



COLUMBIA UNIVERSITY

*College of Physicians
and Surgeons*



ColumbiaDoctors | *Surgery*

Dear faculty, residents and fellows,

The year 2017 has gotten off to an excellent start with our colleagues contributing significant research in many surgical disciplines. I congratulate you on your many recent achievements.

To keep this valuable newsletter going, I hope you will continue to email [Paul Kurlansky](mailto:Paul.Kurlansky) (<mailto:pk2245@columbia.edu?subject=Research%20E-newsletter>) or me (crs2@cumc.columbia.edu) with regular updates on your grants, publications, and presentations. Be sure to contact us by the first of every month.

As a reminder, the PubMed links below should work for everyone. The journal-specific links will only work if you have a subscription to that journal or you are connected into the Columbia University library e-journal system.

For easy reference, we now post all issues of this [newsletter](#) on the [Center for Innovations and Outcomes Research](#) website. In addition, we now compile a [Quarterly Research Report](#) for referring physicians, summarizing the presentations and publications listed in this newsletter.

Best regards,
Craig R. Smith, MD, FACS
Chair, Department of Surgery

CONGRATULATIONS

Emile Bacha, MD, was elected Secretary/Treasurer of the Congenital Heart Surgeons Society for a five-year term.

David Kalfa, MD, received the following awards:

The 2016 Congenital Heart Defect Coalition Research Grant (\$50,000) to create a heart valve with growth potential.

The Irving Institute Collaborative and Multidisciplinary Pilot Research (CaMPR) Award (\$15,000) for "Improving the electrical coupling and conduction of tissue-engineered cardiac constructs for clinical application in children with congenital heart disease."

The Columbia-Coulter Translational Research Partnership for a project entitled "Device for Advanced Drainage."

CARDIAC SURGERY

Presentations

*Annual Meeting of the Society of Thoracic Surgeons
Houston, January 21-25, 2017*

Moderator

Michael Borger, MD, PhD
Aortic/Endovascular Surgery
Rapid Deployment Valves

A Prospective Multi-Institutional Cohort Study of Mediastinal Infection After Cardiac Surgery L. P. Perrault, K. A. Kirkwood, H. Chang, J. C. Mullen, M. A. Miller, B. Gulack, K. Doud, M. Argenziano, R. K. Ghanta, B. A. Whitson, D. Williams, N. M. Sledz-Joyce, B. Lima, G. Greco, N. Fumakia, E. Rose, J. Puskas, R. D. Weisel, M. E. Bowdish.

Mitral Valve Repair vs Replacement in Patients With Functional Mitral Regurgitation Undergoing Complex Cardiac Surgery N. B. Langer¹, B. S. Van Boxtel, R. A. Sorabella, Y. Wu, J. Park, H. Takayama, M. A. Borger, Y. Naka, C. Smith, I. George, M. Argenziano.

Neuropsychological Functioning And Psychosocial Outcomes In Adults With D-transposition Of The Great Arteries Corrected With The Arterial Switch Operation. L. Kasmi, M. Montreuil, J. Calderon, N. Geronikola, V. Lambert, E. Belli, D. Bonnet, D. Kalfa.

Primary Pulmonary Vein Stenosis: Outcomes, Prognostic Factors, and Severity Score in a Multicenter Study D. Kalfa, E. Belli, E. A. Bacha, V. Lambert, D. di Carlo, M. Kostolny, J. Salminen, M. Nosal, J. Hörer, H. Berggren, I. Yemets, M. Hazekamp, B. Maruszewski, G. E. Sarris, T. Ebels, L. Francois.

Current Status of Endovascular Training for Cardiothoracic Surgery Residents in the United States P. N. Vardas, A. C. Stefanescu Schmidt, A. B. Goldstone, A. A. Shah, D. LaPar, W. F. DeNino, E. A. Gillaspie, A. G. Fiedler, M. S. Halbreiner, A. L. Eilers, D. M. Walters, E. H. Stephens, V. Tchantchaleishvili.

Two-Year Echocardiographic and Clinical Outcomes in 937 Intermediate Patients Undergoing Surgical Aortic Valve Replacement From the PARTNER 2A Study.

