

# ACS/Bulletin

AMERICAN COLLEGE OF SURGEONS

## Conversations in Acute Cholecystitis Management

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Recent Treatment Strategies for Pancreatitis  
Surgical Mentorship for Next Generation  
Surgeries of US Presidents

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September 19

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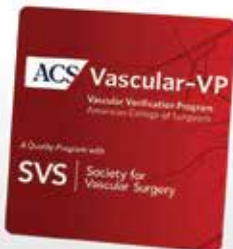


September 19

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September 11

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Lindsay Flynn-Houston, MD, FACS

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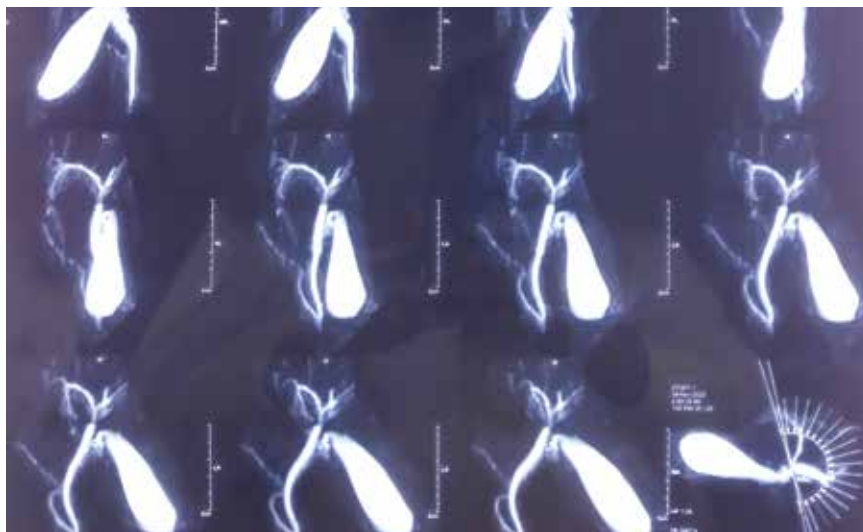
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# Surgery's Long History in Palliative Care

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A DEFINING FEATURE of the ACS is our ability to contribute meaningfully to the careers of all surgeons and expand perspectives across surgical disciplines. One example that may not immediately be top of mind is our work in surgical palliative care.

To some, the phrase “surgical palliative care” may sound contradictory. Our procedures can be invasive, while palliative care sometimes means minimizing or avoiding procedures. At its core, however,

palliation focuses on reducing discomfort, improving quality of life, and aligning the care a patient receives with that patient's stated goals.

While palliative care may be part of end-of-life care, the concept applies to any patient who may benefit from surgery meant to improve quality of life without curing disease. In that sense, a palliative care perspective could be part of many of our practices.

The ACS has contributed to groundbreaking initiatives in surgical palliative care for 30 years, dating back to the beginning of these care considerations.

The College began playing a role in the advancement of palliative surgical care when **Olga Jonasson, MD, FACS** (1934–2006), a legendary transplant surgeon, became the Director of what is now the ACS Division of Education in 1993. In that role, she spearheaded early efforts to inform ACS members about palliative care.

Building on her intended commitment, we have continued activities in palliative surgery,

including efforts to unite surgeons to develop principles of the field. In 1998, the ACS Committee on Ethics released the Statement of Principles Guiding Care at the End of Life, followed in 2005 by the revised Statement of Principles of Palliative Care. In 2009, a team led by the prominent palliative surgeon **Geoffrey Parker Dunn, MD, FACS**, helped the ACS create a guideline on palliative surgical care for resident physicians. In 2017, the ACS Trauma Quality Improvement Program (TQIP) released the ACS TQIP Palliative Care Best Practices Guidelines, which aim to bridge gaps in palliative surgical care for trauma patients.

Over time, our work on palliative care has also included numerous other activities such as launching committees and workgroups, adding the topic to multiple editions of the ACS Surgical Education and Self-Assessment Program (SESAP®), and running a 4-year-long series of articles on palliation in the *Journal of the American College of Surgeons*.



We have also maintained an ongoing focus on research. The ACS recently hosted the 8th annual Symposium for Research in Surgical Palliative Care. During that virtual program in May, surgeon-scientists presented studies on palliative care, illuminating cancer care, common misconceptions, and surgeon-patient communication. In addition, we have featured panel sessions on surgical palliative care at Clinical Congress. This year's schedule includes multiple sessions on the topic (see sidebar).

