

OCTOBER 2023 / VOLUME 108 / NUMBER 10

# ACS/Bulletin

AMERICAN COLLEGE OF SURGEONS

## Simulations May Help Change Surgical Culture

### Also Inside:

Obesity and Surgical Complications

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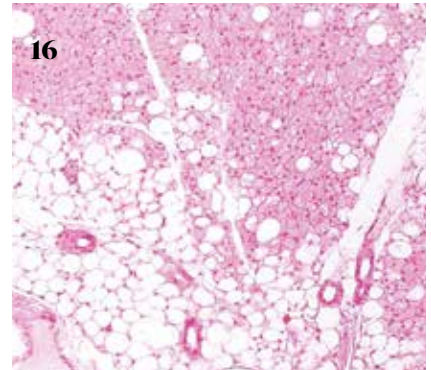
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# Celebrating a 28-Century-Long Tradition in Surgery

Patricia L. Turner, MD, MBA, FACS

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I HAVE ALWAYS LOVED to read Greek mythology. These are sprawling epics that use melodic language and have huge casts of fascinating characters. While much of their appeal comes from their ancient and otherworldly qualities, I often reflect upon how certain elements of these tales metaphorically appear in our world today—in particular, via surgeons who play the roles of healer and teacher at the periphery of war.

One of my favorite characters from Greek mythology is Chiron, a centaur who is unusually refined, mild-mannered, and intelligent. He is a teacher of medical skills who often tutors heroes, including Jason,

protagonist of *Jason and the Argonauts*; Peleus, the father of the nearly undefeatable warrior Achilles; and Asclepius, a mythical human characterized as the father of medicine. He also appears at the margins of many myths about war. When Bellerophon is injured in a fight, for instance, he goes to Chiron's home for care. In *The Iliad*, warriors use Chiron's medical teachings to heal others. En route to retrieve the golden fleece, Jason uses the healing skills he has learned from Chiron.

The presence of Chiron throughout these stories illustrates that what was true in Greece in the 8th century BC is still true today: the work of medical professionals is essential to the success of soldiers, and important insights into surgery can arise via the special and sometimes unavoidable circumstances of war.

These truths have been borne out over a long history. Physicians on the battlefields of the American Civil War created the first iterations of the trauma systems we still use today. Military surgeons, who gain insight by practicing under unique high-pressure circumstances, have since helped develop multiple surgical disciplines, including orthopaedic surgery, vascular

surgery, burn care, and more. That tradition continues through military-civilian partnerships that offer training and foster surgical innovations today.

The ACS is part of that work through our Military Health System Strategic Partnership American College of Surgeons (MHSSPACS), a partnership of the ACS and the US Department of Defense Military Health System that was launched in 2014 to improve surgical quality via organizational collaboration. USAR Major General (Retired) Jonathan Woodson, MD, MSS, FACS, MG, MC, the current president of the Uniformed Services University of the Health Sciences, has said, "The partnership has been wildly successful." I would agree. The positive outcomes have been many. Through a collaboration with the Uniformed Services University of the Health Sciences, the MHSSPACS has created the Military Clinical Readiness Curriculum, a free online course designed to improve the trauma surgery skills of both deployed military surgeons and general surgeons operating in civilian settings, particularly rural ones. (See the sidebar for details on what the course includes and how to access it.)



## Military Clinical Readiness Curriculum

### Modules available now:

- Wounds, amputations, and fractures
- Torso trauma
- Expeditionary unique (trauma surgery rarely encountered outside military settings)
- Transfusion and resuscitation
- Airway and breathing
- Critical care and prevention
- Head and spine injury

### Audiences:

- Military trauma surgeons preparing for deployment
- General surgeons in civilian practice, particularly in rural settings

### How to access:

Free to all at [facs.org/mcurriculum](https://facs.org/mcurriculum)

Available in English, with audio transcripts in English and Ukrainian

The success of the partnership extends beyond education, in that the MHSSPACS has also helped the ACS advocate for MISSION ZERO legislation. This federal law, which was passed in 2019, aims to reduce preventable civilian trauma deaths and increase military readiness for deployment through a US Department of Health and Human Services grant program that covers the administrative costs of embedding military trauma professionals in civilian trauma centers in the US. The program received \$2 million in funding in fiscal year 2022, in part due to our advocacy efforts. ACS Quality Programs are now being implemented in scores of military treatment facilities as well.

Finally, the strategic partnership has breathed new life into the ACS's long-standing military interest group. In 1945, returning service members united to form the College's Excelsior Surgical Society in response to their World War II experiences. Annual meetings persisted until the death in 2008 of Michael E. DeBakey, MD, FACS, the legendary cardiovascular surgeon, who was the last surviving member to have served in WWII. But since 2014, the MHSSPACS has reinvigorated the Society as a home within the ACS for surgeons who are active, veteran, or reserve military members, as well as any surgeons interested in the overlaps of

military and civilian surgery. The group provides support for surgeons transitioning from the military to civilian practice, as well as an opportunity for surgeons to contribute to ACS efforts in military surgery. I urge all interested surgeons to join.

Asked about Greek mythology on warfare, Dr. Woodson quoted Hippocrates, the Greek physician who lived from about 460 to 370 BC: "He who wishes to be a surgeon needs to go to war."

While my personal experience with military medicine may be confined to a love for Greek mythology, it is clear to me that military insights are a part of the foundation of surgical care. I applaud all who, like the fictional Chiron and real-life Hippocrates, share their skills and insights with others through teaching, mentorship, and advocacy. To the surgeons who have served their country, on behalf of the entire ACS, I thank you, sincerely, for your service.

### Clinical Congress


If you'll be at Clinical Congress in Boston, Massachusetts, this October 22–25, please join us for the Excelsior Surgical Society/Edward D. Churchill Lecture on October 24 at 9:45 am.

Sustaining an Excelsior tradition that dates to 1945, M. Margaret Knudson, MD, FACS, the former Medical Director of MHSSPACS, will speak. Her lecture is titled

"Service, Synergy, and Surgical Mythology."

You can plan your entire Clinical Congress schedule at [www.abstractsonline.com/pp8/#!/10669](https://www.abstractsonline.com/pp8/#!/10669). I look forward to seeing you there.

### TQIP Conference

Registration is now open for the 2023 Trauma Quality Improvement Program conference in Louisville, Kentucky, December 1–3. We are pleased to welcome all trauma surgeons and their teams for sessions on surgical technique, trauma survivorship, and more. Register at [facs.org/tqip](https://facs.org/tqip). 

**Dr. Patricia Turner** is the Executive Director & CEO of the American College of Surgeons. Contact her at [executivedirector@facs.org](mailto:executivedirector@facs.org).

# Simulations in Ergonomics and Intraoperative Decision-Making May Help Change Surgical Culture

M. Sophia Newman, MPH





# The Surgical Metrics Project is bringing to light new data streams that can help practitioners engage with one another in clinical care teams in ways they've never engaged before.

CLINICAL CONGRESS IS ONE of the largest gatherings of surgeons in the world, and it offers everything one might expect from a preeminent conference with a 113-year history: nearly 300 sessions, many of which will present exciting surgical research findings and cutting-edge education; 11 Named Lectures by some of the field's brightest minds; and innumerable professional and social connections between surgeons. This ACS signature event also will offer two innovative Exhibit Hall opportunities for hands-on learning that can be immediately helpful to surgeons, advance innovative research, and change the culture of surgical training and practice.

## SURGICAL METRICS PROJECT

The Surgical Metrics Project is bringing to light new data streams that can help practitioners engage with one another in ways they've never engaged before. "In addition to creating a digital rendering of complex technical skills and intraoperative decision-making, participants will be able to share tips and tricks, interact with expert surgical coaches, and contribute to a performance database for resident learning," said project leader Carla M. Pugh, MD, PhD, FACS, director of the Technology Enabled Clinical Improvement Center at Stanford University in California.

The project invites surgeons to participate in simulated surgical procedures while recording their own movements and brain waves to better understand the critical physical and mental maneuvers that underpin the best outcomes in the operating room. Digital performance data allow the development of something surgery has had very little of to date: objective comparisons and digital mapping of successful and unsuccessful techniques and the mastery of specific surgical tasks by individual surgeons.

Dr. Pugh explained, "One of the first goals of the project is to build a database of surgical performance. What operative decisions do you make and why? What is the variance in those technical decisions that experts make?"

### Individual Learning and Inverted Conference Research Model

To participate, interested surgeons can come to the project's location in the Exhibit Hall whenever they like. Each surgeon will complete a brief survey and consent form and then will apply sensors to their fingers (worn under surgical gloves to record hand motions) and forehead (to record electroencephalographic [EEG] data on their thought processes while operating). A simulated surgery using inanimate tissues follows, as well as a chance to see the digital data generated from their efforts.

If this activity sounds familiar to some, it is because the Surgical Metrics Project appeared at Clinical Congress in 2019 and 2022,<sup>1</sup> the past two times Clinical Congress was held as an in-person event. In 2019, it had more than 250 participants.<sup>2,3</sup> In 2022, more than 110 attendees participated (completing a longer procedure than the one used the previous year).

### Surgical Metrics Project AT A GLANCE

**What:**

An opportunity to explore digital data and surgical technique using motion sensors, surgical video, EEG technology, and other wearable devices

**Where:**

Booth 553 in the Exhibit Hall at the Boston Convention & Exhibition Center

**When:**

9:00 am–4:30 pm, October 23–25

**Research:**

Willing participants can complete a survey and consent form that will permit analysis of their simulation performance data in light of their experience, career stage, and other attributes

**Is advance sign-up required?**

No, but participants may stop by in advance to schedule a session

**How long will participants spend onsite?**

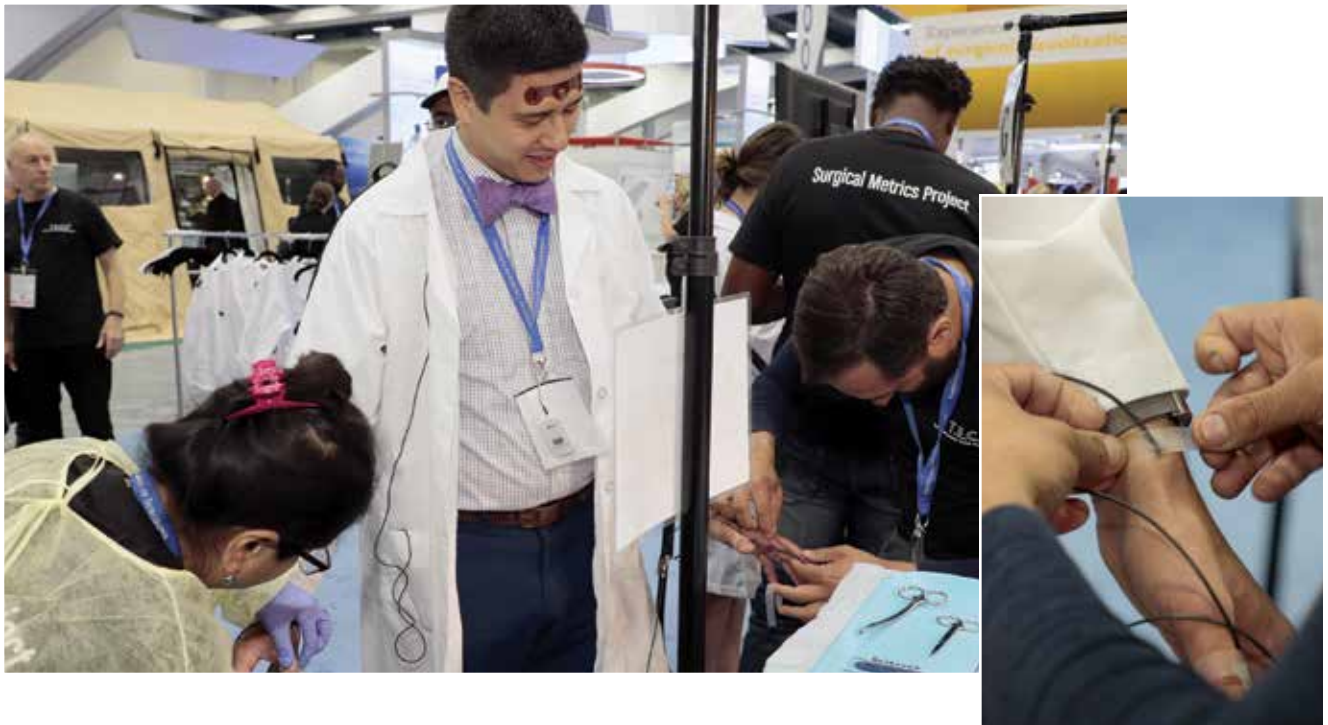
15 to 20 minutes at each of three simulation stations

**Why should surgeons attend?**

To learn more about wearable technology and digital data, and contribute to a project creating objective measures of surgical success and transforming resident education

**What's new this year?**

The addition of expert surgical coaches, global surgery collaborators, new institutional partnerships, and more technology



The Surgical Metrics Project offers an opportunity for individual surgeons to learn more about the future of digital healthcare and optimizing their practice. The project also is the basis for research and inverts the usual pattern of conferences—in which researchers present the findings of studies completed offsite—by giving conference attendees the opportunity to become research participants themselves.

The work is ongoing, and findings from the 2019 Clinical Congress cohort published in the *Annals of Surgery* have highlighted the capture and characterization of individual surgeon preferences with wearable technology.<sup>4</sup> Dr. Pugh noted, “The 2019 results showed that there is more than one way to complete a procedure, but some approaches are more efficient than others and lead to fewer errors. This was a unique opportunity to confirm that surgeon’s individual preferences are linked to procedural outcomes.”

This year’s iteration of the project will collect new data from surgeons completing simulated procedures while integrating expansions of the project’s questions by using coaches and new technologies and expanding simulations to three short but challenging operative tasks. The brief survey before the surgical simulation will incorporate details such as each surgeon’s specific surgical discipline, years of experience in surgery, and self-reported familiarity and skill level with the type of operation simulated onsite. These points will become part of data subanalyses

on the efficacy of specific surgical techniques.

In addition, while the new exhibit will continue to collect motion sensor and EEG data from surgeons completing simulated operations, this year’s data collection also will include EEG sensors on expert coaches observing the simulated operations. This will permit data collection on the thought patterns that well-established surgeons exhibit when observing an operation, to better characterize varying levels of surgical mastery.

### Extending the Project Worldwide

A further change in the Surgical Metrics Project this year is an expansion of the project’s reach. Dr. Pugh explained that the project is now connected to the West African College of Surgeons (WACS) and the College of Surgeons of East, Central, and Southern Africa (COSECSA). These international organizations work to provide education and training in several Western and sub-Saharan African nations. With industry support, WACS and COSECSA will partner with the ACS Member Services Division and work with the Surgical Metrics Project on establishing how to efficiently use data-driven training methods with surgeons in low- and middle-income countries.

