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*College of Physicians
and Surgeons*

Dear Faculty,

Many thanks for your continued participation and interest in this newsletter. I hope you will enjoy this month's selection of publications and presentations below.

In case you may not be aware, all issues of this [newsletter](#) are now available on the Center for Innovations and Outcomes Research web site for easy reference. Please be sure to email [Paul Kurlansky \(pk2245@columbia.edu\)](mailto:pk2245@columbia.edu) or myself (crs2@cumc.columbia.edu) with your confirmed publications, presentations, and grants this month for inclusion in our next newsletter.

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

Best regards,
Craig Smith, MD

CONGRATULATIONS

To Dr. Megan Sykes on receiving the Immune Tolerance Network/Benoroya Research Institute Award for \$150,000. The goal of this sponsored research is to optimize a method for identifying the donor-reactive Treg repertoire and tracking its fate in the setting of transplant tolerance induction vs rejection, as well as using this method for analysis of tolerant and non-tolerant ITN study subjects.

To Dr. Sheldon M. Feldman on being named President of the American Society of Breast Surgeons at its annual meeting in Orlando, Florida. The Society is the primary leadership organization for general surgeons who treat patients with breast disease.

To Dr. Henry Spotnitz, George H. Humphreys, II, Professor of Surgery on being inducted as the fourth President of the John Jones Surgical Society.

To the twelve finalist researchers (six translational and six clinical) selected from a

competitive field of 25 for presentation to the 25th Annual Surgery Research Competition on Thursday May 19, 2016.

| Researcher | Attending | Project |
|--------------------|-------------------------|--|
| Peter Henderson | Christine Rohde | Breast tissue expanders and MRI: Defining surgeons' opinions, clinical outcomes, and optimal parameters for safety |
| Nathaniel Langer | Isaac George | Altered right ventricular metabolism in a porcine model of chronic thromboembolic pulmonary hypertension |
| Ahmed Al-Mazrou | Ravi Kiran | Characterization of readmissions by day of rehospitalization after colorectal surgery |
| Christine Schad | Carrie Shawber | Sustained ant-proliferative effect of sirolimus on lymphatic malformation derived cells and induction of progenitor cell differentiation |
| Shinichi Fukuhara | Hiroo Takayama | Novel perspectives on postcardiotomy shock: New insights to improve outcomes |
| Debarshi Banerjee | Angela Kadenhe-Chiweshe | Targeting activating transcription factor 5 (ATF5) in pediatric tumor neuroblastoma by a novel dominant negative inhibitor |
| Abhishek Mathur | Jean Emond | Visceral adiposity is associated with Increased recurrence of hepatocellular carcinoma following liver transplantation |
| Sulemon Chaudhry | Adam Griesemer | Enhanced T-cell depletion in non-human Primate combined liver and bone marrow transplantation |
| Eric Przybyszewski | Michael Kluger | A novel nanosystem for highly tumor-specific imaging |
| Neda Valizadeh | Ravi Kiran | Specific factors predict risk for urgent/emergent colectomy in patients undergoing surgery for diverticulitis |
| Brandon Guenthart | Matthew Bacchetta | A novel platform for prolonged extracorporeal lung support |

CARDIAC SURGERY

Presentations

American College of Cardiology Scientific Sessions, Chicago, April 2-4, 2016

(Additional presentations from last month)

Castillero E, Ji R, Wu S, Akashi H, Wang C, Ali Z, Sweeney HL, Schulze PC, George I. Increased myostatin is associated with decreased AMPK and worsened cardiac function in heart failure with previous insulin resistance.

Khalique OK, Hamid N, White J, Terre J, Hastings R, Palmerini T, Kodali S, Nazif T, Vahl T, George I. Assessment of balloon-expandable transcatheter heart valve oversizing using three dimensional transesophageal echocardiography semi-automation versus direct planimetry: All methods are not created equal.

Oberweis BS, Hamid N, Khaliq O, George I, Nazif T, Vahl T, White J, Kodali S, Leon M, Hahn R. Effective orifice area reference values with different sizes of the Sapien 3 balloon-expanding transcatheter aortic valve.

