NEWSLETTER - SPRING 2024

UNOS News

By Flora Simmons, MD

Record-breaking 10,000 Liver Transplants Performed in 2023

In 2023, more than 10,000 liver transplants were recorded, more than any single year in history. This continues the eleven-year streak of record-breaking numbers of liver transplants. More changes to liver allocation are coming soon and should continue to increase annual liver transplant numbers. Link Here

Changes to Minimum Donor Criteria for Kidney Biopsies Leads to increased Kidney Donors

A policy change aiming to standardize biopsy practices was implemented on September 22, 2023 to help improve kidney allocation efficiency. The policy establishes minimum donor criteria for kidney biopsies. The most recent monitoring report shows a six percent (6,930) increase in deceased kidney donors recovered. Link Here

New pre-transplant performance metric

A new risk-adjusted performance monitoring metric will take effect in July 2024 called the “pre-transplant mortality rate ratio”. The pre-transplant mortality rate ratio indicates whether patients listed at a program are more or less likely to die prior to receiving a transplant than expected. Link Here

Change to the Organ Offer Acceptance Limit

On May 29, 2024 the number of offers a transplant hospital may accept per transplant candidate will be reduced. Link Here

Research Updates and Interesting Articles

By Michael Trostler, MD and Alex Stoker MD

Perioperative Considerations in Older Kidney and Liver Transplant Recipients: A Review

The aging population has led to an increase in the ages of our transplant population. This narrative review details the individual factors that aging patients deal with and should be recognized as we proceed with transplanting this patients. Frailty, sarcopenia, cognitive dysfunction, likelihood of malignancy, coronary artery disease and associated disorders are some of the preoperative factors that we need to be considering. Link Here

Understanding Alcohol Relapse in Liver Transplant Patients With Alcohol-Related Liver Disease: A Comprehensive Review

Alcoholic relapse is a formidable challenge in alcohol related liver disease and liver transplant. This review explores the nature of relapse and strategies to prevent it. This is written with alcoholic cirrhosis in mind, but the strategies are equally relevant in acute alcoholic hepatitis as these patients have not had a period of abstinence prior to transplant. A holistic approach, recognizing the interconnections between the social, psychological, medical, and physiological factors are key to preventing relapse. Link Here

Liver Machine Perfusion Technology: Expanding the Donor Pool to Improve Access to Liver Transplantation

The effect of machine perfusion on liver transplant center donor utilization. Significantly more DCD donors were used, increased DCD >50 years old, increased steatosis fraction utilization, and increased warm ischemia time. Link Here

Universal Antifungal Prophylaxis Effectively Prevents Fungal Bloodstream Infection in Pediatric Liver Transplant Recipients: A retrospective real-world study

Empiric treatment of pediatric liver transplant recipients with anti-fungals helped prevent fungal bloodstream infections in a retrospective study of 604 pediatric liver transplant recipients in China. Link Here

Perioperative Cardiovascular Risk Assessment and Management in Liver Transplant Recipients: A Review of the Literature Merging Guidelines and Interventions

Liver transplant is the second most common solid organ transplant procedure worldwide, as increasing numbers of transplants are performed each year and as the age of transplant recipients increases screening for CAD is especially important. This literature review covers risk stratification techniques/tests, management and options for coronary revascularization related to liver

transplantation. Link Here

Outcomes following concomitant multiorgan heart transplantation from circulatory death donors: The United States experience

The recent emergence of ex-vivo machine perfusion and normothermic regional perfusion has allowed for expansion of the donor heart pool by utilization of Donation after circulatory death (DCD) organs. Multi-organ heart transplant candidates face a high waitlist mortality. Outcomes following multi-organ heart transplantation from DCD donors is not well established, as these patients had been excluded in recent RCTs of DCD heart transplantation.

In this retrospective study of multiorgan heart transplant candidates and recipients, the authors found willingness to consider DCD offers was associated with higher likelihood of transplant for all multiorgan heart candidates. Heart-kidney recipients of DCD organs had similar post-transplant outcomes compared to recipients of brain-dead donor transplants. While heart-liver and heart-lung recipients represented a group too small for analysis, all patients were alive at last follow up. Link Here

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Update from the SATA Council Meeting and National Meeting in Seattle

By Jiapeng Huang, MD, PhD and David Rosenfeld, MD, FASA

SATA Executive Council met in person in Seattle on May 19-20, 2024. The Council discussed plans to develop strategic plans for the coming years. Discussion points included streamlining SATA committees to avoid overlap and redundancies. In addition, SATA is working closely with ILTS on the upcoming SATA/ILTS perioperative meeting in Philadelphia in Oct 2024. Agenda and speakers are being finalized. SATA has initiated the official application process to become an ASA subspecialty society, which will create significant alignment, collaboration and synergy between SATA and ASA. SATA is also working very closely with our industrial sponsors to promote transplant anesthesiologists recruitment and education.