V. H. Thourani, W. Y. Szeto, S. Kodali, E. Blackstone, A. Lowry, R. Makkar, M. Williams, J. E. Bavaria, H. C. Herrmann, H. S. Maniar, V. Babaliaros, C. Smith, A. Trento, P. J. Corso, A. Pichard, D. Miller, L. G. Svensson, S. R. Kapadia, G. Ailawadi, R. M. Suri, K. L. Greason, R. Hahn, W. Jaber, J. Forcillo, M. Alu, M. B. Leon, M. J. Mack.

Aortic Root Enlarging Procedures and Aortic Valve Leaflet Reconstruction Course Directors: S. Adil Husain, San Antonio, TX, and Prashanth Vallabhajosyula, Philadelphia, PA Faculty: Emile A. Bacha, New York, NY, Arminster Singh Jassar, Boston, MA, Alberto Pochettino, Rochester, MN, Edward Y. Sako, San Antonio, TX, Ibrahim Sultan, Pittsburgh, PA, and James S. Tweddell, Cincinnati.

A Comparison of Operative Outcomes Following Multi-Arterial versus Single Arterial Bypass Grafting: An Analysis of the STS Database 2004-2015 Thomas A. Schwann, Robert H. Habib, John Puskas, Paul Kurlansky, Jeffery P. Jacobs, Sean O'Brien, Amelia Wallace, Milo C. Engoren, Mark R. Bonnell, Robert Tranbaugh, Ritu Chakravarti.

Axillary Extracorporeal Membrane Oxygenation With Transapical Left Ventricular Vent in Refractory Cardiogenic Shock. K. Takeda, H. Takayama, Y. Naka.

Significance of Intraoperative Revision During the Arterial Switch Operation in the Current Era. Y. Nakamura, D. Kalfa, P. Chai, A. Chelliah, L. Freud, J. Quaegebeur, E. A. Bacha.

Scimitar Syndrome in Children and Adults: Natural History, Outcomes, and Risk Analysis H. Wang, D. Kalfa, M. Rosenbaum, J. Ginns, M. Lewis, J. Glickstein, E. A. Bacha, P. Chai.

Publications

Anderson BR, Blancha VL, Duchon JM, Chai PJ, Kalfa D, Bacha EA, Krishnamurthy G, Ratner V. The effects of postoperative hematocrit on shunt occlusion for neonates undergoing single ventricle palliation. *J Thorac Cardiovasc Surg.* 2016 Nov 14. pii: S0022-5223(16)31464-7. doi: 10.1016/j.jtcvs.2016.09.085. [Epub ahead of print]

[Journal link](#)

[Pubmed link](#)

Clerkin KJ, Topkara VK, Mancini DM, Yuzefpolskaya M, Demmer RT, Dizon JM, Takeda K, Takayama H, Naka Y, Colombo PC, Garan AR. The role of implantable cardioverter defibrillators in patients bridged to transplantation with a continuous-flow left ventricular assist device: A propensity score matched analysis. *J Heart Lung Transplant.* 2016 Dec 1. pii: S1053-2498(16)30437-5.

[Journal link](#)

[Pubmed link](#)

Kurlansky P, Herbert M, Prince S, Mack M. Coronary bypass versus percutaneous intervention: sex matters. The impact of gender on long-term outcomes of coronary revascularization. *Eur J Cardiothorac Surg.* Jan, 2017: doi:10.1093/ejcts/ezw375.

[Journal link](#)

[Full text](#)

Langer NB, Hamid NB, Nazif TM, Khalique OK, Vahl TP, White J, Terre J, Hastings R, Leung D, Hahn RT, Leon M, Kodali S, George I. Injuries to the Aorta, Aortic Annulus, and Left Ventricle During Transcatheter Aortic Valve Replacement: Management and Outcomes. *Circ Cardiovasc Interv.* 2017 Jan;10(1). pii: e004735. doi: 10.1161/CIRCINTERVENTIONS.116.004735.

[Journal link](#)

[Pubmed link](#)

Santana O, Singla S, Mihos CG, Pineda AM, Stone GW, Kurlansky PA, George I, Kirtane AJ, Smith CR, Beohar N. Outcomes of a Combined Approach of Percutaneous Coronary Revascularization and Cardiac Valve Surgery. *Innovations (Phila).* 2017 Jan/Feb;12(1):4-8.

