



NEWSLETTER - SUMMER 2022

UNOS News

By Flora Simmons, MD

OPTN Board Eliminates Race-based Calculation For Transplant Listing

In a momentous measure to provide equitable access to all transplant candidates, the board of directors of the Organ Procurement and Transplantation Network recently approved a precedent requiring transplant hospitals to use race neutral calculations when estimating a candidate's glomerular filtration rate (GFR). Read more [here](#).

Kidney Transplants have Increased in Minorities since Policy Changes

Following implementation of the updated allocation system, one year monitoring reports show that transplant rates increased significantly for several key populations including Black, Hispanic, Asian, and pediatric candidates. The updated allocation system replaced the donation service area and administrative regions with a 250 nautical mile circle around the donor hospital. Read more [here](#).

Research Updates and Interesting Articles

By Michael Trostler, MD

“Abdominal Organ Transplantation: Noteworthy Literature in 2021”- *Seminars in Cardiothoracic and Vascular Anesthesia*

Highlights: Yearly article by corresponding author, SATA president Dr. Tetsuro Sakai, selecting 20 articles from over 10,000 articles published over the year. Read the article [here](#)

“Analysis of outcomes and renal recovery after adult living-donor liver transplantation among recipients with hepatorenal syndrome” - *American Journal of Transplantation*

Highlights: Retrospective analysis of 2185 living donor liver transplants over a 7 year period found that time from HRS to transplant was significantly associated with recovery, and recovery was significantly associated with survival. Read the article [here](#)

“Hypothermic oxygenated perfusion in extended criteria donor liver transplantation—A randomized clinical trial” - *American Journal of Transplantation*

Highlights:

Machine perfusion is at the forefront of new technological innovation in the transplant community. A randomized control trial of HOPE in 110 extended criteria donors found improved outcomes with lower graft dysfunction and better graft survival. Read the article [here](#)

“Transplantation of a human liver following 3 days of ex situ normothermic preservation” - *Nature Biotechnology*

Highlights: 3 days of Ex-Vivo machine perfusion prior to transplant was successful and at one year follow-up the recipient was alive and the biliary tree intact. Read the article for the amazing details [here](#)

“Final Safety and Efficacy Results from a 106 Real-World Patients Registry with an Ascites-Mobilizing Pump” - *Liver International*

Highlights: 12 European centers have followed 106 patients over 24 months with a “Alfapump”, an intraperitoneal fluid management system that pumps ascites from the peritoneal cavity into the bladder for excretion. Designed for those ineligible for a TIPS procedure. Read the article [here](#)

“Sequential liver and kidney living donors: Making the ultimate gift twice” -
Clinical Transplantation

Highlights: 150 living donors in the United States have donated more than one organ. 20 of these donors donated at UPMC- Pittsburgh, with 70% non-directed/altruistic with first donation and 80% non-directed/altruistic at the second donation. Read the article [here](#)

Special Topics

By Alex Stoker, MD

Imminent Death Donation

Imminent death donation (IDD) is a proposed organ donation practice described as the recovery of a living donor organ immediately prior to an impending and planned withdrawal of ventilator support expected to result in the patient's death [[OPTN white paper, 2016](#)]. This practice is aimed at increasing the availability of donated organs through increased utilization of organs from donors who may have had non-progression during attempted DCD donation and by reducing organ ischemia. In 2016 the ethics committee of the Organ Procurement & Transplantation Network (OPTN) outlined several ethical concerns, potential risks, as well as challenges of IDD; however, acknowledged the possibility of overcoming those challenges in the future [[OPTN white paper, 2016](#)]. A recent survey by Washburn et al explored the public attitudes towards IDD in the United States and describe a scenario in which one kidney, a portion of liver and portion of lung are donated prior to withdrawal of life support [[Washburn et al, 2020](#)].

Rise of the Machines - Normothermic Ex Vivo Perfusion in Liver Transplantation

Since the first use of normothermic machine perfusion (NMP) in human orthotopic liver transplantation in 2013 there has been considerable and growing interest in using NMP to improve organ quality prior to transplantation by maintaining the allograft in a

physiologic state during transportation. While ongoing investigations have yet to confirm all the potential benefits, NMP may reduce allograft ischemic damage, lessen the metabolic and hemodynamic derangements following liver reperfusion, increase the utilization of marginal organs, improve transplant logistics and expand the donor pool.