International Society for Heart And Lung Transplantation 36 Annual Meeting and Scientific Sessions, Washington DC, April 27-30, 2016

Akanni O, Takeda K, Truby L, Kurlansky P, Han J, Sreekanth S, Garan AR, Topkara VK, Yuzefpolskaya M, Colombo P, Kirtane A, Naka Y, Takayama H. ECPELLA: Combined Use of Extracorporeal Membrane Oxygenation and Percutaneous Microaxial Pump Left Ventricular Assist Device.

Bejar D, Colombo PC, Jennings D, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Castagna F, Maurer M, Zorn E, Latif F, Restaino S, Farr MA, Naka Y, Mancini DM, Topkara VK. Alloantibody Desensitization Therapy in Bridge-to-Transplant Patients on Continuous-Flow Left Ventricular Assist Device Support.

Castagna F, Pan S, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Ross K, Torres M, Blum RA, Singh S, Mancini DM, Naka Y, Colombo PC, Bulek S, Topkara VK. Acoustic Analysis of a Continuous-Flow Left Ventricular Assist Device before and after Suspected Pump Thrombosis.

Castagna F, McDonnell BJ, Yuzefpolskaya M, Topkara VK, Gara AR, Wiley JZ, Trinh PN, Wong K, Cagliostro B, Flanner M, Mancini DM, Takayama H, Takeda K, Naka Y, Cockcroft JR, Colombo PC. Validity and Reliability of a Next Generation Non-Invasive Blood Pressure Monitor in Patients with Continuous-Flow Left Ventricular Assist Device.

Chatterjee D, Clerkin KJ, Rogers KJ, Mancini D, Naka Y, Takayama H, Takeda K, Colombo PC, Vlad G, Vasilescu R, Levin B, Farr MA, Restaino S, Zorn E. Primary Graft Failure Following Cardiac Transplantation Is Associated with Elevated Pretransplant Levels of Pro-inflammatory Factors.

Colombo PC, Yuzefpolskaya M, Jennings D, Wiley JZ, Flannery M, Cagliostro B, Garan AR, Naka Y, Takayama H, Takeda K, Castagna F, Mancini DM, Eisenberger AB, Topkara VK. Usefulness of a Multipronged Strategy to Prevent Device Thrombosis in HeartMate II Left Ventricular Assist Devices.

Delle P, Soni LK, Coppleson Y, Kurlansky P, Sreekanth S, Han J, Li B, Garan AR, Topkara V, Yuzefpolskaya M, Colombo P, Farr M, Takeda K, Naka Y, Takayama H. Increased Donor Selectivity Does NOT Decrease Primary Graft Failure After Heart Transplantation.

Farr M, Takeda K, Takayama H, Truby L, Restaino SW, Lippel M, Givens R, Latif F, Sorabella R, Clerkin K, Colombo PC, Kalesan B, Naka Y, Mancini D. Recipient and Donor Risk Factors Associated with Primary Graft Failure Requiring Temporary Mechanical Circulatory Support < 24 Hours After Heart Transplantation.

Fukuhara S, Naka Y, Takeda K, Yuzefpolskaya M, Li B, Sreekanth S, Colombo PC,

Topkara VK, Garan AR, Kurlansky P, Takayama H. Contemporary Outcomes of Mechanical Circulatory Support for Cardiogenic Shock: Single Center Experience of over 300 Patients.

Fukuhara S, Takayama H, Takeda K, Han J, Kurlansky P, Garan AR, Yuzefpolskaya M, Colombo PC, Topkara VK, Naka Y. Short-, Mid- and Long-Term Efficacy of Aortic Valve Repair in Patients Supported with Continuous Flow-Left Ventricular Assist Device.

Gavalas M, Breskin A, Eisenberger AB, Yuzefpolskaya M, Garan AR, Catagna F, Wong K, Tiburicio M, Te-Frey R, Haythe J, Mancini DM, Takayama H, Takeda K, Naka Y, Topkara VK, Colombo PC. Prospective Evaluation of Urine Dipstick for Detection of Significant Hemolysis in Outpatients on CF-LVAD Support.