Our involvement also extends to updating our own Quality Programs. For example, purpose-built data collection tools are generally required to appropriately capture the intent for a surgery to be palliative. To that end, the ACS National Cancer Data Base, which captures data from approximately 1.4 million US cancer patients per year, now includes data fields for surgical procedures intended to be neither diagnostic nor curative.

In addition, our Division of Research and Optimal Patient Care is integrating surgical palliative care into the Geriatric Surgery Verification (GSV) Program. The ACS launched the GSV Program in 2019 to improve the surgical care of all patients 75 years and older. From the start, its implementation has required the involvement of each hospital's palliative care team to help ensure our process reflects the multidisciplinary nature and specific staffing required to deliver high-surgical care. With generous funding we received

from The John A. Hartford Foundation, we are now working to better incorporate palliative care into the GSV standards. Our quality team also successfully worked with the Centers for Medicare & Medicaid Services to create a new Age Friendly Measure predicated on GSV program to improve the care and outcomes of older adult patients. Hospitals will be required to report their compliance with this new measure beginning in January 2025; compliance information will be publicly available in 2026.

While hospice and palliative medicine is a specialty unto itself, its insights are applicable to surgeons in many disciplines. As always, we use our powerful history and infrastructure to unite all surgeons for meaningful improvements in how we practice. If you are interested in learning about palliative care, please engage with our resources on this important topic at this year's Clinical Congress and beyond.

### **Register for Clinical Congress**

Join us in San Francisco from Saturday, October 19, to Tuesday, October 22, for this year's meeting of the House of Surgery. We look forward to more than 100 Panel Sessions, eight Named Lectures, and many more meetings, sessions, and special events. Learn more and register at [facs.org/clincon2024](https://facs.org/clincon2024). **B**

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

## **Clinical Congress Sessions on Surgical Palliative Care**

**October 20, 9:45 am**


I. Ethics and  
II. Geriatric/Palliative Care

**October 20, 2:30 pm**

Management of Malignant Small Bowel Obstructions in Patients with GI Cancers

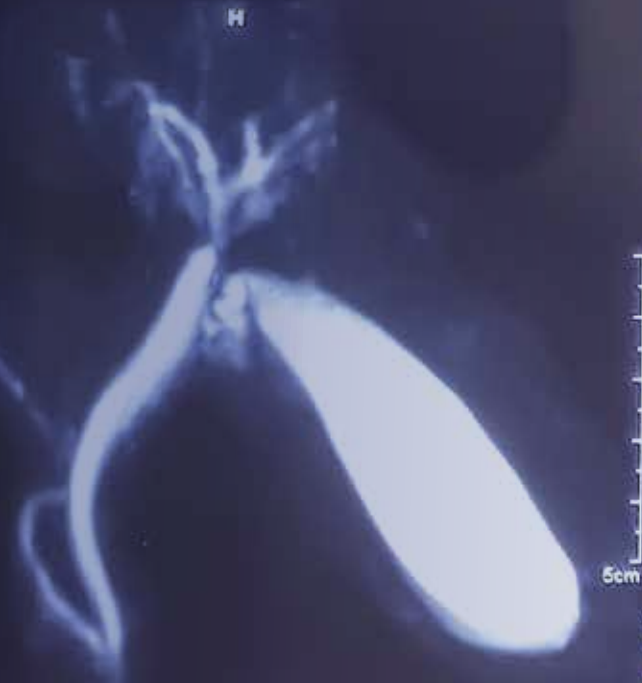
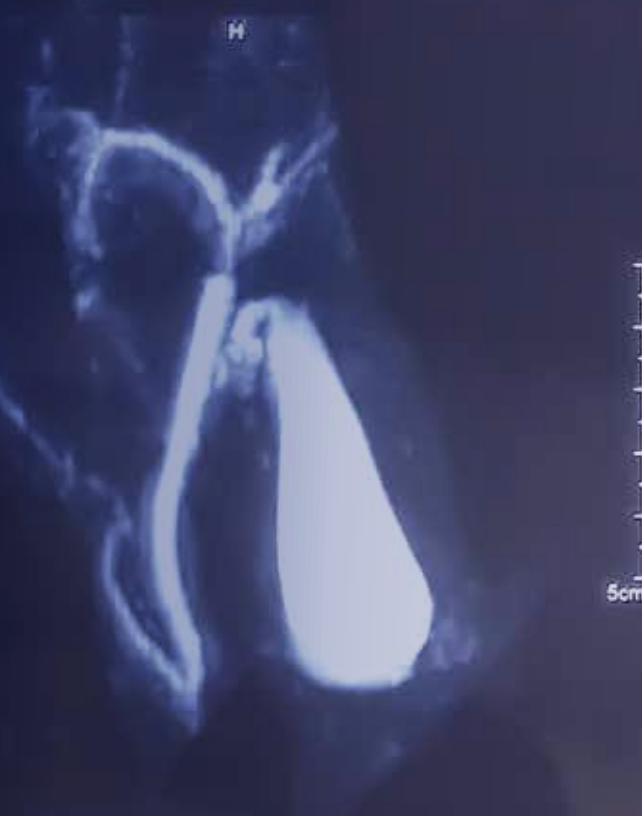
**October 21, 4:15 pm**