[Journal link](#)

[PubMed link](#)

Takeda K, Li B, Garan AR, Topkara VK, Han J, Colombo PC, Farr MA, Naka Y, Takayama H. Improved outcomes from extracorporeal membrane oxygenation versus ventricular assist device temporary support of primary graft dysfunction in heart transplant. *J Heart Lung Transplant*. 2016 Dec 23. pii: S1053-2498(16)30466-1. doi: 10.1016/j.healun.2016.12.006. [Epub ahead of print]

[Journal link](#)

[PubMed link](#)

Topkara VK, Coromilas EJ, Garan AR, Li RC, Castagna F, Jennings DL, Yuzefpolskaya M, Takeda K, Takayama H, Sladen RN, Mancini DM, Naka Y, Radhakrishnan J, Colombo PC. Preoperative Proteinuria and Reduced Glomerular Filtration Rate Predicts Renal Replacement Therapy in Patients Supported With Continuous-Flow Left Ventricular Assist Devices. *Circ Heart Fail*. 2016 Dec;9(12). pii: e002897.

[Journal link](#)

[Pubmed link](#)

Yoshioka D, Takayama H, Garan AR, Topkara VK, Han J, Li B, Kurlansky P, Yuzefpolskaya M, Colombo PC, Naka Y, Takeda K. Bridge to durable left ventricular assist device for refractory cardiogenic shock. *J Thorac Cardiovasc Surg*. 2016 Nov 16. pii: S0022-5223(16)31493-3. doi: 10.1016/j.jtcvs.2016.10.085. [Epub ahead of print]

[Journal link](#)

[Pubmed link](#)

COLON AND RECTAL SURGERY

Publications

Al-Mazrou AM, Suradkar K, Mauro CM, Kiran RP. Characterization of Readmission by Day of Rehospitalization After Colorectal Surgery. *Dis Colon Rectum*. 2017 Feb;60(2):202-212.

[Journal link](#)

[Pubmed link](#)

Ludvigsson JF, Lebwohl B, Ekbom A, Kiran RP, Green PH, Höijer J, Stephansson O. Outcomes of Pregnancies for Women Undergoing Endoscopy While They Were Pregnant: A Nationwide Cohort Study. *Gastroenterology*. 2016 Oct 20. pii: S0016-5085(16)35240-4.

[Journal link](#)

[Pubmed link](#)

GI RESEARCH

Edgington-Mitchell LE, Barlow N, Aurelio L, Samha A, Szabo M, Graham B, Bunnett N.

Bioorg Med Chem Lett. Fluorescent diphenylphosphonate-based probes for detection of serine protease activity during inflammation. *Bioorg Med Chem Lett*. 2017 Jan 15;27(2):254-260. doi: 10.1016/j.bmcl.2016.11.064.

[Journal link](#)

[Pubmed link](#)

IMMUNOLOGY/TRANSPLANTATION

DiMartini A, Dew MA, Liu Q, Simpson MA, Ladner DP, Smith AR, Zee J, Abbey S, Gillespie BW, Weinrieb R, Mandell MS, Fisher RA, Emond JC, Freise CE, Sherker AH, Butt Z. Social and Financial Outcomes of Living Liver Donation: A Prospective Investigation Within the Adult-to-Adult Living Donor Liver Transplantation Cohort Study 2 (A2ALL-2). *Am J Transplant*. 2016 Sep 20. doi: 10.1111/ajt.14055. [Epub ahead of print]

[Journal link](#)

[Pubmed link](#)

Eliaz I, Patil A, Navarro-Alvarez N, Wang Z, Eliaz A, Weil E, Wilk B, Sachs DH, Huang CA. Methods for the detection and serum depletion of porcine galectin-3. *J Clin Apher*. 2017 Jan 13. doi: 10.1002/jca.21521. [Epub ahead of print]

[Journal link](#)

[Pubmed link](#)

Emond JC. Laparoscopic donor hepatectomy: a way forward? *Transplantation*. 2016 Nov 15. [Epub ahead of print] No abstract available.

[Journal link](#)

[Pubmed link](#)

Emond JC, Griesemer AD. Tolerance in clinical liver transplantation: The long road ahead. *Hepatology*. 2017 Feb;65(2):411-413. doi: 10.1002/hep.28862.

[Journal link](#)

[Pubmed link](#)

Furr A, Hardy MA, Barret JP, Barker JH. Surgical, ethical, and psychosocial considerations in head transplantation. *Int J Surg*. 2017 Jan 18. pii: S1743-9191(17)30080-8.

[Journal link](#)

[Pubmed link](#)

Hardy MA, Furr A, Barret JP, Barker JH. The immunologic considerations in head transplantation. *Int J Surg*. 2017 Jan 24. pii: S1743-9191(17)30088-2.

