

Live Video Lets Virtual Urologists Collaborate Remotely During Kidney Transplant

Article 8 in the TIMS Medical “Reimagining Telemedicine” Series



Kidney Transplant Surgery
Source: A Noor/BSIP/Science Photo Library

by **Tony Molinari**
Vice President & Co-Founder
TIMS Medical

www.tims.com

<https://www.linkedin.com/in/tony-molinari-jr/>

Introduction

As colleagues of mine have written in prior articles for the TIMS Medical [“Telemedicine Reimagined” series](#), new medical imaging technologies are transforming a widening range of medical tests and procedures, expanding opportunities for telecollaboration, telementoring, and remote medical education.

((**Full disclosure:** I am Vice President and Co-Founder of 35-year-old #medicalimaging solutions provider **Foresight Imaging, LLC** and its affiliate [TIMS Medical, Inc.](#) (whose technology securely provides live, real-time, high resolution streaming video from operating rooms to remote locations)).

In this article, I’ll detail what I **personally experienced** on March 6, 2021– when hundreds of urologists (attending a virtual medical association meeting) remotely observed and participated in a live kidney transplant procedure which simultaneously took place in two operating rooms at a Tulsa, Oklahoma hospital.

March 6, 2021 was a significant day in medical imaging history for several reasons, as I’ll describe below.



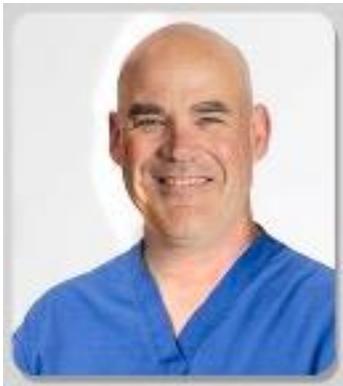
Background

Founded in 1951, the **Oklahoma State Urological Association (OSUA)** is a nonprofit whose members are urologists and related medical practitioners who live and practice in Oklahoma and adjacent states. For 69 years, OSUA has hosted an in-person annual meeting at a hotel or conference facility to let attendees meet, interact, swap stories, and watch presentations on the latest innovations, treatments, and surgical techniques in urology.

Over the past year (2020-21), in the age of COVID, conferences, CME, and networking events in the U.S. and across the globe (that previously allowed healthcare professionals to gather in person) came to an abrupt halt. Thus, because of coronavirus “social distancing” restrictions, OSUA’s 70th annual meeting (in March 2021) had to be held virtually, with hundreds of attendees joining remotely through video conferencing.

While participating virtually via laptop webcams couldn’t match the intimacy and interactivity they would have experienced at a real-world gathering -- after a year of Zoom-enabled doctor-patient telemedicine check-ups and consults, participating urologists, hospital administrators, and others eagerly joined the meeting from hospitals, offices, and homes nationwide.

As OSUA’s leadership wrestled over the challenges of an all-virtual meeting, [Dr. James O. L’Esperance](#) (immediate OSUA past-President), set about finding a creative way to hold the attention of attendees.



James O. L’Esperance, MD

A veteran board-certified urologist and surgeon who practices through Tulsa, OK-based [Urologic Specialists of Oklahoma](#) (the region’s largest urology practice), **Jim L’Esperance, MD** is a pioneer in minimally invasive genitourinary laparoscopic & robotic surgery and transplant surgery.

First Live Streamed Video of Kidney Transplant Shown at Urology Conference

Through his affiliation with Tulsa's **Ascension Oklahoma St. John Medical Center**, and after contacting my company (**TIMS Medical**), **Dr. L'Esperance** organized an unprecedented interactive session during the OSUA annual meeting: **the first and only live-streamed surgery video in the association's history.**

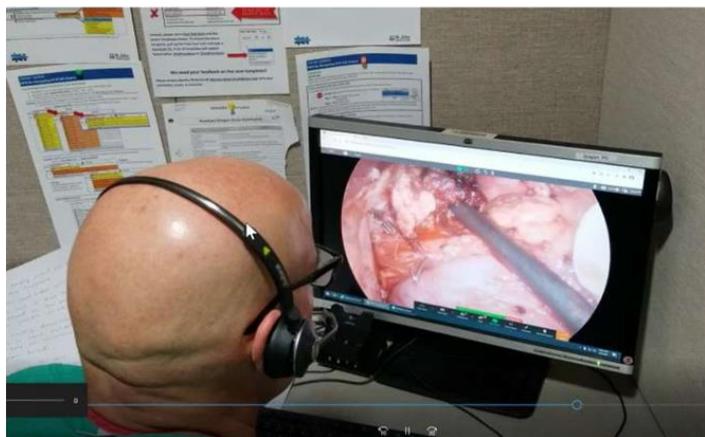
Appreciating the value live medical video could provide for colleagues, educators, med students, surgeons, and others – Dr. L'Esperance arranged for installation of two **TIMS Consultant** systems at St. John Medical Center in advance of the transplant operation.

TIMS Consultant functions as an "Interactive Video Broadcast Network" for hospitals, through which high-quality video streams may be captured through any modality (fluoroscope, endoscope, surgical head cameras, etc.) at patients' locations, and concurrently transmitted over a secure web-connection to internal and external locations. This system goes beyond broadcast "viewing," as third-party interactivity and collaboration is enabled via integrated audio conferencing and live telestrations.

On March 6, 2021, during the 2021 virtual OSUA annual meeting, I assisted Dr. L'Esperance while he served as master of ceremonies for a geographically dispersed collection of virtual attendees who remotely observed in-process kidney removal and transplant surgeries as they took place at Tulsa's St. John Medical Center.

The two operations were conducted by three of Dr. L'Esperance's Urologic Specialists colleagues: surgeons (**Stephen Confer**, MD, FACS; **J. Steve Miller**, MD, FACS; and **W. Jason Cook**, MD, FACS).

