary Artery Bypass Surgery. In: Cannon and O’Gara 2nd Ed. Critical Pathways in Cardiology, Lippincott 2006 pp 161-165.
26. Greelish JP, Ahmad RM, Balaguer JM, Petracek MR, **Byrne JG**. Reoperative Valve Surgery. In: Cohn LH, Cardiac Surgery in the Adult, 3rd Ed. McGraw Hill 2008. Cohn LH , Ed, pp1159-73
27. Lambright ES, Putnam JB, **Byrne JG**. Extended Resections for Lung Cancer and Cardiopulmonary Bypass for Extended Thoracic Resections. In: Sugarbaker DJ, Ed. Adult Chest Surgery: Concepts and Procedures. McGraw Hill 2009. pp 604-10
28. Leacche M, Zhao DX, **Byrne JG**. Reply: Routine Intra-operative Completion Angiography after CABG vs. Routine Intra-operative Transit Time Flow Measurement to Check Grafts Quality. *J Am Coll Cardiol* 2009;54:2337-8.

29. **Byrne JG**, Robbins MA, Leacche M. A new approach for combined carotid and coronary disease: the SHARP study: Simultaneous Hybrid Revascularization by Carotid Stenting and Coronary Artery Bypass Grafting: A new approach to an old problem. *JACC Cardiovascular Interventions* 2009;2(5):402-3.
30. **Byrne JG**. Contemporary Issues in CABG. Introduction. *Seminars in Thoracic and Cardiovascular Surgery* 2009;21:195
31. **Byrne JG**. Team Ball: Building a Winning Cardiovascular Care Delivery System. *Cardiology* 2009;38(11): 20-21.
32. Leacche M, Thompson A, Zhao DX, Riedel BJ, **Byrne JG**. A new horizon for coronary surgery: hybrid coronary revascularization and routine intra-operative completion angiography. *In: Coronary artery bypasses*. Eds: Hammond RT, Alton AB, Chapter II, 2009, Nova Science Publishers, Inc
33. **Byrne JG**, Leacche M. Long-term follow up of patients undergoing reoperative surgery with aortic or mitral valve replacement, using a St. Jude Medical prosthesis. *J Heart Valve Dis.* 2010 Jul;19(4):471-2
34. Greelish JP, Antevil J, Riordan WP, **Byrne JG**. Cardiac and Thoracic Aortic Trauma Penetrating Cardiac Injuries. *In: Erwin RS, Ripple JM. Manual of Intensive Care Medicine (5th Ed)*. Lippincott, Williams and Wilkins (Philadelphia), 2010 pp 192-201.
35. Umakanthan R, Solenkova NV, Leacche M, **Byrne JG**, Ahmad RM. Coronary Artery Bypass Grafting. P.P. Toth, C. Cannon, Ed. *In Comprehensive Cardiovascular Medicine in the Primary Care Setting*. 1st ed. Illinois: Humana, Springer; 2010: 263-279.
36. Leacche M, **Byrne JG**. Hybrid cardiovascular procedures. *US Cardiology*, 2010;7(2):63-6.
37. Jaik NP, Umakanthan R, Leacche M, Solenkova N, Balaguer JM, Hoff SJ, Ball SK, Zhao DX, **Byrne JG**. Current status of hybrid coronary revascularization. *Expert Rev Cardiovasc Ther.* 2011 Oct;9(10):1331-7.
38. **Byrne JG**, Leacche M, Zhao DX. Surgical and interventional hybrid procedures: Lessons from China and beyond. *J Thorac Cardiovasc Surg.* 2012 Jan;143(1):246
39. Maltais S, Joggerst SJ, Hatzopoulos A, Disalvo TG, Zhao D, Sung HJ, Wang X, **Byrne JG**, Naftilan AJ. Stem cell therapy for chronic heart failure: An updated appraisal *Expert Opin Biol Ther* 2013 Jan 6 (Epub ahead of print)