[Journal link](#)

[Pubmed link](#)

Shanmugarajah K, Powell H, Leonard DA, Mallard C, Albritton A, Harrington E, Randolph MA, Farkash E, Sachs DH, Kurtz JM, Cetrulo CL Jr. The Effect of MHC Antigen Matching Between Donors and Recipients on Skin Tolerance of Vascularized Composite Allografts. *Am J Transplant*. 2016 Dec 30. doi: 10.1111/ajt.14189. [Epub ahead of print]

[Journal link](#)

[Pubmed link](#)

Tanabe T, Watanabe H, Shah JA, Sahara H, Shimizu A, Nomura S, Asfour A, Danton M, Boyd L, Dardenne Meyers A, Ekanayake-Alper DK, Sachs DH, Yamada K. Role of intrinsic (graft) vs. extrinsic (host) factors in the growth of transplanted organs following allogeneic and xenogeneic transplantation. *Am J Transplant*. 2017 Jan 24. doi: 10.1111/ajt.14210. [Epub ahead of print]

[Journal link](#)

[Pubmed link](#)

PEDIATRIC SURGERY

Farkouh-Karoleski C, Najaf T, Wynn J, Aspelund G, Chung WK, Stolar CJ, Mychaliska GB, Warner BW, Wagner AJ, Cusick RA, Lim FY, Schindel DT, Potoka D, Azarow K, Cotten CM, Hesketh A, Soffer S, Crombleholme T, Needelman H. A definition of gentle ventilation in congenital diaphragmatic hernia: a survey of neonatologists and pediatric surgeons. *J Perinat Med*. 2017 Jan 28. pii: /j/jpme.ahead-of-print/jpm-2016-0271/jpm-2016-0271.xml. doi: 10.1515/jpm-2016-0271. [Epub ahead of print]

[Journal link](#)

[Pubmed link](#)

Schad CA, Fallon BP, Monteagudo J, Okochi S, Cheung EW, Morrissey NJ, Kadenhe-Chiweshe AV, Aspelund G, Stylianos S, Middlesworth W. Routine Use of Distal Arterial Perfusion in Pediatric Femoral Venoarterial Extracorporeal Membrane Oxygenation. *Artif Organs*. 2017 Jan;41(1):11-16. doi: 10.1111/aor.12861.

[Journal link](#)

[Pubmed link](#)

PLASTIC SURGERY

Presentations

*American Society for Reconstructive Microsurgery
Hawaii, January 14-17, 2017*

Ascherman J, Najjar M, Lopez M, Akelina Y. Re-establishment of lymphatic drainage after vascularized lymph node transfer in a rat model.

Henderson P, Gomberawalla A, Ascherman J, Grant R, Taback B, Chen M, Ananthakrishnan P, Feldman S, Rohde C. LYMPHA significantly decreases the incidence of upper extremity lymphedema after axillary lymph node dissection. American Society for Reconstructive Microsurgery, Hawaii, January 14-17, 2017.

Publications

Ascherman JA, Zeidler K, Morrison KA, Appel JZ, Berkowitz RL, Castle J, Colwell A, Chun Y, Johnson D, Mohebbi K. Carbon Dioxide-Based versus Saline Tissue Expansion for Breast Reconstruction: Results of the XPAND Prospective, Randomized Clinical Trial. *Plast Reconstr Surg.* 2016 Dec;138(6):1161-1170.

[Journal link](#)

[Pubmed link](#)

Fu R, Chang MM, Chen M, Rohde CH. A Qualitative Study of Breast Reconstruction Decision-Making among Asian Immigrant Women Living in the United States. *Plast Reconstr Surg.* 2017 Feb;139(2):360e-368e.

[Journal link](#)

[Pubmed link](#)

Goltsman D, Munabi NC, Ascherman JA. The Association between Smoking and Plastic Surgery Outcomes in 40,465 Patients: An Analysis of the American College of Surgeons National Surgical Quality Improvement Program Data Sets. *Plast Reconstr Surg.* 2017 Feb;139(2):503-511. doi: 10.1097/PRS.0000000000002958.

[Journal link](#)

[Pubmed link](#)

Henderson PW, Dosanjh J, Rohde CH. Successful Breast Reconstruction Despite Dislodgement of Tissue Expander Magnetic Ports. *Aesthet Surg J.* 2016 Nov;36(10):NP307-NP309.

