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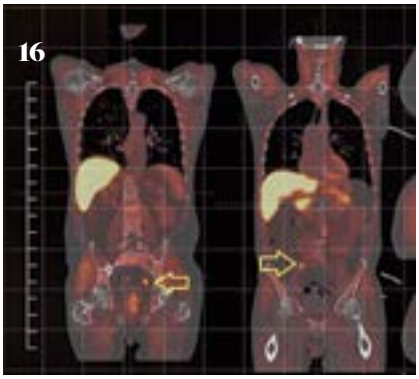

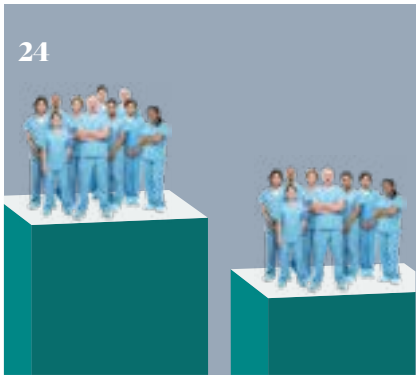

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Introducing the New ACS Strategic Plan

Patricia L. Turner, MD, MBA, FACS
executivedirector@facs.org

OVER THE PAST YEAR and a half, the ACS has been thoughtfully engaged in establishing our strategic plan. Multiple stakeholders have participated, including the Board of Regents, Officers, representative Past Presidents, Board of Governors, Young Fellows Association, Resident and Associate Society, various committee leaders, and staff executives. As with all strategic plans, the purpose has been to create a roadmap, prioritize our essential aims, establish key performance indicators, and ensure the ongoing success of our organization.

The resulting plan has four pillars undergirded by a transcending principle at its base.

Advance Patient-Centered Care and Surgical Quality

The first pillar, advancing patient-centered care and surgical quality, has been at the core of the ACS since our founding in 1913. Our organization's motto has been unwavering—"To Heal All with Skill and Trust"—and this can only be accomplished with continued focus on surgical excellence.

This pillar includes efforts to transform our Quality Programs to better serve participating institutions and to ensure that every patient has access to evidence-based, optimal-quality surgical care. It also prioritizes developing and promoting policies that incentivize high-quality, data-informed, patient-centered care, and educating patients about surgical quality, resulting in enhanced trust in us as surgeons.

Revolutionize and Educate

While the first pillar focuses on the "trust" part of our motto, the second focuses on the "skill" component.

The ACS offers a vast number of timely educational programs that range from artificial intelligence in surgery to hands-on skills training, in-person didactics across disciplines, to offerings for surgeons to develop advanced leadership, communication, and teaching skills.

We will continue developing relevant new products and updating existing, widely used resources, while modernizing our learning platforms to incorporate the latest technology. We will more seamlessly match content to learners' needs and enhance collaboration across surgical specialties to ensure that our programs are comprehensive and accessible to all members.

Innovate and Accelerate

This pillar highlights our investment in technology infrastructure, including pursuing frontline incorporation of

health informatics and digitally transforming the ACS enterprise for a frictionless and personalized experience. This vertical also includes a focus on incorporating strategic agility to accelerate our work, which is necessary to keep the ACS at the forefront of evolving member needs, patient care, and surgical science.

Unify and Advocate

As The House of Surgery®, a key aspect of our mission is to unify surgeons—both across our 90,000 members and across the many surgical disciplines and their respective stakeholders. This focus on collaboration permits us to speak with one voice and leverage our collective influence to protect and advance our roles as leaders of the care team. This prioritizes the best outcomes for our patients. We must connect with leaders across the continuum to help them make the most well-informed decisions. Whether through gentle relationship-building or assertive advocacy, we will fight aggressively for policies and practices that uphold member integrity and foster patient trust.

Operational Excellence

Finally, operational excellence underlies everything we do. The ACS has more than 450 employees in Chicago and Washington, DC, who work diligently on behalf of all members and the patients we serve. An essential element of our strategic plan is to support our employees with the right infrastructure for effective and efficient work, as we evolve and transform together.

Upholding Our Traditions

Leaders have made substantial updates to the ACS's areas of focus via this strategic plan. The core of our mission will always remain "To Heal All with Skill and Trust." We exist to help surgeons thrive and serve surgical patients to the utmost of our collective and individual abilities. This is our North Star, fixed and unchanging, and in every moment, our unity as surgeons can help us follow it.

Over the next few months, you will hear more about the ACS Strategic Plan and the initiatives underway in each pillar. The information will be available in the *ACS Brief,* on *facs.org,* and via other communications vehicles.

Clinical Congress 2025: Register Now

Please join us at Clinical Congress in Chicago, October 4–7, where we will induct new Fellows, present cutting-edge science and intriguing debates, network and collaborate, and enjoy camaraderie that helps sustain us all in our surgical practices.

I am also pleased that attendees will be able to celebrate Ajit Sachdeva, MD, FACS, who is retiring as ACS Senior Vice President of Education, and to meet Kyla Terhune, MD, MBA, FACS, who will assume this role.

View the program planner and register now at *facs.org/clincon2025.* B

Dr. Patricia Turner *is the Executive Director & CEO of the American College of Surgeons. Contact her at executivedirector@facs.org.*

Robotics Help Improve Precision, Personalization of **Knee Replacement Surgery**

Tony Peregrin

When patients balk at the suggestion of undergoing robotic-assisted total knee arthroplasty (TKA), some orthopaedic surgeons suggest they think of it as a sophisticated version of a GPS system in their car.

USING PLANNING SOFTWARE and real-time imaging, this technology helps surgeons navigate an individual's specific anatomy, including the tension in the various knee ligaments and other tissues around the knee, with reproducible precision in order to place the new implants in an optimal position with accurate soft tissue balance.

With the computerized software that comes with robotic systems, the surgeon can see the effect on the soft tissue balance of repositioning the implants and of altering the bone cuts before the first cut is ever made.

This software can reduce the number or extent of soft tissue releases and dissections that are required to balance the knee replacement, and it eliminates the need to revise bone cuts.

This is a typical OR setup, with a robotic device in place, to perform a TKA.

Using this less invasive technique, such a level of accuracy in both alignment and soft tissue tension can help balance the knee with less pain and easier recovery, leading to reproducible outcomes with fewer outliers in terms of alignment in multiple patients.

"Some patients will tell me they're not sure they want a robot doing their surgery," said William Ward, MD, FACS, an orthopaedic surgeon from FryeCare Orthopedics & Neurosurgery in Hickory, North Carolina, and member of the ACS Advisory Council for Orthopaedic Surgery. "I have to reassure them that we're not simply pushing a robot into the OR while I go sit in the corner. That may happen someday, but that's definitely not what's happening in 2025. I don't just blindly do what the computer is telling me to do. I'm telling the computer what I want it to do. And if the computer breaks down, the cables get severed, or the power goes out, I can still finish the procedure with standard jigs."

While the majority of knee replacements continue to be performed manually, the use of this technology rises, with approximately 13% done robotically.[1,2] According to the American Academy of Orthopaedic Surgeons, it is estimated that 50% of TKAs will be performed robotically by 2030.[2] Notably, patients younger than 65 years will account for more than 60% of all knee replacements by this time, likely due to an increase in active lifestyles coupled with faster recovery times and enhanced outcomes afforded by robotic-assisted surgery.[3]

How Does Robotic-Assisted Surgery Work?

Several surgical specialties offer robotic-assisted procedures, including cardiothoracic surgery, general surgery, gynecology, head-and-neck surgery, and urology in order to effectively manage a variety of medical conditions. For all procedures, including TKA, it is important to keep in mind that not all robotic devices are the same, and the surgeon is encouraged to learn the unique strengths and limitations of the specific device they are using.

Generally, prior to surgery, preoperative imaging (computed tomography or magnetic imaging) is performed in order to generate precise measurements of angles, rotations, soft tissue, and bone. This joint mapping

Once the plan is finalized by the surgeon intraoperatively, with the use of haptics, the surgeon limits what the computerized robot, under the guidance of the surgeon's hands, will cut.

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technology creates a 3-D model of the patient's knee joint, although some systems have the capability of creating a 3-D model intraoperatively without presurgery scans.

"The joint mapping involves using a stylus that is registering with the robot," explained Levi W. Kindel, MD, an orthopaedic surgeon from Salina Ortho in Kansas. "You're touching around the knee in certain landmarks, which creates a 3-D image for the robot."

During the procedure, the robotic arm helps guide the surgeon to ensure precise implant placement and bone cuts so the implant feels as close to the patient's natural knee as possible. These systems often incorporate haptic feedback that allows the surgeon to "feel," via the robot, the virtual boundaries established in the operative plan.

Once the plan is finalized by the surgeon intraoperatively, with the use of haptics, the surgeon limits what the computerized robot, under the guidance of the surgeon's hands, will cut. When these haptic limits are set, the robot will not allow the surgeon to cut beyond their planned cut, protecting the surrounding tissues.

"It is like having a magic coloring book that will not allow the crayon to go beyond the lines," explained Dr. Ward. "The haptic feedback varies with each robotic system. The one I use allows you to actually stress the knee in different preset positions with your own hands and arms, and you get a reading of how much laxity and how much space there is to put the implants in."

These readings allow the surgeon to revise the operative plan and reposition the implant, adjusting the bone cuts slightly to optimize both alignment and soft tissue balance. The adjustments are performed before the bone is actually cut, during the final stages of intraoperative planning. "Now, when you're making the cut, you're seeing it on the computer screen. You look at the screen and you look at the patient, back and forth, with haptic feedback guidance. The mechanical arm is moving within the range that you have set," he said.

By providing real-time feedback, haptics enhance the surgeon's control over the procedure, potentially contributing to better outcomes and a quicker recovery period.

"I still use a cutting block with the robotic system I use," said Dr. Kindel. "I think of it as kind of hybrid robotic-manual procedure. I use the robot to place my implant cutting guides where I want them, and then I perform all the cuts like a normal manual knee procedure. I describe it to patients as you can hang a picture on the wall and look at it and say, 'I think that's pretty level,' or you can use a level and know that it's perfect. And the robot, to me, is the level."

Is Robotic-Assisted Surgery Better?

Robotic-assisted TKA offers individualized surgical planning and enhanced component placement—but are patient outcomes higher than similar surgeries performed manually?

Assessing data from the National Inpatient Sample—a public database with information covering 7 million hospital stays annually in the US—researchers from The University

This leg is in full extension after final implants are in place during cementation.

of Texas Southwestern Medical Center in Dallas compared findings related to both approaches to TKA. Specifically, investigators identified 541,122 patients who received manual TKAs, and 17,249 who received robotic TKAs between 2016 and 2019.

The findings, published in 2024 in the *Archives of Orthopaedic and Trauma Surgery,* revealed that patients who received a robotic-assisted TKA intervention had hospital stays nearly half a day shorter and were less likely to exhibit complications, including infections, excessive blood loss, and fractures, dislocations, or mechanical complications of their prosthetic.[4,5] A notable drawback of this approach was cost. Robotic TKAs were found to cost an average of $2,400 more than manual surgeries.

In terms of mortality rates, several recent studies have reported a decrease in the number of deaths with technology-assisted TKA compared to conventional instrumentation in primary TKA. In this context, "technology assisted" includes robotic and other technologies that avoid the use of intramedullary guide rods, according to Dr. Ward.

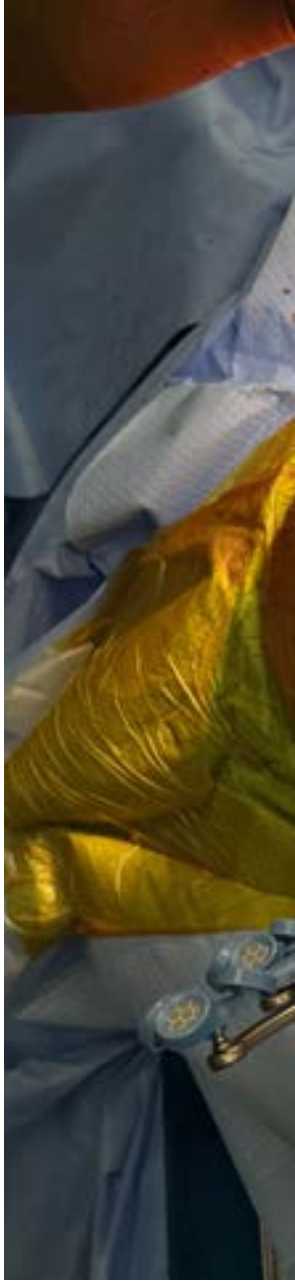
Specifically, an analysis of the Australian Orthopaedic Association National Joint Replacement Registry published in the *British Medical Journal* found that "The use of conventional instrumentation during TKA is associated with higher odds of early postoperative death than when technology-assisted instrumentation is used. This difference may be explained by complications related to fat embolism secondary to intramedullary rods used in conventional instrumentation. Given the high number of TKAs performed annually worldwide, increasing the use of technology-assisted instrumentation may reduce early postoperative mortality."[6]

Furthermore, a 2024 report in *Clinical Orthopaedics and Related Research* examining the American Joint Replacement Registry found that robotic-assisted TKAs were not associated with decreased odds of early revision; however, the study also reported a mortality rate of 0.3% (225 of 70,824) in patients with TKAs performed with conventional technique (1 in 315) versus a 0.03% mortality (3 of 8,853) with robotic-assistance (1 in 2,951). No further mortality analysis or data were provided.[7]

"Taken as a whole, these studies support patient preferences for lower mortality methodology, such as with a robot, at least until further research either refutes or confirms the lower mortality methodologies," said Dr. Ward.

While these studies suggest promising applications for robotic-assisted TKA, manual procedures remain the predominant approach, with at least one study calling the benefits of both a draw, at least for now.

> "There are ways to do it manually and get good results, but with the robot, you are less likely, at the end of the operation, to realize that the ligament is a little bit too tight."
>
> Dr. William Ward



Orthopaedic surgeons from the Cleveland Clinic in Ohio analyzed 12 categories of data from 340 patients undergoing robotic-assisted or manual TKA.[8] The results of the study were mixed, with the robot scoring better on length of hospital stay and home discharge, while manual surgery resulted in better flexion scores (bending motion of the knee) and shorter operative times for this cohort. Both procedures had virtually the same rate of postoperative complications.

"I operated without the robot for many years, and I trained many residents on how to do it manually," said Dr. Ward. "There are ways to do it manually and get good results, but with the robot, you are less likely, at the end of the operation, to realize that the ligament is a little bit too tight. You just don't get surprised with this approach. You cut where you plan to cut, and the post-op x-ray looks like it's supposed to look."

Limitations of Robotic-Assisted Approach

The barriers associated with the robotic approach to TKA include higher costs, increased operative time, navigating the learning curve, and overcoming patient perceptions.

In terms of costs, not only can individual cases cost an average of $2,400 more than conventional surgeries, but there also is the increased expense associated with the disposable equipment necessary to perform the procedure, not to mention the acquisition of the robotic device itself, which can cost millions of dollars, depending on the vendor.

Another potential challenge related to robotic equipment is size. Robots typically occupy a large footprint in the OR of up to 600 feet, including the console and robotic arms.

An additional consideration when adopting this technology is time. In a study published in 2023, researchers looked at six randomized clinical trials covering 1,689 cases and found that robotic-assisted surgery is associated with a longer duration of surgery, with a mean difference of 32.9 minutes.[9]

Time also is a factor for surgeons seeking to master the learning curve associated with this technology; proficiency with this approach is essential for ensuring patient safety, efficiency, and overall outcomes. While the learning curve can vary considerably based on the skills of the individual surgeon, a study published in 2024 suggests that a reduction in operative times for robotic-assisted TKAs to levels comparable to manual surgeries occurred after performing 30 to 40 robotic procedures.[10]

Other studies underscore the learning curve's wide range, suggesting that as few as 25 surgeries or as many as 70 are necessary to master the robotic device, depending on the manufacturer and distinct

The robot is setting the distal femoral rotation and anteroposterior placement for the cutting block.

competencies of each surgeon.[10]

"Come do a case with me," advised Dr. Ward as a way for colleagues to reframe perceived barriers to integrating this technology into practice. "Observe a case with someone who's mastered this procedure."

While reaching this level of proficiency presents challenges related to time spent away from the surgeon's practice, researchers highlighted the importance of structured training programs that can accelerate the learning process and called for additional studies to examine approaches for optimizing these training protocols.

"Do it—just give it a chance," added Dr. Kindel. "The biggest consideration regarding robotic knee technology, and I had to go through it, is the learning curve. You've got to figure out how to use the machine, and you have to determine what gaps or numbers you like. There's no set, standardized number. The surgeon gets to decide what extension gap they like, what flexion gap they prefer, and you get to pick those numbers. Unfortunately, for you to be able to do that, you've got to do the cases. And it's a big learning curve. But once you figure out those numbers, you're done."