"We Believe in Miracles": Responding to Patient and Family Requests to "Do Everything"



# Conversations in Acute Cholecystitis Management Include Treatment Timing, Robotics

Matthew Fox, MSHC



Around the world, gallstones and subsequent cholecystitis are among the most common gastrointestinal disorders and a leading cause of hospitalization. Surgeons of any discipline are likely to be familiar with the condition, as cholecystectomy is one of the most common operations, with hundreds of thousands performed each year in the US alone.<sup>1</sup>



INDEED, CHOLECYSTECTOMY is widely considered the ultimate solution for acute calculous cholecystitis. Unlike other common conditions, such as appendicitis, in a typical case of acute cholecystitis, there is little debate about whether surgery, antibiotics, or some other treatment modality is the preferred course of care. Cholecystectomy, especially laparoscopic cholecystectomy, is the gold standard.<sup>2</sup>

Because the disease and treatment are common, there is an ongoing need to evaluate and reevaluate evidence of best practices for acute cholecystitis management to ensure that each patient receives the best care possible, particularly when the gold standard is unachievable. This article reviews recent ongoing trends, shifts, and potential future directions for managing acute cholecystitis.

## The Gold Standard

As noted, laparoscopic cholecystectomy has become the accepted treatment for acute cholecystitis, with up to 90% of gallbladders removed laparoscopically.<sup>3</sup>

One of the current conversations is not about what to do, but when to do it. Evidence suggests that early laparoscopic cholecystectomy (within 2 days of cholecystitis episode onset, by most definitions) is the preferred timing, even if the acute disease episode is still taking place.<sup>4</sup>

“Research shows that if you take a gallbladder out during the acute admission you will save the patient a lot of time, you will save the hospital a lot of money, and the patient can return to their work and life faster. There are a lot of benefits to taking the gallbladder out right away,” said Clancy J. Clark, MD, FACS, a hepatobiliary and pancreatic surgeon and associate professor of surgery at Wake Forest University School of Medicine in Winston-Salem, North Carolina.

And with the emergence of acute care surgeons who have 24-hour availability, a patient often can be operated on in a timely fashion during a period that cholecystectomy will be an easier, less complex operation, Dr. Clark noted.

## Nonoperative Alternatives

While most patients can have their gallbladders removed early, not all patients can have surgery in that timeframe due to a variety of factors. The large volume of patients experiencing acute cholecystitis virtually guarantees that thousands of individuals each year will not fall into the standard or ideal treatment paradigm—thus, other options such as interval, or delayed, cholecystectomy need to be considered.

“If a surgeon finds that the patient is in a severe episode of inflammation or experiencing a secondary health condition that may affect their candidacy for surgery, you would give serious consideration to delaying cholecystectomy several weeks, if not a few months, after initial presentation,” explained Benjamin K. Poulouse, MD, FACS, chief of the Division of General and Gastrointestinal Surgery at The Ohio State

University Wexner Medical Center in Columbus. Therefore, surgeons and patients must consider other options to alleviate symptoms while final treatment decisions are made.

One of the primary options historically has been percutaneous cholecystostomy (PC) tube placement to drain the gallbladder of bile, which is intended to get the patient past the acute episode of cholecystitis. Then, if the medical condition improves and the patient is more stable, surgery can be delayed. In such scenarios, PC tubes have proven to be an effective temporizing measure before surgery.<sup>5</sup>

While there is some evidence that PC tubes can act as definitive treatment in select, complicated cases of acute cholecystitis,<sup>6</sup> they are generally considered a bridge to cholecystectomy when possible. A more recent emerging technology that could provide alternative resolution to acute cholecystitis is internal drainage using endoscopic techniques.