The SATA National Symposium in Seattle was a resounding success and attended by over 50 physicians . We had great presentations including a section from colleagues from the Korean Society of Transplant Anesthesiologists (KSTA). Pictured below is Dr. Gebhard Wagener with Dr. Sang-Hyun Kim from Soon Chun Hyang University Medical Center during the speakers dinner. We also had a great experience with the first POCUS/TEE Interactive Training Workshop.

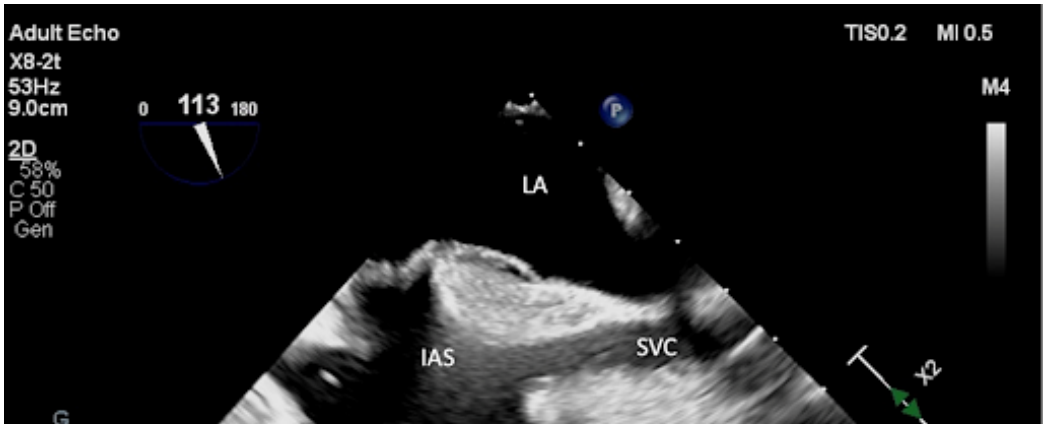
Special Topics

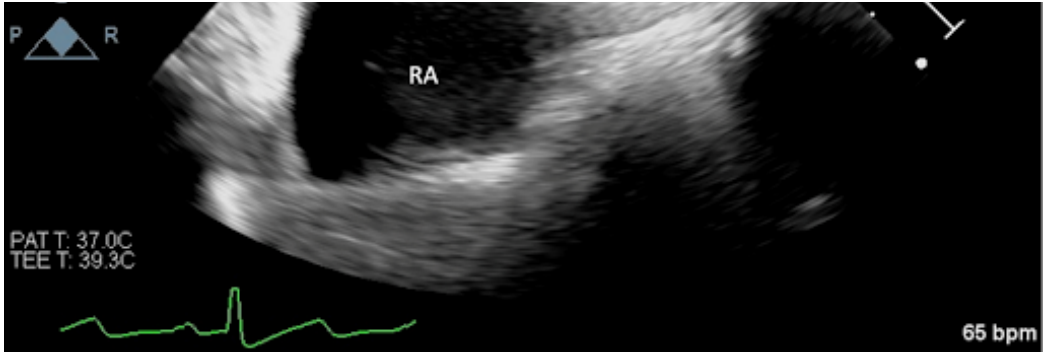
By Alex Stoker, MD

Lipomatous Hypertrophy of the Interatrial Septum

Lipomatous hypertrophy of the interatrial septum (LHIS) is a benign cardiac lesion characterized by fat accumulation in the interatrial septum with a prevalence between 2.2% and 8% and can be diagnosed by computed tomography, cardiac MRI as well as transesophageal echocardiography (TEE). Using TEE, LHIS is best seen in the midesophageal bicaval view and typically involves hypertrophy of both the cephalad and caudal portions of the interatrial septum, projecting into the right atrium and sparing of the fossa ovalis, creating the classic “dumbbell” shape (see Fig 1 below). Criteria for LHIS includes an atrial septum thickness greater than 2 cm. LHIS can predispose patients to atrial arrhythmias due to conduction disturbances from fat infiltration as well as inflammation. LHIS is associated with advanced age, obesity and pulmonary emphysema. It is important to recognize LHIS as this can be mistaken for other pathology such as malignant cardiac tumors or even intracardiac thrombus.