Addressing patient misconceptions regarding the application of this technology is another potential hurdle for implementing the robot into practice. A 2024 study examined the results of an optional, anonymous survey presented to 360 patients during their initial consultation. It found that patient interest in robotic-assisted total joint arthroplasty varied (77.8% of respondents expressed interest in the robotic-assisted approach to some degree), and that many patients have a limited understanding of the procedure.[11] In fact, more than 100 respondents expressed belief that robotics were capable of independently performing most or all of the procedure.

"The lay public may not understand what the robot is," explained Dr. Kindel. "They sometimes think it's a robot that enters the room and does the surgery. I tell them, 'No, the robot is just another tool in my tool chest

This photo depicts arthritis of the knee after arthrotomy with robotic arrays in place.

that I use during surgery.' The big thing I relay to patients is that I'm still completely in control. I make all the cuts, and I make all the decisions."

Training in Traditional TKA Is Indispensable

While both Drs. Kindel and Ward support robotic-assisted TKA for appropriate patients due to its enhanced precision capabilities, they assert that training in manual techniques is essential, particularly for managing unanticipated situations in the OR.

"Patients are usually fairly agreeable once they understand that I've had years of experience—and that if the computer were to malfunction, I still have what I call ocular navigation," explained Dr. Ward. "I'm using my own eyes, and if something doesn't look right, then I'm going to verify. So, if the robot breaks, I'm not totally out of luck. I know how to finish the case if I have to."

In fact, a rising number of orthopaedic residency programs are incorporating robotic-assisted TKA into their training. In a survey of 220 senior orthopaedic residents attending a National Board Review course, 70% of respondents reported exposure to this technology during their training, with 20% reporting that more than half of their training involved robotics.[12] While 45% found robotic training enhanced their understanding of the surgical procedure, 25% expressed concerns that training on a robotic device may negatively compromise their training with traditional instruments.

Dr. Kindel's training was primarily focused on the manual approach. Following training, he performed manual TKA procedures for a year and half.

"Then I switched to the robot, and I've been doing the robot primarily for the last year. I'm pretty much straight robot, unless it's an atypical case or I am doing a revision—then I'll still do manual instrumentation," he said.

While Dr. Kindel uses the robotic approach for TKA almost exclusively today, he remains an ardent champion of manual training during residency.

"During my residency, I had one attending who taught me

> "Every resident should know how to do a manual total knee replacement, and then once you incorporate the robot, it's a full light bulb moment when you completely understand and manipulate the knee differently."
>
> Dr. Levi Kindel

manuals," said Dr. Kindel. "If it wasn't for him, I would've been trained primarily on the robot. Every resident should know how to do a manual total knee replacement, and then once you incorporate the robot, it's a full light bulb moment when you completely understand and manipulate the knee differently. We're able to make a very individualized knee replacement for the patient, depending on their deformity or their arthritic pattern. I'm very passionate about it." B

Tony Peregrin *is the Managing Editor of Special Projects in the ACS Division of Integrated Communications in Chicago, IL.*

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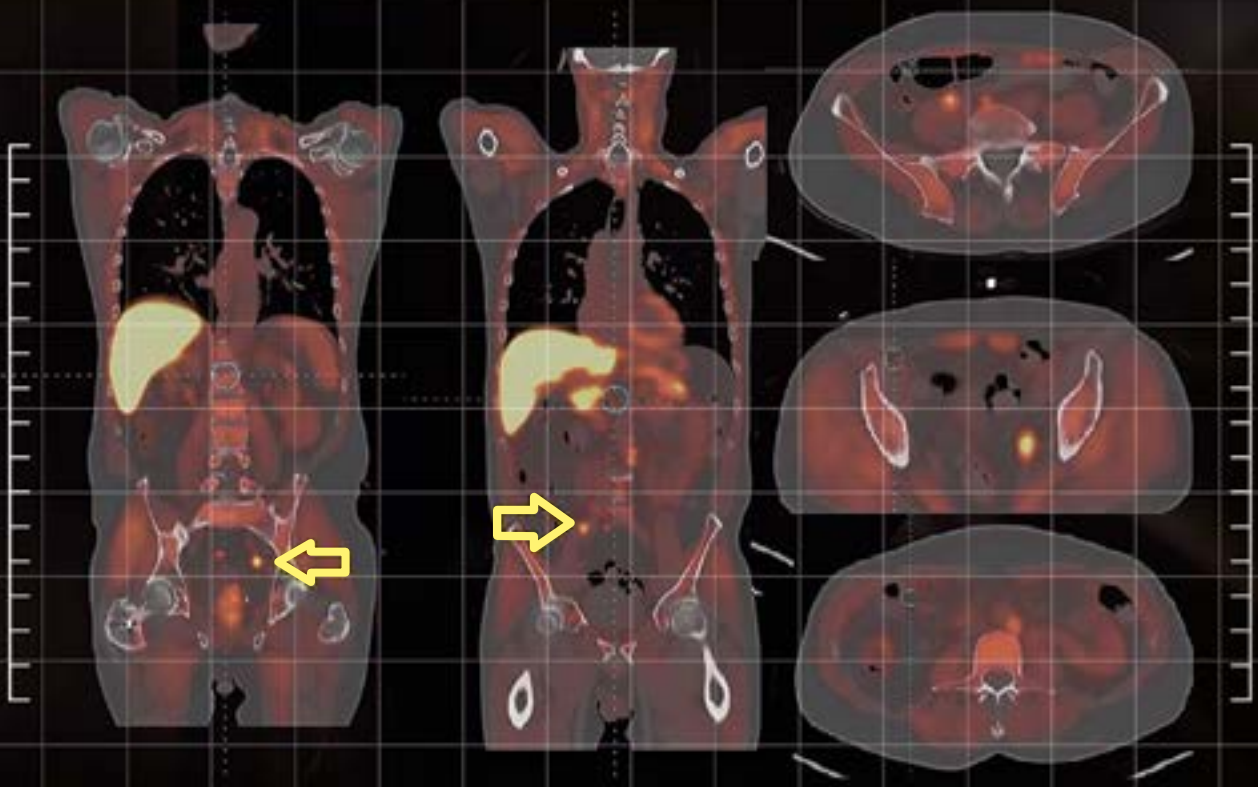
Advanced Imaging, Robotic Surgery Propel Prostate Cancer Management

Matthew Fox, MSHC



The global incidence of cancer is increasing. In 2050, more than 35 million people around the world are expected to be diagnosed with cancer, representing a massive 77% increase from the estimated 20 million diagnoses in 2022.[1]

AMONG THE CANCERS DRIVING this increase is prostate cancer, which is the most common cancer among men in the US and the second-most common among men globally.[2] Prostate cancer incidence is expected to double worldwide by 2040 to nearly 3 million diagnoses per year.[3]

Accurate diagnoses and effective treatment for prostate cancer is a clear priority in medicine, and recent news about the diagnosis of former US President Joe Biden with aggressive metastatic prostate cancer is driving even greater attention to this common disease.[4]

As with most cancer care, management of prostate cancer is a multidisciplinary effort, and surgeons share a position at the forefront of treatment.

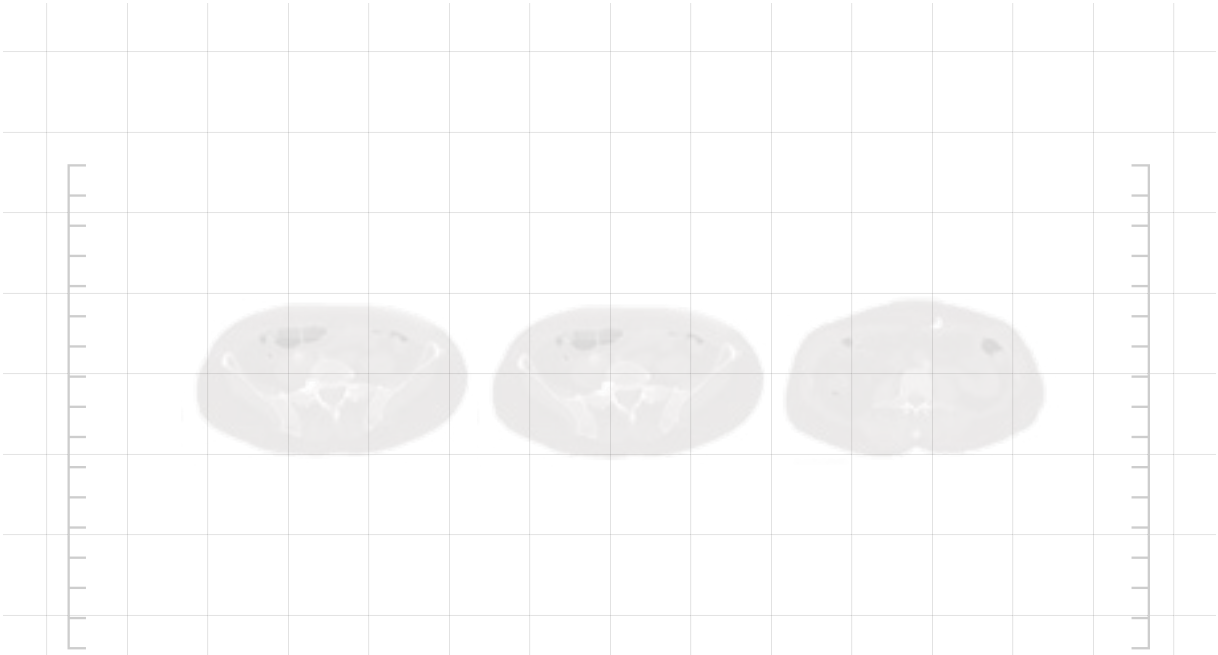
The ubiquity and sometimes unique nature of prostate cancer necessitates high-quality, proven treatment, while also providing continuous opportunities for evolution. This reality makes prostate cancer management a microcosm of broader conversations in surgery, which includes advanced imaging, optimal surgical or nonsurgical treatment, and decisions regarding whether surgery—or any treatment—is necessary in each case.

A PSMA PET scan vividly highlights the location of prostate cancer.

Advanced Imaging Guides Diagnosis, Treatment

Effective management of solid tumor cancer relies on accurate information, and prostate cancer imaging has experienced several advancements in recent years that are helping to make diagnoses and treatment decisions more impactful.

The prostate-specific antigen (PSA) blood test continues to be the mainstay of contemporary prostate cancer screening and monitoring after treatment, with its high sensitivity that is useful for detecting disease (though it has low specificity). Other newer blood-based and urine-based biomarkers



are enhancing the initial point of entry for identifying patients who are at risk for prostate cancer, as well. And once cancer is suspected, advanced imaging techniques come into play.

"We typically use prostate–focused magnetic resonance imaging (MRI) for diagnosis," according to John G. Pattaras, MD, FACS, the James C. Kennedy Chair of Prostate Surgery, director of minimally invasive surgery, and associate professor of urology at the Emory University School of Medicine in Atlanta, Georgia.

"Individuals can still go and get a biopsy done if their PSAs are elevated or the urologist feels they're at risk for prostate cancer, but the standard in 2025 is getting the MRI before the biopsy to look for suspicious areas and allow us to target those biopsies," he said.

The idea of targeted biopsies for prostate cancer represents a sea change for gaining diagnostic information compared to the mid-1990s and early 2000s when the PSA was introduced and gained traction.

"Historically, the way we would identify prostate cancer is the patient would get a PSA test, and if it was high, they would use a template biopsy of the prostate where the surgeon, like playing a game of Battleship, would essentially map out the prostate in a 4-by-3 grid and just hope that they catch the cancer," said M. Minhaj Siddiqui, MD, FACS, director of urologic oncology and robotic surgery at the University of Maryland Medical Center in Baltimore.

"Now with these MRIs, we can see areas most concerning for cancer, and we have the ability to perform a targeted biopsy that provides much more accurate information," he noted.

The MRI has a relatively high sensitivity and specificity for localizing the index lesion or the most dominant focus of clinically significant cancer in the prostate. It also is reasonably useful for local staging, including involvement of seminal vesicles, lymph nodes, or extracapsular extension.

However, there are accuracy limitations when extending beyond the local area into broader regional or further metastatic areas of concern—and it is in these instances that the prostate-specific membrane antigen positron emission tomography (PSMA PET) scan has entered the conversation.

"PSMA PET has really changed the landscape of staging and advanced imaging for prostate cancer," said Kara L. Watts, MD, director of the prostate screening program at Montefiore Einstein Medical Center in the Bronx, New York.

"Traditionally, we obtained a computed tomography (CT) and bone scan to stage men who have intermediate, or high-risk prostate cancer at time of diagnosis. But PSMA PET has been shown to have a much higher accuracy for predicting lymph node involvement compared to CT scan, and a higher sensitivity and specificity for other distant spread compared to bone scan. In addition, it delivers less than half the total radiation of the CT/bone scan combination," she said.

As a result, PSMA PET has largely replaced CT and bone scans for determining oligometastatic and metastatic disease (when insurance and access are available). And it is worth underscoring that this

scan is specifically designed to enhance prostate cancer management.

"These are very specific PET scans. They're not fluorodeoxyglucose PET scans, which are used for breast, colon, and other types of cancer," Dr. Pattaras said. "This is for prostate cancer, and it has become our standard for working up patients prior to surgery or radiation for unfavorable intermediate-risk and high-risk patients."

Enhancing Surgical Planning

Prostate MRI and PSMA PET scans provide invaluable data for a multidisciplinary care team to understand the severity of disease and create a map for treatment. For surgeons, both can aid in pre- and perioperative planning.

The MRI of the prostate is exceptionally good at characterizing the behavior of the cancer within the prostate as well as prostate anatomy, which has allowed surgeons to map and treat the cancer better surgically, according to Dr. Siddiqui.

Modern MRI can provide clear images of vital structures the cancer is near, such as important nerve bundles.

"In certain situations, you must be more aggressive in the way you resect the cancer in the prostate, and you may not be able to spare some of these structures to get all the cancer out. In other situations, you can see that the cancer is not really near some vital structure," Dr. Siddiqui said.

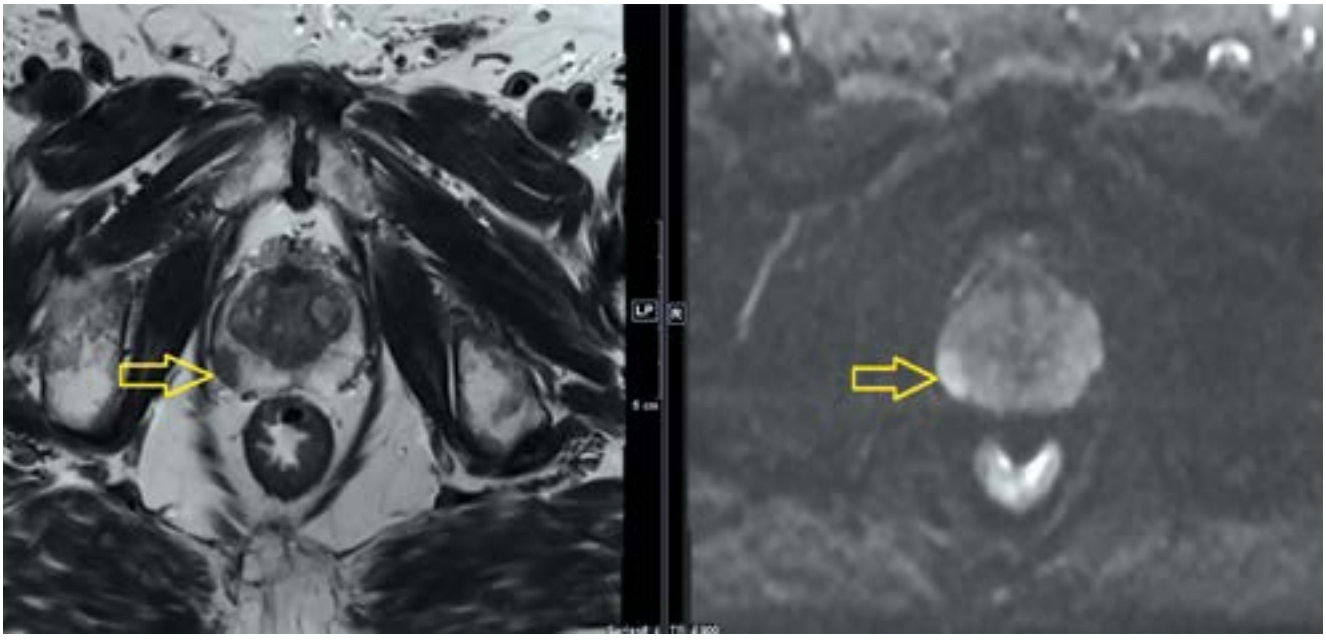
"So, even though the patient may have aggressive cancer in some areas, you can consider a more extensive surgical approach when performing a nerve-sparing prostatectomy to save the neurovascular bundle or manage the bladder neck to help with continence recovery," he said.