“Endoscopists are now starting to access the gallbladder through the common bile duct, place a drain through the cystic duct, or under ultrasound, they can bridge a stent into the gallbladder so that it drains into the duodenum,” said Trang K. Nguyen, MD, FACS, associate professor of surgery in surgical oncology at the Washington University Center for Advanced Medicine in St. Louis, Missouri.

Research has shown that endoscopic approaches can produce positive results in patients who cannot undergo cholecystectomy.<sup>7</sup>

Endoscopic techniques, such as transduodenal luminal apposing metal stent placement and transpapillary drainage of the gallbladder, have seen more regular use in countries like South Korea and Japan, but they are not a standard treatment option in the US.

“We haven’t quite reached the point where they’re commonly used procedures, and not all hospitals are doing them,” Dr. Nguyen said. “We don’t know how safe or not safe it is, and it is important to have surgeons involved as part of the multidisciplinary team for appropriate indications using this emerging technology for those patients who can’t undergo an operation.”

Part of the issue is that if the endoscopic intervention fails, patients may find themselves requiring surgery.

### Opposite:

A surgeon performs laparoscopic surgery to remove a gallbladder with stones.

“I hesitate to add endoscopy as a primary treatment, because if it goes wrong, the bailout is much more challenging,” Dr. Clark said. “If you’re choosing a technique that is meant to avoid surgery, you’re in a potentially dangerous situation if surgery is ultimately required for management of an unexpected complication.”

### Identifying a Difficult Gallbladder

Patients with a known high risk of morbidity and mortality from cholecystectomy must be offered alternative treatment options preoperatively. But not all higher-risk patients are identified before surgery—sometimes, the difficulty of a cholecystectomy becomes apparent only after an incision is made and a laparoscope is inserted.

Despite its prevalence as the site of a common surgical disease, the gallbladder and its surrounding anatomic structures are subject to a wide variety of presentation, both from variable genetics, disease presentation, and environmental factors.

“There are factors just from the disease process itself that can make for a more difficult cholecystectomy. Severe inflammation in the hepatocystic triangle can make it difficult or even impossible to dissect out the important structures for identification,” Dr. Poulouse said.

## Common bile duct injury is an omnipresent threat with laparoscopic cholecystectomy.

He added that biliary anatomy in the hepatocystic triangle is naturally one of the most varied anatomies from patient to patient, which can make capturing the critical view of safety more difficult.

In addition, there are growing differences in the ability to visualize the gallbladder and its structures due to rising obesity and obesity-related surgeries, which can limit visualization.

“In the last decade or two, there has been a rise of patients who have altered intestinal anatomy after gastric bypass, which may prevent our endoscopic colleagues from accessing the biliary tree to identify gallstones that are in the common bile duct,” Dr. Nguyen said.

In such cases, the difficult gallbladder can present a patient safety issue because of the risk of common bile duct injury, as well potential injury to other surrounding vascular structures.

### Subtotal Cholecystectomy

To avoid operative complications, including the hazardous common bile duct injury, one of the key conversations taking place around acute cholecystitis is determining the correct bailout procedure if a laparoscopic total cholecystectomy is deemed too high risk to continue.

One option is conversion to open cholecystectomy. The rate of open procedure as an initial operation has decreased significantly in the last 30 years as laparoscopic cholecystectomy has become the surgical treatment of choice,<sup>2</sup> but it remains a potential option when the critical view of safety cannot be achieved due to reasons such as cirrhotic liver or adhesions.

Practicing surgeons, however, advise a subtotal or partial gallbladder removal, which provides better patient outcomes and a superior method to achieve surgical goals if traditional laparoscopic cholecystectomy is not possible. Recent research suggests that subtotal cholecystectomy is associated with fewer complications than an open procedure, such as biliary injury and bleeding.<sup>8</sup>

“At the end of the day, we’re trying to make sure that we avoid a common bile duct injury in these challenging cases where there is so much inflammation and you can’t visualize the critical view of safety with the cystic duct and cystic artery away

from the common bile duct,” Dr. Nguyen said.

Common bile duct injury is an omnipresent threat with laparoscopic cholecystectomy, and Dr. Nguyen explained that these injuries can be devastating, or even fatal, and require other surgeries with concomitant lengthy hospital stays.