Fujita K, Takeda K, Li B, Mauro C, Kurlansky P, Sreekanth S, Han J, Truby L, Garan AR, Topkara VK, Yuzefpolskaya M, Colombo PC, Naka Y, Takayama H. Combined Therapy of Ventricular Assist Device and Extracorporeal Membrane Oxygenator for Profound Acute Cardiopulmonary Failure.

Han J, Takeda K, Mauro CM, Kurlansky P, Garan AR, Topkara VK, Sreekanth S, Yuzefpolskaya M, Colombo PC, Takayama H, Naka Y. Predictors of Readmission in Long-Term Continuous Flow Left Ventricular Assist Device Support.

Ikegami H, Takeda K, Takayama H, Garan AR, Topkara VK, Fukuhara S, Kurlansky P, Yuzefpolskaya M, Colombo PC, Naka Y. Outcomes of Continuous-Flow Left Ventricular Assist Device Insertion for Acute Myocardial Infarction and Cardiogenic Shock: Importance of Bridging Strategy.

Jennings DL, Li RC, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Cagliostro B, Flannery MA, Toennes B, Farr MA, Mancini DM, Naka Y, Colombo PC, Topkara VK. Genotype-Guided Warfarin Dosing in Continuous-Flow Left-Ventricular Assist Device (CF-LVAD) Patients.

Li B, Takeda K, Kurlansky P, Fukuhara S, Wright M, Sreekanth S, Han J, Chiuzan C, Truby L, Garan AR, Topkara VK, Yuzefpolskaya M, Colombo PC, Farr MA, Takayama H, Naka Y. Outcome of Patients Having Multiple Mechanical Circulatory Support Devices before Orthotopic Heart Transplantation.

Li B, Takeda K, Kurlansky P, Truby L, Fukuhara S, Delle PF, Sreekanth S, Han J, Mauro CM, Garan AR, Topkara VK, Yuzefpolskaya M, Colombo PC, Farr MA, Takayama H, Naka Y. Extracorporeal Membrane Oxygenator or Ventricular Assist Device for Primary Graft Failure after Orthotopic Heart Transplantation?

Mai X, Topkara VK, Wong K, Castagna F, Trinh PN, Sreekanth S, Ross K, Uryevick A, Eadie J, Murphy J, Takeda K, Takayama H, Naka Y, Maurer M, Mancini DM, Yuzefpolskaya M, Colombo PC, Garan AR. Long-Term Outcomes in Continuous-Flow Left Ventricular Assist Device Patients with and without ICD.

Takeda K, Garan AR, Topkara VK, Han J, Sreekanth S, Kurlansky P, Yuzefpolskaya M, Colombo PC, Naka Y, Takayama H. Novel Minimally Invasive Surgical Approach Using External Ventricular Assist Device and Extracorporeal Membrane Oxygenation in Refractory Cardiogenic Shock.

Takeda K, Takayama H, Garan AR, Topkara VK, Han J, Fukuhara S, Kurlansky P, Yuzefpolskaya M, Colombo PC, Naka Y, Contemporary Outcome of Unplanned Right Ventricular Assist Device for Severe Right Heart Failure After Continuous Flow Left Ventricular Assist Device Insertion.

Topkara VK, Trinh PN, Masoumi A, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Haythe J, Maurer M, Latif F, Restaino S, Farr MA, Mancini DM, Naka Y, Colombo PC. Risk of post-transplant renal dysfunction is increased in patients supported with continuous-flow left ventricular assist devices.

Topkara VK, Eisenberger AB, Knotts R, Jennings D, A. Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, R. Li RC, J. Fried A, Castagna F, Cagliostro B, Tiburcio M, D.Mancini DM, Naka Y, Colombo PC, Jorde UP. Warfarin Sensitive Patients Have Higher Risk of Gastrointestinal Bleeding and Device Thrombosis on Continuous-Flow Left Ventricular Assist Device (CF-LVAD) Support.