Dr. Pattaras echoed the utility of MRI and added that PSMA PET has a place for optimal perioperative treatment.

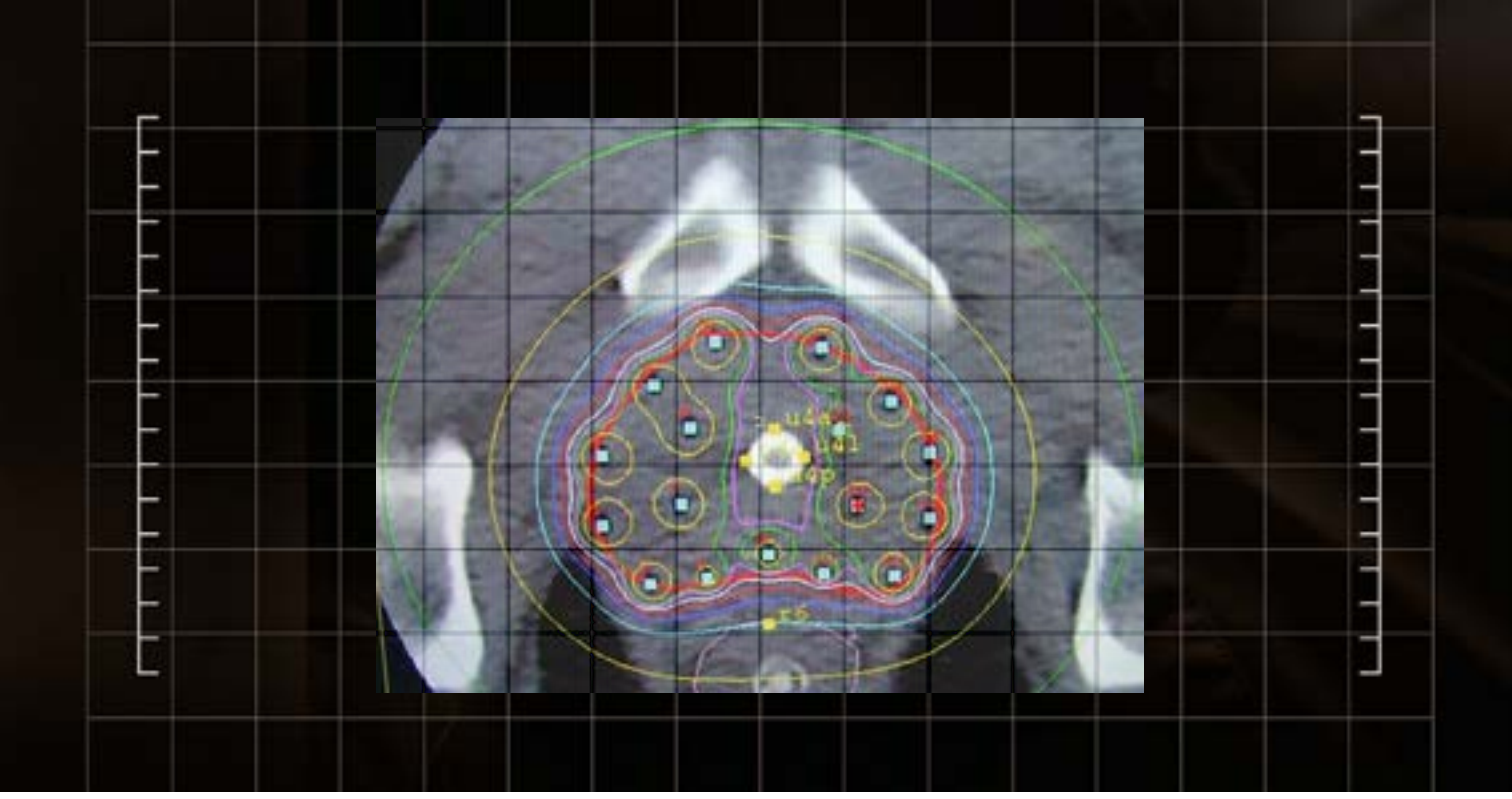
"I can use MRI to know the anatomy when I'm opening the bladder, and I'll know the size of the prostate and locations of adjacent structures; then I use PET to determine my lymph node dissection. I'm using these imaging techniques not just for diagnostics; I'm using them as surgical planning techniques," he said.

Despite newly available patient data from PSMA PET, caution should be taken, according to Dr. Watts, because it has the potential to identify lymph nodes or small lesions on bones that look positive but may not be metastatic.

"In some cases, this does carry a risk of upstaging a patient where they may no longer be offered a surgical option for curative intent, or the amount of



A prostate MRI shows the location of a primary tumor. This patient was given a Prostate Imaging Reporting and Data System score of 4, indicating high suspicion of clinically significant prostate cancer.



This imaging of HDR (high-dose-rate) brachytherapy, also known as international radiation therapy, shows where implants are placed to deliver radiation directly to a tumor.

therapy offered to them may be changed from what was originally recommended to them based on the MRI," she said, adding that such possibilities must be considered when reviewing PET scans and holding multidisciplinary consultations.

Robotic Prostatectomy Dominates Surgical Treatment

Many different prostate cancer treatments exist, but when diagnostics and imaging confirm that surgery is appropriate for primarily localized disease, the approach is clear—a patient will almost invariably have a robotic prostatectomy.

Robotic-assisted prostatectomy has been the standard surgical treatment for prostate cancer for at least a decade, and today approximately 95% of prostatectomies are performed using a robotic approach.[5]

This is a noteworthy figure in an era where considerable research is dedicated to determining the efficacy of robotic versus laparoscopic approaches to a variety of procedures, from hernia repair to cholecystectomy to transplant surgery.[6-8] Both pathways have varying outcomes that sometimes trend toward less favorable results for robotics in terms of outcomes and costs.

Fortunately, the prostate presents an operative environment that favors the robotic-assisted approach and, specifically, disfavors laparoscopic and open approaches.

"The location of the prostate is particularly challenging. You're deep into the narrower male pelvis, and it's surrounded by the rectum and bladder," Dr. Pattaras said, which limits working and visualization space with traditional laparoscopic tools.

"When we were attempting these laparoscopically, you couldn't see in three dimensions, but with modern robots, there are two 1080p cameras providing 3-D visualization that allows you to see small nuances of the prostate and surrounding tissue," he said.

When weighed against open prostate surgery, which is the primarily used alternative approach, there are similar advantages to using a robot.

"The prostate is surrounded by a plexus of vascular structures that could make it a fairly bloody case historically," Dr. Minhaj said. "The robot really helps with visualization access to these spaces and has made the case much less bloody compared to open surgery."

This approach represents a significant improvement from the 1990s, when US Food and Drug Administration approval of the PSA test led to a substantial increase in prostate cancer surgery.

With open surgery, "patients would lose 500 ml to a liter of blood very easily in a prostatectomy, and the transfusion rates were quoted to be anywhere between 10% and 40%," Dr. Pattaras said. "Now, because of the pneumoperitoneum and improved visualization, most patients lose probably less than 100 ml of blood, and the transfusion rate is down to less than 1%."

Overall, the general advantages for patient recovery after surgery with the minimally invasive, robotic approach are similar to most other procedures in

contrast to open surgery—reduced pain, less time in the hospital, and quicker return to functional status.

It is important to note that the oncologic outcomes for robotic and open surgery appear to be roughly equal at a moderate follow-up interval,[9] but where the robotic approach has shown a clear advantage is in noncancer outcomes, such as continence and erectile function.

The intraoperative precision of a robotic approach makes nerve-sparing prostatectomy more of a possibility, which can dramatically improve these important quality of life outcomes. Other advances continue to be made in robotics, such as the development of single-port robots that make only one incision to perform the prostatectomy versus multiple, which introduces new minimally invasive possibilities.

Multimodal and Nonoperative Approaches

While surgeons are likely to focus on how technologic and technical leaps are impacting the care they provide, robotic-assisted surgery is just one piece of the overall treatment plan for prostate cancer.

Whether a patient has advanced metastatic disease that makes surgery a less effective option or they are physiologically unable to bear surgery-related stress, there are multiple nonoperative approaches that can effectively treat prostate cancer in the right circumstances.

The most familiar option is likely external and internal radiation therapy, which is a common alternative to surgery. In fact, Dr. Pattaras said he and a radiation oncologist see all new patients together to offer additional options and more information on potential follow-up radiation after surgery.

Other treatment modalities include hormonal therapy to block the action of androgens, which can spur prostate cancer growth, as well as standard chemotherapy and immunotherapy for metastatic disease.[10]

But there is one area of increased focus that is aimed at minimizing side effects while providing quality outcomes for localized diseases—focal therapy.

"The most commonly available forms of focal therapy are cryotherapy, which involves freezing the prostate with needles, and transrectal HIFU [high-intensity focused ultrasound], which involves heating the prostate to a lethal temperature through a transrectal probe. There is also irreversible electroporation, or NanoKnife, which uses needle-based electrical pulses that destroy only the tissue in between the needle points. Other treatments are also offered in select centers or are in development in current clinical trials," explained Dr. Watts.

"The benefit of this type of approach is that it minimizes the side effects that may result from whole-gland therapy, like surgical removal of the prostate or radiation therapy, while still achieving in, appropriately selected cases, an effective cancer control outcome," she said.

These treatments are not currently the standard of care for prostate cancer, and because some prostatic tissue remains untreated, their use necessitates additional monitoring after the procedure.

Another MRI reveals the location of a primary prostate tumor.

"But in the properly selected patient, with an experienced surgeon, these can offer a really effective alternative with much fewer side effects than whole-gland therapy," Dr. Watts said.

Active Surveillance Helps Avoid Unnecessary Treatment

Underlying all discussions of surgery, alternate therapies, and advanced imaging is a clinically significant fact—prostate cancer is, in many cases, a slow-growing or indolent disease. It often does not require immediate treatment after a patient is analyzed using the Gleason score or the more recently developed grading on Grade Groups.

And because most prostate cancer diagnoses occur in men in their late 60s to 70s, conversations are increasingly taking place regarding whether treatment is the right decision when weighing the side effects of surgery, radiation, chemotherapy, and so on against the extended life expectancy, which is typically 10–15 years for prostate cancer patients.

After all, there is a reason that the medical maxim of "more men die with prostate cancer than because of it" still holds true.[11] Resultantly, the concept of active surveillance has found a foothold in prostate cancer management.

"These patients can range the spectrum of age, health, and baseline status. But their cancers are characterized based on their PSA, imaging, biopsy, and Gleason score or Grade Groups score, as having a low-grade and a low-stage cancer. If all these things line up, and it's a low-risk cancer, or in some cases even a favorable intermediate risk of cancer, then a process of active surveillance begins," he said.

True to its name, active surveillance requires regular testing and patient engagement, with 6-month visits that include PSA tests and repeat MRIs and biopsies to make sure that the cancer is not progressing into a more aggressive subtype.

Evidence shows that the protocol works in the right patient. When the studies examined individuals who were randomized to either getting immediate treatment versus being monitored closely with active surveillance and only treated when they were found to have a progression, the cancer-related outcomes were identical.

"More than half of the time, patients under active surveillance never require treatment," Dr. Siddiqui said.

He also noted that the efficacy of active surveillance has been substantiated with enough data that this approach has become part of guideline statements from the American Urological Association and the National Comprehensive Cancer Network; it also has become a part of best practices at ACS Commission on Cancer (CoC)-accredited treatment centers, where Dr. Siddiqui managed updating the urologic cancer measures.

"The CoC measure that was adapted and is now live states that for patients who are diagnosed at CoC institutions with low-risk prostate cancer, the preferred method for management should be active surveillance, not treatment, as an initial strategy," he said, demonstrating that the ACS plays a meaningful role in whole-patient management, and not just surgery.

The concept of active surveillance has found a foothold in prostate cancer management.

Ultimately, the decision to pursue active surveillance speaks to the nature of modern prostate cancer. It is a well-understood, generally slow-growing disease that has several effective treatment modalities, but it also affords the possibility of no treatment at all for appropriate patients. And looking forward, genomics and artificial intelligence may play a role in enhancing treatment decisions even further.

As with all cancer, it is incumbent upon surgeons, oncologists, and other members of cancer care teams to regularly communicate with the patient so they understand the course of action that will provide the best outcomes for their individual circumstances.

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Surgeon Shortage Calls for Action

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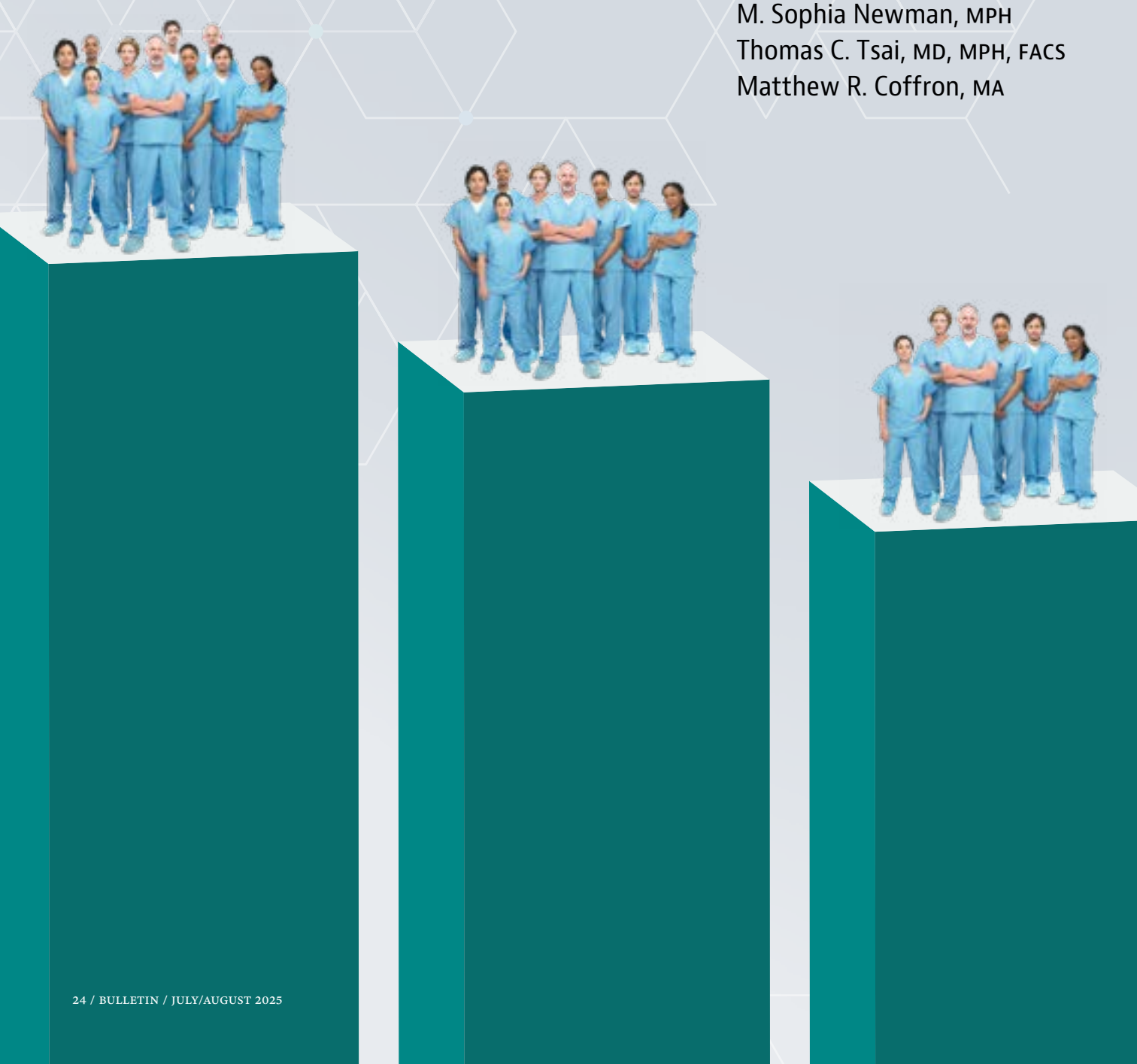

An Association of American Medical Colleges (AAMC) report released in 2024 was so clear it was almost brutal: it predicted a shortage of 13,500 to 86,000 physicians by 2036.

THE WORST NEWS WAS THAT 10,000 TO 19,900 individuals, or as much as 74% of the total shortfall, would be surgeons.[1]

This deficit could mean longer wait times, longer travel distances, and less timely care for patients in need of surgical procedures—situations exacerbated by the growing burden of chronic disease and rising median age among the US population. Without the physicians and surgeons needed to provide effective care, improving the health of US communities will be an overwhelming challenge.