“How do you build low-cost simulations and provide feedback and access to a database of experienced healthcare practitioners so that they can see where they are on the learning curve to competency or to mastery?” asked Dr. Pugh about the purpose of the collaboration. With that question

Surgical Metrics Project associates help a participant apply hand and fingers sensors used to track movements while completing a operation simulation.



A Clinical Congress attendee takes part in a Surgical Metrics Project simulation while wearing a forehead EEG sensor.



answered, “Then you can start to benchmark what it is that you need to partner with the leaders in those countries to help them to train more surgeons and increase access to care.”

### Advancing Surgical Education

In any country, the benefits of the Surgical Metrics Project are fundamentally the same: The project offers the opportunity to update the way surgeons are trained.

A database on what surgeons do in a standardized simulation and the operating room (OR) can help surgeons understand where their present skills fall on a spectrum of competence, helping them reach mastery and maintain their skills over time. “It enables surgical trainees to have an objective digital measure of where they are and where they should be, so they know exactly where they are on the learning curve to mastery as they progress throughout their career,” Dr. Pugh said.

Beyond simply improving individual surgeons’ skills, this option can update the length and efficacy of all surgical education and training, Dr. Pugh said, by ensuring surgeons receive the feedback they need much faster than they currently do.

“What if you had a database of that surgeon’s procedures and you knew exactly what they needed to expedite obtaining a certain level of quality and mastery? You could train specific procedural skills in 1 month as opposed to infrequent exposure and training over a 5-year period because right now, in our current mode of training, you’re waiting for the mistake or the less efficient operative approach to happen. But if we had a digital database of that person’s top five cases, they could review key moments in an hour,” potentially transforming the time it would take to complete surgical training.

### Eliminating Bias in Surgical Training

Dr. Pugh also noted that the Surgical Metrics Project is meant to aid in ensuring more surgeons learn to operate without “the bias in human observation and feedback” hampering their progress.

She explained, “Making assessment digital helps because you actually have objective metrics. The sensor doesn’t know whether it’s a female or male or a tall person or a short person. The sensors and video data know only what your working volume is, the anatomical region where you spent most of your

“Making assessment digital helps because you actually have objective metrics. The sensor doesn’t know whether it’s a female or male or a tall person or a short person.”

Dr. Carla Pugh

time, how many times you paused when you were thinking, and if you, at a critical moment, found interesting or exciting anatomy or unexpected bleeding. That’s all this determines.”

The departure from subjective assessments to measuring skills through digital data opens the door to an objective, more efficient surgical training environment. “In terms of the dream and the vision of the future,” Dr. Pugh explained, “This will just be something that’s incorporated into our daily workplace.”

## SURGICAL ERGONOMICS CLINIC

Not far from the Surgical Metrics Project in the Exhibit Hall will be a second, fully independent simulation-based project. The Surgical Ergonomics Clinic will offer surgical stations simulating the operating room environments to show surgeons how best to stand, move, and collaborate with their teammates to maximize surgical efficiency while maintaining their own musculoskeletal health.

According to the project’s organizer, Gyusung Lee, PhD, Assistant Director of Simulation-Based Education and Training in the ACS Division of Education, the clinic is about “bringing ergonomics education to the surgeon with hands-on experience, rather than just asking them to read something published elsewhere.”

### Meaningful Help for Individual Surgeons

Dr. Lee emphasized that the ergonomics clinic’s first mission is proactive help: “What we really want to do is not just try to help the surgeons who are already experiencing physical symptoms or complications from ergonomically incorrect operating, but we want to prevent or at least delay the onset of such problems even for the younger surgeons as much as possible.”

Surgeons walking into the Surgical Ergonomics Clinic area in the Exhibit Hall will find themselves in a large, open space set up with stations simulating operating rooms for open, laparoscopic, and robotic surgeries. After a brief sign-up process, participants will have the opportunity to try out the adjustable OR components of each station, such as an OR table or laparoscopic monitor, and receive personalized feedback on body positioning, movement, sightlines, and other ergonomics issues from the ergonomics coaches on hand, including ACS Surgical Ergonomics Committee members and physical therapists.

While no medical care or referrals can be given (a constraint imposed by state-level licensing requirements), general recommendations on beneficial stretching and strengthening exercises and other surgery-specific ergonomics basics will be available to all.<sup>5</sup>

### Follow-Up for the Greater Good

In addition, the Surgical Ergonomics Clinic is conducting research. As with the Surgical Metrics Project, this study invites Clinical Congress attendees to become the study’s subjects. For participants, the project will entail a brief survey onsite, plus a series of four follow-up surveys

## Surgical Ergonomics Clinic AT A GLANCE

### What:

A site simulating open, laparoscopic, and robotic surgeries so surgeons can explore correct ergonomics positioning and movement

### Where:

Booth 510 in the Exhibit Hall at the Boston Convention & Exhibition Center

### When:

9:00 am–4:30 pm, October 23–25

### Research:

Willing participants can sign up to receive over 9 months a series of brief surveys on ergonomics in their daily working lives

### Is advance sign-up required?

No, participants can just walk up whenever they like

### How long will participants spend onsite?

20 to 30 minutes, depending on how many stations they visit

### Why should surgeons attend?

To discover ways to ameliorate, prevent, or delay physical harm from ergonomically incorrect positioning while operating

### What’s new this year?

A space four times larger than the 2022 clinic

“I asked what they do when they feel the pains and physical symptoms in the OR, and they said, ‘I simply ignore them and just keep going.’ Well, we want to change the culture.”

Dr. Gyusung Lee

over the course of 9 months, which will seek details of the surgical ergonomic interventions that surgeons have implemented in their practice, the sustainability of these interventions over time, and the interventions’ impact on any ergonomic symptoms.

The Surgical Ergonomics Clinic also is working on directly expanding the number of people their projects reach. The project hopes to connect with more than 100 simulation sites that the ACS has accredited worldwide to bring evidence-based ergonomics clinics directly to them. “We hope to develop something for them, so that the ergonomic education can also take place onsite at each of the academic medicine and simulation centers and that they don’t have to come all the way to Clinical Congress every single year to learn something easily shared,” Dr. Lee said.

In addition, Dr. Lee is working to draw together industry partners to share the project’s data. These meetings will point out which surgical instruments are improperly designed for use by surgeons of different heights, body sizes, or strength levels, in the hopes that this will lead to the creation of surgical instruments that function more efficiently, more comfortably, and with less injury risk to surgeons.

### Changing the Culture of Surgical Practice

The overarching work of the program goes beyond advice to individuals, published research, and even worldwide institutional partnerships, however.

Dr. Lee said, “The one item I really talk about is the change of culture between the resident and the faculty members.”

He retold a story of an attending surgeon who was 5’3” working with a surgical resident who was 6’10”. The taller surgeon had to bend nearly to his waist to operate alongside his shorter superior.

“They were told just to accommodate what the attendings are using,” Dr. Lee said.

The standard in ergonomics, however, is to adjust the operating table to the height of the taller individual, accommodating the shorter one with a stepstool—the problem being that this may invert a hierarchy and ask an attending surgeon to alter their own long-established approach to operating. Other difficulties can arise for surgeons who are shorter than average or pregnant, Dr. Lee noted, which can require similar unsettling of power relationships to solve.

Dr. Lee said there is no way to fully address ergonomics without gently discarding adherence to hierarchy. “I was asking almost every single faculty member to talk to residents or trainees and ask about their ergonomics: ‘So, from the last case, was the operating table height good for you or the standing locations or postures? Did that work for you or not? Is there something we can do to help?’”

He suggested a similar approach for junior colleagues: “Not necessarily during the procedure in the OR, but afterward, you may just express that you have some challenges, have a discussion respectfully with your attending, and just let them know. They may listen to you and come up with some solutions.”

In addition, he noted that a cultural change involved a shift in the expectations of individual surgeons: “Surgeons were trained to ignore everything happening with them to take care of the patient. It’s a long, long process of building that habit. In my study, I asked what they do when they feel the pains and physical symptoms in the OR, and they said, ‘I simply ignore them and just keep going.’ Well, we want to change the culture, and there are more ergonomic options available now to do that.”

This is particularly true because ergonomics-related aches and pains are not confined to older surgeons. Dr. Lee said his analyses to date have shown that “the increased workload, or case volume, was the factor predicting the likelihood of a surgeon developing or reporting an ergonomic issue.”

### The Future Is Back

If the Surgical Ergonomics Clinic sounds familiar, like the Surgical Metrics Project, it is because it has appeared at Clinical Congress already. Beyond reiterating the successes of its first version (in 2022), however, the clinic will be visibly improved. In specific, its area in the Exhibit Hall will be four times larger than the one at Clinical Congress 2022. The change is meant to eliminate waiting times, as the project had more than 400 participating surgeons last year, a group large enough to occasionally cause lines of surgeons eager for ergonomic advice.

Dr. Lee said, “Some of the most common comments were, ‘Where have you been?’ and ‘Why did it take so long?’”

This year, the clinic is designed to eliminate waiting—and previous attendees are welcome to




come back for hands-on simulation and proactive advice once again. Dr. Lee said, “We encourage them to come back together, learn again, and recap what was learned last year.”

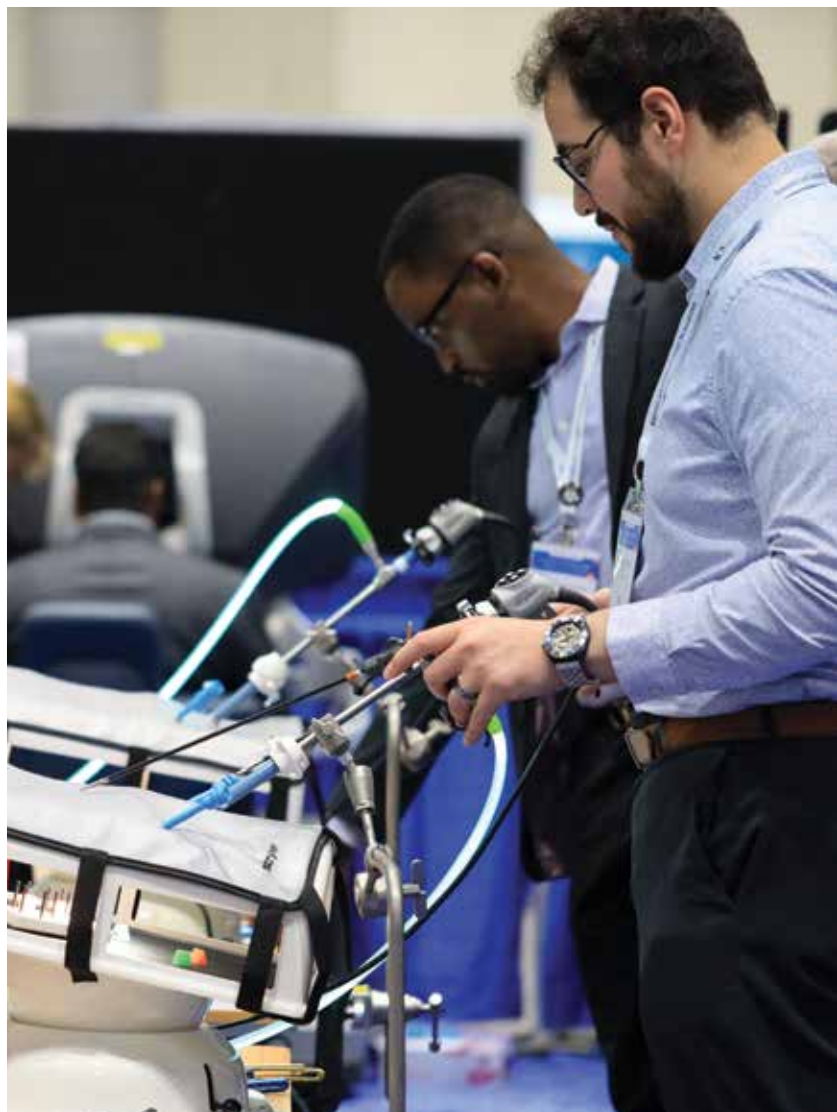
## ALIGNED WITH HISTORICAL PURPOSE

Both the Surgical Ergonomics Clinic and Surgical Metrics Project present intriguing offers to anyone at Clinical Congress interested in knowing more about how to operate safely, optimize effectiveness, and sustain a productive career—or those who want a quick break from meetings and didactic lectures at Clinical Congress for the hands-on tasks many surgeons enjoy.

The forward-looking Surgical Ergonomics Clinic and Surgical Metrics Project also reinforce a storied past. Clinical Congress was among the first events that brought American surgeons together to improve the field of surgery. The success of the first event, in 1910, created the momentum necessary for the founding of the American College of Surgeons in 1913. The mission of improving surgical quality through meaningful innovation is an unbroken thread through the entire Clinical Congress—and, in the upcoming conference, both the Surgical Ergonomics Clinic and Surgical Metrics Project, too.

If you haven't registered yet for Clinical Congress, there's still time. Visit [facs.org/clincon2023](https://facs.org/clincon2023). 

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Two Clinical Congress attendees examine the laparoscopic surgery station at the Surgical Ergonomics Clinic.

# Study Clarifies Link between



# Obesity and Surgical Complications

Jim McCartney

# The largest multicenter retrospective analysis to date linking obesity and surgical outcomes is shedding new light on complications and the opportunities for preoperative patient management.

THE STUDY, AN ANALYSIS using 7 years of data from the ACS National Surgical Quality Improvement Program® (NSQIP®), was published in the May 2023 issue of *Surgery*. It included 2012–2018 data from approximately 5.6 million patients and 64 studies within nine surgical specialties (general, gynecology, neurosurgery, orthopaedics, otolaryngology, plastics, thoracic, urology, and vascular).<sup>1</sup>

“Most studies have been about the impact on specific operations, disease states, and patient populations,” said senior author Robert A. Meguid, MD, MPH, FACS, a professor of cardiothoracic surgery at the University of Colorado Department of Surgery in Aurora. “We wanted to harness the power of the ACS NSQIP database to examine outcomes in obese class II and III populations, which were largely underpowered in prior studies.”

Obese class II patients have a body mass index (BMI) of 35.0 to 39.9 kg/m<sup>2</sup>; obese class III patients have a BMI of at least 40.0 kg/m<sup>2</sup>.