Topkara VK, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Castagna F, Cagliostro B, Parkis G, Restaino S, Latif F, Maurer M, Farr MA, Mancini DM, Naka Y, Colombo PC. Effect of Body Mass Index on Outcomes of Heart Transplant Candidates Supported by Continuous-Flow Left Ventricular Assist Devices (CF-LVADs).

Topkara VK, Garan AR, Ton V, Yuzefpolskaya M, Takeda K, Takayama H, Jennings D, Castagna F, Cagliostro B, Farr MA, Mauer M, Mancini DM, Naka Y, Colombo PC.

Red Cell Distribution Width (RDW) Predicts 90-Day Mortality in Continuous-Flow Left Ventricular Assist Device (CF-LVAD) Patients.

Topkara VK, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Fried JA, Wong K, Jennings D, Te-Frey R, Hayth J, Maurer M, Farr MA, Mancini DM, Naka Y, Colombo PC. Changes in Lipid Profile Subfractions on Continuous-Flow Left Ventricular Assist Device (CF-LVAD) Therapy.

Topkara VK, Eisenberger AB, Jennings D, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Ton V, Castagna F, Clemons AM, Flannery M, Te-Frey R, Uryevick L, Maurer M, Mancini DM, Naka Y, Colombo PC. Relationship of Factor II and Factor X Activity with International Normalized Ratio (INR) in Continuous-Flow Left Ventricular Assist Device (CF-LVAD) Patients: A Cross-Sectional Study.

Topkara VK, Wayda BJ, Rao SD, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Castagna F, Clemons AM, Wong K, Trinh PN, Restaino S, Latif F, Hayth J, Farr MA, Maurer M, Mancini DM, Naka Y, Colombo PC. Impact of Socioeconomic Status on

Bridging with Contemporary Left Ventricular Assist Device (LVAD): Analysis of the UNOS Registry.

Topkara VK, Garan AR, Yuzefpolskaya M, Takeda K, Takayama H, Givens RC, Fried JA, Castagna F, Cagliostro B, Flannery M, Wiley JZ, Restaino S, Latif F, Farr MA, Maurer M, Mancini DM, Naka Y, Colombo PC. Discharge Lactate Dehydrogenase (LDH) Level Predicts Early Device Thrombosis in Patients with HEARTMATE II Left Ventricular Assist Devices: A Retrospective Cohort Analysis.

Truby L, Takeda K, Farr M, Lippel M, Yuzefpolskaya M, Colombo PC, Takayama H, Mancini D, Naka Y. Continuous Flow Left Ventricular Assist Device as a Risk Factor for Intraoperative Vasoplegia during Orthotopic Heart Transplantation.

Zuckerman WA, Richmond ME, Lee TM, Law SP, Rodriguez RJ, Chai PJ, Bacha EA, Quaegebeur JM, Kalfa D, Addonizio LJ. Long-Term Survival in Pediatric Heart Transplantation: A 30-Year Single-Center Experience.

Publications

Cheung EW, Bacha EA. **The concept of "palliation" in children with heterotaxy syndrome.** *J Thorac Cardiovasc Surg.* 2016 May;151(5):1378-9.

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Dadson K, Kovacevic V, Rengasamy P, Kim GHE, Boo S, Li RK, George I, Schulze PC, Hinz B, Sweeney G. **Cellular, structural and functional cardiac remodeling following pressure overload and unloading.** *Int J Cardiol.* 2016;216:32-42.

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Girdauskas E, Rouman M, Disha K, Fey B, Dubslaff G, Theis B, Petersen I, Gutberlet M, Borger MA, Kuntze T. **Functional Aortic Root Parameters and Expression of Aortopathy in Bicuspid Versus Tricuspid Aortic Valve Stenosis.** *J Am Coll Cardiol.* 2016 Apr 19;67(15):1786-96.