How Shortages Might Arise

Physician shortfalls can be attributed to many factors, but three causes stand out: a medical school moratorium, the cap on federally funded surgical trainees, and an anticipated surge in retirement rates.

The moratorium had its origin in a report on the future of medical education issued in September 1980 by the Graduate Medical Education (GME) National Advisory Committee to the US Department of Health and Human Services. This report predicted an oversupply of 145,000 physicians by the year 2000.[2]

An aging population facing a growing burden of chronic diseases, such as cardiovascular disease, cancer, obesity, and diabetes—diseases that often require surgical treatment—has increased the demand for physicians, and especially surgeons.

This posed a serious concern. An oversupply could impede physicians' abilities to advocate for adequate work conditions, appropriate compensation, and even high-quality patient care.

As a result, a self-imposed moratorium among US medical schools followed. Starting in 1981, medical student enrollment was maintained at approximately 16,000 seats per year,[2] and no new medical schools were established to avoid training more physicians than the country needed.

In response to the predicted surplus of physicians, Congress also acted to limit federal support for GME in the Medicare program. The Balanced Budget Act of 1997 capped the number of Medicare-supported residency positions at the levels that existed in 1996.

Since the federal government was and still is a primary source of funding for GME, this cap has further limited the number of physicians. In addition, GME slots are tied to their sponsoring institutions, and this freeze has locked in training in the geographic areas where programs were established—often far from areas experiencing the highest rate of population growth, such as Florida and the Southwestern US.[3]

The predicted oversupply did not materialize. By 2005, the moratorium had lasted for a quarter century. In that time, the US population had grown by 70 million people, medicine had specialized more extensively than ever before, and the logic of permitting zero growth among medical students had begun to seem misguided.

In addition, an aging population facing a growing burden of chronic diseases, such as cardiovascular disease, cancer, obesity, and diabetes—diseases that often require surgical treatment—has increased the demand for physicians, and especially surgeons.

Instead of an oversupply, the combined shift in physician training and population needs had created a shortage of surgeons.

Too Little, Too Late?

Medical schools responded by lifting the moratorium. Existing schools quickly added seats to incoming classes and additional campuses, and entirely new schools sprang up. By 2020, a new plateau of nearly 21,000 annual graduates of MD-granting institutions had been reached—approximately 30% above the previous level of 16,000.[4]

Accordingly, the number of resident physicians increased, too, from about 108,000 in 2008–2009 to approximately 158,000 in 2022–2023, according to the Accreditation Council for Graduate Medical Education (ACGME) data, an increase of approximately 46%.[5] (These data include international and US medical graduates.)

Per the AAMC, the number of active physicians grew from 766,000 to more than 949,000 (24%) between 2005 and 2024.[5] Because the US population

increased approximately 16% in the same period, it appeared that physicians were growing at a pace at least somewhat well-matched to population needs, offsetting the relatively small numbers educated between 1980 and 2005.

But not all specialties have grown at the same pace. While the number of surgical residents grew by approximately 37% (from about 21,000 in 2007–2008 to 29,000 in 2022–2023),[5] the population of practicing surgeons rose by less than 10%, from approximately 142,000 to 155,000 surgeons.[6]

In addition, the limitation on the number of Medicare-supported GME positions has remained in place, which limits the growth of the medical profession. The government has acted only recently—and insufficiently—to ease these limitations. In the Consolidated Appropriations Acts of 2021 and 2023, Congress approved a combined total of 1,200 new positions. As of last year, only half of these positions have been allocated to teaching institutions nationwide. Among healthcare professionals, concerns are growing that the slow pace of GME expansion will bottleneck the training of US and international medical graduates.

According to National Resident Matching Program (NRMP) data, in 2025, 99.8% of the available 1,778 surgical positions were filled on Match Day.[7] However, the NRMP noted that approximately 20% of applicants, including more than 6% of US seniors in programs granting medical doctorates or doctorates of osteopathy, were unsuccessful in securing postgraduate positions across all specialties.[7]

The US needs those trainees. Using 7.5 general surgeons per 100,000 population as a benchmark, AAMC data now show that 21 states have fewer than the necessary number of general surgeons, a shortage that may be related to the cap on medical school enrollment in earlier years.[8]

At present, this has led to the view that rather than a surgeon shortage, a maldistribution of surgeons that overconcentrates resources in urban areas to the detriment of rural communities, may be a more pressing issue. A 2018 Health Resources and Services Administration (HRSA) report to the Senate Appropriations Committee found that rural areas nationwide had on average only 69% of the general surgeons needed to meet demand, while large metropolitan areas had more general surgeons than strictly required to meet the needs of urban populations.[9] (Read the April 2024 *Bulletin* article, "Physician Workforce Data Suggest Epochal Change," for more details.)

The problem will take time to fix. For disciplines such as general or orthopaedic surgery, full training includes approximately 9 years of medical school and residency. With many academic training programs requiring 2 years of research training

Statistics on the Shifting Surgeon Workforce

1. Predicted shortage of surgeons by 2036: 10,000–19,900 surgeons
2. Number of US states that currently have fewer than 7.5 general surgeons per 100,000 population: 21
3. Portion of surgeons in the US who are age 65 years or older: Approximately 25.6%
4. Estimated number of surgeons older than age 65 who may retire without a replacement: 10,937

and 1–2 years in a fellowship, a surgeon may train for 14 years. Policies to address surgeon shortages, whether at the current or predicted future levels, need to account for this.

Intent to Leave Practice

Whether a current shortage or maldistribution are in effect, signs suggest surgical workforce numbers may decline in the future as practicing surgeons retire. At present, approximately 25.6% of all surgeons in the US are aged 65 years or older, and surveys indicate that most physicians wish to retire by age 70.[10] Very few surgical disciplines have sufficient residents available to replace this wave of retirees. A rough estimate derived from 2023 AAMC data on surgeons older than age 65 and 2022–2023 ACGME data on the number of current surgical residents suggest 10,937 surgeons will retire without replacements—well within the range of 10,000 to 19,900 that the AAMC has predicted.[1]

In addition, a *JAMA Network Open* study[11] from 2023 surveyed nearly 19,000 physicians and found that, across all specialties, 32.6% had a moderate or strong urge to leave clinical practice within 2 years. Within surgical specialties, this statistic varied from nearly 40% in thoracic and neurologic surgery to less than 30% in plastic surgery and ophthalmology. In every case, however, the loss of so great a percentage of surgeons would significantly impede patient care.

Whether a current shortage or maldistribution are in effect, signs suggest surgical workforce numbers may decline in the future as practicing surgeons retire.

The same study offered numerous insights into how to help. It found that professional fulfillment, peer support, supportive leadership, useful electronic health records, and good alignment between personal and organizational values all reduced intent to leave practice. Burnout, depression, and negative impact of work on personal relationships all increased intent to leave.

Elsewhere in the literature, surgeons have proposed helping surgical residents through mentoring, stronger peer-to-peer connections, and greater support during early and transitional phases of residency. In addition, greater efforts to help existing rural surgeons stay in practice and ease the maldistribution of surgeons in various practice settings are necessary.

What ACS Is Doing

The ACS offers a range of supports across the career span, starting with specialized education, outreach, and career discernment resources for medical students. The College also has created career-stage groups, particularly the Resident and Associate Society and Young Fellows Association, that bolster opportunities for networking, camaraderie, and support in early career. The ACS also has available several mentoring programs for surgeons, which have been posited to reduce intent to leave practice.

At the federal level, the ACS Division of Advocacy and Health Policy supports legislative efforts to expand Medicare support of GME, create specific designations for surgical shortages, and reduce the burden of student debt.

For example, in the current 119th session of Congress, the ACS endorsed the Resident Education Deferred Interest Act (HR 2028/S 942), which would allow borrowers in residency to defer student loan payments interest free, and the Specialty Physicians Advancing Rural Care Act (HR 2761/S 705), which would establish a new loan repayment program for specialty physicians.

The ACS also previously supported legislative efforts such as the Resident Physician Shortage Reduction Act, which would greatly expand the number of Medicare-supported GME spots, and the Ensuring Access to General Surgery Act, which would direct HRSA to study access to general surgery and, if needed, designate general surgery shortage areas. These bills are expected to be reintroduced in the 119th Congress.

In addition, a new research project to map the current distribution of surgeons of all specialties is in the works and expected to produce data that can bolster awareness of shortages and advocacy efforts in the future.

Helping ensure surgeons are able to maintain work-life balance is another priority, so the ACS supports solutions to reduce unnecessary paperwork and help surgeons learn about and effectively use artificial

intelligence (AI), a technology often touted for its potential to improve electronic health records and lower administrative burdens on clinicians. Offerings on AI include several Clinical Congress sessions, as well as freestanding courses on the science behind AI in surgery.

The ACS also is pressing for improvements in workplace policies on pregnancy, parental leave, and lactation support for surgical trainees and practicing surgeons. In spring 2024, the College issued statements specifying appropriate support for family planning and childrearing among surgeons and surgical trainees, including eligibility for 12 weeks of leave after the birth of a child. The statements were endorsed by the American Board of Surgery and American Boards of Thoracic, Colon and Rectal, Neurological, Oral and Maxillofacial, and Plastic Surgery. This is one of several ways that the College connects with other surgical societies on supporting surgeons.

In addition, the ACS offers a range of support to rural surgeons, from practical advice on the ACS Practice Management hub to the work of the Advisory Council for Rural Surgery. The College remains active in advocacy to help surgeons access student loan forgiveness, healthy reimbursement rates, and other means to ensure their prosperity, and provides support for research, professional development, and career advancement.

Meeting the needs of patients requires an adequately sized workforce, as well as a workforce that is respected, treated well, and unified. While no single factor may forestall the shortage of surgeons, a concerted effort to help surgeons will be essential—both to bolster the number who practice and ensure optimal outcomes for their patients, in keeping with the College's motto, "To Heal All with Skill and Trust."

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Clinical Congress 2025 in Chicago Will Ignite Big Ideas, Bold Advances

Matthew Fox, MSHC

For the first time in a decade, the ACS Clinical Congress will return to Chicago, Illinois, with thousands of surgeons and medical professionals coming together October 4–7 for one of the largest surgical meetings in the world.

LOCATED ON THE PICTURESQUE SHORES of Lake Michigan, Chicago is an international hub for culture, fine dining, commerce, industry, education, and technology.

"Chicago has so much to offer and, importantly, it is conveniently located in the middle of the US," said Anton N. Sidawy, MD, MPH, FACS, ACS President-Elect, who will be inaugurated at the conference.

"There is a reason Chicago is a city where many professional organizations, especially medical organizations, have their headquarters—that central location facilitates collaboration," he said.

The well-received Saturday-through-Tuesday meeting footprint, initiated last year, returns and allows surgeons to spend minimal time away from their busy practices. The meeting also has been enhanced by adding the Windy City Welcome Reception to Saturday evening. This event, which combines the Saturday President's Reception and Taste of the City, previously held on Tuesday, will blend Chicago's renowned cuisine, vibrant culture, and stunning skyline with a celebration of The House of Surgery®.

Another event not to miss is a celebration of the career of Ajit K. Sachdeva, MD, FACS, who will retire later this year as Senior Vice President of the ACS Division of Education.

"In the past nearly 2 and half decades, Dr. Sachdeva has transformed the Division of Education from a few educational programs into a vibrant division featuring programs for medical students, residents, practitioners, surgeons, and patients," said Fabrizio Michelassi, MD, FACS, Chair of the ACS Board of Regents.

"This transformation has occurred in a systematic and informed way with vision, persistence, and commitment, and we invite all attendees to help us celebrate the many contributions of Dr. Sachdeva," he said.

New Fellows

A high point of Clinical Congress is the Convocation Ceremony, which confers Fellowship upon surgeons who have successfully met the ACS's requirements and standards and who are committed to its mission and values.

Preceding the welcome reception, the ceremony will take place on Saturday evening and will include recognition of Honorary Fellows, presentation of the Distinguished Service Award, installation of ACS Officers and Officers-Elect, and the Presidential Address from Dr. Sidawy.

The Convocation Ceremony also will be livestreamed for those unable to attend in person.

In-Depth Explorations into AI and Robotics

For more than a century, what has made Clinical Congress such an integral part of advancing the field of surgery has been its robust and ever-evolving educational program that "meets the moment" for surgeons. In 2025, this translates into a greater focus on how technology is transforming practice.

"This year, we are excited because we have an emphasis on new technology, on artificial intelligence (AI), robotics, advances in education, quality issues, and, of course, the usual clinical topics we cover," Dr. Sachdeva said.

Exploration into how AI will affect surgery continues to grow. In addition to serving as a point of discussion throughout dozens of presentations that will investigate its impact on specific content areas, consider attending several expert-led sessions that will cover AI issues of broad interest:

- Using ChatGPT and AI for Beginners
- AI: Who Is in Control?
- Research Misconduct: Defending Scientific Integrity against the Machine
- Artificial Intelligence in Surgical Science: Clinical Prediction Models, Large Language Models, and Computer Vision

The practical applications and research into robotics will be another technology-based focus this year, with many opportunities for surgeons to learn more about this growing practice area.

Events will include a session on credentialing and privileging for robotic surgery, a new Didactic Course on emerging robotic systems and telesurgery, the returning Surgical Skills Course on the essentials of robotic hernia surgery—in addition to sessions on robotic surgery woven throughout the program.

Engaging Scientific Content for All Surgeons

While AI and robotics are intertwined with much of this year's programming, a spectrum of other topics will be covered in more than 100 Panel Sessions, including those central to general surgeons:

- Controversies in the Management of Diverticulitis
- Unique Challenges during Hernia Surgery
- Not Your Usual Appendicitis: Managing the Inflamed Appendix in Unusual Situations
- Cholecystitis, Cholangitis, and Contemporary Management of the Common Bile Duct

In addition, there is a returning conference favorite that both general and specialized surgeons won't want to miss—the 10 Hot Topics in General Surgery session, moderated by Kenneth W. Sharp,

MD, FACS, ACS Regent and Chair of the Program Committee, and Benjamin K. Poulose, MD, MPH, FACS.

"Every year, we bring 6-minute topics discussed by 10 experts. Over the course of this 90-minute session, we have succinct, clinically relevant presentations, and our goal is to have everyone who attends come away with a few clinical pearls that might even change their clinical practice for the better," Dr. Sharp said. This year's session will cover hyperparathyroidism, endoscopy for acute cholecystitis, and more.

Recognizing the breadth of the field and the College's role as The House of Surgery, the ACS Program Committee has included specialized thematic tracks early in the conference, including Opening Day Thematic Sessions on AI, education, endocrine, hernia, trauma, and orthopaedics.

In addition, there are a variety of multidisciplinary sessions that will offer the latest research and practical applications for all surgeons on both clinical and nonclinical topics:

- Pediatric Genitourinary Trauma Strategies
- Updated American Thyroid Association Guidelines for Thyroid Nodules–What's New?
- The Role of the Surgeon in Impacting Health Policy
- Surgeon's Mental Health: Overcoming Distress and Preventing Suicide
- Feeding the Surgical Patient
- Entrustable Professional Activities: Best Practices and Implementation

This array of content—relevant to and reaching across all disciplines—is indicative of the significance of Clinical Congress.

"It is important for all specialties and surgeons of all disciplines to come to Clinical Congress because multidisciplinary teamwork is at the forefront of how we can provide the best care for our patients," said Lena M. Napolitano, MD, FACS, Vice-Chair of the Board of Regents.

"Meeting with surgeons representing different specialties, backgrounds, and practices—from the rural surgeon to the surgeon in a large academic center—is a wonderful opportunity at Clinical Congress," she said.

All attendees also are encouraged to check out the returning, interactive Great Debates sessions this year—which, due to positive feedback since their introduction in 2023, have grown to include four vigorous, multidisciplinary, and collegial debates:

- Great Debates in Benign Biliary Disease
- The Great Bariatric Debates: Medications vs. Surgery; Bariatric Surgery vs. Endoscopic Procedures
- The Great Diverticulitis Debates: Conservative Treatment vs. Resection; Primary Anastomosis vs. Stoma
- The Great Rectal Cancer Debates: Liver Metastases Synchronous vs. Staged Resection—Pro and Con of Neoadjuvant Therapy for T2 Lesions

Named Lectures Provide Sharp, Relevant Talks

Each year, internationally known surgeons and notable figures in healthcare deliver a slate of Named Lectures in one of the most popular features of Clinical Congress. This year, eight lecturers will share their insights into clinical, nonclinical, and historical topics that influence the practice of surgery.

The Martin Memorial Lecture, "Looking Forward Together in an Uncertain Time," will be delivered immediately after the Opening Ceremony on Sunday by David J. Skorton, MD, president and CEO of the Association of American Medical Colleges.