Subtotal cholecystectomy has been recognized as a critical bailout procedure to avoid bile duct injury while achieving the best-possible surgical outcomes, which was detailed in the “Safe Cholecystectomy Multi-Society Practice Guideline and State of the Art Consensus Conference on Prevention of Bile Duct Injury during Cholecystectomy,” released in 2020.<sup>9</sup>

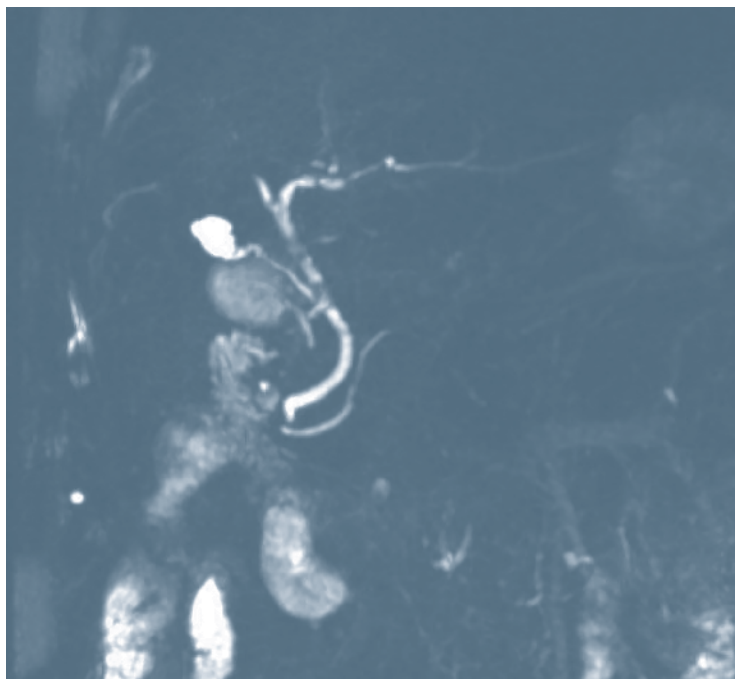
There is some debate regarding the ideal subtotal cholecystectomy, which comes in two forms: fenestrating, wherein the gallbladder is left “open” but the cystic duct is sutured internally; and reconstituting, wherein the lower end of the gallbladder is closed. Data suggest that both are feasible and safe, although the fenestrated version may have higher incidence of bile leakage, while recurrence of biliary events was higher in the reconstituting form.<sup>10</sup>

Regardless of which technique is chosen, this alternative to standard laparoscopic cholecystectomy means that a patient may be left feeling that the surgery “went wrong”—which presents an opportunity, if not a mandate, for surgeons to counsel their patients about what this means for their future.

“I think from a public point of view, it can be difficult to understand why a person would require a partial cholecystectomy when a majority of a patients who have acute cholecystectomies will have their whole gallbladders removed,” Dr. Clark said.

If a patient assumes that the entire gallbladder was removed and then develops symptoms of a remnant cholecystitis 5 years later, the assumption may be poor surgical care at the first operation. Following partial cholecystectomy, patients and their families should be informed that a partial cholecystectomy was the safest option available and that there is a small risk of remnant cholecystitis in the future.

“Since hundreds of thousands of cholecystectomies are performed each year, it is inevitable that thousands will have a subtotal cholecystectomy. It is critical that



we share freely with our patients that this bailout maneuver is common and for their safety,” he said.

It is worth noting that subtotal cholecystectomy of either is a technique that must be learned and executed correctly, and few training programs make it a point to teach how to perform these techniques safely and effectively, Dr. Poulouse added. There is an opportunity for improvement in this space as this bailout becomes more common.

### Ongoing Questions about Robotic Cholecystectomy

Robotic cholecystectomy has emerged as a potential next step for managing acute cholecystitis. Much like laparoscopic cholecystectomy in its nascent stages 30 years ago, robotic procedures face questions about effectiveness, quality, and value.

