SATA Society for the Advancement of Transplant Anesthesia | ASA AFFILIATED SUBSPECIALTY SOCIETY American Society of Anesthesiologists

# NEWSLETTER - SUMMER 2025

## UNOS News

By Flora Simmons, MD

### Organ donor hospitals and transplant hospitals – how do they differ?

Donor and transplant hospitals both play important roles in saving lives and making transplantation possible. Donor hospitals are not members of the national Organ Procurement and Transplantation Network (OPTN) and are not subject to OPTN policies or requirements. They must comply with state and federal laws regarding identification and referral of donors. The organ procurement organization (OPO) managing the logistics of the donation process is still accountable to CMS requirements and OPTN policies. Hospitals accredited to perform organ transplants are accountable to state and federal laws. Each transplant hospital must also be a member of the OPTN and must abide by the OPTN policies and bylaws. An institution can function as both a donor and a transplant hospital as long as it meets OPTN standards and requirements.

### How UNOS uses data to help transplant programs improve

UNOS uses organ donation and transplant data to determine key trends and identify ways the system can more efficiently help people receive a transplant. UNOS accesses this information by submitting data requests to the Organ Procurement and Transplantation Network (OPTN) which compiles data on transplant recipients, candidates, and organ donors. Any individual or OPTN member can submit a data request by completing a form on the OPTN website. UNOS follows the same steps as everyone else to request data. UNOS uses its analytics team to help devise performance improvement tools that can be used by transplant hospitals and organ

procurement organizations (OPOs). Analytics can be used to create solutions for organ transportation such as the UNOS organ tracking service that allows transplant hospitals oversee organ shipments in real-time. UNOS research and decades of insights can also be used to develop customized registries and clinical databases to provide cost-effective solutions and improvement/outcome registries.

# SATA Member Corner: 5 minutes with Dr. Natalie Smith from Mount Sinai Hospital

By Alex Ruan, MD

### Can you share a little bit about your background and your journey to a career in medicine?

Originally, I am from New York and attended the University of Michigan for my undergraduate studies before returning to NYU for medical school. After medical school, I moved to the Upper East Side to Mount Sinai Hospital, where I have been ever since. Both of my parents are doctors, and my grandfather was a surgeon in a small town in Ohio. While I never felt pressured to become a doctor as a child, it seemed like the natural path for me. My brother is also a surgeon, so it feels like a family tradition.

### Why transplant anesthesiology? Do you have a role in your group?

I am currently the director of the Liver Transplant Division and the Fellowship director for transplant at Mount Sinai Hospital in New York City. I have always been drawn to larger cases where anesthesiologists play a significant role. I loved cardiac anesthesia, but I found that transplant cases, which generally do not involve bypass, presented a different kind of challenge. I liked the acuity and pressure of transplant cases. We also have a very nice team of surgeons, and the rapport between the surgical and anesthesiology team drew me in as well. I have been lucky to become the director of the team and to teach the next generation of fellows.

### Why did you join SATA? How long have you been a member of SATA and what is your current involvement with the organization?

Like a lot of others, I learned about and joined SATA through word of mouth, primarily encouraged by Dr. Jeron Zerillo, who was very involved in SATA at Mount Sinai. He played a significant role in the organization during the 2010s and encouraged me to get involved and get to know all these people from around the country and even the world who had this interest in transplant anesthesia. My initial involvement was with the Newsletter Committee. At the time,

we were writing the newsletter and trying to send it out without any office staff, so I helped format it and get it into HTML, so we could send it over email. Over time, I've gotten into other roles. I'm most involved now with Vanguard, which is the committee to help get younger transplant physicians involved. We work with other committees, like the Education Committee to make sure junior attendings can get involved with programming for meetings and get opportunities to speak and network. We created a subcommittee to keep members engaged through social media, and this past year created a new mentorship program.

### What are your research interests, and do you currently have any research/ clinical projects going on?

As a division, we collaborate on various research projects. Our research director, Dr. Ryan Wang, is heavily involved in several initiatives, including projects with the SATA liver transplantation QI database in collaboration with UCSF and other groups. I am very interested in quality improvement and safety initiatives. Ryan and I recently implemented a new protocol for managing hyperkalemia with high-dose insulin infusions; Dr. Christine Nguyen-Buckley from UCLA helped us with that.