In the lecture, Dr. Skorton will share his perspective as an executive leader of the organization that represents medical schools, academic health systems and teaching hospitals, and academic societies.

2025 Named Lectures

Martin Memorial Lecture
Looking Forward Together in an Uncertain Time
David J. Skorton, MD

I. S. Ravdin Lecture in the Basic and Surgical Sciences
The Past, Present, and Future of the Total Artificial Heart: A Very Houston-Centric Story
William E. Cohn, MD, FACS

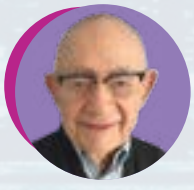
Excelsior Surgical Society/ Edward D. Churchill Lecture
Damage Control, Surgical Leadership, and National Readiness
C. William Schwab, MD, FACS, FRCS

Scudder Oration on Trauma
Optimizing Strategies to Improve Trauma and Burn Care for US Children
Mary E. Fallat, MD, FACS

Olga M. Jonasson Lecture
Pay It Forward—The Enduring Impact of Mentors
Jennifer Lawton, MD, FACS

Distinguished Lecture of the International Society of Surgery
Global Quality Improvements for Breast Cancer Patients
Kerstin Sandelin, MD, PHD, FRCS, FACS (Hon)

Commission on Cancer Oncology Lecture
The Promising Future of Cancer Therapeutics and Care
Selwyn M. Vickers, MD, FACS



Metabolic and Bariatric Surgery Lecture
Unraveling the Metabolic Syndrome
Walter J. Pories, MD, FACS, FACC, FACG, USMC Col. (Ret.)

All lectures will be recorded and made available for on-demand viewing soon after the live presentations (see sidebar, page 36).

Scientific Forum, Informal Education, and Special Interests

Beyond the Panel Sessions and Named Lectures, there is so much more to experience in this year's educational program.

The robust Scientific Forum offers the latest high-quality, in-progress scientific and academic surgery reports. From research presentations to ePosters, the Scientific Forum offers researchers of all experience levels the opportunity to share their promising results in front of an audience of peers, mentors, and students.

A standout in the Scientific Forum is the returning High-Impact Clinical Trials and Studies session, which focuses on potentially practice-changing publications.

Scientific Forum sessions take place Sunday through Tuesday and are arranged in a discipline-specific format (e.g., endocrine surgery, trauma/burn/critical care).

In addition, Video-Based Education sessions showcase detailed surgical procedures, while Meet-the-Expert sessions will provide more informal learning experiences that will allow attendees to engage in conversations with surgeon leaders and colleagues.

There also is a selection of Special Interest sessions that will provide novel education and experiences for both broader audiences and specific cohorts.

In recognition of the ACS's commitment to surgeons in all stages of their careers, the Surgery Resident Program and Medical Student Program will return this year with information and education tailored to meet their unique needs; the History of Surgery Poster Sessions will highlight the rich history of surgery; and ACS Stop the Bleed training will prepare attendees to save a life in a bleeding emergency.

Networking Enhances the Conference Experience

The outstanding hands-on and didactic learning opportunities at Clinical Congress are further enhanced by the many opportunities to engage with peers, whether by catching up after a session or attending an engagement event—which is a highlight of the conference in and of itself.

"It is the networking, it is the energy, it is the camaraderie that we as a College offer through Clinical Congress. I'm looking forward to seeing friends, colleagues, and others who have not met for a while and having some sidebar conversations, in addition to availing myself of the strong program," Dr. Sachdeva said.

Visit the Exhibit Hall

Throughout the conference, attendees will be able to visit ACS Central to learn about the latest College programs and services, engage in presentations at the Innovation Theater, and visit the more than 150 expected companies that will display their products, innovations, and services in the Exhibit Hall. From medical devices to surgical equipment to education

Access related video content online.

CME Information

- For in-person registrants, up to 186.5 AMA PRA *Category 1 Credits*™ are available for attending live and on-demand sessions by February 23, 2026.
- For virtual registrants, up to 165.5 AMA PRA *Category 1 Credits*™ are available for viewing on-demand sessions by February 23, 2026.
- More than 50 sessions are designated as Credit to Address State Regulatory Mandates.
- More than 100 sessions are designated as Credit to Address Accreditation/ Verification Requirements.
- 18 ticketed sessions offer Self-Assessment Credit.

and training, the Exhibit Hall will provide attendees with a chance to compare products and services firsthand. New this year, a Resident and Associate Society Lounge will offer a place to relax, recharge, network, and engage in topical discussion.

A popular interactive exhibit also will return this year—the fourth iteration of the Surgical Ergonomics Hands-On Clinic, which features ergonomic coaches helping surgeons apply the updated ACS Surgical Ergonomics Recommendations in a simulated environment to assess and reduce their physical burden in practice.

This unique station had more than 100 visitors last year, and in a value-adding change, there is no fee to take part at Clinical Congress 2025. Registration is still required, so sign up at your earliest opportunity.

Start Planning and Register Today

The scope of this comprehensive surgical education meeting is impressive, and the ACS offers several options to help you create a personalized Clinical Congress 2025 schedule.

The online, interactive Clinical Congress Program Planner is available to access today, and the mobile app will launch this fall. In addition, the ACS will provide updates via email and the website, including *Clinical Congress News* that covers major events and noteworthy sessions.

This hybrid event will again offer select content in a virtual, on-demand format, which will remain available for access through **February 23, 2026.**

No matter how you plan to attend or which specific sessions or events you plan to be involved with, Clinical Congress 2025 will offer value for all surgeons.

"This Clinical Congress promises to be one of the most interactive and collegial meetings that we've had in years," Dr. Sharp said. "The educational opportunities are unmatched, and the opportunities to meet with your friends and fellow colleagues are simply outstanding. I think everyone will enjoy this meeting and come away with something of value from each and every day that you take part."

Registration is open, and the deadline to receive the early bird registration rate is **August 18.** Residents and medical students may register for free through the same date. Learn more and register today at *facs.org/clincon2025.*

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

ACS Quality and Safety Conference Celebrates 20 Years of Innovation

M. Sophia Newman, MPH

Each summer, the ACS holds its Quality and Safety Conference (QSC), a multiday meeting purpose-built to help surgeons and hospitals improve the quality of patient care they provide.

THIS YEAR'S CONFERENCE, planned for July 17–20 in San Diego, California, is the 20th anniversary of QSC. It also is a moment to appreciate how much the conference has achieved in 2 decades—and how considerably the College has developed its products and services to help advance quality in surgical care.

NSQIP and New Beginnings

The first QSC, held in 2005, came at the heels of another watershed event in the history of quality improvement: the establishment of the National Surgical Quality Improvement Program (NSQIP) as an ACS program in 2004.

NSQIP was founded in the late 1980s. The impetus was a then-new federal law that compelled the US Department of Veterans Affairs (VA) to show that its surgical outcomes were comparable with national averages. But the data on national averages did not exist at the time. So, the VA used its unusual position as a unified national healthcare system to gather data on various surgical procedures performed across its hospitals and then created a risk-adjusted, validated, peer-controlled database that tracks surgical outcomes.

This was a crucial step forward in surgical quality improvement. Quality programs have developed enormously since the inception of NSQIP, but using databases to measure and compare surgical outcomes remains central to this work.

NSQIP quickly showed remarkable objective benefits. Within the VA, the 30-day postoperative mortality rate dropped by 47% and morbidity by 43% between 1991, just before NSQIP was in use, and 2006.[1]

Such a successful, innovative program was not destined to remain siloed within a single healthcare system. In a highly cited paper published in the *Annals of Surgery* in 1998, influential surgeon Shukri Khuri, MD, FACS, and coauthors explained that wider use was the goal. "NSQIP is interested in collaborating with the affiliated non-VAMC [Veterans Administration Medical Centers] surgical services to implement similar programs and compare surgical outcomes between VHA [Veterans Health Administration] and other nonfederal hospitals."[2]

At the time of that publication, a version of the idea already was being realized. By the turn of the millennium, NSQIP had been piloted successfully in 18 private hospitals.[3]

By 2004, the entire database had shifted from the VA to the ACS, where it has remained ever since. This move made it possible to begin to grow NSQIP from a few hospitals to more than 700 sites today (including, despite the program's name, more than 100 international sites in Europe, Australia, and the Middle East). This effort in turn necessitated practical assistance for the many participating hospitals—and hence QSC was born.

"It started as a small idea of getting people together to talk about quality and share how to improve."

Dr. Clifford Ko

Networking and Soft Science

The original name of QSC was "the NSQIP Conference." Then, as now, hospitals that joined NSQIP received reports detailing their performance relative to other healthcare institutions and to set standards of care. Those hospitals, some of which were new to quality improvement, needed insights into how to read those reports accurately, understand the meaning of underlying statistics, and use that information to change practices where needed and ultimately give higher-quality surgical care.

"It started as a small idea of getting people together to talk about quality and share how to improve," said Clifford Y. Ko, MD, MS, MSHS, FACS, Senior Vice President of the ACS Division of Research and Optimal Patient Care. "It was probably one of the first quality improvement collaboratives in surgery from hospitals across the nation."

Eschewing a top-down model, the conference was based on networking between healthcare institutions. Dr. Ko explained, "When hospital administrators said, 'Oh, I'm not as good as I want to be in X, Y, or Z,' and was in the same room as hospitals that were really good in X, Y, and Z, they could say, 'How do you guys do it?'"

The advice that hospitals could give each other helped inform the improvements each might make. "No hospital was great at everything, and no hospital was terrible at everything. So sometimes hospitals were learning from other hospitals and teaching other hospitals, all at the same time," he said.

The diverse range of hospitals at the meetings meant that all could find another facility struggling with the same problem and engage in networking during and after each meeting. These collaborations facilitated hospitals adopting the successful methods used by others or avoiding the pitfalls that had affected similar institutions, facilitating faster improvements in patient care.

This collaboration provided a crucial bridge over a gap between the data that NSQIP provided and the action necessary to make data insights meaningful. As Dr. Ko said, "To achieve high-quality, optimal care data are essential but insufficient. You still need to act on the data."

Art of Implementation

Leveraging insights from data was an area to which the ACS could bring its expertise.

The College had long been involved in quality improvement in hospitals. Within a few years of its 1913 founding, influential surgeon Ernest A. Codman, MD, FACS, had articulated his "end result idea," a concept later echoed in the impetus for and design of NSQIP. Dr. Codman described the idea as "the common sense notion that every hospital should follow every patient it treats, long enough to determine whether or not the treatment has been successful, and then to inquire, 'If not, why not?' with a view to preventing similar failures in the future."[4]

He pursued quality improvement via his Hospital Standardization Program, an ambitious effort to help early surgical wards deliver better care. The program began in 1919, endured for decades at the ACS, and spun off as an independent entity, now called The Joint Commission, in 1951. This organization continues to accredit hospitals and hospital programs nationwide that meet their quality standards.

Separately, the ACS was advancing cancer care through the Commission on Cancer, which in the 1930s began offering accreditation to cancer centers that could deliver optimal care. In 1987, the ACS Committee on Trauma established its Verification, Review, and Consultation Program, with site reviewers visiting hospitals to help them carry out quality efforts. Both programs focused on implementing specific standards in surgical care, rather than simply collecting the data that could make the existing quality of a facility clear.

A speaker shares insights at the Quality and Safety Conference.

By the time QSC launched 2 decades ago, the ACS had accumulated insights into how to ensure a quality improvement effort involved not only the right data and standards, but also the right leadership, staff involvement, focus, insights, framework, and momentum to succeed.

The skills behind implementation, although sometimes misunderstood or underrated, are crucial to master. "Some people think that if you just show people that they're bad, they'll get better," Dr. Ko said. "Some people will, but most people will not know how, or if it's a team effort, the team needs to be coordinated on how to go from A to B all in the same way. Otherwise, if people do it differently or at different speeds, and it's not coordinated, it'll be poor."

As a result, QSC has evolved to offer a wide range of sessions that also aim to facilitate the skills in change management, leadership, and team engagement that make quality improvements possible. This programming includes instruction on specific methods, such as the Plan-Do-Study-Act cycle and Six Sigma process improvement methodologies, as well as insights derived from so-called soft sciences, such as behavioral economics and cognitive psychology.

Helping Bariatric Surgery Become Safer

Over time, QSC built on these elements to further extend its impact. The conference has become an annual opportunity to identify new opportunities to conceptualize, initiate, or grow Quality Programs.

In 2012, the ACS launched the Metabolic and Bariatric Surgery Accreditation and Quality Improvement Program (MBSAQIP) in collaboration with the American Society for Metabolic and Bariatric Surgery. The program immediately began participating in QSC, according to Program Manager Lisa Hale, MSN, RN, CNOR(E), CPHQ, CBN, who has been part of the program since its inception.

"QSC serves as a crucial platform for MBSAQIP to present findings and discuss innovative quality improvement strategies," Hale stated.

She credited it with "fostering collaborations and partnerships among centers to address systemic issues and promote widespread adoption of best practices," which was one piece of a critical shift that has helped move bariatric surgery from a surgical procedure with a relatively high level of risk to one safer than hip replacement and gallbladder removal procedures.[5]

Safety in bariatric surgery already had started improving before the launch of MBSAQIP, Hale said. "However, MBSAQIP significantly accelerated and sustained this advancement through standardized data collection, evidence-based guidelines, and structured accreditation requirements"—all of which have been presented, discussed, and refined during QSC meetings.

Improving Geriatric Surgery

In 2019, the ACS Geriatric Surgery Verification (GSV) Program was launched after QSC attendees identified the need for it. "As we started to get data in geriatric surgery, we knew that older adults undergoing surgery had higher untoward event rates, higher rates of occurrences of safety-related issues or quality issues," Dr. Ko explained. "We got people together. The sessions were full. People were always talking about what we should do. We had geriatricians come in and speak."

As a result, "People said, 'Why can't we have a dedicated effort to this?' So, that helped open our eyes to the need for a Geriatric Surgery Verification Program."

The GSV Program now enrolls hospitals and, in part through in-person visits, requires that they implement six standards designed to ensure geriatric patients

undergoing surgery receive evidence-based best practices for optimal outcomes in this age group, such as geriatric vulnerability screens.

The program has gained traction. In August 2024, the US Centers for Medicare & Medicaid Services adopted the Age Friendly Hospital Measure, which specifies standards for high-quality care for elderly patients. The measure aligns with the GSV and came into effect on January 1, 2025—and the ACS, which advocated for the measure, stands ready to help hospitals meet it.

Based on current progress, the ACS will have as many as 100 hospitals verified in the GSV Program by the end of the year.

Influencing Pediatric Care

The annual meeting, originally created to facilitate the use of NSQIP, has also influenced a major expansion of NSQIP. The involvement of pediatric surgical teams in QSC led to the realization that the quality improvement available to adults also should extend to children. As a result, the ACS launched NSQIP Pediatric, a database that parallels the original, adult-specific NSQIP with a focus on children's surgical procedures.

Recognizing that positive change requires more than data, the launch of ACS NSQIP Pediatric in 2016 came alongside the introduction of the Children's Surgery Verification (CSV) Improvement Program. This program helps hospitals attain quality standards in pediatric surgery.

Research examining the program underscores its benefits. In 2017, an article published in the *Journal of the American College of Surgeons* identified NSQIP Pediatric as a useful addition to a pediatric surgical department—capable, among other things, of identifying morbidity far more comprehensively than a traditional morbidity and mortality conference could.[6]

In 2022, an article comparing pediatric femur fracture care found that hospitals verified by the CSV Program had shorter mean time to surgery (by 4 hours), shorter hospital length of stay (by a day and a half), and less narcotic use (by 39%).[7]

Expanding Internationally

One of the most intriguing developments related to QSC was perhaps the most unexpected.

According to Dr. Ko, "About 10 or maybe 12 years ago, these surgeons from Japan said, 'We want to join this group because it's so great. Can you translate it into Japanese?' And very early on, we said, 'No, we can't, but we'll help you develop your own.'"

The ACS assisted this group to develop a Japanese database of surgical outcomes—conceptually based on but fully independent of NSQIP. About 3 years ago, the College helped a Korean group of surgeons pursue the same goal.

The 20th anniversary QSC meeting will include four nations—the US, Canada, Japan, and Korea—discussing ways to learn from each other, despite differing cultures and payment systems.

Continuing to Grow

As its 20th anniversary approaches, QSC continues to grow. This year, the conference received 1,100 abstract submissions, an all-time high. Of these, 110 have been selected for podium presentations, and many more for poster sessions.

In 2026, the conference will see another expansion, as the ACS Cancer Conference—long a freestanding event—will be folded into QSC, offering those interested in quality improvement in cancer care optimal benefit under a single registration. In addition, the conference aims to include a greater number of participants focused on anesthesiology—thus encompassing quality across the surgical team to a greater extent.