More than two in five adults in the US are obese (BMI of at least 30.0 kg/m<sup>2</sup>), and the number of obese surgical patients continues to grow. Obesity is associated with cardiovascular disease, stroke, type 2 diabetes, certain types of cancer, and other comorbidities.<sup>2-3</sup>

## Study Results

Grouping patients by BMI class, the researchers examined 12 postoperative adverse outcomes: 30-day mortality, overall morbidity, pulmonary, infection, urinary tract infection, venous thromboembolism (VTE), cardiac, bleeding/transfusion, renal, stroke, unplanned readmission, and nonhome discharge.

“Our team thought we’d see an increased rate across the board of the different complications but that wasn’t the case,” said Dr. Meguid.

They did not find elevated odds of postoperative complications such as mortality, overall morbidity, pulmonary issues, and urinary tract infection among obese patients. What they did find was an association between obesity and higher rates of infection, VTE, and renal failure.

The researchers offered the following explanations:

- Infection may be higher because of an impaired immune system response due to immune cell interactions with adipocytes, increased wound tension after closure, trauma due to retractor use to improve surgical visibility, and poor microcirculation among obese patients. Infections are also associated with longer operations, possibly due to intraoperative hypothermia.
- VTE may be due to a prothrombotic state of chronic inflammation and impaired fibrinolysis caused by the release of proinflammatory cytokines and plasminogen-activator inhibitor-1 by adipocytes. Obesity also is associated with a chronic inflammatory state, decreased perioperative mobility for obese patients, underdosing of subcutaneous heparin, and challenges with using standard sequential compression devices.
- Renal failure may be due to volume shifts associated with a larger volume of distribution, increased intra-abdominal pressure associated with possible renal hypoperfusion, and chronic inflammation among obese patients.

A big takeaway from the study was that more effort needs to be made preoperatively on preventing complications, especially VTE. “Even in this really diverse population, VTE events were statistically more common,” explained Anthony T. Petrick, MD, FACS, a general surgeon specializing in esophageal and bariatric surgery at Geisinger Health in Danville,

Pennsylvania, and Chair of the ACS Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) Data and Quality Committee.

In addition to specific complications, the researchers examined how long an operation took, the rate of complications from complex operations, and challenges to patient recovery.

### Longer Operations

Although the study showed that it takes longer to operate on overweight and obese patients than on normal-weight patients, the difference was marginal (89 minutes vs. 83 minutes), possibly due to the wide variety of operations included, as well as advances in technology such as minimally invasive procedures.

Nevertheless, the small difference in operating time was a surprise to Dr. Meguid, who—as a cardiothoracic surgeon performing foregut surgery—said he experiences longer and more complicated procedures when patients have extra intra-abdominal fat tissue because it decreases visibility and complicates access to the organs.

“There’s also an increase in what we call dead space where the wound is being closed, due to the fat tissue,” Dr. Meguid said.

Longer operation times in the study were associated with obese patients undergoing plastic reconstructive surgery, neurologic surgery, and gynecologic surgery.

### More Complications in Complex Operations

The researchers found that the more complex the operation, the greater the likelihood of a wide variety of complications.

For higher-complexity operations such as pancreaticoduodenectomy, however, obese patients also faced increased risk of mortality, overall morbidity, pulmonary complications, unplanned readmissions, and nonhome discharge.

In lower-complexity operations such as cholecystectomy, obese patients had an increased risk of infection, VTE, and renal complications, similar to the overall outcomes.

### Harder Recovery

In his practice, Dr. Meguid said he often sees a correlation between high BMI and difficulty in walking after the operation, as nurses, physical



Dr. Robert Meguid

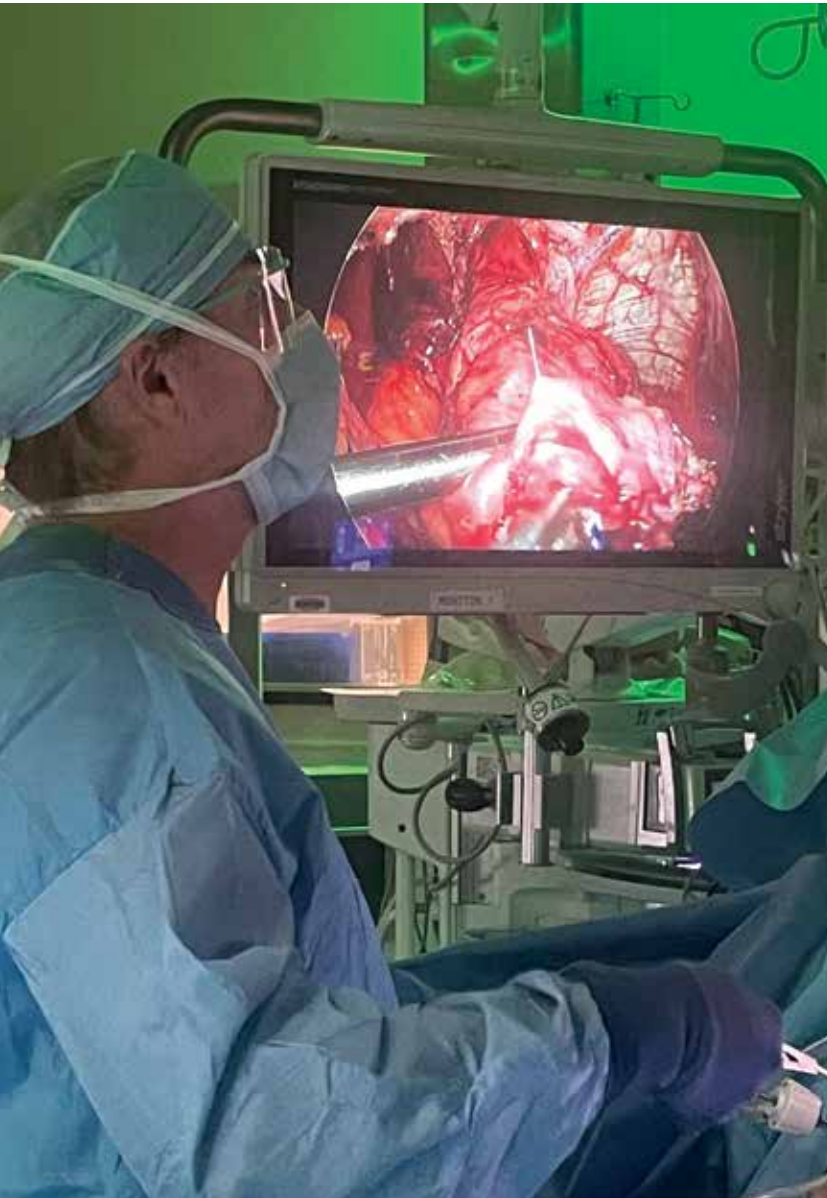
therapists, and assistants often have a hard time getting obese patients out of bed. This reality can prolong recovery and increase complications, since perioperative ambulation decreases the risk of pulmonary and VTE complications. In addition, obese patients are more likely to face wound complications than normal-weight patients, which can lengthen their recovery.

### Limitations of the Study

Although the broad, sweeping approach of the study is one of its strengths, it also is the source of some of its limitations because it groups many different operations and surgical specialties into one analysis.

“You’re looking at a very diverse group of procedures, some of which are associated with very low complication rates across the board, so the impact of obesity on these outcomes is diminished,” Dr. Petrick said.

There can be significant differences between procedures that occur at the skin level compared to those within body cavities, especially when it comes to infection, but the impact of these various types of infections were not differentiated in the study.



Dr. Anthony Petrick repairs a hiatal hernia and revises the gastric pouch in a patient with a previous laparoscopic gastric bypass.

### Need for Longer-Term Outcomes

“Many complications for surgical patients in general, and obese patients in particular, occur more than 30 days after an operation, and therefore, aren’t captured in the ACS NSQIP patient data,” explained Dr. Meguid. “The ACS has made an effort to start looking at longer-term outcomes and measure patient-reported outcomes, which are, to me, the heart of how patients are doing.”

There are challenges, however, in gathering long-term patient data, said Dr. Petrick, a participant in MBSAQIP.

Getting this long-term patient data often requires multiple telephone calls, and obtaining this information is a particular challenge for national patient databases. For example, MBSAQIP incorporates data on patients a year out from their bariatric surgery, such as weight loss, he said. But it has been difficult to register even 10% of these patients—a reality that is compounded by the fact that people move frequently, and their contact information often changes.

It may be more strategic for specific institutions to focus on gathering longer follow-up information from patients, according to Dr. Petrick.

### Better Metric for Obesity

Although the ease and simplicity of the BMI measurement makes it a convenient tool, it has several inherent limitations. BMI assessments do not consider cardiorespiratory fitness or metabolic health; some individuals may have higher BMIs due to higher muscle mass and bone density rather than higher levels of fat. In addition, not all types of obesity are considered equal; for example, visceral fat is associated with increased mortality risk.

Some possibilities for better measures include waist circumference or body fat percentage. “A lot

## Study Data

7  
years  
(2012–2018)

5.6 million  
patients

64  
studies

9  
surgical  
specialties

General  
Gynecology  
Neurosurgery  
Orthopaedics  
Otolaryngology  
Plastics  
Thoracic  
Urology  
Vascular

of our medical programs that manage patients long term use these measures,” Dr. Petrick said. However, these alternative measures typically require more time, effort, and money. BMI, on the other hand, is simple and easy to compute from regularly collected patient information.

“It’s a question of ‘Is good better than perfect?’” Dr. Petrick said. “BMI is universally available, and it’s pretty good, so it’s an important step forward for medicine. But clearly it isn’t perfect.”

### Reducing Surgical Risks for Obese Patients

To help better mitigate potential obesity-related surgical risks, Dr. Meguid recommends using a risk-assessment tool to create a preoperative plan for the patient, their families, and the surgical team.

This individualized patient care plan would complement the standard of care regarding VTE prophylaxis, intraoperative normothermia, and appropriate perioperative antibiotic administration and glucose control.

“For instance, surgeons can take extra precautions to minimize renal failure by monitoring postoperative renal function,” he said. “For wound infections, we would use meticulous tissue handling and wound closure techniques, and early and more frequent perioperative follow-up to identify and treat infections early.”

Several national quality improvement programs through MBSAQIP have demonstrated successful strategies to improve surgical outcomes in obese patients. They include Decreasing Readmissions through Opportunities Provided (DROP), Employing New Enhanced Recovery Goals for Bariatric Surgery (ENERGY),<sup>4</sup> and Bariatric Surgery Targeting Opioids Postoperatively (BSTOP).<sup>5</sup>

The goal of DROP was to decrease all-cause



30-day readmissions for primary bariatric surgery at comprehensive centers by 20% in 1 year using interventions that include an educational video, a discharge checklist, follow-up phone calls by an RN, distribution of key clinical phone numbers, and multiple visits with the nutritionist.<sup>6</sup> ENERGY focused on reducing postoperative surgical infections through measures like antibiotic delivery and prepping patients to ensure they're appropriately nourished and their blood glucose levels are under control,<sup>7</sup> while BSTOP created a multimodal perioperative pain management regimen that helped to minimize opioid use.<sup>5</sup>

From the recent *Surgery* study, other suggestions to reduce risk for obese surgical patients include:

- Performing minimally invasive procedures versus open procedures, when possible
- Using weight-based dosing for anesthetics, muscle relaxants, neuromuscular reversal agents, analgesics, antibiotics, and anticoagulants
- Ensuring appropriate perioperative care such as early ambulation is available
- Conducting early and more frequent perioperative follow-up to guide intervention and minimize postoperative complications
- Recommending patients follow specific infection protocols such as a multidisciplinary wound-management approach, daily bathing, and/or negative pressure wound therapy
- Stratifying patients using a risk score such as the Caprini score to help prevent VTE; high-risk patients should receive mechanical and pharmacological prophylaxis, in some cases, even after hospital discharge
- Maintaining adequate hemodynamics and sufficient fluid resuscitation and avoiding nephrotoxic agents to help preventing acute kidney injury
- Optimizing preoperative hemoglobin levels to avoid excessive transfusions

## ACS Strong for Surgery Program

For obese patients preparing for elective procedures, losing weight should be part of the equation.

Many institutions have enhanced recovery after surgery protocols, and the ACS Strong for Surgery

program provides guidance and strategies—such as checklists to assess nutrition, blood sugar control, smoking cessation, and medications—to optimize the health of patients before surgery. The Strong for Surgery program also includes a patient toolkit.

More information about the program is available at [facs.org/quality-programs/strong-for-surgery](https://facs.org/quality-programs/strong-for-surgery).

**Jim McCartney** is a freelance writer.

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# The Operative Word

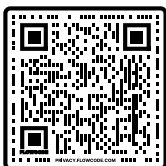
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# Ethics Challenges Shape Patient Care and Surgeon Well-Being

Matthew Fox, MSHC



Surgeons face clear challenges in contemporary healthcare, including growing administrative and economic burdens, workforce issues, and the continuing necessity of improving quality and safety. But some of surgeons' most persistent dilemmas are often less described, less discussed, and more nebulous—the ethical challenges faced in daily practice.

SURGICAL ETHICS HAS ITS basis in broader medical ethics, but the unique nature of a surgeon's work—particularly the necessity of causing some bodily harm to induce greater healing—necessitates a distinct perspective. The ACS has played an important role in defining some of the core ethical issues that surgeons face. For example, the 2006 textbook, *Ethical Issues in Clinical Surgery*, has served as a lodestar for guiding discussion on surgical ethics for more than 15 years and was further refined in the 2017 ACS textbook, *Ethical Issues in Surgical Care*.

But are the issues raised by surgical ethicists in these and related texts still relevant to all surgeons?

To answer that question, authors of a recently released *Journal of the American College of Surgeons* (JACS) article<sup>1</sup> interviewed attending surgeons at a single institution to get their thoughts on the primary ethical challenges they face, revealing what has been consistent and what has changed in surgical ethics.

In the JACS article, study authors and experts in the field share their thoughts on modern surgical ethics, the impact that ethical dilemmas can have on

surgeons and their well-being, and how education can address surgeons' burdens.

### Consistency and Change

*Ethical Issues in Clinical Surgery* identifies six core themes that cover a broader set of topics in surgical ethics: Competition of interests, truth-telling, confidentiality, professional obligations, end-of-life care, and surrogate decision-making. In the JACS article, the interviewed surgeons provided their thoughts on the pressing ethical issues they regularly face, and four of the six core issues were identified by modern practicing surgeons:

- Professional obligations, including conflict between healthcare team members, just allocation of resources, and challenges related to innovation and surgical education
- Competition of interests, both financial and personal
- End-of-life care, including pressure to provide interventions unlikely to produce benefit
- Truth-telling

Meanwhile, issues related to confidentiality and surrogate decision-making were not identified. These results were largely in line with the expectations of the authors.

