
NEWSLETTER - Spring 2026

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Interested in getting more involved with SATA? Have topics, updates, or perspectives you'd like to share with the transplant community? The SATA Newsletter Committee is now accepting applications for new members. If you're interested in contributing, please email Editor-in-Chief Alexandra Ruan at aruan@stanford.edu for more information.

Upcoming Events and Announcements

The 2026 Symposium of the Society for the Advancement of Transplant

Anesthesia: Please join us May 3-4, 2026 for the Annual SATA Symposium which will be held at the Fairmont Queen Elizabeth Hotel in Montreal, Canada. Click [here](#) to review the Program Agenda. Click [here](#) for the Meeting Registration - *Special Note: If you join SATA as a 2026 Member you can receive your registration to the SATA 2026 National Meeting Complimentary.* <https://sata2022.wufoo.com/forms/w1j710kh04smasr/>

UNOS News

By Sennaraj Balasubramanian MBBS MD FCARCSI ERDA

UNOS responds to CMS proposed rule; celebrates progress for patients

The United Network for Organ Sharing (UNOS) supports the proposed rule from the Centers for Medicare & Medicaid Services (CMS), which advances two critical reforms: modernizing donor referral through electronic referrals from donor hospitals to organ procurement organizations (OPOs) and improving the tracking of donated organs.

UNOS applauds inclusion of organ donation and transplantation reforms in FY26 Federal Funding Package

Consolidated Appropriations Act 2026 directs the U.S. Department of Health and Human Services (HHS) and the Health Resources and Services Administration (HRSA) to implement specifically:

- Directs HHS to develop a report on automated deceased donor referral software tools.
- Supports the adoption of real-time organ tracking during transit.
- Urges HRSA to implement the Federal Aviation Administration (FAA) Organ Transportation Working Group recommendations.
- Aids the transplantation of medically complex kidneys.

UNOS responds to article in Bloomberg Government based on Grassley/Wyden allegations

On March 4, Bloomberg Government published an allegation that UNOS “deleted or modified OPTN member records” related to “member activity and patient safety.”

UNOS is setting the record straight

To be clear, UNOS did not delete any OPTN records. No files or data required by our contract with HRSA to serve the OPTN are missing, and none have been modified. UNOS has been transparent and collaborative in all its dealings with HRSA.

<https://unos.org/news/>

The Research Corner

By Michael Trostler, MD and Alex Stoker, MD

[“Back-to-base Versus In-transit Machine Perfusion in Donation After Circulatory Death Liver Transplantation: Insights From a National Registry”](#) by Alderete et al.

This study measured outcomes from 1217 DCD liver transplants in normothermic machine perfusion where the organ was put on pump at the donor institute or was brought back to the recipient center and no significant difference was found in outcomes (Graft rejection or graft survival). There is a larger cost to transporting the liver on pump which should be considered

on a center by center level based on logistics and infrastructure, but this can be done without compromising outcomes.

[“Living liver donor safety: Intraoperative considerations in living liver donation—Guidelines from the ILTS–iLDLT group consensus conference 2025”](#) by Bhangui et al.

The guidelines and evidence from the International Liver Transplantation Society (ILTS) and the International Living Donor Liver Transplant Group (iLDLT) during the global consensus conference in Toronto, March 2025. The group guidelines are presented regarding vascular access (Arterial and central lines and appropriate monitoring modalities), Ventilation strategies, Analgesic techniques, surgical techniques, and other surgical considerations. Please review these guidelines and recommendations, the grades of the recommendations are overall strong, although the level of evidence tends to be low.

[“Hepatocellular Cancer Recurrence After Liver Transplantation With and Without the Use of Intraoperative Blood Salvage and Autotransfusion: A Retrospective Study”](#) by Butler et al.

This retrospective review of 245 patients from 2007-2020 examines the risks of HCC recurrence with the use of intraoperative blood salvage and autotransfusion without leukodepletion filters. There was no increased risk of HCC recurrence when blood salvage was used compared with those where it was not $p=0.38$. 9% risk of recurrence across both populations after a median 20 months.