### What is your favorite piece of anesthesia equipment?

I love RIC (rapid infusion catheter) lines! They're easy to put in, and I think they're the most valuable line in any case where you have to transfuse, even better than all central lines.

### What do you enjoy doing outside of work?

Outside of work, I enjoy spending time with family and friends, cooking, and skiing. My 18-month-old is my main hobby right now. I'm always looking for new recipes I can cook that I can share with her and introduce her to new foods. I also bought her a little pair of skis that she has been walking around the house with, so next year I hope to finally put her in real skis!

### What advice would you give to a medical student or resident who is interested in liver transplant?

I would encourage medical students and residents to stay open-minded about their paths in medicine. There are so many ways to get involved in liver transplant if that's what you're interested in, whether through medicine, anesthesia, surgery, immunology, or hematology – there's just so many people who are involved with the transplant process. Of course, I always encourage everyone to pursue liver transplant anesthesia if they're interested. It's a smaller field and we get less exposure to it so it can be daunting to decide to pursue it. But the skills that you

learn from doing transplant makes you so adaptable, and you're taking care of the sickest possible patients. There are so many transplant centers out there and our ability to do more and more transplants is increasing especially in the era of machine perfusion so the need for transplant anesthesiologists will continue to grow.

### How can we reach you?

You can reach me at natalie.smith@mountsinai.org. You can also learn more about our program at our Fellowship website: https://icahn.mssm.edu/education/residencies-fellowships/list/msh-liver-transplant-fellowship of follow the Sinai Instagram: @mountsinaianesthesiology

*If you or someone you know is interested in being featured in the SATA newsletter, please reach out to Dr. Alexandra Ruan aruan@stanford.edu*

## The Research Corner

By Michael Trostler, MD and Alex Stoker, MD

**"The role of veno-venous bypass in liver transplant"** Ahrens et al.

Veno-Venous Bypass (VVB) is a standard of care at some institutions with either portal bypass or portal and caval bypass. The hypothesis was that VVB would improve renal perfusion and, but this was only shown to be effective in bicaval not piggyback technique. As long as piggyback technique is used there were less transfusions and bleeding without VVB.

**"Vasopressin Is Not Associated With Severe Kidney Injury in Liver Transplantation: A Propensity Score-adjusted Analysis"** Antonucci et al.

Acute Kidney Injury (AKI) is a common complication after liver transplants. AKI is associated with decreased graft survival, higher morbidity and mortality, and increased chronic kidney disease. Vasopressin can be theorized to decrease the incidence of post-operative renal dysfunction through mechanisms of increased GFR, limitation on catecholamine induced renal vasoconstriction, and prevention of sympathetic overactivation. This study was a retrospective analysis of 1120 patients found that vasopressin use was not associated with severe AKI after liver transplant and was not

associated with increased graft failure over time.  Patients receiving vasopressin did received less catecholamine vasopressors.

**"Vasoplegia in Heart, Lung, or Liver Transplantation: A Narrative Review"**
Ortoleva et al.
This narrative review is an excellent overview of the mechanisms underlying vasoplegia and the mechanisms of the common treatment agents that are used when our normal vasopressors are inadequate (Methylene Blue, Hydroxycobalamin, Angiotensin II).

# In the Spotlight:  University of Florida Health – Gainesville – Lung Transplant

By David Rosenfeld, MD, FASA

We had the opportunity to learn about UF Health's extensive lung transplant program through Drs. T. Everett Jones and Yong Peng.  The Gainesville program is anchored out of the UF Heath Shands Hospital, a sprawling 1,111 bed facility with 241 ICU beds. As a transplant center they are thriving, with SRTR 12 month data showing 158 cadaveric livers, 64 kidneys, 10 kidney-pancreas, 58 lungs, and 16 hearts.