Alongside changes to the meeting itself, the ACS is adding improved public reporting to the ACS website, which will offer patients and the public

a searchable database showing which hospitals have achieved verification or accreditation via ACS Quality Programs. The goal is to allow these hospitals to capitalize on this hard-earned achievement, and more importantly, to help patients find hospitals where they can receive the highest-quality surgical care. The new Find a Hospital search launched earlier this month at *facs.org/find-a-hospital.*

Dr. Ko, who has written about the need to "improve the improvement,"[8] sees little chance that QSC will slow down or veer from its core mission of improving surgical care. What stands out about the conference is somewhat like what remains notable about NSQIP, all these years after its inception, he says: "This is for surgeons, by surgeons."

M. Sophia Newman *is the Medical Writer and Speechwriter in the ACS Division of Integrated Communications in Chicago, IL.*

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Dr. Thomas Duncan

California Prehospital Blood Program Is Already Saving Lives

Thomas K. Duncan, DO, FACS
Edward Campana
Daniel Shepherd, MD, FACEP
Neil Canby, MD, FACEP

PREHOSPITAL BLOOD administration is a concept promoted by the ACS Committee on Trauma (ACS COT).[1] It also has been approved by the Trauma Hemostasis & Oxygenation Research Network and Association for the Advancement of Blood & Biotherapies (formerly known as the American Association of Blood Banks), as well as recommended by the Committee on Tactical Combat Casualty Care and International Association of Emergency Medical Services Chiefs.[2]

The practice of administering prehospital blood stems from the reality that hemorrhage is the leading cause of mortality in both civilian and military trauma patients.[3]

Unfortunately, trauma is still the most common reason for death for individuals up to 44 years of age. To reach its goal of zero preventable deaths from injury, the National Academies of Sciences, Engineering, and Medicine (NASEM) is focusing on improving the treatment of life-threatening hemorrhage.[3] As such, the delivery of blood to a hemorrhaging patient in the field initiates the resuscitation phase early and could potentially save up to 10,000 lives a year and benefit between 54,000 to 900,000 patients annually in the US.[1,3]

This model, while not new to some parts of the US, has not been adopted in many states. Data from October 2023 showed that 24 states had adopted prehospital blood transfusion but accounted for less than 1% of 9-1-1 emergency medical services (EMS) agencies in the US.[2] (For more information on the use of prehospital blood, read the March 2025 *Bulletin* article, "Improving Access to Prehospital Blood May Save 10,000 Lives a Year.")

Use of warm, fresh whole blood has been studied extensively in the military and shown to decrease the mortality of traumatic hemorrhagic shock.[1] In the landmark study by Shackleford and colleagues, 24-hour and 30-day mortality was shown to be reduced in patients receiving prehospital transfusion within 15 minutes of the injury.[4] Because it has been studied widely in the military, experts in prehospital blood administration advocated for it to be extrapolated to the civilian sector. Notably, initial studies from early civilian adopters demonstrated similar potential benefits as evidenced by the military studies.[1]

Bringing Blood to the Field

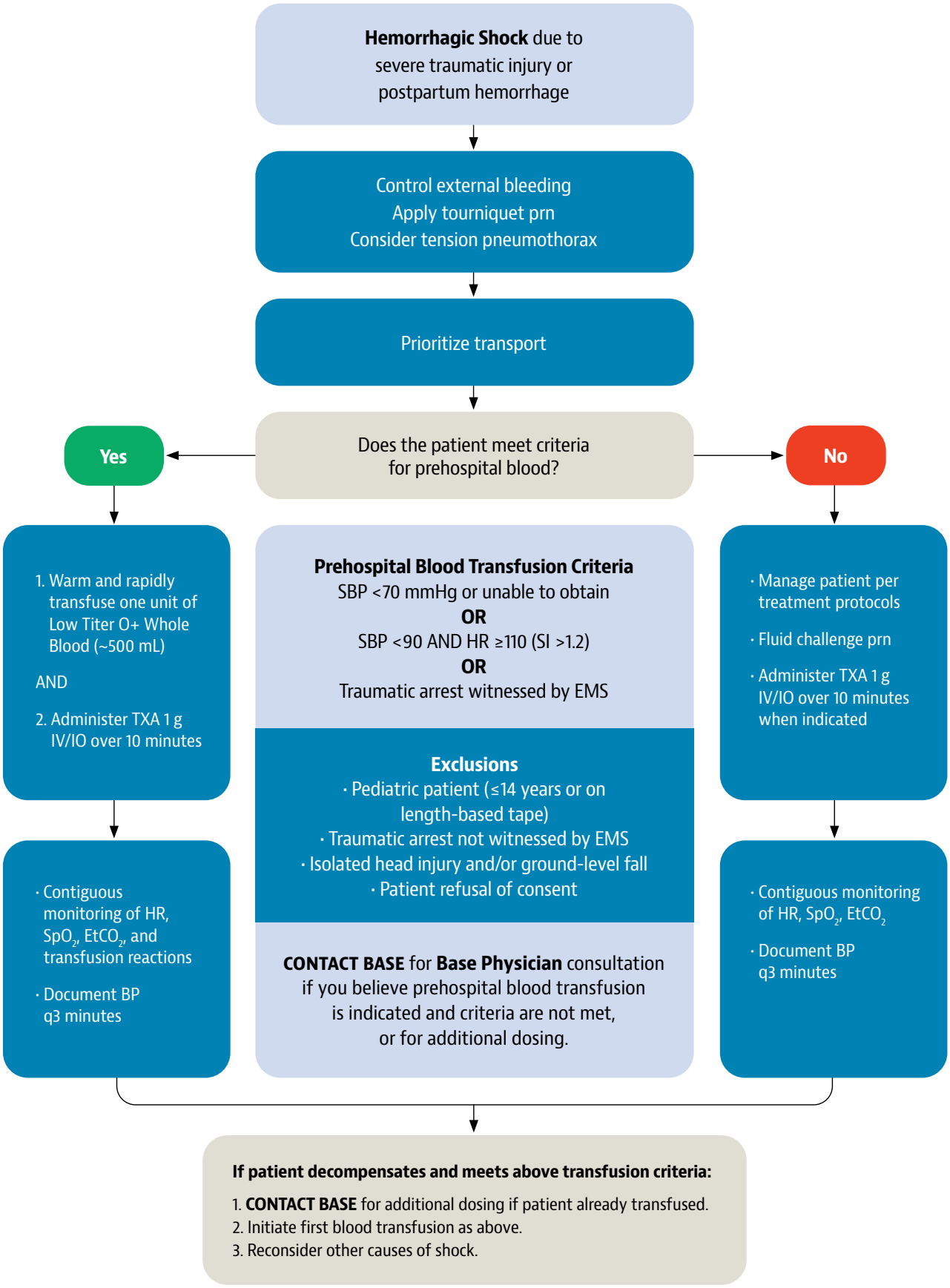
Inspired by these results, the Ventura County Fire Department (VCFD) requested the Ventura County EMS (VCEMS) Agency seek approval from the California EMS Authority to implement a prehospital blood program. The VCFD then engaged with the Ventura County Medical Center (VCMC), Ventura's west county trauma center, on the programmatic journey to bring blood to the field. It made sense to partner with VCMC because it has the only whole blood program in the county.

Ventura County is located in southern California. It has a population of 823,000 and is situated approximately 70 miles northwest of Los Angeles, approximately 30 miles southeast of Santa Barbara, and just north of the Pacific Ocean.[5] The county has two adult ACS-verified Level II trauma centers; one is located on the east side, and the other is on the west side of the county.

The Ventura County Fire Department provided funding for basic equipment, which included a refrigerator and blood warmer.

The chief proponent of the program from the VCFD is firefighter and paramedic Edward Campana who assembled stakeholders from VCEMS, VCMC, and our local blood supplier. Multiple meetings were held with all stakeholders to mirror the development of an established program in San Antonio, Texas. While the program in Ventura was evolving, programs also were being established in Los Angeles, San Bernardino, Riverside, and Sacramento counties, which collectively form the California Development and Rapid Operationalization of Prehospital Blood or "CAL-DROP Coalition."

Figure. Protocol for Ventura County Prehospital Blood Transfusion Pilot



The coalition was developed to foster collaboration and establish best practices for multiple regions across California looking to implement prehospital blood programs. The local EMS agency in each region is responsible for programmatic oversight and will report data prospectively to the California EMS Authority.[6]

The initial goal was to start the program in October 2024, but there were some unexpected challenges. VCEMS had to acquire approval from the California EMS Authority, which was granted in September 2024. Criteria for the administration of blood was created and agreed upon by all stakeholders (see Figure, page 48). Funding for startup of the program came from VCFD in the amount of $122,215 for basic equipment.

A blood exchange rotational system was configured with VCMC. After determining the nuances of blood units available for the prehospital side and exchange with VCMC, a memorandum of understanding (MOU) was signed between VCFD and VCMC. VCEMS and VCFD reviewed historical EMS data to determine the optimal strategic deployment of blood in Ventura County.

After the MOU was signed, there was another challenge related to starting the program due to the Palisades (Pacific Palisades) and Eaton (Altadena) fires in the Los Angeles area that erupted in January 2025. The fires burned 23,707 acres and 14,021 acres, respectively, resulting in the destruction of more than 16,000 structures and 28 deaths.[7]

Containing the fires and managing the aftermath required the use of resources from not only Los Angeles County, but also many other fire departments such as the Ventura County fire units. Following containment of the fires, training of 100 VCFD and sheriff's department personnel occurred, and the pilot program was started on April 1, 2025.

Ventura County's prehospital blood program currently involves four of five battalions, with the hope of increasing to all. The eventual goal is to create blanketed coverage, including aviation-unit helicopters used by the Ventura County Aviation Unit, which is a joint unit run by both the VCFD and the Ventura County Sheriff Department. To enable support of the program, monthly blood drives will be organized.

A press release was issued upon initiation of the program, and a press conference was held on April 9 to help ensure public awareness of the program.

On April 10, a Ventura County fire paramedic became the first ground paramedic to administer prehospital whole blood in California. Thus far, there have been four cases of prehospital whole blood administration in young adult males. The first was stabbed in the thigh and required a combination of Stop the Bleed packing techniques, tranexamic acid (TXA), and one unit of whole blood. The patient was treated nonoperatively after adequate control of the arterial bleeder.

Firefighter-paramedic Max Corbiere (left) and VCFD Captain Edward Campana demonstrate LifeFlow PLUS fluid and blood infuser.

The second patient was stabbed in the back and had a retroperitoneal bleed that also was treated with one unit of whole blood, TXA, and nonoperative management. The third patient had a devastating penetrating head injury with significant blood loss, was administered TXA and one unit of whole blood, and delivered to VCMC. Family wishes were honored. The fourth patient had a suspected gastrointestinal bleed from gallstone ileus, was administered one unit of whole blood, and underwent surgical management.

The program has a quality assurance process to review all cases for identifying any challenges such as inappropriate use of blood, transfusion adverse reactions, outcomes, and other metrics.

Efforts to create the Ventura County Prehospital Blood Program demonstrate how collaboration works in improving the quality of life for the injured patient and aligns with NASEM's goal to attain zero preventable deaths after injury.

Several surgeons (from left to right), including Alexandra Johns, MD, Dr. Thomas Duncan, Jay Doucet, MD, FACS, Amy Liepert, MD, FACS, John Maa, MD, FACS, and Sigrid Burruss, MD, join Assemblymember Freddie Rodriguez (center) to celebrate California AB 2260, the Tactical Response to Traumatic Injuries Act.

It is important to note that Ventura County leadership worked with the Joint Advocacy Committee of the ACS California chapters (Northern, Southern, and San Diego Imperial chapters), which was instrumental in sponsoring the Stop the Bleed Assembly Bill (AB) 2260 with Assemblymember Freddie Rodriguez (D).[8]

The legislation was the first statewide law of its kind to make bleeding control kits widely accessible in public buildings.[8] During the past several years, joint efforts from both Ventura County trauma centers (VCMC and Los Robles Regional Medical Center) and VCEMS have brought ACS Stop the Bleed training to the community at large, including but not limited to, the summer 2024 Junior Lifeguards Program, where 900 kids (ages 10 to 18) were instructed on lifesaving skills. B

Acknowledgment

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Disclaimer

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

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Dr. James Elsey

A Surgeon Reflects on Retirement: Lots of Saturdays, No Mondays

James K. Elsey, MD, FACS

I was recently at dinner with a brilliant engineer who runs an international company specializing in energy development.

he is an intense, sophisticated workaholic who spends more than 300 days a year on the road. As the evening progressed, he proclaimed with gusto that he had decided to sell his company and retire. In his usual calculating manner, he said he couldn't wait for every day to be a Saturday—a day unencumbered by the weariness of the week's toil and buffered by Sunday before returning to the grind. He went on to describe a large retinue of hobbies that he would undertake to fill his time, most of which sounded vacuous to me, but as a genteel Southerner, I smiled and said they sounded great.

As I reflected the next day on the conversation and having recently retired from clinical surgery, I contemplated the fact that this new life of persistent Saturdays comes at the expense of a loss of Mondays, a day marking the beginning of another week in the arena of the grand calling of surgery, which includes a week of full caseloads, testing emergencies, joyful team dynamics, duties of the sickroom, and invigorating daily challenges, as well as the magic and rewards of being a healer. In short, Monday is emblematic of a life of weeks and weeks of making a difference and a life of a noble calling and high purpose—the surgeon's life.

As the old saying goes, "If the creek doesn't rise and you don't die young, retirement comes to all of us." Retirement is an event in life that protects professionals in fields that require a high level of function from staying past their ability to perform, and there often is a resistance to this withdrawal that we commonly see among athletes and entertainers who just can't seem to give up the field or the stage. Similarly, the siren's call of the surgical arena is a strong one that provides purpose, personal identity, joy, financial security, and a wonderfully fulfilling life.

Despite all of this, most of us, no matter how great the ride, don't want to be the doctor who needs his patients more than they need him. The time ultimately comes when we should get off the stage and turn off the overhead lights.

This time is different for different people. Sir William Osler, MD, opining on this subject in 1905, said that physicians should quit at age 60 due to what he perceived as the natural decline in fluid intelligence that begin in middle age.[1] Most healthcare practitioners today would think this assertion is too rigid and certainly not consistent with the modern natural known and observed performance capabilities noted of practitioners across the age spectrum of practice.

Along with this more elevated understanding of individual capability is the fact that modern operative advances, such as minimally invasive surgery, technologic advances like robotics, the rise of artificial intelligence, and the increasing availability of physician extenders, decrease the physical human toil of providing surgical care.

Along with the concerns of technical and neurocognitive performance for senior surgeons, there are practical effects of retirement on the surgical workforce. Currently, 26% of US surgeons and 40% of the total physician workforce are over the age of 65.[2,3] The graying surgical workforce, as well as a relatively static number of graduate medical education (GME) training slots, are projected to result in a shortage of surgeons of approximately 19,000 by 2036.[4]

Adding to this pending surgical manpower crisis is the fact that we have a significantly aging national demographic. At this time, 22% of the population is projected to reach age 65 by 2036 with an expanding lifespan,[5] which is the subset of the population that requires the greatest amount of medical and surgical care. This pending surgeon supply and patient demand incongruity will negatively impact the availability of surgical care in the upcoming decades. For more information on the surgeon shortage, see the article, "Surgeon Shortage Calls for Action," earlier in this issue.

The ACS has been deeply involved in both the study and resolution of the evolving issues concerning the availability of an adequate surgical workforce, and it provides resources regarding issues related to the neurocognitive and technical competency of surgeons. Many potentially practical ideas are being discussed to increase the pipeline production of surgeons. These strategies include reducing the cost of medical school and thus student debt, streamlining the training paradigm by replacing

time served with competency-based metrics of advancement, increasing surgical GME slots, and reducing barriers to the matriculation of foreign medical graduates, as well as decreasing the cost and inefficient maldistribution of surgeons by specialty and geography.

Also, the College, as reported in the *Journal of the American College of Surgeons* in the collective review by Todd K. Rosengart, MD, FACS, and colleagues, "Sustaining Lifelong Competency of Surgeons: Multimodality Empowerment Personal and Institutional Strategy," has proposed a rational strategy for the evaluation of neurocognitive and technical proficiency of practicing surgeons.[6]

In the article, the authors point out that numerous studies have reported clear age-related cognitive and technical declines among surgeons particularly past the age of 60. Heretofore, the management of this has depended on individual self-regulation, which has not proven to be a dependable method of assuring competency. In consideration of these issues, the authors recommend that a formal, required comprehensive competency assessment program be established for all practicing surgeons similar to that required of airline pilots.

I accept this recommendation as rational and appropriate; however, there is a humanistic side to this "lifequake" event. There is just something extraordinary and distinctive about the surgical calling.