[Ravikumar et al. 2016](#); [Nasralla et al. 2018](#)

In the Spotlight: Duke University Medical Center –Cardiothoracic Transplant Program

By David Rosenfeld, MD; Alex Stoker, MD

For this summer's piece we choose to focus exclusively on the adult cardiac and lung transplant program at Duke. A large medical center with 1048 patient care beds, Duke University Hospital is one of the premier centers in the world for cardiac and lung transplantation. According to 2021 SRTR data they were third in the US in adult cardiac transplant volume with 104, second in lung with 108, and also performing three combined cardiac-lung transplants, and one lung-liver transplant.

Led by Dr. Mihai Podgoreanu, the Duke Cardiothoracic Anesthesiology Division has been a leader in comprehensive perioperative management of thoracic organ and combined organ transplant recipients as members of the Duke Transplant Center, which recently celebrated its 10,000th transplant milestone. Perioperative transplant care is provided by a highly integrated group of cardiothoracic anesthesiologists and intensivists, 4 or 5 anesthesia residents, and up to 10 fellows covering a total of 9 adult cardiothoracic operating rooms and 32 CTICU beds. Duke has one of the largest and busiest Adult Cardiothoracic Anesthesia (ACTA) fellowship programs in the US (14 fellows/year), led by Dr. Brandi Bottiger who also directs Quality Improvement across the Duke Transplant Center. Concomitantly, the Anesthesiology Critical Care Medicine (CCM) fellowship program, led by Dr. Nazish Hashmi, is rapidly growing (8 fellows/year), with a strong emphasis placed on acute care of critically ill transplant patients.

The Duke Heart Transplant program, under the medical directorship of Dr. Adam Devore, has a comprehensive patient selection process where many disciplines are represented, including anesthesiologists and intensivists. Performing the first donation after circulatory death (DCD) case in 2019, the cardiac transplantation program has completed more than 80 heart transplant procedures with DCD donors. To facilitate this innovative practice which significantly expands the donation pool, Duke has been early in its use of the Transmedics Organ Care System

(OCS) and is one of five centers included in a prospective non-inferiority trial comparing transplantation of DCD organs resuscitated with the device compared to donation after brain death hearts preserved with traditional cold storage methods. Dr. Jacob Schroder is the surgical director of heart transplantation and the principal investigator for the OCS DCD heart trial, which helped support the FDA's approval of the device for DCD donor hearts in April 2022.

Similarly, the Duke Lung Transplant program, under the medical directorship of Dr. John Reynolds, has a comprehensive, multidisciplinary patient selection process. Anesthesiologists are involved in developing quality metrics and improvements in clinical care. The Duke Lung Transplant Program, with surgical director Dr. John Haney, has adopted elective intraoperative VA ECMO during lung transplantation to reduce allograft reperfusion injury, increase cardiopulmonary stability, and reduce comorbidity associated with cardiopulmonary bypass use. They utilize a hybrid ECMO circuit that can be quickly converted to a full CPB circuit if needed emergently.

Many thanks to Dr. Bottiger for sharing details of the transplantation program at Duke University Medical Center. If interested in having your program highlighted in the future, please contact David Rosenfeld, Mayo Clinic Arizona at Rosenfeld.david@mayo.edu

Announcements

Attention liver transplant anesthesiologists and program directors! SATA will be offering free 6 month membership to fellows! Please sign up by emailing sata@pacainc.com. We look forward to welcoming new fellow members!

Upcoming Programming: “Increasing Liver Utilization Using Hard to Place Livers”
Tuesday, August 16, 2022 2-3pm ET. A discussion from the Alliance about increasing utilization of organs through machine perfusion. [Register Here](#)

Transplant Anesthesia Upcoming Meetings

[SATA Meetings](#)

[Midstate SATA Regional Meeting](#): September 24, 2022

[Southern SATA regional Meeting](#): November 5, 2022

[Mid-Western SATA Regional Meeting](#): January 21, 2023

Other Meetings:

[ILTS Perioperative Care in Liver Transplantation Meeting 2022](#)

October 21, 2022; Ochsner Health, LA; in-person and virtual

[The 2023 International Congress of ILTS, ELITA and LICAGE](#)

May 3-6, 2023; Rotterdam, Netherlands

[American Transplant Congress \(ATC\) 2023 Annual Meeting](#)

June 3-7, 2023, San Diego, CA