The UF Health Lung Transplant program is under the medical directorship of Dr. Amir Emtiazjoo, with Dr. Mindaugas Rackauskas as surgical director.  Patients are reviewed weekly through their multidisciplinary Medical Review Board which includes pulmonary CCM, thoracic surgeons, anesthesiology, psychology, physical therapy, and dieticians. Cardiothoracic anesthesiologists have developed standardized protocols to help guide management and reduce significant variability in practice during the intraoperative phase.  In 2014 elective intraoperative VA ECMO during lung transplantation was adopted for most cases to reduce allograft reperfusion injury and increase cardiopulmonary stability during cardiac manipulation with ICU based ECMO commonly used as a bridge to transplantation.  Outcomes are high quality, ranking as the top program in Florida and top 5 in the country for one year survival according to the 2024 SRTR data.  During the pandemic they were one of the largest volume centers performing more than 30 bilateral lung transplantation cases for end stage post COVID complications with their experience currently being submitted for publication.  Point of care coagulation testing with Quantra has been adopted since 2018 to assist with ECMO induced coagulopathy and has led to reduced transfusion requirements.  They contribute to expanding the donor pool aiming to prolong the time for which lungs can

be transplanted safely without a detriment to outcomes including being one of the first institutions to use ex-vivo perfusion rehabilitation prior to transplantation. UF transports lungs using the BaroGuard system. They have been studying the effects of cold storage at 10 $^{O}$C overnight for semi-elective lung transplantation during the next day, and use intraoperative plasma exchange for highly sensitized patients at high risk of antibody mediated rejection. Combined lung/liver and lobar transplants are part of the practice as well. Members of their Cardiothoracic Anesthesia Division have collaborated with several centers researching the rate of blood transfusion in lung transplantation and collaborated with SATA reporting on the national trends related to the use of extracorporeal life support in lung transplantation (the SEAL study). Truly a remarkable and mature program at UF.

*If interested in having your program highlighted, please contact David Rosenfeld, Mayo Clinic Arizona at Rosenfeld.david@mayo.edu*

# SATA Committee and Leadership Updates

### From the Fellowship Committee

The SATA Fellowship Committee is excited to sponsor the SATA Liver Transplant Anesthesia Fellow Journal Club. Dr. Christy He from Columbia University presented the first journal club session on the article by Lacom et al.: Safety and Feasibility of Early Extubation in Liver Transplantation. The next Liver Transplant Anesthesia Fellow Journal Club presentation will be Monday, September 15 - more information to come. Don't miss out on the discussion!

For members only, a Fellowship Corner has been created on c8. Fellowship lectures can be found here:
https://app.c8health.com/knowledge?category=66d770662885a348e8eccbed

For a fellow reading list curated by liver transplant anesthesiology experts, go to:
https://app.c8health.com/knowledge/67f8428e3c70605969d1ad5d

# Upcoming Events and Meetings

## ILTS/SATA Perioperative Care in Liver Transplantation Meeting

Please join us on October 10, 2025 for the 2025 Perioperative Care in Liver Transplantation meeting, jointly organized by the International Liver Transplant Society (ILTS) and the Society for the Advancement of Transplant Anesthesia (SATA) at the University of Texas, Health Science Center at San-Antonio on Friday, October 10, 2025. https://www.ilts.org/perioperative-meeting

## SATA West Coast Meeting

Please join us on Saturday, December 13, in Los Angeles with a hybrid (in-person and zoom) format. Sessions include the evolving role and application of ECMO during liver transplantation, emerging technologies and issues in liver transplantation, and expert panels on cardiac evaluation in liver transplantation and transfusion practices and patterns. Reserve the date on your calendar and more details will be sent to SATA members in the near future.

## World Transplant Congress (WTC)

The World Transplant Congress is a joint meeting organized by the AST, the American Society of Transplant Surgeons (ASTS), and The Transplantation Society (TTS). This international event will take place from August 2-5, 2025, in San Francisco, CA. https://wtc2025.org/

## International Transplantation Science (ITS)

The ITS meeting is a joint effort between the AST, the European Society of Organ Transplantation (ESOT), and The Transplantation Society (TTS). The next meeting will be hosted in San Diego, CA, November 16 - 19, 2025. https://www.myast.org/its2025/its-registration

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