Surgery, to me, is different than other professions. I don't believe you pick it; I believe it picks you. It rewards those who answer its call with a life of high and noble purpose. It provides the best prize in life, which former US President Teddy Roosevelt described as the chance to work hard at work worth doing.

The great paradox to me is that, despite all the joy and rewards this grand profession confers upon its disciples, part of the true surgeon's heart "dies" when it is gone. There is a persistent, painful vacuum—a loss that most of us mourn daily.

As high achievers and energetic spinning tops, surgeons strain to fill their time with various activities such as clubs, community volunteerism, hobbies, travel, running after grandchildren, and some even ignite new careers. For me, I joined the surgical faculty as a lecturer and mentor at the Medical University of South Carolina in Charleston, became the treasurer of the Fisher House Charleston, serve on a church board, expanded my writing career, and help with my grandchildren. It's all great and rewarding, particularly time spent with the grandchildren, but for me, to be honest—it's not the same.

The strong gravitational pull of my blessed time in surgery has led me to contemplate a line in the famous Kris Kristofferson song "Me and Bobby McGee." In his obvious and similar thoughts of yearning for the magical halcyon days gone by, he wrote, "I would give up all my tomorrows for a single yesterday."

Would I do that for just one more Monday in the surgical arena? Certainly not…well, maybe? It was just that great!

Disclaimer

The thoughts and opinions expressed in this column are solely those of the author and do not necessarily reflect those of the ACS.

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Unknown 15th Century Medical Illustrator Helps Advance Neurosurgery

Olivia K. Hoy, MD
Brandon Sloan, MD
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Newfound historical evidence highlights advancements in surgical techniques in Turkish-Islamic medicine in Anatolia during the 15th century.

Figure 1.
A 15th century Anatolian female surgeon (Tabiba) approaches a genital tumor with a special scalpel.

ALTHOUGH largely unrecognized in the Western world, these early advancements have had significant implications for contemporary surgical practice.

While Renaissance-era anatomical depictions of surgical techniques have been widely acknowledged as early contributors to surgical illustration, little credit has been awarded to the author of what has now been recognized as one of the world's first illustrated surgical textbooks.

Şerefeddin Sabuncuoğlu (1385–1468 CE), a Turkish surgeon and illustrator during the Ottoman era in the 15th century, penned the *Cerrahiyetü'l-Haniyye (Imperial Surgery)* in 1465 at the age of 83.[1] With three chapters and 193 sections, the textbook combined earlier known teachings from Greek, Arabic, and Persian textbooks with the author's own findings from his medical practice with an emphasis on pictorial descriptions of incisions, surgical planning, and surgical instruments. Despite fluency in Arabic and Persian, Sabuncuoğlu intentionally penned his work in Turkish, allegedly with the intent of improving the Turkish medical vocabulary.

Even though the book contained revolutionary illustrations portraying both established and innovative techniques in orthopaedic surgery, obstetrics and gynecology, pediatric surgery, plastic surgery, urology, neurology, neurosurgery, ophthalmology, and vascular surgery, Sabuncuoğlu and his literary works were relatively unknown during his time.[2] In addition, and for reasons not well documented, his overall impact remained effectively veiled from the collective annals of medicine in the Western world until 1937. Currently, only three copies of *Imperial Surgery* are known to exist, two of which are located in Istanbul, Turkey, and one in Paris, France.

Sabuncuoğlu's efforts to record his work were creative and highly advanced for their time. Written in rhyme and meter, his texts and illustrations violated traditional Islamic rule, which prohibited artistic representation of humans or animals.

Furthermore, he is credited with illustrating the first known depictions of female surgeons performing neurosurgery on infants with hydrocephalus and obstetric and gynecologic surgeries (see Figure 1, this page) at a time when Western women were predominantly barred from participating in surgical practice.[3] These images portray patient positioning for gynecologic surgeries that resemble those in practice today.

Sabuncuoğlu depicted early plastic and craniomaxillofacial surgical procedures, producing some of the earliest known illustrations of these interventions, including blepharoplasty and surgical management for gynecomastia in what may be described as an early attempt at reduction mammoplasty.[4]

Figure 2. This illustration shows the earliest known description of the axial traction system for reduction of dislocated vertebrae.

His section on cancer offers an early description of surgical management for resectable malignancies such as breast cancer.

In addition to their artistic representation of surgical techniques, images found in *Imperial Surgery* yield intuitive approaches to gastroenterology, critical care, and trauma. The text includes an early depiction of a hollow tube used for upper endoscopy, axial traction techniques for vertebral dislocations (see Figure 2, this page), and a comprehensive characterization of various etiologies of pain. It also features an early description of shock and possible pneumothorax in response to archery-related injuries: "If the arrow hits the thorax, the blood coming from the entrance wound becomes foamy, his neck veins become distended, he breathes long and requests cold air…the patient's color changes."[5]

Sabuncuoğlu also has been credited by numerous Iranian historians for having founded the surgery school of the Ottoman empire.[1] Now referenced in countless journals across various surgical subspecialties, Sabuncuoğlu's contributions were so remarkable for their time that both the university in Amasya, where he practiced, and the neighborhood in which he was born, bear his name today.

Unfortunately, despite his revolutionary advancements, recognition of Sabuncuoğlu's work is largely limited to Turkey and its surrounding countries, while everyday Western medicine often fails to acknowledge his significant contributions to the profession.

Dr. Olivia Hoy *recently graduated with her medical degree from the Lewis Katz School of Medicine at Temple University in Philadelphia, PA. She began her residency training in general surgery at Thomas Jefferson University Hospital in Philadelphia this month.*

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CoC Accreditation Is Becoming More Accessible to Rural Hospitals

Ingrid M. Lizarraga, MBBS, FACS
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Despite a similar overall cancer incidence, rural patients have higher cancer mortality rates compared with urban patients, and the gap is widening.[1]

THIS DISPARITY is at least partly due to differences in access to cancer screening and high-quality cancer care for rural patients, as rural and urban cancer patients treated in clinical trials with uniform protocols have similar outcomes.[2]

Rural cancer patients are less likely to receive guideline-concordant surgery, chemotherapy, and radiation, as well as survivorship services, genetic testing, and palliative care.[3] Centralization of cancer care to large urban tertiary care centers results in significant travel and financial burden for rural patients and is limited by referral patterns in rural communities and patients' desire to access care closer to home.

Rural hospitals play an important role in providing cancer care to rural patients but face serious challenges, including difficulty with recruiting and retaining providers, limited access to specialty services, unfavorable payer mix, and an older patient population with more comorbidities and fewer financial resources. These hospitals also frequently lack the infrastructure to collect and monitor their own cancer data, making performance tracking and improvement very challenging.

Commission on Cancer (CoC) accreditation addresses rural disparities in cancer care because it provides both a comprehensive framework for

program development and tools for continuous data monitoring and quality improvement. Treatment at CoC-accredited hospitals is associated with increased access to guideline-concordant care and improved mortality for patients with high social vulnerability.[4]

However, only 156 (7.9%) of the 1,965 rural hospitals (excluding critical access hospitals) in the US are CoC accredited, compared to 35% of urban hospitals. Rural patients travel an average of 10 times farther than urban patients to access the nearest CoC-accredited hospital.[5] Additional challenges related to achieving accreditation for rural hospitals include limited staff and resources necessary to provide services and perform the tracking and documentation required by the standards.

Increasing CoC Accreditation in Rural Hospitals in Kentucky and Iowa

One favorable approach to mitigating these challenges is for a rural hospital to partner with a network supported with the resources of a tertiary care cancer center. Such a model has proven successful in Kentucky, where the University of Kentucky Markey Cancer Center Affiliate Network (MCCAN) extends resources from the Markey Cancer Center to community hospitals across the state.

The network, which requires that its affiliates become CoC accredited, has developed a robust infrastructure to support its hospitals in achieving and maintaining accreditation. MCCAN has been able to demonstrate that within 3 years of joining the network, affiliates markedly improved their compliance with disease-specific treatment-related quality measures and were three times more likely to achieve CoC accreditation than matched control hospitals in the state.[6]

Similar to Kentucky, Iowa is a rural state, in which 40% of breast and colon cancer patients receive most or all of their definitive treatment at rural, non-CoC-accredited hospitals. Patients at non-CoC-accredited Iowa hospitals are less likely to receive guideline-concordant breast and colon cancer care, and the difference is more pronounced for rural non-CoC-accredited programs, which fail to demonstrate improvement over time.

Iowa Adopts Strategies Used by MCCAN

Inspired by the success of MCCAN in Kentucky, a research group was formed at the University of Iowa in Iowa City, under the leadership of Mary Charlton, PhD, MS, a cancer epidemiologist and director of the Iowa Cancer Registry, and Ingrid Lizarraga, MBBS, FACS, a breast surgeon and CoC State Chair.

The group was awarded a National Institutes of Health R01 grant to study MCCAN in order to create a network of rural hospitals in Iowa that can assist centers in meeting CoC-accreditation standards. They hypothesized that extending resources at high-volume cancer centers could support rural hospitals in improving their quality of care and adopting emerging treatment guidelines more rapidly, allowing rural patients to obtain high-quality cancer care close to home.

The study researchers recruited four rural non-CoC-accredited Iowa hospitals providing surgery, radiation, and chemotherapy to the highest number of rural, underserved patients—ranging from 191 to 499 new cancer patients each year per hospital—to create the Iowa Cancer Affiliate Network (I-CAN). They used qualitative methods to perform process mapping of the MCCAN intervention and determine the key elements of their network that made it successful.[7] These drivers included building relationships with affiliate hospitals, fostering a culture of quality improvement, and providing accreditation expertise and support, as well as access to services not locally available. External facilitation was used to guide hospitals through the accreditation process while leveraging the resources of their National Cancer Institute-designated cancer center.

Implementation science methods were used to adapt the strategies used by MCCAN in Kentucky to Iowa. The I-CAN Plan consisted of an evaluative phase to understand the rural hospital's services, goals, barriers and strengths in the context of the accreditation standards; and an implementation phase, which included regular facilitation meetings with cancer program leadership. This phase also focused on data collection and analysis support, providing accreditation and clinical resources, mentoring and

training of clinical staff, networking opportunities, and access to clinical trials. Interval assessments of determinants of success were performed.

Ultimately, one hospital withdrew from the study in the evaluation phase, and two additional rural Iowa hospitals approached I-CAN to join the network. Now in the fourth year of intervention, all five I-CAN hospitals have made significant progress toward meeting the standards. Three of the five hospitals have instituted a cancer committee or governing body of physicians, administrators, and clinical staff responsible for meeting regularly to review the standards and plan implementation.

Three hospitals also have started a regular multidisciplinary tumor board. All the hospitals have made progress toward implementing the standards related to clinical practice (oncology nursing education, rehabilitation, nutrition, psychosocial distress screening, genetic counseling), and four of the five are now providing formal survivorship services. Iowa Cancer Registry data are being used to approximate the CoC quality measures for breast and colon cancer and provide programs with their own performance data to drive quality improvement.

Certain standards have been particularly impactful for changing patient care delivery. The cancer committee standard represented a culture change for all the participating hospitals, as it was the first time that each hospital's cancer services were evaluated in a comprehensive fashion. Implementation of the tumor board had a similar effect, resulting not only in management changes for specific patients, but also broader practice changes and process improvement, and better communication between clinicians in different specialties.

The standards addressing clinical services, such as nutrition, rehabilitation and survivorship, provided a useful framework for programs to ensure that cancer patients were better screened and directed to services that already existed. In some cases, the standards even helped clinicians and cancer center administrators advocate to senior leadership for additional services for their patients, such as dietitians or social workers.

Although the CoC framework had a clear positive impact on cancer patient care, the study also found that CoC accreditation remained a significant challenge to I-CAN hospitals, even with the support of the network. Some standards are particularly challenging, such as the requirement to enroll a specified proportion of patients into clinical trials, which is difficult for many small hospitals. Access to palliative care services and genetic counseling is limited in rural areas and also presents challenges for centers seeking accreditation.

A key benefit of CoC accreditation is the continuous quality improvement that it facilitates. These enhancements are driven by timely collection of institutional data on all cancer patients, which is then submitted to the National Cancer Database, analyzed, and returned to participating hospitals to use for self-monitoring and improvement. The infrastructure required for this process can be prohibitively expensive for rural hospitals and usually requires hiring personnel with specific training who may not be able to contribute to clinical work. In Iowa, this was addressed by having hospitals contract with the state cancer registry to provide these services for a per-case fee, but solutions would likely differ elsewhere.

In addition to the challenges presented by specific standards, a major barrier for rural hospitals with limited administrative and clinical staff is the amount of tracking, monitoring, and reporting work that is required to meet the 38 accreditation standards annually, even with network support.

CoC Addresses Challenges for Accreditation of Rural Hospitals

The CoC has committed to addressing the challenges in accessing high-quality cancer care for rural patients by making the benefits of accreditation more accessible to rural hospitals. Qualitative data from the University of Iowa study were used to inform the creation of a set of modified standards specific to rural hospitals, which were then refined by a work group of rural cancer physicians, administrators, and CoC Site Reviewers.

The new rural accreditation track will be offered to hospitals identified as rural (non-metropolitan),

A key benefit of CoC accreditation is the continuous quality improvement that it facilitates.

based on US Department of Agriculture rural-urban continuum codes, and will provide an affiliate accreditation status for a smaller fee than the full accreditation, with implementation planned for 2026.

Modifications to the standards include less stringent requirements for cancer program leadership, flexibility in provider tumor board participation, elimination of the minimum clinical trial enrollment requirement, and the ability to focus on selected cancer support services at the time of application. The initial requirements represent a lower threshold for rural hospitals to access their own quality data and CoC resources.

The goal is to make CoC accreditation more feasible, appealing, and relevant to rural hospitals, allowing them to participate more easily in data-driven quality improvement and develop their comprehensive cancer care services incrementally.

The I-CAN model demonstrates that partnering with a larger CoC-accredited site in the same catchment area enhances the ability of rural hospitals to meet quality standards, and further research is planned to extend that model to other states. The Rural CoC accreditation track is an exciting step forward in improving outcomes for rural cancer patients across the county.

For more information about the new Rural CoC accreditation track, contact Erin Reuter at ereuter@facs.org.

Dr. Ingrid Lizarraga *is a fellowship-trained breast surgeon and clinical professor of surgery at the University of Iowa Health Care in Iowa City. She serves as the CoC State Chair for Iowa and medical director of I-CAN. Her research focuses on addressing disparities in rural cancer outcomes and healthcare delivery.*

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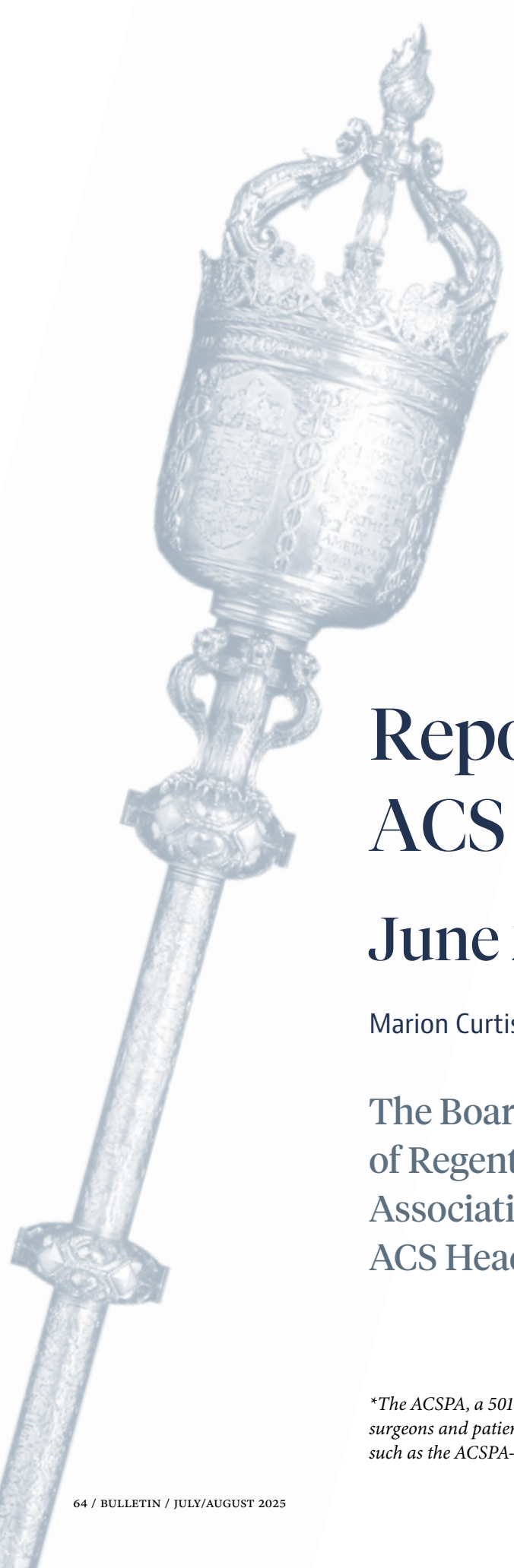

Report on ACSPA/ ACS Activities

June 2025

Marion Curtiss Henry, MD, MPH, FACS

The Board of Directors of the ACS Board of Regents (BoR) and ACS Professional Association (ACSPA)* met June 6–7 at ACS Headquarters in Chicago, Illinois.