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Guglielmetti LC, Sorabella R, Chiuzan C, Najjar M, Castillero E, Lambert D, Kim MJ, Kurlansky P, Borger MA, Argenziano M, Smith CR, George I. **Bridging Anticoagulation After Mechanical Aortic Heart Valve Replacement: A Questionable Routine.** *Ann Thorac Surg.* 2016 Apr 8. pii: S0003-4975(16)00041-2. doi: 10.1016/j.athoracsur.2016.01.030. [Epub ahead of print]

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Kalfa D, Krishnamurthy G, Cheung E. **Patent ductus arteriosus surgical ligation: still a lot to understand.** *J Thorac Cardiovasc Surg.* 2016; doi: 10.1016/j.jtcvs.2016.04.013.

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Kolh P, Kurlansky P, Cremer J, Lawton J, Siepe M, Fremes S. **Transatlantic Editorial: a comparison between European and North American guidelines on myocardial revascularization.** *Eur J Cardiothorac Surg.* 2016 May;49(5):1307-17. doi: 10.1093/ejcts/ezw086.

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Kurlansky P. **Multiple arterial grafting: Please don't confuse me with the facts.** *J Thorac Cardiovasc Surg* 2016; doi: 10.1016/j.jtcvs.2016.03.065

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Sen DG, Najjar M, Yimaz B, Lévasséur SM, Kalessan B, Quaegebeur JM, Bacha EA. **Aiming to Preserve Pulmonary Valve Function in Tetralogy of Fallot Repair: Comparing a New Approach to Traditional Management.** *Pediatr Cardiol.* 2016 Feb 26. [Epub ahead of print]

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Stephens EH, Shah AA, Robich MP, Walters DM, DeNino WF, Aftab M, Tchanchaleishvili V, Eilers AL, Rice RD, Goldstone AB, Shelstad RC, Malas T, Cevasco M, Gillaspie EA, LaPar DJ. **The Future of the Academic Cardiothoracic Surgeon: Results of the TSRA/TSDA In-Training Examination Survey.** *Ann Thorac Surg.* 2016 Apr 27. pii: S0003-4975(16)00125-9. doi: 10.1016/j.athoracsur.2016.01.106. [Epub ahead of print]

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CENTER INNOVATION AND OUTCOMES RESEARCH

Publications

Xie L, Vo L, Keshishian A, Price K, Singh P, Mardekian J, Bruno A, Baser O, Kim J, Tan W, Trocio J. **Comparison of hospital length of stay and hospitalization costs among patients with non-valvular atrial fibrillation treated with apixaban or warfarin: An**

early view. *J Med Econ*. 2016 Apr 24:1-8. [Epub ahead of print]

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Nelson WW, Milentijevic D, Wang L, Baser O, Damaraju CV, Schein JR. **Patterns of international normalized ratio values among new warfarin patients with nonvalvular atrial fibrillation.** *Blood Coagul Fibrinolysis*. 2016 Feb 15. [Epub ahead of print]

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The Keshishian A, Wang Y, Xie L, Baser O. **Economic impact of symptomatic menopause among low-socioeconomic women in the United States.** *Expert Rev Pharmacoecon Outcomes Res*. 2016 Apr;16(2):305-13. doi: 10.1586/14737167.2015.1073589. Epub 2015 Aug 2.

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GI/ENDOCRINE SURGERY

Presentations

Lim JY, Herman MC, Bubis L, Epelboym I, Allendorf JD, Chabot JA, Lee JA, Kuo JH. Differences in single gland and multigland disease are seen in low biochemical profile primary hyperparathyroidism. Accepted for oral presentation at the American Association of Endocrine Surgeons Annual Meeting. Orlando, April, 2016.

Lim JY, Chen S, Pasupuleti L, Chabot JA, Lee JA, Kuo JH. Nodular Graves' Disease is associated with a higher incidence of cancer and aggressive features. Accepted for poster presentation at the American Association of Endocrine Surgeons Annual Meeting. Orlando, April. 10-12, 2016.