Link Here





Midesophageal bicaval view obtained during liver transplantation with appearance of fatty infiltration of the atrial septum. While the interatrial septum in this image does not meet formal criteria of LHIS with atrial septum thickness not being greater than 2 cm, it does highlight the classic appearance of thickened cephalad and caudal portions of the atrial septum with sparing of the fossa ovalis (dumbbell shape).

In the Spotlight: University of California – Los Angeles - Abdominal Organ Transplant Program

By David Rosenfeld, MD, FASA

For the spring newsletter we are highlighting UCLAs Abdominal Organ Transplant Program. The program is based out of the Ronald Reagan UCLA Medical Center which was opened in 2008 and is a 520-bed center of over a million square feet. This historic liver transplant program was launched and grown under the leadership of renowned surgeon Ronald Busittil in 1984. The abdominal transplant program currently includes both adult and pediatric liver, small bowel and multivisceral transplants. The pediatric arm is staffed by pediatric anesthesia physicians under the UCLA Mattel Children's Hospital umbrella within the Reagan UCLA footprint. Renal transplantation is managed under the Department of Urology. Volume data from 2023: 195 Liver Transplants, 8 Pediatric LT, 1 Small Bowel.

The adult team includes eleven attending anesthesiologists, as well as a separate pediatric team for that arm. At all times two attendings are on call for the liver team. This team also covers hepatocellular carcinoma resections, hepatic metastatic cancers, complex Whipple procedures and invasive renal cell carcinoma surgeries. UCLA's patient population is high acuity with an average MELD-Na of 34, with a high percentage of ICU patients listed. Cases are mixed between total cava exclusion (60%), piggyback (25%), and veno-veno bypass (5%) depending on the surgeon and anatomy, with ROTEM and TEE frequently used, and CRRT common. Anesthesiologists are a consistent member of the selection committee, with surgeons, cardiologists, pulmonology and of course hepatology, and are involved in biweekly inpatient high MELD

rounds with the entire team. The anesthesiology division meets monthly with case discussions, QI reviews, preoperative evaluations, research presentations, with minutes distributed.

UCLA has a large anesthesiology residency of 27 per class. An intense two-week experience in liver transplant is combined with a two weeks of vascular in a one month rotation. Extensive LT anesthesia website educational resources, simulation-based LT resident training model, and an extensive reading list and Powerpoint lectures are offered. UCLA has a one year non-ACGME Liver Transplant Anesthesia Fellowship for up to two candidates with the goal of training the fellow to be a perioperative consultant in liver transplant anesthesia. Fellows spend 50% of time in clinical liver transplant anesthesia and 50% time working as a staff anesthesiologist. Salary reflects this blended role with additional ability to moonlight. Fellows receive training in transesophageal echocardiography with experience geared towards the Basic PTEXAM Examination of Special Competence. Research experience is encouraged. The division's research arm is robust with ongoing prospective and retrospective investigations and an institutional outcome database collected for over 20 years. Collaborations exist with cardiology, liver transplant surgery and critical care, and other institutions. Special thanks to Fellowship Director Dr. Christine Ngyen-Buckley, and Service Chief Dr. Christopher Wray for their contributions to this section. If you have interest in having your program highlighted in the future, please contact me at Rosenfeld.david@mayo,edu.

SATA Member Corner: 5 minutes with Dr. Christine Nguyen-Buckley from UCLA

By Alex Ruan, MD

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

My first job out of college was as a study coordinator in pediatric infectious diseases. I realized during that job that I really wanted to work with patients and take care of them as a physician. So that's what drove me to going into medicine. For anesthesiology, I didn't really have a good idea of what it was about, even though my husband is an anesthesiologist. During my surgery rotation, the anesthesiologist asked me to come to the head of the bed and let me participate in the patient’s care. He let me do minor things like holding the mask and putting on the monitor, but it felt very exciting and hands-on. And I

thought, “Oh, wow! Look at all these things the anesthesiologist gets to do.”

Why transplant anesthesiology?