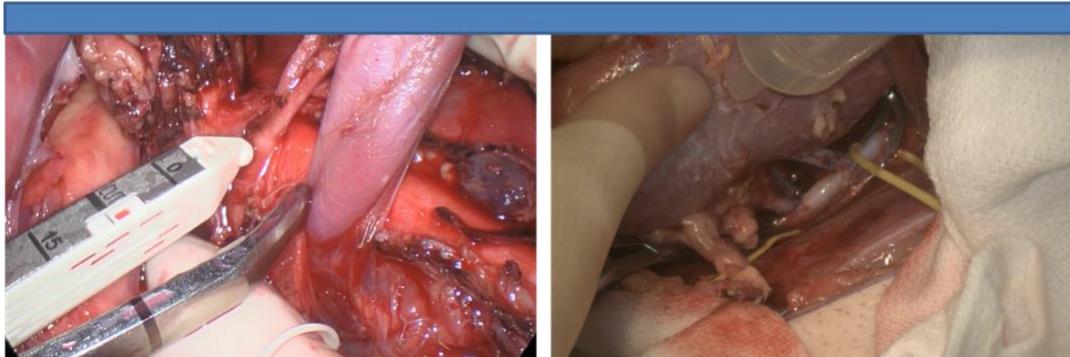
Meeting Coordinator Managing Interaction Between Attendees & Surgeons



Over the 5-hour duration of the surgeries, with L'Esperance serving as both moderator and intermediary: conference attendees watched live in-body and external video from laparoscopes and surgeons' headcams, which were streamed simultaneously from two separate operating rooms:

- **OR #1:** Laparoscopic kidney removal (nephrectomy) from a 28-year-old female donor
- **OR #2:** Adjacent transplant theater in which a 36-year-old unrelated male recipient was prepped, and then underwent kidney transplant surgery.

OR #1: Laparoscopic Kidney Removal >>> **OR #2: Adjacent OR for Recipient Surgery**



Through video technology presented at the meeting, OSUA members were not just passive attendees, nor mere observers-- but rather active co-participants in the surgeries, as they could interact in real-time with the surgeons and others: asking questions, making comments and suggestions (via the moderator).

To avoid interrupting the surgeons, as well as manage the flow and momentum of the day's proceedings, the meeting participants didn't have to watch the entirety of the operations. Instead, Dr. L'Esperance conducted periodic "check ins" with the surgeons at appropriate times during the conference. This helped to maintain the surgeons' focus and ensure patient safety, while concurrently keeping OSUA members informed and engaged.

Game-Changing Medical Video

If you've ever had to source and pay for a video production company to record footage from a surgical procedure, you know that the entire process is both complicated and expensive (typically requiring specialized cameras, and the involvement of expert videographers) to share that footage anywhere outside of an OR. Having had to do that personally as an organizer, presenter, or attendee at many conferences over my career, this was a refreshing and game-changing experience!

Perspective and Context:

An informative [2015 Urology News article](#) commented:

“Urology has been ‘ahead of the game’ with technology, so to speak. Historically, as urologists, we have been used to working with endoscopic images for many years and were probably the first surgical specialty to be recording endoscopic surgical video on cine film.”¹

While, as that article correctly observed, urologists may currently better ‘get the picture’ than physicians who practice other specialties, healthcare professionals of all kinds will see a multitude of benefits made possible using live medical video.

Benefits of Live, Interactive Surgical Video and Audio

Those “proven benefits” were succinctly itemized in a recent article ([“The 21st Century Virtual Surgical Amphitheater”](#)), written by my friend and fellow TIMS Medical Co-Founder, **Mark Mariotti**). Those specific benefits include:

- Highly cost-effective platform
- High quality interactive audio/video
- Makes medical conferences more interactive, less passive
- Teleconsultations for additional expert advice and concurrence
- Telementoring and teleproctoring
- Review in-progress status and final operative results
- Valuable ability to record and review surgeries (Postoperative)
- Facilitate peer review and self-peer review
- Provide valuable resource for training and remote learning
- “See One, Do One, Teach One” 21st century medical education²

Supporting our perspective on the value of live video for urologic surgery, a [“Telemedicine in Urology”](#) White Paper published in 2016 by the **American Urological Association** specifically cited the use of the TIMS Consultant telesurgical technology for **“Teleintraoperative consultations,”** which its authors suggested may be “the most important and valuable role of electronic consultation for urologic care.”

The introduction of that AUA paper boldly declared that much as Gutenberg’s invention of the printing press ushered in significant changes...

“Today, an electronic revolution—telemedicine—is changing the very essence of how physicians practice medicine. In what is described as the democratization of access to knowledge, information, and process, the information freely available today has a profound effect on how medical care is and will be delivered.”³

###

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Authorship:

This original article “Live Video Lets Virtual Urologists Collaborate Remotely During Kidney Transplant,” by [Tony Molinari](#), Vice President/Co-Founder of TIMS Medical & Foresight Imaging (Chelmsford, Mass. USA) is the eighth in a series of educational [“Telemedicine Reimagined”](#) articles that are/will be posted on the TIMS.com website.

Tags:

#Telemedicine #TelemedicineReimagined #Telehealth #Telesurgery #KidneyTransplant #nephrectomy #OSUA #JamesLEsperance #UrologicSpecialists #Surgery #Urology #Telesurgery #Telementoring #LiveRemoteMedicalVideo #MedTwitter #MedicalHistory #MedicalEducation #MedicalSchool #Teleproctoring #RemoteCollaboration #RemoteMentoring #Innovation #TIMSConsultant #TIMSMedical #TelemedicineCollaboration – Now and Anywhere

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