Publications

Kluger MD, Epelboym I, Schrope BA, Mahendararaj K, Hecht EM, Susman J, Weintraub JL, Chabot J. **Single institution experience with irreversible electroporation for T4 pancreatic cancer: first 50 patients.** *Annals of Surgical Oncology*. 2016;23: 1736-1743. PMID: 26714959

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Najjar M, Mandel. **Round ligament presenting as an incarcerated inguinal hernia: Case**

report and review of the literature. *Case reports in surgery* 2016; Article ID 9380212.

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IMMUNOLOGY/TRANSPLANTATION

Presentations

Sykes, M. General Keynote Lecture Tracking the Human Alloresponse: A New Window into Tolerance and Rejection. The 2nd LabEx IGO Meeting in Nantes, France on Thursday, April 21, 2016.

Publications

Najjar M, Campos BD, Samstein B, Halazun KJ. **Intracaval mass discovered at the time of liver procurement.** *Am J Transplant* 2016;16:1635-7.

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Sondermeijer HP, Witkowski P, Woodland D, Seki T, Aangenendt FJ, van der Laarse A, Itescu S, Hardy MA. **Optimization of alginate purification using polyvinylidene difluoride membrane filtration: Effects on immunogenicity and biocompatibility of three-dimensional alginate scaffolds.** *J Biomater Appl.* 2016 Apr 25. pii: 0885328216645952. [Epub ahead of print]

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PLASTIC SURGERY

Book Chapters

Munabi N, Olorunnipa O, Goltsman D, Rohde C, Ascherman J. The role of indocyanine green angiography in breast reconstruction. In: Shiffman M (ed). *Breast Reconstruction: Art, Science, and New Clinical Techniques*. Springer International Publishing. Switzerland. 2016.

Publications

Phillips B, Munabi N, Roeder R, Ascherman J, Guo L, Zenn M. **The role of intraoperative perfusion assessment: What is the current state and how can I use it in my practice?** *Plast Reconstr Surg.* 2016;137:731-741.

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Morrison K, Ascherman J. **Patient-controlled tissue expansion with a remote control device.** *Plastic Surgery Pulse News.* 2016;Vol 7;No 4.

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THORACIC SURGERY

Presentations

International Society for Heart and Lung Transplantation, Washington DC. April 27-30, 2016

Pre-Meeting Symposium: Current Innovations and Future of EVLP. DEBATE: My Clinical Program Needs an EVLP Service (PRO) Frank D'Ovidio, MD, FRCS.

Briganti D, Kim C, Aramini B, Nandakumar R, Zhou B, Chan R, Sreekanth S, Raza K, Robbins H, Shah L, Arcosoy S, Sonett J, DiPaolo G, Cremers S, D'Ovidio F. Bronchial & Alveolar Lipidomic Profile as a Marker of the Immunological and Functional Status of the Lung Allograft.

Briganti D, Kim C, Aramini B, Nandakumar R, Zhou B, Chan R, Sreekanth S, Raza K, Robbins H, Shah L, Arcosoy S, Sonett J, DiPaolo G, Cremers S, D'Ovidio F. Bile Acid Aspiration Associates with CLAD and Affects the Bronchial District Lipid Profile: Targeted Bile Acid Metabolomics and Lipidomics in Bronchial Washing.

Levvey B, Snell G, Edwards L, Stehlik J, Erasmus M, Glanville A, Hertz M, Hopkins P, Chambers D, Musk M, Budev M, Mason D, Puri V, Yusen R, D'Ovidio F, Keshavjee S, Cypel M, Van Raemdonck D. Donation After Circulatory Death (DCD) versus Donation After Brain Death (DBD): Contrasting Donor and Recipient Characteristics in the ISHLT DCD Lung Transplant (LTx) Registry.

Van Raemdonck D, Levvey B, Edwards L, Stehlik J, Erasmus M, Glanville A, Hertz M, Hopkins P, Chambers D, Musk M, Budev M, Mason D, Puri V, Yusen R, D'Ovidio F, Keshavjee S, Cypel M, Snel G. Characteristics of Various Categories of Controlled Donors after Circulatory Death Do Not Affect Outcome after Lung Transplantation; an Analysis of

ISHLT DCD Registry Data.

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