Transplant anesthesia can be exciting and gratifying. It feels so good when you see patients you care for go from the extremes of being sick in the ICU to recovering after transplant. It’s gratifying when patients come back for routine outpatient procedures like colonoscopies and they look so well. I also have a nice mix of cases in my practice - some days I'll do general routine cases, then other days, I’m dealing with the intensity of getting someone safely through a transplant.

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

I've been a member of SATA since around the time that I was a fellow. I’m trying to remember the details, but at the ASA, I think Ryan Chadha said to me “Hey, there's this SATA meeting. Do you want to check this out?” And so I went to it. There were all these big-time transplant anesthesiologists that were there. It was very intimate and a small group at that point. And now it’s grown so much. It has been really great to be part of an organization where it has been so easy to get involved, even as a fellow.

I'm currently the chair of the SATA membership committee. I would like to help people be satisfied with their experience as SATA members, and then also to recruit members and get them involved. SATA needs the help of its members! Members can email me and I can help connect them to people in areas they may be interested in.

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

My research interests involve perioperative care of liver transplant patients. We've been looking at complications like intracardiac thrombosis, how to prevent and treat it, but also why it happens. I'm also interested in education in liver transplant, particularly liver transplant fellowship.

What is your favorite piece of anesthesia equipment?

How do I even choose - it's so hard to pick a favorite! But one piece of anesthesia equipment that I used today that I was so grateful for, and just love, is having point of care testing in the OR. You can get a blood sample and then almost immediately get the patient’s glucose, hemoglobin, a blood gas, electrolytes and then repeat that as often as you need to. This allows you to do this independently and not be reliant on someone to take it to the lab, then for the lab to run it, so that you can really manage your patient very closely. I find it really crucial, not only for liver transplant anesthesia where we are getting labs every hour or even more often, but general cases as well.

What do you enjoy doing outside of work?

I have 3 sons, they're 11, 8 and 2. So that keeps me pretty busy. But I also like traveling, I like the outdoors, I like reading a lot - anything from like psychological thrillers and true crime novels to the New York Times.

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

I would say they should definitely join SATA. We have a discounted rate for trainees, and it's a fantastic opportunity to learn about liver transplant anesthesia and to meet and work with experts in the field. SATA has been very helpful for me in my career by helping me make connections for research projects. Medical students and residents should join the Vanguard Committee so they can get involved and further their career.

Dr. Nguyen-Buckley can be reached at cnguyenbuckley@mednet.ucla.edu.

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

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Newsletter Committee Update

Future ideas - we are exploring the concept of having a printed newsletter to serve our membership. The SATA newsletter committee is actively seeking

new members. Those interested in all topics related to transplant anesthesia are welcome. We are always looking to expand ideas and content for the newsletter. If interested, please contact David Rosenfeld, MD at Rosenfeld.David@mayo.edu

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SATA Survey

Adult Liver Transplant Anesthesiology Practice in the Post-COVID-19 Era: Survey from the Society for the Advancement of Transplant Anesthesia

We previously sent out an email about participating in the first survey from the SATA Practice Management Committee focusing on adult liver transplant institutions in the United States. This is a reminder email to please complete the survey if you have not previously. The link is below, we greatly appreciate your time and effort to share your experience. If you have any questions and/or issues, please feel free to contact the Co-PI.

Ted Sakai (sakait@upmc.edu**).**

Follow this link to the Survey:

Take the Survey

Or copy and paste the URL below into your internet browser:

https://ucdenver.co1.qualtrics.com/jfe/form/SV_9piQkrlQ5YnJ3iC?Q_DL=8SwUYTYkHyJIGtG_9piQkrlQ5YnJ3iC_CGC_Wc4OqWtC9OalYgm&Q_CHL=email

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Future SATA Events and Meetings

SATA Mid State Meeting - September 27th, Virtual

SATA/ILTS Perioperative Meeting - With the ASA National Meeting, October 18, Philadelphia, PA

SATA Winter West Coast Meeting - December 14, 2024, UCSF

Transplantation Upcoming Meetings

American Transplant Congress, June 1-5, Philadelphia, PA Link Here

30th International Congress of The Transplantation Society (TTS 2024) - TTS Official Meeting, September 22-25, Istanbul, Turkey. Home (tts2024.org)

13th Congress of the International Pediatric Transplant Association (IPTA 2025) - TTS Official Section Meeting, September 18 - 21, Berlin, Germany

18th Congress of the International Xenotransplantation Association (IXA 2025) - TTS Official Section Meeting, Sept 30-October 3, Geneva Switzerland. Link Here

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