“The themes that we found were quite well encompassed by the original six themes laid out in *Ethical Issues in Clinical Surgery*,” said Katherine Fischkoff, MD, FACS, a general and acute care surgeon at Columbia University in New York, New York, and coauthor of the *JACS* article. “But the shift away from the confidentiality issue, for example, and the surrogate decision-making suggest effective education and policymaking around those issues.”

Dr. Fischkoff raises a key point regarding the ethical issues that weigh on surgeons: the formerly identified challenges related to confidentiality and surrogate decision-making have been addressed enough through training, institutional policy, or law such that they occupy a less theoretical ethical space and a more tangible, consequential one.

“Confidentiality used to be a big deal, but we don’t think of it so much as an ethical issue because now it’s part of the law. If you choose to reveal personal information about a patient to a third party, you will face consequences for it,” said Peter Angelos, MD, PhD, FACS, the Linda Kohler Anderson Professor of Surgery and Surgical Ethics and director of The MacLean Center for Clinical Medical Ethics at The University of Chicago Medicine in Illinois. He also wrote an invited commentary in response to the *JACS* article.<sup>2</sup>

“There are major legal ramifications now to breach confidentiality, whereas that used to be primarily an ethical responsibility rather than a legal responsibility,” he said.

Updates to the Health Insurance Portability and Accountability Act provided the legal basis for hospitals and healthcare institutions to demand training and education on the topic. Similarly,

surrogate decision-making often is included in hospital procedures, with patients routinely asked about living wills that designate someone as durable power of attorney for healthcare at the time of admission.

The guidelines and practices applied to these two formerly notable challenges suggest that yesterday’s ethical challenges could be tomorrow’s accepted processes, but the nature of the four consistent challenges makes that potential transition more complex.

“I think part of the reason that professional obligations, financial concerns, end-of-life care, and truth-telling persist as challenges is because it’s hard to make a rule about things such as futility at end of life, or when you’re covering a colleague’s patients and you disagree with their management,” Dr. Fischkoff said.

### **Emerging Challenges for Ethics and Well-Being**

While most of the originally described six core ethical challenges remain extant in surgeons’ practices, and some have faded from attention in law and policy, the *JACS* study revealed a dilemma that has become more prominent—pressure to provide medically unindicated care, outside of end-of-life scenarios, that comes both from patients and colleagues.

Interviewees noted a tension between what patients want or think they need in scenarios where the surgeon thought the procedure would be of questionable benefit or safety. At the same time, medical or interventionalist colleagues sometimes push surgery aggressively while not considering factors related to a specific surgery on a specific patient.

When considering the reason pressure to provide potentially unindicated care has increased, one can

# Six Core Themes in Surgical Ethics



Competition  
of interests



Truth-telling



Confidentiality



Professional  
obligations



End-of-life care



Surrogate  
decision-making

look at the advanced state of modern medicine and the potential afforded by surgery.

“I think the complexity of medical care has made these issues come up more, particularly around surgery,” Dr. Fischkoff said. “We have more interventions that we can offer. Patients are kept alive longer, particularly when we’re talking about fertility at the end of life. The issue has grown exponentially because of technology and our general advancement in the surgical world.”

Growing pressure to provide care intersects with several of the other consistent ethical challenges that surgeons face, such as the professional obligations to support their colleagues when cross covering patients. In these situations, surgeons are faced with potentially operating on a patient, without having pre- or postoperative continuity or, conversely, being forced to choose whether to operate on a patient whom they may not have advised for surgery.

“If I’m cross covering at night for my partner who has told the patient that they ought to have an operation, which is scheduled for tomorrow, and I get called in the middle of the night because of an issue and I’m not sure that operating is the right thing to do, I’m in a tough spot,” Dr. Angelos said. “I don’t really have a long-term relationship with this patient. I’m just cross covering, but I’m being asked to justify a course of action that I may not have chosen.”

Further complicating these ethical queries are economic and financial considerations. There often is a financial incentive to operate on someone as opposed to not operate on someone, and health

“In combination with everything else that is difficult about modern practice...these difficult ethical cases can be very time consuming and emotionally draining, and I think that’s why they feel extra hard.”

Dr. Katherine Fischkoff

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systems are increasingly pressured to be cognizant of the bottom line.

“These are ethical dilemmas about wanting to support the economic health of the places we work, which is natural. But, feeling that those decisions sometimes don’t center on the patient and aren’t in alignment with our principles, is distressing,” said Carter Lebares, MD, FACS, a general surgeon and director of the University of California, San Francisco Center for Mindfulness in Surgery.

As Dr. Lebares and the authors of the *JACS* study note, that lack of alignment—the friction between the guiding principles of beneficence that generally drive physicians, and the realities of working in modern healthcare that increasingly focuses on an economic bottom line—can create moral distress for surgeons. Moreover, such misalignment of values and motivations can dramatically effect surgeon well-being and increase the risk of burnout.

Navigating this unique dynamic and attempting to give patients exactly what they need within the constraints of a health system, whether that is surgery, mental health services, medical weight management, and so on, can exact a heavy toll. And, unfortunately, daily ethical dilemmas present themselves against a backdrop of other increasing burdens.

“In combination with everything else that is difficult about modern practice, like documentation, handoffs, and case volume among the other necessary items on your task lists, these difficult ethical cases can be very time consuming and emotionally draining, and I think that’s why they feel extra hard,” said Dr. Fischkoff.

“To maintain well-being, we need to pay attention to things that amplify burdens as well as those that amplify rewards. Moral distress has a significant negative impact,” Dr. Lebares said, whereas relationships in medicine are often at the heart of our deepest rewards. “At the hub of many of our ethical issues is our deep respect for the physician-patient relationship, and the profound value we derive from belonging to the fellowship of surgeons. These relationships give us so much,” Dr. Lebares said.

Therefore, focusing on systems, guidance, and resources that facilitate relationships—colleague to colleague, and surgeon to patient—especially in the realm of ethical dilemmas, can help us discern between our personal opinions and our professional responsibilities. Education, guidelines, and built-in support systems (such as standardized practices surrounding living wills and confidentiality), can reflect ethical principles agreed upon by the medical community. Support scaffolds like this can help surgeons maintain relationship trust while ameliorating the burden of navigating these dilemmas alone.

### **Institutional Support**

The *JACS* study suggests that practicing surgeons are grappling with ethical dilemmas in the regular course of their work. However, the ability for surgeons to navigate these challenges can be hindered by a lack of awareness of ethical guidance from institutions both in training and while in practice.

Healthcare institutions have a powerful role in creating an atmosphere that promotes discourse

# “Ethical decision-making is a skill. What is the branching pathway through our thinking and decisions to determine the right thing to do?”

Dr. Carter Lebares

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and taking time to consider the ethical implications of patient care.

Is the setup of the system one that encourages ethical activity and ethical behavior, or is it one that tends to discourage it? Is it an institution where physicians feel like they are going against the flow if they're trying to make decisions on behalf of their patients that they think are ethical? These questions are at the heart of institutional ethics, according to Dr. Angelos.

“The comfort that a surgeon has in advocating for a patient in the face of economic pressures is more an influence on the part of a health system, rather than an individual surgeon making recommendations for an individual patient,” he said.

## The Critical Role of Education

The foundation of a supportive institution—as well as any policies or laws that alleviate the burden of surgical ethical challenges on practicing surgeons—is education.

Currently, there are few options for individuals or institutions to engage in standardized surgical ethics education. Rather, much of how surgeons learn about moral and applied ethics in practice comes through mentors and colleagues in what is described as the “hidden curriculum.”<sup>1</sup> However, because this informal process may not be sufficient to help guide surgeons through difficult ethical challenges, a standardized curriculum could be a powerful tool.

Interviewees in the *JACS* article were broadly supportive of a dedicated surgical ethics curriculum that goes beyond the ethics taught in medical school. Even surgeons who might be initially skeptical of formal ethics training often reveal their interest in the field simply through conversation.

“We love to talk about ethics—we talk about it in the hallways, we talk about our really difficult cases, the ones that weigh on our minds, the ones that are stressful,” Dr. Fischkoff said. “When we interviewed people, they would relay all kinds of experiences,

from the challenge they faced 10 years ago or the argument they had 1 week ago.”

Harnessing that interest and packaging it into a practical, useful form is the ask, and the theoretical nature of the field leaves education or a curriculum up to a broad range of ideas. Dr. Fischkoff suggests basing education within real cases, and it could be folded into Morbidity and Mortality Conferences, dissecting cases that had surgical or medical complications.

“I think it would be very useful both within case complications already being presented to talk about the ethical issues, as well as to talk about a case specifically because it had really complicated ethical issues,” she said. “Maybe we're not focusing on the death of that patient but discussing the ethical difficulties of the case. Perhaps the patient was dying, and the family wanted me to do everything I could, and I did a laparotomy, but then she died that night, and I wonder if she didn't need to have that procedure at all.”

These experiences tend to resonate with fellow surgeons, and it can be particularly important to share them with residents, since younger surgeons often are at the frontline of communicating with patients.

“Understanding that there is a steep learning curve in medicine in general and that many of the ethical issues that go along with it make some cases more difficult, will get better over time,” Dr. Fischkoff said.

And because of the connection between managing ethical challenges and surgeon well-being, Dr. Lebares suggests that an ethics curriculum could reasonably fall under a longitudinal well-being curriculum for trainees and/or those in early practice.

“We know there is a mind-body connection at the heart of stress and well-being. Equipping people with cognitive skills to recognize their own distress and create space between their feelings and their reactions, can allow surgeons to look at challenging



situations with less reactivity, entanglement, and suffering,” she said.

With the added guidance of experts—especially surgeon-ethicists who understand the issues that surgeons face daily—and the development of consensus guidelines, the field of medicine can improve surgeons’ abilities to meet ethical challenges head on with equipoise.

“Ethical decision-making is a skill. What is the branching pathway through our thinking and decisions to determine the right thing to do?” Dr. Lebares asked. “If we learn some emotional regulation and have experts teach us underlying principles, we simultaneously improve well-being by reducing the stress of feeling like we’re in the middle of the ocean, where the water is deep and the waves are big, and we don’t know how to get to shore.”

## ACS as Ethics Leader

The ACS is one of the only organizations dedicated to exploring surgical ethics that are broadly applicable throughout the field. According to Dr. Angelos, the College can contribute strongly to further defining and responding to surgeons’ ethical challenges.


“There is no group that speaks for the world of surgery like the ACS,” he said, adding that the College is in position to create and promulgate basic minimal curricular requirements in surgical ethics.

“It isn’t for the ACS to tell a surgeon what is right and wrong, but rather that these are issues that everybody ought to be conversant in,” said Dr. Angelos. “We ought to know that they are challenging, that they require a lot of thought, and that if, as a new surgeon, we feel some moral ambiguity about what the right thing to do is in a certain scenario, we can refer to examples or resources from the College and talk to our colleagues about it.”

The ACS is well-known as a leader in developing best practices for surgeons across the continuum of

care, Dr. Lebares said, and could take on a similar role in ethics.

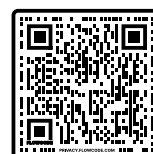
“The ACS historically has been involved in establishing standards for the field, with the National Surgical Quality Improvement Program, for example, changing how surgeons define and incorporate best practices,” she said. “Having an organization that supports ethics and gives it a level of seriousness is something the College is critically positioned to do.”

There is a spectrum of ethical challenges that surgeons face in their daily practice. However, these shared themes suggest that a collective voice could lead surgeons across disciplines to better understand their own needs and the needs of their patients, as well as equip surgeons with tools to navigate the sometimes winding path of how to do best by their patients and their profession. 

**Matthew Fox** is the Digital Managing Editor in the ACS Division of Integrated Communications in Chicago, IL.

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Dr. Monica Khattak

# It's Never Too Late for Breast Cancer Patients to Quit Smoking

Monica Khattak, DO  
John Maa, MD, FACS  
Alyssa Takahashi  
Julie E. Lang, MD

TOBACCO USE REMAINS the leading cause of preventable disease and deaths in the US. An estimated 34 million US adults, and 1.3 billion people worldwide, smoke. With approximately 8 million smoking-related deaths globally each year, cancer is the leading cause of these deaths.<sup>1</sup>

The ACS Commission on Cancer (CoC) recently announced new initiatives to promote smoking cessation within US cancer hospitals—Just ASK and the complementary Beyond ASK.

ACS CoC Chair Timothy W. Mullett, MD, MBA, FACS, participated in a White House forum focused on expanding equitable access to smoking cessation programs and reducing the burden of tobacco-related cancers, which also are part of President Biden's Cancer Moonshot initiative. Cancer Moonshot is a national effort to reduce deaths from cancer by 50% within 25 years and improve quality of life for people with cancer and cancer survivors. In addition, because smoking leads to approximately 30% of cancer deaths in the US, the initiative will focus on increasing the number of people who quit smoking.

Smoking impacts surgical care across all specialties, with breast cancer being the most common cancer among women globally.

This viewpoint article focuses on recommendations for the care of patients who smoke and have breast diseases.

### **Risks of Smoking on Breast Disease**

Tobacco contains known mammary carcinogens such as polycyclic aromatic hydrocarbons and aromatic amines that are stored in breast adipose tissue and carry a known anti-estrogenic effect that can induce early menopause.<sup>1</sup> An estimated 90% of breast cancer cases are influenced by environmental factors and lifestyle.

Both current and former female smokers face a significantly increased risk of breast disease and breast cancer. Women who start smoking at an early age and before their first childbirth are at an increased risk of malignancy. Overall, the carcinogenic risk of smoking is greatest in

premenopausal women.<sup>2</sup>

Smoking cessation around the diagnosis of breast cancer should be encouraged, as extensive research demonstrates the most powerful incentive for a smoker to quit is after the new diagnosis of heart disease or cancer.

One study noted that slightly less than 75% of lung cancer patients quit smoking by their surgery dates and nearly half (48.9%) continued to abstain from smoking 1 year postoperatively, highlighting the power of the teachable moment of a cancer diagnosis to convince a smoker to quit.<sup>3</sup>

### **Impact of Smoking on Perioperative Surgical Outcomes**

Smoking-related illnesses cost the US more than \$600 billion a year in healthcare expenditures and lost productivity from smoking-related illnesses and premature

**Smoking impacts surgical care across all specialties, with breast cancer being the most common cancer among women globally.**

death.<sup>4</sup> Smoking is linked to chronic health conditions, including coronary artery disease, cerebrovascular disease, and chronic obstructive pulmonary disease, that adversely impact perioperative surgical outcomes.