[“Giant polycystic liver disease with thoracic involvement: an anaesthesia and surgical challenge in liver transplantation”](#) by Salazar et al.

A very interesting case report of a 14,200cc polycystic liver which caused partial lung collapse and mediastinal displacement. The case was successfully completed with a sterno-laparotomy approach and venovenous bypass.

ICU Liberation After Liver Transplant: Where Are We with ERAS?

By Tony Wang, MD and Sergio Navarrete, DO

ERAS Comes to Liver Transplantation

Enhanced Recovery After Surgery (ERAS) has reshaped perioperative care across surgical specialties, but liver transplantation has been one of the last to adopt comprehensive pathways. The complexity of the operation, the physiologic burden of end-stage liver disease, and significant variability between centers have all contributed to slow uptake. In 2022, the ERAS4OLT.org collaborative and the International Liver Transplantation Society (ILTS) published the first consensus framework for enhanced recovery in liver transplantation, generating 80 recommendations across 32 perioperative domains based on systematic reviews and input from 273 specialists worldwide. (Pollok et al., *Lancet Gastroenterol Hepatol* 2023; Shankar et al., *J Anaesth Clin Pharmacol* 2024). Several of these recommendations have direct

implications for early postoperative ICU management, and the evidence behind them warrants close attention.

Early Extubation: The Evidence and the Practice Gap

Of all the ERAS elements studied in liver transplantation, early extubation carries the strongest evidence base. A systematic review and meta-analysis by Tinguely and colleagues demonstrated that early extubation was associated with significantly lower reintubation rates (OR 0.29, 95% CI 0.22–0.39) and fewer pulmonary complications (OR 0.17, 95% CI 0.09–0.33) compared to deferred extubation. ICU and hospital length of stay were shorter in eight of eight and seven of eight comparative studies, respectively. (Tinguely et al., *Clin Transplant* 2021). The physiologic rationale supports these findings: prolonged mechanical ventilation increases the risk of ventilator-associated pneumonia and may impair hepatic venous drainage by raising intrathoracic pressure, a particularly unfavorable consequence in a freshly grafted liver. (Feltracco et al., *World J Hepatol* 2011). Criteria for safe early extubation have coalesced around hemodynamic stability with minimal vasopressor support, normothermia ($\geq 35^{\circ}\text{C}$), adequate oxygenation ($\text{PaO}_2/\text{FiO}_2 \geq 150$ mmHg), full neuromuscular recovery (train-of-four >0.9), and the absence of early graft dysfunction. (Tinguely et al. 2021; Skurzak et al., *Curr Opin Anaesthesiol* 2025).

Beyond Extubation: Broader ERAS Outcomes

Beyond ventilator liberation itself, centers implementing broader ERAS protocols have reported encouraging downstream results. In a retrospective comparison, Kara and colleagues found a statistically significant reduction in postoperative infection rates in the ERAS cohort ($p = 0.01$), along with shorter antibiotic duration and decreased hospital length of stay. (Kara et al., *Exp Clin Transplant* 2024). A prospective quality assessment by Yuan and colleagues demonstrated that ERAS provided a safe management framework with low morbidity and no mortality during the observation period, with outcomes meeting or exceeding German national quality benchmarks. (Yuan et al., *Hepatobiliary Surg Nutr* 2025). A 2025 meta-analysis by Zheng and colleagues confirmed that ERAS protocols improve short-term outcomes after liver transplantation without increasing readmission rates. (Zheng et al., *World J Gastrointest Surg* 2025). Despite this growing body of evidence, formal clinical guidelines for early extubation after liver transplantation do not yet exist, and there remains substantial variability in extubation practices across institutions. (Skurzak et al. 2025).

Patient Selection: Who Should NOT Be Fast-Tracked?