Abstracts, Poster Presentations and Exhibits Presented at Professional Meetings

1. Sun S, Masetti P, **Byrne JG**, Appleyard R, Laurence RG, Couper GS, Marsh J, Cohn LH. Improved method for the study of myocardial protection in the small animal: The heterotopic rat heart transplant model with In-Vivo hemodynamic and myocardial blood flow measurements. *J Am Coll Cardiol* 1991;17:375A.
2. Lee C, Appleyard R, **Byrne JG**, Fleetwood J, Cohn LH. Inhibition of myocardial produced leukotrienes D4, E4 improves coronary flow and functional recovery in isolated crystalloid-perfused rat hearts. *J Am Coll Cardiol* 1991;17:228A.
3. Adams DH, Chen R, **Byrne JG**, Filsoufi F, Aklog L. Improving outcomes in patients with moderate ischemic mitral regurgitation undergoing CABG and mitral annuloplasty. *Circulation* 2000;102:II-462.
4. Aklog L, Flores K, Chen R, **Byrne JG**, Nathan N, Adams DH. Does CABG alone correct moderate ischemic mitral regurgitation. *Circulation*. 2000;102:II-492.
5. Chen R, Filsoufi F, Goldhaber S, **Byrne JG**, Aklog LH, Adams DH. Women have higher operative mortality after CABG surgery: Why? *J Am Coll Cardiol* 2001;37:478A.
6. Oxford J, Adams M, Blake G, **Byrne JG**, Wainstein M, Popma J, Selwyn A. Cardiac catheterization laboratory backup for cardiac surgery. *J Am Coll Cardiol* 2001;37:59A.
7. **Byrne JG**, Goldhaber SZ, Bueno R, Colson YL, Richards WG, Sugarbaker DJ. Refractory right heart failure after left extrapleural pneumonectomy can be caused by constrictive pericardial disease. *Circulation* 2001;104:II-737.
8. **Byrne JG**, Leacche M, Mihaljevic T, Aranki SF, Rawn JD, Cohn LH. Staged initial PCI followed by valve surgery (“Hybrid” approach) for patients with complex coronary and valve disease. *JACC* 2004;43:851-3.
9. Leacche M, Winkelmayer WC, Paul S, Lin J, Mihaljevic T, Rawn JD, **Byrne JG**. In which patients does artificial renal support help? *JACC* 2004;43:1086-138.
10. Dang NC, Topkara VK, Leacche M, Ranjit J, **Byrne JG**, Naka Y. Left ventricular assist device implantation following acute anterior wall myocardial infarction and cardiogenic shock: a two center study. American Heart Association, January 6-9 2005, Seattle, Washington. *Circ Suppl*. 2004;110(17):III-630-1.
11. Zhao DX, Greelish JP, Balaguer JM, Ahmad RM, Crenshaw MH, Hansen DE, Piana RN, Richardson TR, Slosky DA, Day G, **Byrne JG**. The Future of Cardiovascular Interventions: The Vanderbilt Experience with Intraoperative Completion Angiography after CABG and Concomitant Percutaneous Coronary

- Intervention (PCI) with CABG (Hybrid Coronary Revascularization) *Circulation* 2005.
12. Damp J, Zhao DX, Greelish JP, Day G, Paris C, Corr B, Crosby S, Crispin J, Jiramongkolchai K, **Byrne JG**. Intra-operative completion angiography after CABG with immediate percutaneous or surgical revision of defects: 1-year experience form the Vanderbilt Hybrid Lab, *Circulation* 2006; Suppl II 429.
 13. Konstantinos D, Stahlman D, **Byrne JG**, Ahmad RG, Greelish JP, Day G, Parris C, Jiramongkolchali K, Corr B, Crosby S, Chrispin J, Zhao DX. One stop hybrid procedures, *Circulation* 2006 Suppl II 507.
 14. Leacche M, Zhao DX, Greelish JP, Balaguer JM, Ahmad RA, Petracek MR, Absi TS, **Byrne JG**. Determinants of intraoperative graft failure in CABG surgery: findings of routine completion angiogram. 7th International Congress on Coronary Artery Disease. Venice, Italy October 7-10 2007.
 15. Leacche M, Zhao DX, Greelish JP, Balaguer JM, Ahmad RA, Petracek MR, Absi TS, **Byrne JG**. Hybrid percutaneous intervention with coronary artery bypass grafting versus standard CABG surgery 7th International congress on coronary artery disease. Venice, Italy October 7-10 2007
 16. Eagle SS, Umakanthan R, Leacche M ,Petracek MR, Solenkova N, Ahmad RA, Balaguer JM, Greelish JP , Ball SK, Hoff SJ, **Byrne JG**. Minimally invasive mitral valve surgery without aortic cross-clamping: An excellent solution for reoperative cardiac surgery". World Congress of Cardiology, Buenos Aires , 18-21 May 2008. *Circulation* Vol 117: N19, May 13, 2008.
 17. Balaguer JM, Eby E, Cai S, Absi TS, Leacche M, Waly A, Feilner A, Greelish J, Ahmad R, Levin R, **Byrne JG**. Stroke reduction in coronary surgery using a simple intraoperative strategy in high-risk population. 19th World Society of Cardio-Thoracic Surgeons, Buenos Aires, Argentina, 4-6 November 2009.
 18. Hoff SJ, Ball SK, Petracek MR, Ahmad R, Greelish JP, Balaguer JM, Leacche M, **Byrne JG**. Results of intra-operative open-chest completion angiography in a hybrid or after minimally invasive off-pump coronary artery bypass (MIDCAB) through a left thoracotomy. Southern Thoracic Surgical Association, 56th annual meeting, November 4-7 2009, Florida.
 19. Leacche M, Solenkova N, Mohamed T, **Byrne JG**, Zhao DX. Comparison of 30 days outcomes of coronary artery bypass surgery vs. hybrid coronary revascularization stratified by SYNTAX and EURO scores. American Heart Association Scientific Session 2010 Chicago, IL.