An ACS National Surgical Quality Improvement Program database study demonstrated that current smokers have higher odds of overall, pulmonary, wound, and septic/shock complications

following most cardiovascular and oncologic operations.<sup>5</sup> Another meta-analysis of postoperative complications found that surgical site infection, dehiscence, and delayed healing occurred twice as frequently in smokers undergoing surgery.<sup>6</sup>

### Impact of Smoking on Breast Surgery Outcomes

Cigarette smoke contains nicotine (a vasoconstrictor),

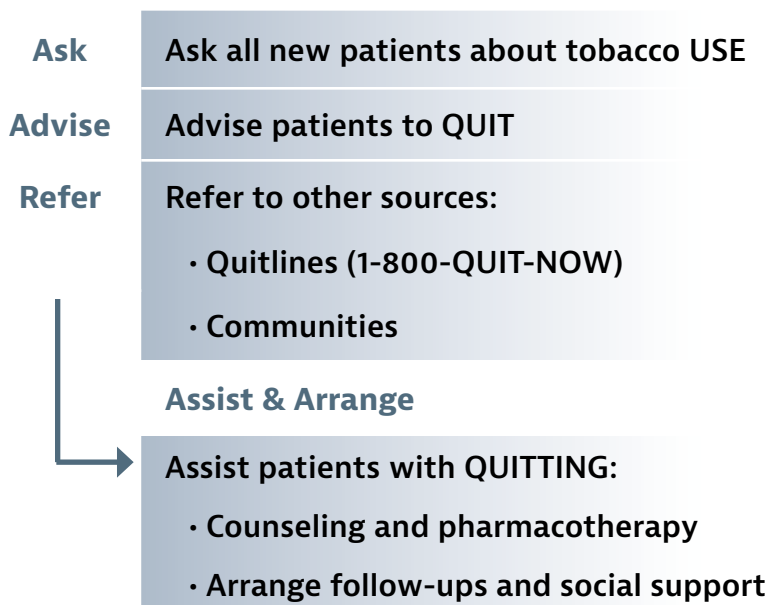
carbon monoxide, and hydrogen cyanide, which impair wound healing by producing tissue hypoxia. In patients undergoing simple mastectomy, modified radical mastectomy, or breast-conserving surgery, active smoking is an independent risk factor for wound-healing complications, including skin flap necrosis, epidermolysis, and surgical site infections.<sup>6</sup>

In a retrospective study of more than 1,100 patients, 14.8% of smokers had a wound complication following mastectomy compared to 7.1% of nonsmokers.<sup>7</sup> The Cleveland Clinic has reported greater overall complication rates in smokers undergoing postmastectomy breast reconstruction.<sup>8</sup>

For smokers who undergo autologous repair with flap reconstruction, complications included partial flap necrosis, abdominal wall necrosis, hernia formation, fat necrosis, and increased revision rates for reshaping of scars.<sup>8</sup> This is consistent with recent studies that show higher rates of wound complications in active and previous smokers undergoing breast prosthesis.<sup>6</sup>

For these reasons, many plastic surgeons delay autologous reconstruction until patients quit smoking, despite immediate reconstruction

**Figure. Just ASK: Beyond ASK**



## Smoking cessation 4 to 8 weeks before elective surgery can result in improved perioperative pulmonary function and wound healing.

being more convenient for patients. Smoking cessation in the perioperative period is associated with improved survival in breast cancer patients across all tumor stages.<sup>9</sup>

### Smoking Cessation Counseling before Surgery

Smoking cessation 4 to 8 weeks before elective surgery can result in improved perioperative pulmonary function and wound healing.<sup>6</sup> In the UK, patients often are directed to undergo a smoking cessation course for several weeks before undergoing elective surgery. But given the concern of cancer spread, a lengthy time delay to achieve the ideal 4-to-8-week window for smoking cessation may not be realistic.

Proceeding directly to resection of the breast cancer may be more appropriate, and the key question then arises whether plastic surgery reconstruction should be offered immediately/ simultaneously or deferred to a second operation. As the second operation is elective, there is time for surgeons to counsel patients to stop smoking in an effort to reduce mortality and healthcare costs. Given the long-term health benefit from smoking cessation, smokers who undergo immediate definitive reconstruction should be referred for postoperative cessation treatment and counseling.

### Strategies to Promote Smoking Cessation

The power of nicotine addiction makes smoking cessation difficult, often requiring multiple quit attempts to succeed. Approximately 70% of smokers want to quit, although women may be less motivated to quit smoking.<sup>1,8</sup>

Traditionally, smoking cessation efforts on the part of surgeons have emphasized the Ask-Advise-Refer approach as part of an expanded social history assessment of tobacco use. The hallmarks are (see Figure, page 34):

- *Ask* all patients if they use tobacco.
- *Advise* smokers to quit.
- *Refer* patients to smoking cessation counselors or quitlines (1-800-QUIT-NOW).

For surgeons interested in assisting their patients with quitting, a variety of smoking cessation therapies are available, ranging from medications and nicotine replacement therapies, cognitive behavioral therapies, and holistic approaches, including hypnotherapy, yoga, mindfulness meditation, and acupuncture. Most cessation interventions are associated with durable quit rates under 10%, but combined behavioral counseling and pharmacotherapy can be

more effective.<sup>1</sup> Patients who are prompted multiple times with pamphlets, surveys, and by the healthcare team, were more likely to quit.<sup>6</sup>

The ACS Quit Smoking Before Surgery Program, which makes available resources to help surgeons support smoking cessation for their patients, includes a Quit Smoking Before Your Operation brochure that details treatment options and an action plan. In addition, Beyond ASK—the quality improvement project sponsored by the ACS Cancer Programs—offers a “road map” to smoking cessation along with a list of resources available to help patients quit smoking.

### Preoperative Smoking Cessation Interventions

At the Cleveland Clinic, plastic surgeons screen for smoking status during the preoperative consultation. Smokers are counseled about the increased risk for postoperative complications, provided with educational smoking cessation materials, and connected to cessation programs either via their primary care office or other services. Documenting this discussion in the medical record invites patients to participate further in their care. A urinary cotinine level is obtained to establish a baseline, with repeat testing performed at subsequent visits.

For patients who wish to undergo autologous reconstruction, an elective operation is deferred 1 to 3 months until smoking cessation is achieved. Due to the need for urgent oncologic treatment, the placement of tissue expanders at the initial operation is not delayed, regardless of smoking status.

When patients return for follow-up, their smoking status is monitored through urinary cotinine levels. If patients demonstrate motivation and adherence to smoking cessation, they can proceed with autologous breast reconstruction. Patients are encouraged to continue cessation postoperatively to optimize cancer outcomes and their overall health.

## Future Directions and New ACS Initiatives

The ACS CoC has introduced two initiatives that surgeons can incorporate into their practices to help curb the deadly toll of tobacco use. At the national level, the ACS CoC and National Accreditation Program for Breast Centers have partnered in Just ASK—an elective quality improvement project focused on strengthening evidence-based care across participating programs by leveraging existing resources to address smoking by ASKing all newly diagnosed cancer patients about their smoking status.

This program seeks to build a programs' capacity to offer cessation assistance to newly diagnosed cancer patients who

report currently smoking.

The 2023 goal for Beyond ASK is to increase the number of patients who are offered quitting assistance by at least 20% over baseline or maintain assistance to identified patients at over 90% through the year. Early results have underscored the value of using electronic health records for data collection, capture, reporting, and action as highlighted by the Cleveland Clinic experience.

Surgeons can harness the teachable moment of an upcoming breast cancer operation to emphasize that preoperative smoking cessation can increase the success of the upcoming operation and enhance overall long-term cancer survival. **B**

## Disclaimer

The thoughts and opinions expressed in this viewpoint article are solely those of the authors and do not necessarily reflect those of the ACS.

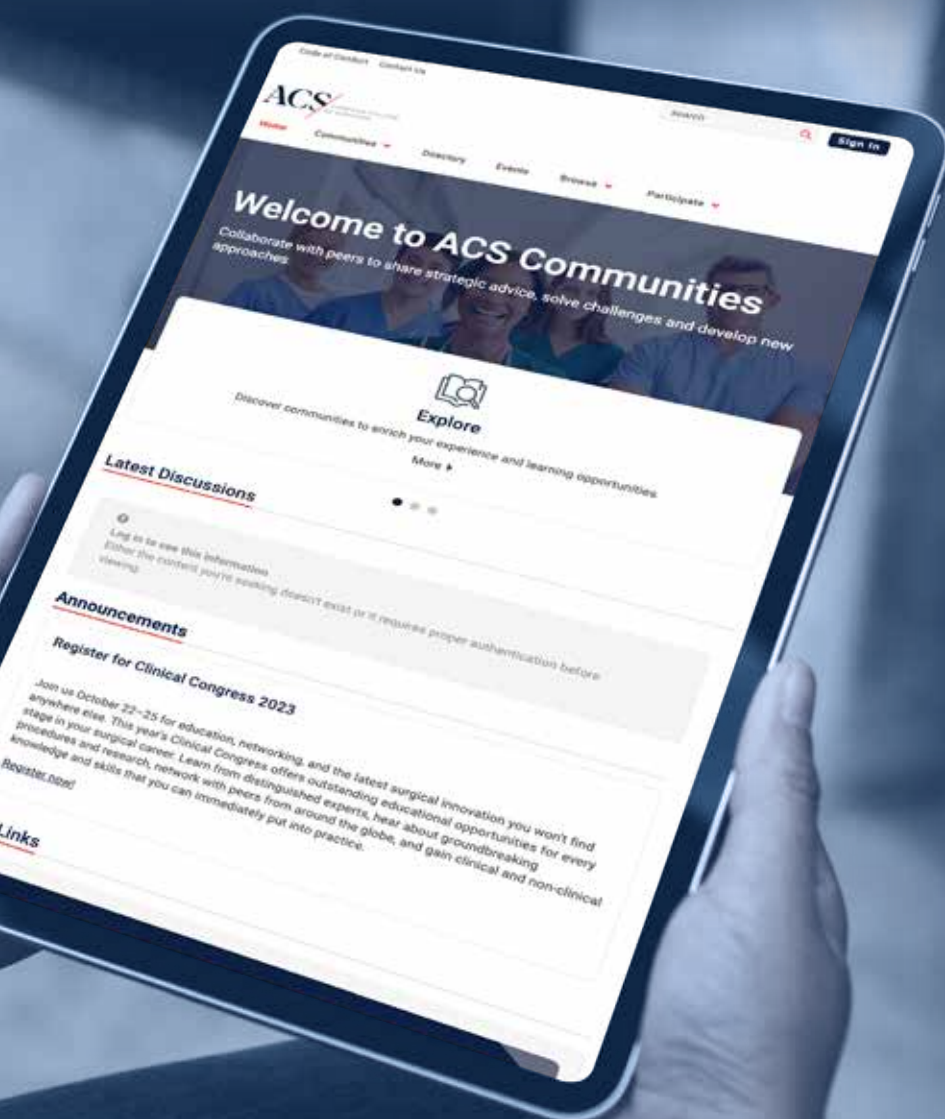
**Dr. Monica Khattak** is a fourth-year general surgery resident at the Cleveland Clinic South Pointe Hospital in Warrensville Heights, OH.

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# Get the Most Out of Your Community

The ACS Communities is an online, members-only forum where you can connect, engage, and share information with colleagues around the world.



Specialty communities focus on issues related to clinical and direct patient care, while nonclinical communities—such as ACS Wellness and Advocacy—focus on those topics.

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FOR YOU TODAY!**

[fac.org/communities](https://fac.org/communities)

**ACS** / AMERICAN COLLEGE  
OF SURGEONS

# Handoff Strategies Should Feature Implementation Science, Contextual Factors

Lenworth M. Jacobs Jr., MD, MPH, FACS

**Perioperative handoffs are critical transition points for safety and quality of care. Any communication barrier or breakdown has the potential to impact patient outcomes.**

EVERY CLINICIAN SHOULD BE CONCERNED that all relevant information is transferred accurately from the sending practitioner to the receiving practitioner. This exchange is particularly important when the patient is critically ill or returning from major surgery.

Recognizing this crucial period, *The Joint Commission Journal on Quality and Patient Safety* dedicated a special issue in August to original studies and commentaries on perioperative handoffs.

One of the articles highlighted in the issue is a study from the Perelman School of Medicine at the

University of Pennsylvania in Philadelphia, detailing the creation and implementation of the Handoffs and Transitions in Critical Care (HATRICC), which involves a standardized protocol for handoffs from the operating room to the intensive care unit (ICU).

The study, which was conducted 2014 to 2017, used fuzzy-set qualitative comparative analysis (fsQCA) to characterize combinations of conditions associated with fidelity to the HATRICC protocol. Conditions were derived from postintervention handoff observations yielding quantitative and qualitative data.



## Every clinician should be concerned that all relevant information is transferred accurately from the sending practitioner to the receiving practitioner.

Fifty handoff observations were analyzed; at the individual handoff episode level, four conditions explained high fidelity to the HATRICC protocol:

- Patient was newly admitted to the ICU
- Presence of an ICU provider
- Observer-rated attention paid by the handoff team
- Handoff took place in a quiet environment

While the researchers determined that none of the conditions was solely needed or sufficient for high fidelity, three combinations of those conditions equated to viable pathways for fidelity to HATRICC protocols and explained 93.5% of cases demonstrating high fidelity:

- Presence of the ICU provider and high-attention ratings
- Newly admitted patient, presence of the ICU provider, and quiet environment
- Newly admitted patient, high-attention ratings, and quiet environment

Other articles in the special issue of the *Journal* included:

- A study on bringing a multiteam system theory (MTS) perspective to the perioperative context. The authors demonstrated the applicability of an MTS taxonomy to the perioperative context using a case study from gynecological oncology.
- A study attempting to improve a process for cardiovascular handoffs by applying human factors and the science of teamwork. The team used Plan-Do-Study-Act cycles and participatory design and ergonomics to create, use, and measure a new handoff process and bundle.
- Literature reviews on strategies to improve handoff and on possible ways to leverage

technology and artificial intelligence to enhance handoffs.

- A systematic review of the peer-reviewed literature focused on handoff studies with education interventions that included anesthesiology providers.
- A commentary on taking a resilience engineering approach to perioperative handoffs.

In an editorial titled, “Improving Perioperative Handoffs: Moving Beyond Standardized Checklists and Protocols,” Joanna Abraham, PhD, and coauthors reflected on the articles featured in the special issue and discussed the need to go beyond standardizing elements of an effective handoff and address possible contextual factors unique to the types of handoffs and care settings.