ERAS protocols must be applied with careful patient selection. Immediate extubation is neither feasible nor advisable in patients with severe preoperative encephalopathy, marked hypoxemia, significant hemodynamic instability, primary graft dysfunction, or pulmonary edema. (Feltracco et al. 2011). Failed early extubation carries its own risks, including impaired oxygen delivery to the new allograft and the morbidity associated with reintubation. This calculus is further complicated by the evolving transplant landscape: the donor pool increasingly includes DCD and extended criteria organs, and recipients are presenting with greater acuity, creating tension with fast-tracking goals. Emerging predictors of successful extubation, such as preoperative psoas muscle index as a marker of sarcopenia and intraoperative hemodynamic parameters

(use of CRRT, severity of post-reperfusion syndrome, FFP transfusion volume), offer promise but have not yet been validated into practical bedside tools (Skurzak et al. 2025; Crouch et al., *Curr Opin Organ Transplant* 2024).

As the evidence continues to mature, the critical next steps for the field include randomized trials comparing comprehensive ERAS pathways to standard care and the development of standardized risk stratification tools to guide patient selection for accelerated recovery protocols.

SATA Member Corner: 5 minutes with Dr. Lorenzo De Marchi from Georgetown University

By Alexandra Ruan, MD

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

I went to medical school at the University of Milan and did my first anesthesiology and intensive care residency in Italy. After that, I worked for three years as an attending anesthesiologist in Milan. Then, I had the opportunity to come to the United States for a research fellowship at the NIH, at the National Heart, Lung, and Blood Institute. The original plan was to do research and study for the USMLE so I could get some clinical anesthesia experience abroad. But my wife and I decided to stay in the United States, and my USMLE path turned into repeating residency here. I did my internship at SUNY Downstate in New York, then matched for anesthesia at Georgetown. I completed anesthesia residency from 2004 to 2007, and toward the end they offered me a staff position specifically to do liver transplant.

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

Initially, it was a request—Georgetown needed someone—but I also liked the idea of big cases. Liver transplant is fascinating. The physiology of anesthesia is really engraved in a liver transplant; it's a dynamic environment where things can change every minute. Collaboration with the surgeon is pivotal—you work as a team preparing the patient, planning what's going to happen, and then responding to changes throughout the case. Every change is usually related to what the surgeon does, so communication must be constant. I've been doing transplant anesthesia since 2007, and since 2018 I've been the director of liver transplant anesthesia at Georgetown. As director, I took over from previous colleagues and reshaped some things. Historically, we participated in transplant clinic and listing meetings, but it was usually just the director. When I took over, I expanded that involvement to all my colleagues so they could get a more complete view of what transplant anesthesia really means—seeing patients before transplant and understanding the problems that come with that. A big part of my focus is also nurturing the next generation—tapping into residents and encouraging someone to take this on and keep growing. I want to leave a legacy in that way.

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

The first time I heard about SATA was probably 2012, about a year after it was founded. It was funny, because I remember talking with a friend and thinking it would be nice to have a society that included transplant anesthesiologists across organ systems. Then I “bumped into” SATA—what Dr. Ernesto Pretto had built. In 2012, I drove up to Pittsburgh for what is now the national meeting and met Ernie and others in the early group.

Fast forward to 2016: we organized a Mid-Atlantic resident meeting, and Ernesto was the keynote speaker. I learned that SATA was being revamped, and I reconnected with the society. I was doing transesophageal echo (TEE) for every liver transplant, and Ernie told me SATA was trying to get the TEE effort going. He introduced me to the council, we formed a working group, and we ended up writing an article about the safety and benefit of TEE in liver transplant anesthesia.

From there I got ‘pulled’ into leadership—at the time there weren’t formal elections yet—and when someone needed to cover the secretary position, I stepped in. What attracted me to SATA compared to other societies was the openness: if you show up and want to contribute, there’s a place for you. Over the years I served as treasurer, then secretary, then president-elect, and now I’m currently serving as president.