**The ACSPA, a 501(c)(6), allows for a broader range of activities and services that benefit surgeons and patients, including expanded legislative advocacy and political programming, such as the ACSPA-Political Action Committee (SurgeonsPAC).*

KEY PRESENTATIONS centered on the College's strategic plan, membership recruitment and retention, a new focus for the *Journal of the American College of Surgeons,* and updates related to ACS Trauma Programs and the overarching ACS clinical data strategy.

The following is a summary of the discussion and was current as of the date of the meeting.

ACS Strategic Plan

Lists of key activities related to pillars within the recently approved strategic plan were outlined. A webinar will be held with ACS leadership groups this summer to delve into the plan and ensure alignment of activities. In addition, Executive Director & CEO Patricia L. Turner, MD, MBA, FACS, is using her July/August *Bulletin* column (see pages 6–7) to introduce members to the strategic plan. More details by pillar will be offered in upcoming editions of the *ACS Brief* enewsletter.

Member Services

The BoR accepted resignations from 19 Fellows and changed the status from Active or Senior to Retired for 120 Fellows. In addition, the Board approved a new ACS Senior Fellows Society, a life cycle program for senior surgeons to share knowledge and facilitate experiences and engagement.

To complement the strategic analysis of ACS membership, Michael J. Sutherland, MD, MBA, FACS, Senior Vice President of the Division of Member Services, offered detailed information on recent membership trends, while Lena M. Napolitano, MD, FACS, Vice-Chair of the BoR, provided an analysis of qualitative data derived from one-on-one phone conversations with members and nonmembers.

Strategies and tactics were offered to help counter a net loss of dues-paying members in the US and Canada, while also helping to attract and retain members from residency through retirement. They included:

- Increasing member participation through more **customized engagement opportunities**
- Implementing **enhanced marketing strategies** that include personalizing outreach and a simplified application process
- Improving the **member experience** through seamless connection of the ACS's disparate data platforms and better use of artificial intelligence and analytics
- Increasing **collaborative efforts** with all surgical disciplines through stronger specialty society partnerships and throughout the entire House of Surgery

Research and Optimal Patient Care

In addition to the update and recent progress on the long-term strategy previously presented to the BoR for ACS clinical data registries by ACS Chief Health Informatics Officer Genevieve Melton-Meaux, MD, PhD, FACS, a deep-dive presentation offered details on initiatives within the Trauma Programs area of the Division of Research and Optimal Patient Care.

Among the initiatives noted by Eileen M. Bulger, MD, FACS, Medical Director of Trauma Education, Avery Nathens, MD, PhD, FACS, Medical Director of Trauma Programs, and Jeffrey D. Kerby, MD, PhD, FACS, Chair of the Committee on Trauma, were:

Advancing the development of a National Trauma and Emergency Preparedness System (NTEPS)

- Assisting the Military Joint Trauma System in verifying quality care delivery
- Collaborating with the Division of Advocacy and Health Policy to identify the key decision-makers, assess federal and military interest, and explore building a coalition
- Developing standards for Regional Medical Operations Coordinating Centers (RMOCC)
- Identifying the recommended tactics and timeline needed to promote NTEPS
- Utilizing the Regional Committees on Trauma Field Program infrastructure to further develop RMOCC

ACS Stop the Bleed

- Approximately 5 million individuals have been prepared for bleeding emergencies globally (50 states and 161 countries) since the program was launched in 2016
- Virtual, hybrid, and in-person training is offered
- The program has more than 180,000 instructors

Advanced Trauma Life Support (ATLS) 11th Edition

- Launches in August 2025
- Offered in Brazilian/Portuguese, English, and Spanish
- Interactive discussions and skills stations
- New student and instructor courses
- MyATLS App will be updated to the 11th edition in August and offer additional multimedia features, treatment algorithms, checklists, and calculators, and real-time education

Rural trauma program

- Evaluating existing relevant education programs and conducting needs assessment
- Identifying the technical requirements needed for improved business intelligence and the analytical tools necessary to improve experience for participants
- Conducting market research and discovery with rural stakeholders and an assessment to determine the needs of rural trauma providers

Trauma benchmarking and reporting: TQIP 2.0

- Transitioning from a hybrid model to a digital first model
- Increasing penetration of programs in current markets via expanded participation in Level III Trauma Quality Improvement Program (TQIP) and verification; TQIP participation of non-ACS verified centers and repackaging of TQIP collaboratives
- Addressing the needs of new markets, including a longitudinal consultation program, rural/Level IV centers, and specialty-specific TQIP data/reports

Journal of the American College of Surgeons

New Editor-in-Chief of the *Journal of the American College of Surgeons (JACS),* Thomas K. Varghese Jr., MD, MS, MBA, FACS, offered a market analysis of *JACS* performance compared to other journals and outlined his strategies to make it a go-to source for "the best science for the practicing surgeon in The House of Surgery®." Highlights included:

- Updating the editorial board to include representation from all surgical specialties, career stages, and practice types
- Revising author guidelines and better defining article types
- Educating potential authors on manuscript best practices
- Focusing on clinical practice guidelines, work product of the ACS, health policy data, workforce data, and surgical business data
- Exploring the launch of a second journal

Additional Activity

In addition to these presentations, the Regents heard updates from the Finance Committee, Young Fellows Association, ACS Advisory Councils, and Nominating Committee. They also reviewed a number of informational reports and approved:

- Fiscal Year 2026 Budget
- *Best Practice Guideline for the Management of Genitourinary Injuries*
- Statement on Electric Bicycle Safety and Injury Prevention
- Statement on the Physician Acting as an Expert Witness *(revision)* B

Dr. Marion Curtiss Henry *is Chair of the ACS Board of Governors and professor of surgery at The University of Chicago Medicine, where she also serves as the medical director of the operating rooms and pediatric surgery quality officer at Comer Children's Hospital in Chicago, IL.*

Dr. Jesse Columbo Receives Clowes Award

JESSE A. COLUMBO, MD, MS, FACS, has been selected to receive the 2025 ACS George H. A. Clowes, MD, FACS, Memorial Career Development Award for his project, "Risk of Stroke after Carotid Revascularization among Standard-Risk Patients." Dr. Columbo is a vascular surgeon at Dartmouth Hitchcock Medical Center in Lebanon, New Hampshire.

In 2023, the Centers for Medicare & Medicaid Services expanded coverage of carotid artery stenting—including transcarotid artery revascularization (TCAR)—to standard-risk patients and removed strict federal regulatory oversight. Although widely adopted, this change occurred despite ongoing debate and controversy about the sufficiency of existing evidence, particularly concerning long-term outcomes beyond the immediate periprocedural period.

Dr. Columbo's research aims to address this critical evidence gap by documenting procedure use and 30-day stroke risk among patients undergoing carotid revascularization, with focus on three approaches: TCAR, transfemoral carotid stenting (TF-CAS), and carotid endarterectomy. He also will evaluate how practice patterns and stroke risk shifted before and after the Medicare policy change. Dr. Columbo hypothesizes that both the use of carotid stenting (i.e., TCAR and TF-CAS) and stroke rates will increase after the policy change.

Leveraging Medicare's Virtual Research Data Center and advanced biostatistical methods—such as difference-in-differences and instrumental variable analyses—he will generate real-world evidence on long-term outcomes. These findings are expected to guide clinical decision-making, shape policy, and support his trajectory toward independent funding through a planned R01 submission.

"Our results will inform the effectiveness of TCAR for standard-risk patients and guide clinical practice by informing which procedure has the lowest stroke-risk for patients," he said. "This work builds on the aims from my K08 by allowing me to use a powerful new data source, study a new population of patients with enhanced follow-up, employ a novel validated stroke outcome, and use advanced statistical methods."

The Clowes Award is supported through contributions to the ACS Foundation with funding from The Clowes Fund, Inc., of Indianapolis, Indiana. Its purpose is to help advance the research of a promising young surgical investigator. The award consists of a stipend of $45,000 for each of 5 years and is not renewable thereafter.

More information is available at *facs.org/clowes*. Applications for the 2026 Clowes Award are due by **July 31.**

Residents Receive Research Scholarships

Research Scholarships for 2025–2027 have been awarded to six residents pursuing careers in academic surgery.

THESE SCHOLARSHIPS, supported through the generosity of Fellows, Chapters, and friends of the College, offer $30,000 each year for 2 years.

The recipients are:

James Bradford, MD, The University of Chicago in Illinois
- *Research project:* Investigating the Mechanisms by which Diet-Induced Changes in the Gut Microbiome Drive Postoperative Ileus

Kate Telma, MD, University of Wisconsin–Madison
- *Research project:* Better Conversations for Better Informed Consent: A Pilot Study to Automate Surgeon Training and Evaluate Patient Reported Outcomes

Lucia Calthorpe, MD, MPhil, University of California, San Francisco
- *Research project:* Development of an Administrative Frailty Index to Augment Perioperative Risk Assessment for Patients with Cirrhosis

Margaret S. Pichardo, MD, PhD, MPH, University of Pennsylvania in Philadelphia
- *Research project:* Mixed-Methods Approaches to Assess and Measure Dietary Quality among Hispanic/Latina Women with Breast Cancer

Michelle LaBella, MD, The University of North Carolina in Chapel Hill
- *Research project:* The Role of TNIK (Traf2 and Nck Interacting Kinase) in Pancreatic Adenocarcinoma

Nensi M. Ruzgar, MD, Beth Israel Deaconess Medical Center, Dana-Farber/Boston Children's Cancer and Blood Disorders Center, and Harvard Medical School
- *Research project:* Genome-Wide Study of Circulating Tumor DNA Signatures in Patients with Hepatoblastoma

The online application for the Resident Research Scholarship is expected to re-open this month. For more information, visit *facs.org/resident-research.*

Nominate Colleagues by August 25 for Prestigious ACS Awards

The ACS invites members to nominate colleagues for six prestigious awards.

Honors Committee

NOMINATIONS OF CANDIDATES from all surgical specialties and geographical locations, especially for Honorary Fellowship, are highly desired.

The Honors Committee, which administers the awards, will review the nominations and send them to the Board of Regents for final approval.

Submissions are accepted throughout the year and considered for selection annually according to the following schedule:

January

Distinguished Lifetime Military Contribution Award

May

Distinguished Service Award

Jacobson Innovation Award

Lifetime Achievement Award

September

Honorary Fellowship

Sheen Award

Nominations must be received by **August 25** in order to be included on the next Honors Committee meeting agenda. Nominations received after that date will be held for future consideration.

Visit *facs.org/honorscommittee* for award criteria and instructions for submitting a nomination.

Note

Nominations do not automatically lead to selection, and not all awards or honors are presented annually.

2024–2025 Honors Committee Members

- Beth H. Sutton, MD, FACS, *Chair*
- Anthony Atala, MD, FACS
- James W. Fleshman, MD, FACS
- Henri R. Ford, MD, MHA, FACS
- Andrea A. Hayes-Dixon, MD, FACS
- Fabrizio Michelassi, MD, FACS
- Anton N. Sidawy, MD, MPH, FACS
- Gary L. Timmerman, MD, FACS
- Douglas E. Wood, MD, FACS

Member News

Fields Chairs URMC Department of Surgery

Ryan C. Fields, MD, FACS, has taken over as the Seymour I. Schwartz Professor in Surgery and chair of the Department of Surgery at the University of Rochester Medical Center (URMC) in New York, surgeon-in-chief of Strong Memorial Hospital, and director of translational research of the Wilmot Cancer Institute, both in Rochester. A surgical oncologist, Dr. Fields previously was the Kim and Tim Eberlein Distinguished Professor of Surgery and chief of surgical oncology at the Washington University School of Medicine in St. Louis, Missouri, leader of the Solid Tumor Therapeutics Program at the Alvin J. Siteman Comprehensive Cancer Center in St. Louis, and director of resident research in the Department of Surgery of Washington University in St. Louis.

Tzeng Steps into Chief Role at UPMC

Edith Tzeng, MD, FACS, is chief of the Division of Vascular Surgery at the University of Pittsburgh Medical Center (UPMC) Heart and Vascular Institute in Pennsylvania. She also will continue to serve as professor of surgery in the Division of Vascular Surgery at the University of Pittsburgh (Pitt) and chief of vascular surgery. Dr. Tzeng, a vascular surgeon-scientist, joined the faculty at Pitt and UPMC in 2000 and has served as chief of vascular surgery at the Veterans Administration Medical Center in Pittsburgh since 2003. She also has been the program director of the Vascular Surgery Research T32 Program funded through the National Institutes of Health for the past 15 years.

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. Submissions will be printed based on content type and available space.

Additional Member News items are available on *facs.org*.

Gamblin Is Inaugural Utah Chief of Surgical Oncology

T. Clark Gamblin, MD, MS, MBA, FACS, is the inaugural chief of the Division of Surgical Oncology in the Department of Surgery at the Spencer Fox Eccles School of Medicine at The University of Utah in Salt Lake City. He also serves as an investigator at Huntsman Cancer Institute. A hepatopancreatobiliary surgeon with expertise in the surgical management of complex liver, pancreas, and biliary cancers, Dr. Gamblin previously was chief of surgical oncology and vice chair of clinical operations for the Department of Surgery at the Froedtert & Medical College of Wisconsin in Milwaukee.

Tadlock Receives Heroes of Military Medicine Award

Matthew D. Tadlock, MD, FACS, a captain in the US Navy, received the 2025 Heroes of Military Medicine Award for his contributions to military medicine. The Henry M. Jackson Foundation for the Advancement of Military Medicine presented the award in May. Dr. Tadlock is an active-duty trauma/critical care surgeon in the US Navy and the Department of Surgery of the Naval Medical Center San Diego in California. He also is an associate professor at the Uniformed Services University of the Health Sciences in Bethesda, Maryland, and current President of the Excelsior Surgical Society.

JACS JOURNAL OF THE AMERICAN COLLEGE OF SURGEONS

Highlights

The following articles appear in the July and August 2025 issues of the *Journal of the American College of Surgeons*. A complimentary online subscription to *JACS* is a benefit of ACS membership. See more articles at ***facs.org/jacs***.

Long-Term Cytoreduction Outcomes with or without Heated Intraperitoneal Chemotherapy for Colorectal Peritoneal Metastases

Michael G. White, MD, MSc, Paula Marincola Smith, MD, PhD, Neal Bhutiani, MD, PhD, and colleagues

This retrospective analysis comparing cytoreduction and cytoreduction with heated intraperitoneal chemotherapy (HIPEC) for peritoneal metastases from colorectal cancer demonstrated a benefit for HIPEC only in patients with a peritoneal cancer index score of 11 or greater.

Feasibility, Outcomes, and Odds of Same-Day Surgery in Laparoscopic Elective Repair of Type IV Hiatal Hernia with Intrathoracic Stomach

Nikhil Erabelli, BSA, Ethan Bui, BS, Shalin Shah, BS, and colleagues

In this study, researchers found that in about half of patients with intrathoracic stomach, the percentage of gastric herniation on preoperative imaging did not correlate with the percentage of gastric incarceration identified at the time of laparoscopic repair. Same-day surgery is feasible in most laparoscopic elective intrathoracic hiatal hernia repair.

Equity Landscape in Healthcare Quality: A Mixed-Methods Study of Efforts within Surgical Quality Programs

Jessica K. Liu, MD, MS, MPH, Courtney E. Collins, MD, FACS, Anoosha Moturu, MD, MS, and colleagues

Although efforts to achieve health equity may be in place at the institutional level, they are often hindered by insufficient infrastructure, organization, and processes needed to support effective frontline practices. The study results highlighted opportunities that support implementation of health equity strategies and target barriers that limit the reach of health equity efforts.

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Now Available: Automatic CME Credit Reporting to the ABS

By attending an ACS-accredited activity, you may choose to participate in the automatic transfer of your CME credits to the American Board of Surgery (ABS) via the Accreditation Council for Continuing Medical Education (ACCME).

Go to ***facs.org/mycme*** today, verify your ABS ID and date of birth on the Board Certification tab, and select "Opt In." After that, your CME data will be automatically transmitted to the ABS!

This arrangement with the ABS and ACCME is phase one; the ACS is also working on autotransfer protocols with other surgical boards. Stay tuned!

facs.org/mycme