“Large-scale adoption and reach of evidence-based handoff strategies should consider the core principles of implementation science,” Dr. Abraham and coauthors wrote. “Using mixed methods (qualitative, quantitative) measurement systems will be essential to detect and understand the influence of handoff barriers and enablers on implementation strategies and outcomes.” **B**

### Disclaimer

The thoughts and opinions expressed in this column are solely those of Dr. Jacobs and do not necessarily reflect those of The Joint Commission or the American College of Surgeons.

**Dr. Lenworth Jacobs** is a professor of surgery and professor of traumatology and emergency medicine at the University of Connecticut in Farmington and director of the Trauma Institute at Hartford Hospital, CT. He is Medical Director of the ACS STOP THE BLEED® program.

# CLINICAL CONGRESS 2023

OCTOBER 22-25 / BOSTON, MA

## Major Awards



Scan to watch  
the Convocation  
Livestream.

The ACS Clinical Congress is a premier surgical education event that brings together the House of Surgery for education, networking, and celebration that includes honoring remarkable individuals and their extraordinary contributions. The ACS awards—which embody the spirit of excellence, progress, and service in surgery—will be presented throughout Clinical Congress in Boston, Massachusetts, October 22–25.

The Distinguished Service Award—the College’s highest annual honor—acknowledges exceptional and continuous service as an ACS Fellow, and the Wangenstein Scientific Forum Award celebrates an individual who exemplifies the clinical, research, and educational achievements of a successful academic surgeon. Another major award is the Dr. Mary Edwards Walker Inspiring Women in Surgery Award, which recognizes someone whose contributions help advance women in the field of surgery.

In addition, the ACS Distinguished Lifetime Military Contribution Award will be bestowed upon USAR Major General (Retired) Jonathan Woodson, MD, MSS, FACS, MG, MC, which you’ll be able to read more about in the November/December issue of the *Bulletin*.

These four major awards will be presented during Convocation on Sunday, October 22, at 6:00 pm ET, and will be livestreamed at [facs.org/convocation](https://facs.org/convocation).

The ACS/Pfizer Surgical Volunteerism and Humanitarian Awards, honoring ACS Fellows and members whose altruism, vision, leadership, and dedication have benefited the surgical community and made a global impact, will be presented during the annual Board of Governors reception on Tuesday, October 24.

*For more information about Clinical Congress and to register, visit [facs.org/clincon2023](https://facs.org/clincon2023).*

# SURGEONS UNITED



# Dr. Ronald Stewart Will Receive Distinguished Service Award



Ronald M. Stewart, MD, FACS, a trauma surgeon from San Antonio, Texas, will receive the Distinguished Service Award—the ACS’s highest annual honor—at Convocation during Clinical Congress 2023 in Boston, Massachusetts.

The award is in recognition of exceptional and continuous service as an ACS Fellow, as well as a career distinguished by devotion to patient care and the principles and ideals that guide all surgeons in their professional practice.

“I am honored and humbled to receive the ACS Distinguished Service Award. I am so grateful to be a member of the American College of Surgeons. Partnering with inspirational colleagues, toiling to reach the ACS Committee on Trauma’s goal of optimal patient care, transformed my

life,” Dr. Stewart said. “To me, this recognition is a tribute to colleagues across the American College of Surgeons.”

## Service to the ACS

Dr. Stewart, who has been an ACS Fellow since 1997, is being recognized for his tireless work as an instructor, mentor, and colleague, encouraging many with his “7 Ps to Be”: “Be participatory, be professional, be a problem solver, be a performance improvement leader, be passionate, be patient, and be perseverant.”

Among Dr. Stewart’s contributions to the College are 27 years of service on the ACS Committee on Trauma (COT), serving as Vice-Chair of his state COT, State Chair, Region Chief in the Regional COT, COT Central Committee member, and COT Chair. He has been the Medical Director for ACS Trauma Programs and a member of the ACS Board of Governors. Dr. Stewart also helped spearhead the national launch of STOP THE BLEED®.

Notably, Dr. Stewart has been a driving force behind the College’s efforts to reduce firearm violence, testifying before US Congress on the need to treat firearm injury as a critical public health issue. As a trauma surgeon, he has been in the unfortunate position of caring for victims from two of the largest mass shootings in modern US history—Sutherland Springs First Baptist Church in 2017, and Robb Elementary School in Uvalde, Texas, in 2022.

In his work for the ACS to make firearm injury prevention a reality, he helped develop the Firearms Strategy Team (FAST) in 2017, comprised of



highly regarded trauma surgeons. The FAST group developed a strategy covering 13 areas to reduce firearm injury, death, and disability.

### **Career Accomplishments**

Dr. Stewart has served more than 30 years with The University of Texas Health Science Center at San Antonio (UT Health San Antonio), where he currently is chair of the Department of Surgery.

Dr. Stewart helped develop the Southwest Texas Regional Advisory Council (STRAC), which has advanced trauma system development and disaster preparedness in the San Antonio region. STRAC serves as a regional medical operations center in times of disaster and stands as a model for the nation.

Dr. Stewart is a prolific researcher in trauma care, critical care, injury prevention, and other topics, authoring more than 150 peer-reviewed articles and 13 book chapters. He has presented nearly 300 lectures on firearm injury prevention, trauma care, STOP THE BLEED, and more. Among these lectures is his Scudder Oration on Trauma, which he delivered at Clinical Congress in 2022, on the COT's 100th anniversary.

Dr. Stewart earned his medical degree and completed his residency at UT Health San Antonio, followed by fellowships in trauma and surgical critical care at The University of Tennessee Health Science Center in Memphis. **B**

Dr. Stewart, who has been an ACS Fellow since 1997, is being recognized for his tireless work as an instructor, mentor, and colleague.

# Wangensteen Awardee Brings Impressive Ambition, Personal Insight to Cancer Care



For Monica M. Bertagnolli, MD, FACS, receiving the Owen H. Wangensteen Scientific Forum Award at Clinical Congress 2023 in Boston, Massachusetts, may be a small moment in a momentous, outsized career.

The ACS Scientific Forum Committee gives this award to an individual who exemplifies the clinical, research, and educational achievements of a successful academic surgeon. This year, the honor will go to Dr. Bertagnolli, a world-renowned oncologic surgeon and cancer researcher who has served as director of the National Cancer Institute (NCI) since October 2022.

Of Dr. Bertagnolli, her one-time resident and nominating surgical colleague Luke Funk, MD, FACS, wrote, “I can think of no individual who

is more deserving of the Owen H. Wangensteen Scientific Forum dedication—the premier award honoring the absolute best of academic surgery.”

A graduate of Princeton University in New Jersey and the University of Utah School of Medicine in Salt Lake City, Dr. Bertagnolli completed her surgical residency at the Brigham and Women’s Hospital in Boston, Massachusetts. She then spent 5 years as an assistant professor of surgery at NewYork-Presbyterian Hospital-Weill Cornell Medical College in New York City before returning to Harvard Medical School and Brigham and Women’s Hospital as an associate professor of surgery.

In 2007, Dr. Bertagnolli became the first female chief of surgical oncology at Brigham and Women’s Hospital, and in 2015, she was named the Harvard Medical School Richard E. Wilson Professor of Surgery in the Field of Surgical Oncology. Throughout, she garnered a well-earned reputation for skillful and effective operations, with a special ability to excise tumors otherwise deemed inoperable.

Dr. Bertagnolli also maintained an impressive record in cancer research. Concurrent with her residency, she completed 3 years of tumor immunology research at the Dana-Farber Cancer Institute in Boston, Massachusetts. She received her first research grant from the NCI while at NewYork-Presbyterian Hospital and secured further National Institutes of Health (NIH) awards for cancer research on her return to Harvard. Dr. Bertagnolli maintained NIH and other funding for 25 years and generated several findings that have impacted cancer care.

## Through her innovation, skill, and compassion, Dr. Bertagnolli reflects the surgeon after whom the Scientific Forum Award is named.

As head of the NCI, Dr. Bertagnolli is no longer at the laboratory bench or in the clinic. Rather, she leads the institute's ambitious effort to reduce cancer mortality by 50% within 25 years. She has emphasized that, while this goal can be approached by eliminating care disparities and fully implementing current knowledge, it also will require innovations in research, diagnosis, and treatment. More importantly, Dr. Bertagnolli has said her long-standing focus on patient care has evolved into an emphasis on amplified engagement with other institutions and the public.

"It's crucial that we reach and engage everybody," Dr. Bertagnolli noted when the NCI's National Cancer Plan, developed in the first 6 months of her NCI tenure, was released.

In May 2023, US President Joe Biden nominated Dr. Bertagnolli to lead the NIH. In a statement, President Biden called Dr. Bertagnolli "a world-class physician-scientist whose vision and leadership will ensure the NIH continues to be an engine of innovation to improve the health of the American people."

At present, she awaits confirmation by the US Senate. If confirmed, Dr. Bertagnolli will be the second woman ever in a permanent position leading the NIH.

Like President Biden (who lost a son to cancer in 2015), Dr. Bertagnolli regards cancer as both a professional focus and a personal journey. She is not only a cancer surgeon but also a cancer patient.

Two months after starting her work as the 16th director of the NCI, she publicly stated she was undergoing breast cancer treatment.

In a statement released by the NCI, Dr. Bertagnolli said the experience affirmed her commitment to cancer patients: "Having been an oncologist my entire career, it was always—and still is—all about the patients and survivors...To anyone with cancer today: I am truly in this together with you."

Through her innovation, skill, and compassion, Dr. Bertagnolli reflects the surgeon after whom the Scientific Forum Award is named. Owen H. Wangensteen, MD, PhD, FACS (1898–1981), had a transformative influence on the field of surgery.

In 1940, dismayed at a culture that then discouraged surgeons from publishing research findings, Dr. Wangensteen founded the Surgical Forum within the ACS to provide a place for early career surgeons to share their research and ideas. Originally a part of Clinical Congress, the Forum evolved into a publication and is now presented as the Owen H. Wangensteen, MD, FACS, Scientific Forum at Clinical Congress each year. A lifelong active ACS member, Dr. Wangensteen also served as ACS president (1959–1960). The Wangensteen Surgical Forum Award was created in 1996 to memorialize him. **B**

# Dr. Sujana Chandrasekhar Will Be Honored with Inspiring Women in Surgery Award



Otologist-neurotologist Sujana S. Chandrasekhar, MD, FACS, will receive the Dr. Mary Edwards Walker Inspiring Women in Surgery Award at Convocation during Clinical Congress 2023 in Boston, Massachusetts.

“Receiving this award is a huge honor for me,” said Dr. Chandrasekhar, a partner at ENT and Allergy Associates in New York, New York. “Awards like this showcase the importance that the House of Medicine, our House of Medicine, puts on supporting diversity, equity, and inclusion in surgery.”

Dr. Chandrasekhar is acknowledged as one of the leading authorities on sudden sensorineural

hearing loss and has led groundbreaking research on the treatment of otitis media with an intranasal spray of surfactant.

Throughout her distinguished career, she has sought ways to improve the quality of care she provides patients, joining and taking on leadership roles in various healthcare organizations such as the American Academy of Otolaryngology—Head and Neck Surgery (AAO-HNS), American Otological Society (AOS), and the ACS. While serving in these roles, Dr. Chandrasekhar noticed gaps where women and other underrepresented populations in medicine were not adequately involved in meetings and other leadership positions.

## **Inspiring Women through Actionable Change**

In 2017, after listening to a panel featuring only men at the annual American Neurotology Society (ANS) conference, Dr. Chandrasekhar expressed concern that more was not being done to bring diverse voices into panel sessions. As a result of her speaking up, the ANS, AOS, and sister societies changed bylaws to prevent panel sessions featuring only men.

Dr. Chandrasekhar also successfully advocated that all panel submissions to the AAO-HNS annual meeting document the presence of a woman or physician who is underrepresented in medicine, which drastically improved meeting diversity. In addition, she was one of a group of determined women and ENT surgeons who created the Women in Otolaryngology (WIO) Section of the AAO-HNS and Foundation and ensured a permanent WIO seat on the AAO-HNS Finance and Investment



“Dr. Chandrasekhar’s contributions to advancing women in surgery are numerous and impactful.”

—Dr. Nancy Young

Subcommittee and Board of Directors. These efforts resulted in more than \$150,000 in grants disbursed to projects focused on women in otolaryngology.

“Dr. Chandrasekhar’s contributions to advancing women in surgery are numerous and impactful,” said Nancy M. Young, MD, FACS, FAAP, Lillian S. Wells Professor of Pediatric Otolaryngology at Northwestern University Feinberg School of Medicine in Chicago, Illinois, who has worked closely with Dr. Chandrasekhar on committees and leadership boards for more than 20 years. “She is a woman of courage who speaks with grace and diplomacy.”

During the COVID-19 pandemic, she took another role as an educator, co-hosting a videocast, “She’s on Call.” The videocast showcased different topics in medicine for the public, medical students, and healthcare providers. One memorable episode for International Women’s Day featured ACS Past-President (2021–2022) Julie A. Freischlag, MD, FACS, and Carol R. Bradford, MD, MS, FACS, discussing the representation of women in leadership roles in medicine.

Through this advocacy, both directly and indirectly, Dr. Chandrasekhar said she hopes more women and others underrepresented in medicine see themselves as leaders from the start of their careers.

“I’m really proud that in a small way, I’ve been able to show my wing of the House of Medicine that it’s important to look to diverse content producers,” she said. “Now, I’m so glad that people of all backgrounds can look at a panel session and say to themselves, ‘I can be there too’ or ‘Maybe that’s something I’d like to try.’”

### Career Highlights

Dr. Chandrasekhar obtained her medical degree from the Icahn School of Medicine at Mount Sinai in New York City. She served as an intern, resident, and chief resident in general surgery and otolaryngology-head and neck surgery at New York University Medical Center and completed a fellowship in otology/neurotology at the House Institute Ear Clinic in Los Angeles, California. Dr. Chandrasekhar has published more than 110 peer-reviewed articles.

In addition to her position at ENT and Allergy Associates, Dr. Chandrasekhar is director of neurotology at the James J. Peters Veterans Affairs Medical Center, clinical professor of otolaryngology at Zucker School of Medicine at Hofstra-Northwell, and clinical associate professor at the Icahn School of Medicine at Mount Sinai—all in the New York metropolitan area—as well as a teaching faculty member of five otolaryngology residency programs. She also is president of the AOS.

The Inspiring Women in Surgery Award is presented annually at Clinical Congress in recognition of an individual’s contributions to the advancement of women in the field of surgery. The award honors the fortitude and accomplishments of Mary Edwards Walker, MD, the first female surgeon to serve in the US Army and the only female recipient of the Congressional Medal of Honor. **B**

# Seven Surgeons Will Be Recognized for Volunteerism and Humanitarian Efforts

The ACS Board of Governors (BoG) Surgical Volunteerism and Humanitarian Awards Workgroup has announced the recipients of the 2023 ACS/Pfizer Surgical Volunteerism and Humanitarian Awards. The awards are administered through the ACS Health Outreach Program for Equity in Global Surgery (ACS H.O.P.E.), formerly known as Operation Giving Back.