[Journal link](#)

[Pubmed link](#)

Thimmappa ND, Prince MR, Colen KL, Ahn CY, Dutruel SP, Boddu SR, Greenspun DT, Vasile JV, Chen CM, Usal H, Rohde CH, Redstone JS, LoTempio MM, Lerman OZ, Nath AK, Allen RJ, Levine JL. Breast Tissue Expanders with Magnetic Ports: Clinical Experience at 1.5 T. *Plast Reconstr Surg.* 2016 Dec;138(6):1171-1178.

[Journal link](#)

[Pubmed link](#)

THORACIC SURGERY

Presentations

*Annual Meeting of the Society of Thoracic Surgeons
Houston, January 21-25, 2017*

Adams CW, Bachetta M. Improving Combat Casualty Care: The Use of Golden Hour Offset Trauma (GHOST) Surgical Teams and Group O Low-Titer Whole Blood Transfusion in the Field.

D'Ovidio F. Donors After Circulatory Death for Lung Transplantation: North American Perspective.

Publications

Araujo JL, Altorki NK, Sonett JR, Rodriguez A, Sungur-Stasik K, Spinelli CF, Neugut AI, Abrams JA. Prediagnosis aspirin use and outcomes in a prospective cohort of esophageal cancer patients. *Therap Adv Gastroenterol.* 2016 Nov;9(6):806-814.

[Journal link](#)

[Pubmed link](#)

Costa J, Sreekanth S, Kossar A, Raza K, Lederer DJ, Robbins H, Shah L, Sonett JR, Arcasoy S, D'Ovidio F. Donor lung assessment using selective pulmonary vein gases. *Eur J Cardiothorac Surg.* 2016 Nov;50(5):826-831. Epub 2016 May 30.

[Journal link](#)

[Pubmed link](#)

Costa J, Sreekanth S, Kossar A, Raza K, Robbins H, Shah L, Sonett JR, Arcasoy S, D'Ovidio F. Donors with a prior history of cardiac surgery are a viable source of lung allografts. *Eur J Cardiothorac Surg.* 2016 Nov;50(5):822-825. Epub 2016 May 4.

[Journal link](#)

[Pubmed link](#)

Diamond JM, Cantu E, Porteous M, Suzuki Y, Meyer KC, Lederer D, Milewski RK, Arcasoy S, D'Ovidio F, Bacchetta M, Sonett JR, Singh G, Costa J, Tobias JW, Rodriguez H, Van Deerlin VM, Olthoff KM, Shaked A, Chang BL, Christie JD; Clinical Trials in Organ Transplantation (CTOT)-03 Investigators.. Peripheral Blood Gene Expression Changes Associated with Primary Graft Dysfunction after Lung Transplantation. *Am J Transplant.* 2017 Jan 24. doi: 10.1111/ajt.14209. [Epub ahead of print]

[Journal link](#)

[Pubmed link](#)

Park BJ, Snider JM, Bates NR, Cassivi SD, Jett GK, Sonett JR, Toloza EM. Prospective evaluation of biodegradable polymeric sealant for intraoperative air leaks. *J Cardiothorac Surg.* 2016 Dec 12;11(1):168.

[Journal link](#)

[Pubmed link](#)

Singh G, Coffey A, Neely R, Lambert D, Sonett J, Borczuk AC, Gorenstein L. Pulmonary Kirsten Rat Sarcoma Virus Mutation Positive Mucinous Adenocarcinoma Arising in a Congenital Pulmonary Airway Malformation, Mixed Type 1 and 2. *Ann Thorac Surg*. 2016 Oct;102(4):e335-7. doi: 10.1016/j.athoracsur.2016.01.104.

[Journal link](#)

[Pubmed link](#)

Sonett J. The Jury Is in on the Great Debate: Small Numbers, Powerful Results. *Semin Thorac Cardiovasc Surg*. 2016 Summer;28(2):572-573. doi: 10.1053/j.semtcvs.2016.05.004.

[Journal link](#)

[Pubmed link](#)

VASCULAR SURGERY

Book Chapters

Hoyler M, Morrissey NJ. In Patients with Extras-cranial Carotid Artery Aneurysms Does an Endovascular Approach Improve Clinical Outcomes Compared to Open Repair? In *Difficult Decisions in Vascular Surgery: An Evidence-Based Approach*; Skelly CL, Milner R, Ed. 2017 eBooks: DOI 10.1007/978-3-319-33293-2_31.