Narrative Report:

My most significant contributions to date, besides being a busy clinical cardiac surgeon along with training and teaching many leaders in clinical and academic cardiac surgery, have been the development of the hybrid cardiovascular (CV) operating room, the introduction of hybrid CV procedures and the formation of a financially integrated hybrid care delivery system (CV service).

Training Leaders in Cardiac Surgery

In my roles as Program Director of the cardiothoracic (CT) surgery residency program at Brigham & Women's Hospital (BWH) until 2004, and in my role as Associate Program Director at Vanderbilt Medical Center, I have had the opportunity to train many leaders in CT surgery. The surgeons with whom I have had both a research and clinical mentoring relationship are Dr Alex Karavas and Dr Marzia Leacche. Both worked in my research group and later trained with me in CT surgery. Dr Karavas is in practice in upstate NY and Dr Leacche will be joining me at BWH in April. She has >80 peer reviewed papers and is a co-investigator on an NIH RO1. She will direct the research portfolio in the division of cardiac surgery at BWH.

Foundation of Clinical Outcomes Research

My prior work in clinical outcomes research prepared me to understand the need for the hybrid CV operating room and the subsequent development of hybrid procedures that ultimately require combined, integrated care delivery teams. During the process of publishing a number of papers on clinical outcomes, it became clear to me that hybrid CV procedures would be appropriate for higher risk, more complex patients. However, the ability to execute effective hybrid procedures was limited by the geographic, financial and political separation of the cardiac surgery operating room and the catheterization laboratory. This led to my efforts to establish one of the first hybrid operating rooms in the United States.

The Hybrid Operating Room

Part of my recruitment to Vanderbilt in 2004 was their commitment to build the 1st fully integrated hybrid CV suite in the US. While this idea was not new, no major academic medical center had achieved this goal because of the political and financial barriers that had traditionally separated cardiology and cardiac surgery. We were able to overcome these barriers because of superb leadership within the medical center and in cardiology. The Chief of Cardiology and the Chairs of Medicine and Surgery embraced the idea and helped me lead the effort. I led every aspect of this project from its conception including room design, equipment selection and personnel. Because of the uniqueness of the program, we subsequently hosted hundreds of visitors from all over the world to see how we had organized it. The proliferation of hybrid CV operating rooms in virtually every major academic medical center can perhaps be traced to our original work. My contribution to this area of CV science is perhaps best demonstrated by my participation

on the writing committee for the catheterization lab standards document of the American College of Cardiology (J Am Coll Cardiol. 2012 Jun 12;59(24):2221-305).

Hybrid Procedures

Our hybrid laboratory opened on April 4, 2005 and we subsequently published our first patient series on integrated cardiovascular care in 2009 (J Am Coll Cardiol. 2009 Jan 20;53(3):232-41). In this paper we described the feasibility of completion angiography and hybrid coronary revascularization. However, the hybrid lab soon became a platform for other innovative procedures, such as hybrid atrial fibrillation ablation and image-guided cardiac surgery. Our JACC Interventions paper, one of the inaugural position papers for this new journal, was among the first to summarize the hybrid concept (JACC Cardiovasc Interv. 2008 Oct;1(5):459-68). The hybrid lab is now considered the safest environment for trans-catheter valve procedures. The hybrid lab has become a platform for performing 21st century image-guided CV procedures.

The Hybrid Care Delivery System

Perhaps the most important lesson from the hybrid OR was not the merger of technology from the cardiac OR and catheterization labs, but rather how people worked together and how finances were redirected in an academic medical center. In order to have a functional hybrid OR, one must first have a functional hybrid care delivery system. We learned that the only true way to make this happen was to integrate cardiology and cardiac surgery financially, geographically and strategically. This however had to fit within the traditional departmental structures of a major University Medical School. The hybrid care delivery system integrated, under one set of financial statements, the entire CV enterprise. In doing so, we eliminated many of the financial barriers that had previously separated cardiology and cardiac surgery (http://www.nxtbook.com/nxtbooks/elsevier/acc_ccg201011/index.php?startid=10). This model seems ideal for value-based payment reform and comparative effectiveness research and was warmly received by patients who experienced an integrated, cost conscience system of safe and effective cardiovascular care.