The contributions of the seven award recipients are briefly summarized in this article and will be formally recognized at Clinical Congress 2023 in Boston, Massachusetts, during the annual BoG reception and dinner, Tuesday, October 24. Clinical Congress attendees are invited to hear the honorees speak at the Panel Session, Humanitarian Surgical Outreach at Home and Abroad: Reports of the 2023 Surgical Volunteerism and Humanitarian Award Winners, on Monday, October 23.

## Academic Global Surgeon Award

Andrea Parker, MD, FACS, and Robert Parker, MD, FACS, general surgeons in Bomet, Kenya, will jointly receive the ACS/Pfizer Academic Global Surgeon Award for their nearly 1 decade of service educating surgical trainees in a medically under-resourced country.

In 2014, both Drs. Parker completed their general surgery residency at Brown University in Providence, Rhode Island, and then began working at Tenwek Hospital in Bomet—a faith-based tertiary teaching and referral hospital. For the past 8 years, Drs. Parker have been training African surgeons to address

surgical access gaps through clinical care, education, and research.

During medical school, Robert participated in short-term trips to Guatemala, Mexico, and Ecuador, and he took a year hiatus between his third and fourth year of medical school to contribute to Tenwek Hospital as a research assistant in the Department of Surgery. There, he was part of publications on common regional surgical diseases, which started his passion for research and building surgical capacity. Andrea participated in numerous short-term trips during training, including to the Dominican Republic and Zambia.

To improve training quality, alleviate the burden on faculty, and satisfy medical oversight boards in sub-Saharan Africa, Drs. Parker helped develop innovative web-based, weekly surgical curriculum alongside the College of Surgeons of East, Central, and Southern Africa (COSECSA).

Andrea led a project to create a context-specific modular curriculum, helping to design, implement, and distribute the content, in addition to primarily authoring much of the material. Robert has been an active participant in this endeavor, authoring multiple chapters in the online curriculum and also growing the region's research capacity.

In addition to building a workforce, Drs. Parker supported physical infrastructure to enable education, including acquisition of laparoscopic equipment, new operating room lights and tables, and surgical instruments and retractors. They also have advocated around the world on the importance



of academic surgery education.

### Domestic Surgical Volunteerism Award

Ala Stanford, MD, FACS, a pediatric surgeon in Meadowbrook, Pennsylvania, will receive the Domestic Surgical Volunteerism Award for her work in ensuring equitable access to quality healthcare in Philadelphia, Pennsylvania, particularly during and following the acute phase of the COVID-19 pandemic.

Soon after beginning her career, she was appointed director of Temple University’s Center for Minority Health and Health Disparities, and in 2001, she created It Takes Philly, Inc., a 501(c)(3) organization that provides mentoring for children in underserved areas and exposing them to careers to which they otherwise may not have access.

Her work in the community provided the foundation to eventually play a key role in improving COVID-19 care in some of the poorest areas in Philadelphia. After the pandemic was declared and started to impact urban centers, Dr. Stanford recognized that locations being most affected were primarily neighborhoods populated by people of color. She used the infrastructure of her pediatric surgery practice to create a grassroots organization, the Black Doctors COVID-19 Consortium, which focused on education, testing, contact tracing, and vaccination in communities devoid of access to care and resources.

Dr. Stanford reached out to impacted communities, partnering with local leaders and institutions to spread awareness of the consortium and its activities,

which achieved notable success, serving more than 100,000 individuals.

In 2022, building on the success of the consortium, Dr. Stanford established the Dr. Ala Stanford Center for Health Equity in Philadelphia’s Allegheny West community, which had the lowest life expectancy in the city. There, she works to improve health outcomes and empower individuals to achieve better overall well-being.

Dr. Stanford’s efforts and her expertise in community health have been sought after at

Dr. Robert (far left) and Andrea Parker (second from left) conduct ICU rounds and teach general surgery residents at Tenwek Hospital in Bomet, Kenya.



Dr. Ala Stanford (standing) delivers a socially distanced COVID-19 vaccination at the Deliverance Evangelistic Church in North Philadelphia.



Dr. Andrew Kingsnorth (operating) undertakes a total pancreatic necrosectomy with assistants and observers from the National Surgical Center in Bishkek, Kyrgyzstan.

the local and national levels; she has served on the Philadelphia Board of Health and the city's COVID-19 advisory board and was appointed as director of the Region III US Department of Health and Human Services by President Biden, a position in which she served for 1 year before returning to lead the Dr. Ala Stanford Center for Health Equity.

### **International Surgical Volunteerism Award**

Andrew N. Kingsnorth, MB, BS, FACS, a general surgeon in Plymouth, UK, will receive the ACS/Pfizer International Surgical Volunteerism Award for his more than 20 years of service providing and coordinating surgical services, primarily for hernia repair, in locations around the world.

Dr. Kingsnorth has concentrated much of his volunteerism efforts on treating inguinal hernias, as they are the most common treatable cause of surgical morbidity in men around the world but are often unavailable in rural or under-resourced areas.

During his early international volunteerism, Dr. Kingsnorth saw the severe lack of access that many individuals faced in treating hernias. In 2005, he initiated an outreach hernia camp in Takoradi, Ghana, and in 2006, the Hernia Treatment Centre was established there. The center continues to operate, with nurses and physicians running awareness campaigns in the local community to recruit between 50 and 100 patients per week.

Dr. Kingsnorth is a founding member of the UK-based charitable organization Operation Hernia,

where—for nearly a decade—he led 1- to 2-week missions to locations around Africa, including many to Ghana, as well as Nigeria, Ivory Coast, and The Gambia.

Currently, he is the director and administrator of Hernia International, an organization that sends teams around the world to perform thousands of hernia operations each year. This year, 14 trips have been completed or planned in countries, including Senegal, Pakistan, Tanzania, Brazil, and Sierra Leone.

At the district hospitals that typically host Hernia International visits, Dr. Kingsnorth and his teams train two to three surgeons in mesh hernioplasty during a 1-week visit, and they remain in contact with the regional surgeons to provide ongoing assistance. Dr. Kingsnorth has advocated for local and international support for outreach trips, acquiring grants, staff and personnel, and logistical support from sources in the UK and Africa.

### **Resident Surgical Volunteerism Award**

Younna A. Sherif, MD, a global surgery resident at Baylor College of Medicine in Houston, Texas, will receive the ACS/Pfizer Resident Surgical Volunteerism Award for her 15 years of medical volunteer work in underserved areas around the world.

Dr. Sherif started her volunteerism before earning her medical degree, with her first role coming in 2008 at a mobile health clinic in Kimse Yok Mu, Turkey.

At this time, she was pursuing her bachelor's

degree at Duke University in Durham, North Carolina, in a self-designed major exploring the impact of biopsychosocial factors on healthcare. She continued to accrue local and global health volunteer experience during her undergraduate studies.

Concurrent with her time as a medical student at the Virginia Commonwealth University School of Medicine, Dr. Sherif became further involved in international volunteerism, particularly in Egypt. At Alexandria Main University Hospital in Egypt, she was a researcher on iatrogenic spread of hepatitis C and the increased prevalence of hepatocellular carcinoma—two conditions that are uniquely common in the country due to poor sterilization of vaccination tools, and which afflicted her mother who lived there. After her mother's passing, Dr. Sherif became involved in the biopolitics of healthcare, conducting a study in Egypt that aimed to gauge Egyptians' perceptions of governmental involvement in the spread of these conditions.

As a resident, Dr. Sherif has continued her global surgery work, volunteering in the pediatric surgery service at Uganda's Mulago Hospital, in the general

and bariatric surgery service in the Arab Bariatric & Plastic Center of Harpur Memorial Hospital in Giza, Egypt, and as a researcher on optimizing the role of nonphysician clinicians at Kamuzu Central Hospital in Malawi.

### **Military Surgical Volunteerism Award**

US Air Force Colonel Kerry P. Latham, MD, MHPE, FACS, a plastic and reconstructive surgeon in Washington, DC, will receive the ACS/Pfizer Military Surgical Volunteerism Award for her more than 20 years of dedication to providing facial reconstructive operations while also serving in the US military.

In her first clinical year of medical school, Dr. Latham used her school breaks to visit the Philippines to learn more about global surgery, short mission healthcare delivery, and global partnership. Her mission in 1998 to Catanduanes, Philippines—2 years after beginning her military service—established her decision to pursue surgery and specialize in craniofacial surgery.

Dr. Latham provides a full spectrum of reconstructive services, but the needs of patients and



Dr. Youmna Sherif (third from right) joins the general surgery OR team of scrubs and circulators on her final day at Harpur Memorial Hospital in Menouf, Egypt.



Dr. Kerry Latham (bottom left) and colleagues discuss an international partnership, workflow, resources, and priorities between US and Dominican Republic care teams as part of the patient safety strategy and collaboration process at Hospital Central de las Fuerzas Armadas in Santo Domingo.

healthcare systems drive the procedures performed in various sites across the world. Typically, cleft care and burn reconstruction, both acute and chronic, are in high demand, but Dr. Latham also has cared for acute trauma patients and performed tumor and cancer surgery.

In addition to performing surgery, Dr. Latham has developed resources that nations have continued to use. She created the surgical mission planning document that is crafted to ensure team and patient safety. The document and accompanying post-mission report process have been used across the US Department of Defense for surgical planning.

Dr. Latham values teaching, mentorship, and partnership on her volunteer missions, and she routinely offers educational series to hospital leaders, providing additional collaboration opportunities for host nation nurses and surgeons. In her volunteer locations, Dr. Latham has worked with national leaders to advocate for funds, resources, and placement of surgical and health services. She raised funds for physical therapy equipment for pediatric burn victims in Afghanistan and garnered donations for a life-changing surgery for a child in Barbados through a partnership with the only craniofacial surgeon in country and the ministry of health.

### Surgical Humanitarian Award

Charles J. Filipi, MD, FACS, a general surgeon in Omaha, Nebraska, will receive the ACS/Pfizer Surgical Humanitarian Award for his nearly 20 years of humanitarian service providing hernia repair services and encouraging others to volunteer their

services in underdeveloped nations.

After working in private practice for 18 years, Dr. Filipi joined the faculty of Creighton University School of Medicine in Omaha, where he was a pioneer in laparoscopic and endoscopic surgery, including hernia repair.

In 2004, Dr. Filipi used his knowledge of the gaps in global hernia care in the Dominican Republic, where surgical teams repaired adult and pediatric hernias. For 6 years, he took an average of three annual trips to provide operations and education in developing countries.

In 2010, Dr. Filipi and a Creighton colleague arranged for four surgical teams to visit Haiti, offering support after the country's devastating earthquake and performing 776 acute operations.

In 2011, Dr. Filipi took a leading role in creating two impactful global health programs—Chronic Care International (CCI) and Hernia Repair for the Underserved.

CCI, co-founded by Dr. Filipi, is a program to treat poor rural patients with diabetes and hypertension, providing free care to 1,200 patients in the Dominican Republic and 200 patients in the Philippines. Both the original Dominican Republic program and the recently started Philippines program use a database, shared with US-based medical staff, to monitor patient A1C levels and blood pressure.

In 2013, with the help of Colombian Catholic nuns, he initiated a food program in Ouanaminthe, Haiti, under the CCI nonprofit umbrella that continues to feed daily 70 children experiencing homelessness,



despite the continued civil unrest.

Hernia Repair for the Underserved has, directly through surgery and indirectly through education of local surgeons, operated on thousands of hernia patients. The organization has trained 103 surgeons in Haiti, Brazil, Ecuador, Paraguay, and the Dominican Republic to perform the Lichtenstein repair using an ACS-approved operating performance rating scale. Approximately 2,000 operations have been performed by trainees, and 5,000 have been performed by hernia experts in seven developing countries. There have been no mortalities and a morbidity rate of .07% in these procedures.

Seeing further opportunities to advance global surgical volunteerism and humanitarian activities, Dr. Filipi initiated a Global Surgery Fellowship at Creighton in 2018. The 2-year fellowship, completed by three fellows to date, has 8 to 9 months of subspecialty surgical, anesthesia, neonatal intensive care unit, burn, and ultrasound education, and the final 15 months are spent in a developing country's rural district hospital. **B**

Dr. Charles Filipi (far right) and wife Frances Ann (far left), in Ouanaminthe, Haiti, check on a food program for street children they initiated with Catholic nuns in 2013. This picture was taken in 2015.

# New *SESAP 18 Advanced* Offers In-Depth Content

The newly released advanced edition of the *Surgical Education and Self-Assessment Program (SESAP®)*, *SESAP 18 Advanced*, is attracting the attention of practicing surgeons seeking additional, in-depth educational content that addresses complex and evolving topics.

*SESAP* SUBSCRIBERS CATALYZED the creation of *SESAP Advanced*, and the response to the new modules has been enthusiastic.

*SESAP 18 Advanced* provides peer-reviewed educational content for surgeons interested in specialized and nuanced information using 332 newly constructed, multiple-choice, case-based questions across seven modules—abdomen; alimentary tract; breast; endocrine; melanoma, skin, sarcoma; surgical critical care; and trauma and emergency general surgery.

Participants will find the format familiar, with each question followed by a critique addressing each correct and incorrect answer option. The modules explore topics more deeply than the corresponding *SESAP 18* categories and address topics that

may have been beyond the scope of the more general *SESAP 18* content.

“*SESAP 18 Advanced* is an outstanding educational program aimed at promoting expertise in seven critical domains in general surgery. The program has been specially designed to address complex and evolving concepts to promote lifelong excellence in surgery,” said Ajit K. Sachdeva, MD, FACS, FRCSC, FSACME, Director of the ACS Division of Education.

## **Evolving Content and Controversial Topics**

*SESAP 18 Advanced* was written by 41 expert practicing surgeons using a rigorous, multistep process of question development and peer review.

“Our goal was to be both

instructive and thought provoking in the development of these questions,” explained Lorrie A. Langdale, MD, FACS, *SESAP 18 Advanced* Program Director. “As surgery has become increasingly specialized, so have the problems that practicing surgeon must solve. While we believe the information in *SESAP 18 Advanced* will be helpful to all general surgeons, these modules will be of particular interest to those whose practices are concentrated in these areas.”

Feedback from surgeons on the previous edition of *SESAP* led to the expansion of content areas for the new modules. A completely new module focused on melanoma, skin, and sarcoma is being offered, and advanced emergency general surgery questions have been



developed and are included with trauma questions. Additionally, abdomen and alimentary tract topics have been separated into distinct modules.