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

Research is in my DNA—I come from a big research center in Italy—but for my first decade here I was mainly clinically involved and did smaller projects. When I became the Vice Chair for Faculty Development and Research, I’m trying to revamp our departmental research efforts. We’re not a big “academic” institution in the classic sense, but our Transplant Institute has a major research component. One area I’m working on is the utilization of methylated cell-free DNA as a biomarker in the liver. The idea is that cell-free DNA could serve as a biomarker for different types of injury and potentially help guide care in our field.

What is your favorite piece of anesthesia equipment?

Probably the laryngoscope, and particularly the Macintosh blade. Some people still don’t know how to use it properly, and it’s the instrument that allows you to do the thing every student wants to do—intubate. It’s a maneuver that’s peculiar to our job. We share airway skills with other specialists, like ENT, but our approach is different, and it really makes anesthesiologists the experts—even compared to ICU or ED physicians. In some sense it’s like a symbol of our field.

What do you enjoy doing outside of work?

I’m an outdoorsman. In Italy it’s easy to hike real mountains; here, not so much—but when we go up to Maine, we hike a lot. I was in the Dolomites for two weeks last year, and my kids hated me because we hiked so much. I also love fishing, and in the winter I hunt. My passion as an Italian is pizza and focaccia. I built a pizza oven in my backyard—I personally built it, and it took me a few years. I do pizza parties for my colleagues and for the CA3 graduating class, for the last five years I’ve hosted a pizza party for them. The secret to perfect homemade Italian pizza depends on the style—Neapolitan, Roman, focaccia—but really it is the passion and the

experimentation. With the same components—flour, water, yeast, salt—you can create incredible diversity based on hydration, resting time, and yeast.

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

First, congratulations—it's a fascinating field. Be ready for a lot of involvement and a certain amount of sacrifice in terms of time. It's rewarding because you gain a lot of knowledge, and you do fantastic things—transplant is a life-changing procedure for a person. But it's also tough. It requires dedication and passion, because it's easy to get burned out, and you're going to face tough situations. You must make it a real decision for your life. That said, it's a lot of fun.

How can we reach you?

You can reach me by email at ld92@georgetown.edu or LinkedIn <https://www.linkedin.com/in/lorenzo-de-marchi-a8491818/>

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

In the Spotlight: University of Pennsylvania Transplant Program

By David Rosenfeld, MD, FASA

For this month's section, we reached out to Dmitri Bezinover, Block Chief Solid Organ Transplant Anesthesia, to learn more about the University of Pennsylvania's Abdominal Organ Transplant program. Penn was one of the first academic centers to complete a kidney transplant back in 1966. In 1986 they performed their first liver and pancreas transplant the same year, followed by starting the cardiac program in 1987, and lung in 1991. During these years Penn was known for complex liver transplantation, using mechanical circulator support as a bridge to cardiac transplantation, and advancing multiorgan transplants including heart/liver cases.

In 1995 Dr. Anrahan Shaked and Dr. Kim Olthoff arrived from UCLA and began a new era for the center, improving outcomes, blood utilization, and expanding the donor pool by becoming one of the first centers in the US to use a DCD graft that year. Through the 1990s and early 2000s, they built one of the country's largest integrated transplant infrastructures, including multidisciplinary ICU care pathways, and live donor programs in liver and kidney; while growing major NIH funded programs in transplant immunology. Other notable milestones include their first islet transplant in 2001, a bilateral hand transplant in 2011, and their first uterus transplant in

2018. They have been innovators in the use of percutaneous venovenous bypass. The arrival of Dr. Peter Abt in 2007 was impactful especially expanding the use of DCD liver grafts and he currently serves as Director of Hepatic Transplantation. Peter Markman rejoined the program in 2023 and is now Director of Penn Transplant Institute. In 2005 they posted their highest volumes for liver at 172 organs (27 live donors), kidney at 347, and 37 pancreases. They are advancing pioneering research using genetically modified pig livers via Extracorporeal Liver Cross-circulation for acute or acute-on-chronic liver failure as temporary support towards normalization of native liver function or as a bridge to allotransplantation.
<https://www.nature.com/articles/s41591-025-04196-3>

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

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