Specialty sections under each module entitled “Controversies” also have been added. These questions address complicated cases or emerging topics that may not have clear answers at present. Controversy items weigh the pros and cons of various options and allow the participant to compare their responses to those of their peers in real time.

“This new feature adds a dimension to *SESAP* that is similar to querying other surgeons with ‘What would you do?’ Our goal with this approach is to offer supporting data for different options that may be equally valid in complex problem management,” said Dr. Langdale.

### Targeted to Individual Needs

*SESAP 18 Advanced* modules are online and have corresponding prerequisite categories in *SESAP 18*. Each module may be

purchased separately, allowing surgeons to target advanced content to their practice area. New for *SESAP 18 Advanced*, packages with all seven modules are available at a discount.

The program employs the latest web-based tools, which facilitate self-directed learning to further enhance the educational and clinical relevance of the material. Whether on desktop computers or mobile devices, learners can highlight text and use the My Advanced Library feature to create and customize folders with notes and bookmarked material for future reference.

Targeted search functionality, shared with the *SESAP 18* program, offers filters and advanced strategies to provide focused, relevant results and record past searches. For those surgeons who want additional practice, custom assessments can be created to randomize questions into quizzes across content areas. Modules can be reset and completed multiple times to aid in learning and retention. Finally, the program includes

peer comparisons that display comparative metrics in real time. *SESAP 18 Advanced* program participants can earn up to 122 *AMA PRA Category 1 Credits™*.

For a breadth of knowledge aimed at the general surgeon and to fulfill *SESAP 18 Advanced* prerequisites, *SESAP 18* offers 665 questions across nine categories: abdomen, alimentary tract, breast, emergency general surgery, endocrine, legal/ethics, perioperative care, surgical critical care, trauma. If all *SESAP 18* categories are not of interest, subscribers may choose from web packages with as few as three categories, and other categories may be added at any time based on learning and practice needs. *SESAP 18* participants can earn up to 168 *AMA PRA Category 1 Credits™*.

Whether one is a specialized surgeon seeking to stay current or a general surgeon desiring more advanced information in targeted areas, *SESAP 18* and *SESAP 18 Advanced* are ideal educational resources.

For more information, contact the *SESAP* team at 312-202-5419, [sesap@facs.org](mailto:sesap@facs.org), or visit [facs.org/sesap](http://facs.org/sesap). In-person assistance will be offered during Clinical Congress 2023, October 22–25 in Boston. A *SESAP* booth will be in the registration area, and another will be within ACS Central in the Exhibit Hall. **B**



# Outpatient Vascular Standards Are Released

THE ACS, WITH THE SOCIETY FOR VASCULAR SURGERY (SVS), has released new standards to help guide optimal care for patients undergoing vascular surgical and procedural care at outpatient vascular centers.

The standards are outlined in the *Optimal Resources for Vascular Surgery and Interventional Care—Outpatient Standards* manual. They provide the requirements necessary for outpatient vascular centers to achieve and maintain verification in the Vascular Verification Program (Vascular-VP),

launched earlier this year by the ACS and SVS.

“Outpatient facility verification by this program demonstrates to patients, referring physicians, regulators, and payers that high-quality, high-value vascular care is being delivered. Participants who successfully complete the verification process will be setting the standard for vascular care in their community,” said William P. Shutze, MD, FACS, DFSVS, Chair of the Vascular-VP Outpatient Work Group, and a vascular surgeon with Texas Vascular Associates in Plano.

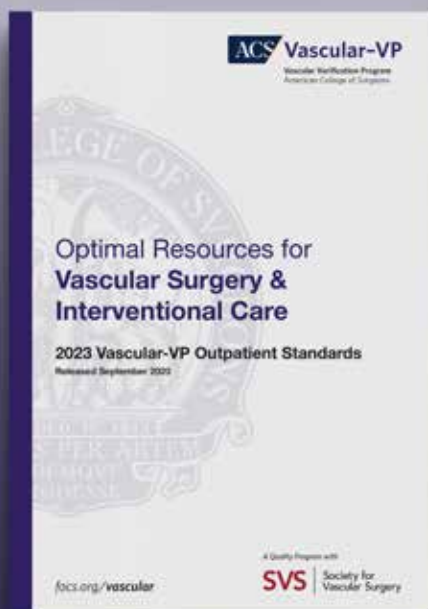
Vascular-VP, which now offers verification for both inpatient and outpatient vascular centers, leverages the strengths and expertise of the ACS and SVS to provide a program with an evidence-driven, standardized pathway for instituting and growing a quality improvement and clinical care infrastructure within a center’s vascular program.

The new standards detail elements of vascular surgical care and quality across nine domains, including:

- Institutional commitment
- Program scope and governance
- Resources for facilities, equipment, services, and personnel
- Clinical care
- Data abstraction and analysis
- Quality improvement

By participating in Vascular-VP and complying with the standards, outpatient vascular centers can develop the tools necessary to provide safe, effective, patient-centered, timely, efficient, and equitable care to all vascular patients.

The new outpatient standards, as well as the inpatient standards, are available at [facs.org/vascularstandards](https://facs.org/vascularstandards). **B**



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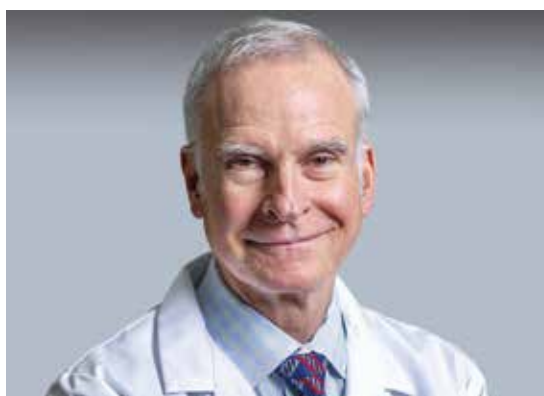
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# Member News

## Weigel Is Named ACS Cancer Medical Director



Dr. Ronald Weigel

Renowned surgical oncologist, researcher, leader, and strategist Ronald J. Weigel, MD, PhD, MBA, FACS, is the new Medical Director for ACS Cancer Programs. He succeeds Heidi Nelson, MD, FACS, who retired in August after serving admirably for 5 years in that position.

Dr. Weigel is the E. A. Crowell Jr. Professor and chair of the Department of Surgery with the University of Iowa Health Care in Iowa City. He also is a prolific researcher whose lab has focused on determining the mechanisms of hormone response in breast cancer, as well as

identifying transcriptional mechanisms regulating patterns of gene expression in breast and colon cancer. This work led to Dr. Weigel pioneering expression analysis techniques, helped prompt his 2018 election into the National Academy of Medicine, and makes him eminently qualified to lead the seven ACS Cancer Programs and drive forward the mission to improve the care of the cancer patient.

After earning his bachelor and master of science degrees in chemical engineering from the Massachusetts Institute of Technology in Cambridge, Dr. Weigel received his medical degree and doctoral degree in molecular biophysics and biochemistry from Yale University in New Haven, Connecticut. Following surgical training at Duke University Medical Center in Durham, North Carolina, he worked at Stanford University in California, Thomas Jefferson University in Philadelphia, and now the University of Iowa. While in Philadelphia, Dr. Weigel obtained his master of business administration degree from The Wharton School at the University of Pennsylvania.

An ACS Fellow since 1995, Dr. Weigel has held several leadership positions within the College. They include Chair of the ACS Board of Governors (2019–2021) and President of the ACS Iowa Chapter (2011–2014). He also served on the Committee on Emerging Surgical Technology and Education, Finance Committee, and Bylaws Committee.

## Chu Is GI Division Director at UAB



Dr. Daniel Chu

Daniel I. Chu, MD, MSPH, FACS, FASCRS, is the new director of the Division of Gastrointestinal Surgery at The University of Alabama Birmingham (UAB). In this new role, he will guide all administrative, clinical, and research efforts for the division, while overseeing strategic development. Dr. Chu will continue to serve as the Selwyn M. Vickers Endowed Chair, associate professor in the UAB Department of Surgery, vice-chair of health services research, and physician advisor for the UAB Enhanced Recovery Program.

## Simianu Leads Research at Benaroya



Dr. Vlad Simianu

Vlad V. Simianu, MD, MPH, FACS, has been appointed medical director of the Clinical Research Program at the Benaroya Research Institute (BRI) in Seattle, Washington. Dr. Simianu—a colon and rectal surgeon at Virginia Mason Medical Center (VMMC) in Seattle—also will continue to serve as medical director for colon and rectal disorders at the Center for Digestive Health within the Virginia Mason Franciscan Health system.



Have you or an ACS member you know achieved a notable career highlight recently? If so, send potential contributions to Jennifer Bagley, MA, *Bulletin* Editor-in-Chief, at [jbagley@facs.org](mailto:jbagley@facs.org). Submissions will be printed based on content type and available space.

## Melcher Becomes Chief of Abdominal Transplantation



Dr. Marc Melcher

Transplant surgeon Marc L. Melcher, MD, PhD, FACS, is the new chief of the Division of Abdominal Transplantation at Stanford Medicine in California. Currently, Dr. Melcher is a professor of surgery at Stanford and performs adult liver and kidney transplants. Additionally, he will continue as the abdominal transplant fellowship director.

## Roggin Joins MUSC as Chief of Surgical Oncology



Dr. Kevin Roggin

Kevin Roggin, MD, FACS, is now chief of surgical oncology in the Department of Surgery at the Medical University of South Carolina (MUSC) and director of clinical oncology at MUSC Hollings Cancer Center, both in Charleston. Previously, he was at The University of Chicago for 17 years, most recently as professor of surgery, general surgery residency program director, and associate program director of the surgical oncology fellowship. In his new positions, Dr. Roggin will enhance the clinical programs, creating collaborative, multidisciplinary approaches to liver, pancreas, and biliary disease, and expanding the endocrine, breast, and hyperthermic intraperitoneal chemotherapy programs.

## Park Heads Trauma at Parkland



Dr. Caroline Park

Trauma surgeon Caroline Park, MD, MPH, FACS, is the new trauma medical director at Parkland Memorial Hospital in Dallas, Texas. She also will continue to serve as assistant professor and associate director of the surgical critical care fellowship in the Department of Surgery at The University of Texas Southwestern Medical Center in Dallas.

## Bowyer Is Honored by Thai Royal College



Dr. Mark Bowyer (right) and RCTS President Pramook Mutirangura, MD, FRCST, FRCS(Ed)

Colonel (Retired) Mark W. Bowyer, MD, FACS, was inducted as an honorary fellow of the Royal College of Surgeons of Thailand (RCST). A trauma and combat surgeon, Dr. Bowyer is the Ben Eiseman Professor of Surgery at Uniformed Services University (USU) and the Walter Reed National Military Medical Center, both in Bethesda, Maryland. He also is the surgical director of the Val G. Hemming Simulation Center at USU. Dr. Bowyer is involved with the ACS Advanced Trauma Life Support® program and is one of the principal architects of the ACS Advanced Surgical Skills for Exposure in Trauma course, which he has conducted at more than 180 sites in 22 countries, including Thailand.

## Geirsson Directs Cardiovascular Institute in New York



Dr. Arnar Geirsson

Cardiac surgeon Arnar Geirsson, MD, FACS, has been appointed director of the Cardiovascular Institute and Surgical Heart Valve Program at NewYork-Presbyterian and Columbia University Irving Medical Center in New York. He also will serve as professor of surgery in the Division of Cardiac, Thoracic, and Vascular Surgery at Columbia University Vagelos College of Physicians and Surgeons. Prior to his new positions, Dr. Geirsson was surgeon-in-chief of cardiac surgery at the Yale New Haven Hospital Heart and Vascular Center in Connecticut. Originally from Iceland, he returned to the country for a few years in 2013 to serve as a cardiothoracic surgeon at Landspítali University Hospital in Reykjavik.

## Gosain Is President-Elect of SAAS



Dr. Ankush Gosain

Ankush Gosain, MD, PhD, FACS, was named president-elect of the Society of Asian Academic Surgeons (SAAS) and will take over as president in 2024. Membership in this fully inclusive organization is open to those of any ethnicity who have an interest in promoting underrepresented populations in academic surgery. Dr. Gosain currently serves as chief of the Division of Pediatric Surgery at the University of Colorado Department of Surgery in Aurora, as well as chair of the Department of Pediatric Surgery and is the Dr. David R. and Kiku Akers Endowed Chair in Pediatric Surgery at the Children's Hospital Colorado. **B**



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# ACS Bulletin

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**Charm**

Die Struck; 3 color enamel, hand polished. Available from Sterling Silver to 14K Solid Gold



**Stud Earrings**

Die-struck in sterling silver & inlaid with hard enamel. Hand polished & buffed to highlight the College logo. Earrings are sold in pairs.



**Expandable Bracelet & Charm**

Die-struck sterling silver miniature charm is hand polished & buffed to highlight the College logo. Charm is placed on a sterling silver expandable bracelet.



**Black Bowtie Kit**

100% silk, jacquard woven bowtie, pocket handkerchief & cummerbund. The ACS logo is elegantly woven into each with a black on black pattern.



**Necktie**

100% silk ties with woven ACS logo & contrasting diagonal stripes. Available in Dark Blue, Maroon, Light Blue, Gray & Black. Extra long ties available.



**MetalIMPRESSion**

ACS Fellow certificate is reproduced on a gold or silver plate; mounted on a solid walnut plaque; 3 sizes available



**Floating Metal ACS Certificate Plaque**

12" x 18" bottom panel showcases The American College of Surgeons logo. "Floating" above that panel is a smaller 8" x 10" plate with a replica ACS certificate.



**Fellow Tie Tac/Lapel**

1" Die Struck; 2 color enamel; hand polished; Single Gold-Filled



**ACS Tie Tac/Lapel**

Die Struck; 3 color enamel; hand polished; Available from Gold-Filled to 14K Solid Gold



**Cuff Links**

Your choice of 3 fine qualities, Single Gold-Filled, 14K Solid Gold & Sterling Silver emblem.



**Tie Bar**

Florentine front with Alligator clasp on back; Gold-Filled ACS emblem on 24K Gold-Plated bar



**College Ring**

ACS Fellowship ring available in 14K, 10K Solid Gold & Sterling Silver; College crest modeled in deep sharp relief



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# ACS Cancer Conference 2024

February 22-24 | Austin, TX

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American College of Surgeons

[facs.org/cancerconference](https://facs.org/cancerconference)

Annual Conference | December 1-3 | Louisville, KY

**Register Now**

**TQIP**23