In recent years, research has shed light on the positives and negatives of robotic cholecystectomy, with sometimes opposing findings. Some smaller case studies of elective cholecystectomy have found that the technique is safe and effective, allowing superior means of visualization and manipulation of the operative field,<sup>11</sup> while a larger study of Medicare claims data found that robotic cholecystectomy led to a notably higher number of bile duct injuries.<sup>12</sup>

Unlike the elective setting, however, robotic cholecystectomy in an emergency general surgery setting has more positive results. A recent study showed that robotic cholecystectomy in an emergency setting was associated with a significantly lower risk of conversion to open surgery.<sup>13</sup>

This magnetic resonance cholangiopancreatography image shows a remnant gallbladder, a potential complication after a partial or subtotal cholecystectomy. (Image courtesy of Dr. Clancy Clark)

As a relatively new platform, there is an expectation that robotic cholecystectomy will require time to show its potential value—and that the additional upfront costs may make it prohibitive early on.

“As a new technology for removing a gallbladder, robotics will have a learning curve, as well as arguably higher costs,” Dr. Nguyen said. “Even if some institutions can lower the costs by managing the supply chain, it will require a dedicated team that is used to the robot, versus most operating room staff who are used to laparoscopic procedures by now.”

On the other side of the cost equation is the potential one where performing robotic surgery on a common surgical disease such as acute cholecystitis can provide downstream benefits for other procedures.

“You need to start with some simpler operations like the cholecystectomy or inguinal hernia repair before you move on to more advanced operations on the robotic platform,” Dr. Nguyen said, adding that “there is some utility in that, even if it may not be cost effective right now.”

As with any surgical innovation, there is a balance to be struck between using the technology or technique in real cases while still in its exploratory stage versus prioritizing patient safety, especially, in this situation, when faced with a difficult gallbladder.

“The challenge is recognizing that it is a different enough technique where we may need to rethink some of the assumptions that we held true for laparoscopic cholecystectomy,” Dr. Poulouse said.

“Some data suggest that there may be an increased risk of bile duct injury, even if it appears small. Whether or not this is true or not still begs the question—should we alter our technique to minimize injury in those situations that we know are difficult?” he asked.

Ultimately, the global surgeon and healthcare community need to reach a consensus on what is an acceptable bile duct injury rate.

Another potentially significant challenge related to robotic cholecystectomy is how it may only be available, as of now, to a subset of patients, which could further contribute to a healthcare system struggling with inequity.

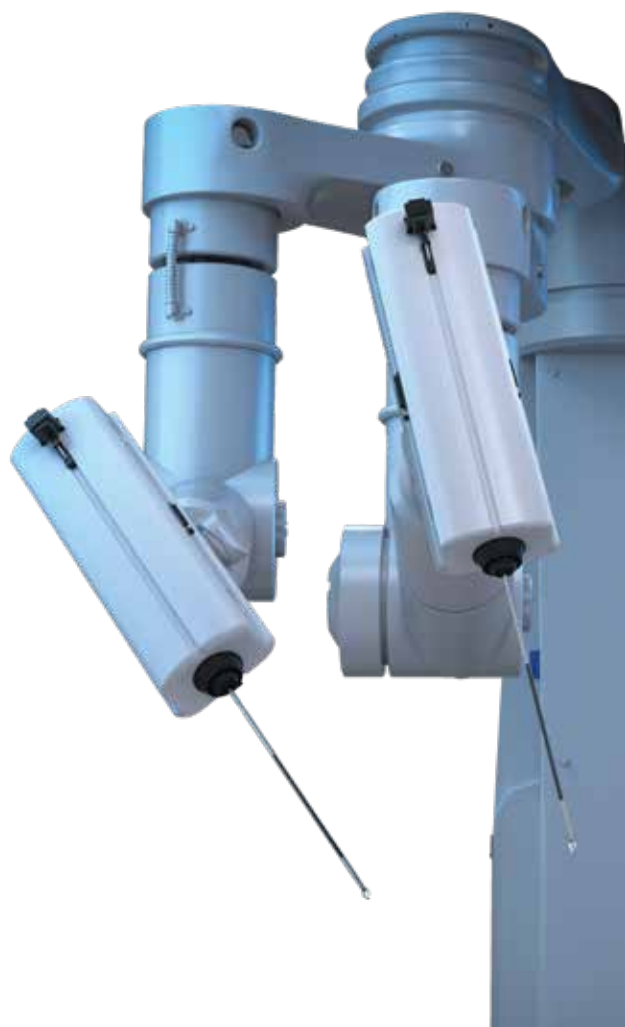
“The accessibility of the robot is currently limited, whether that’s to the hospital itself or an individual

patient, so it might widen the gap of healthcare disparities,” Dr. Clark said. “Inadvertently, if we start saying everyone should perform a cholecystectomy robotically, even if it is because it might be safer or more easily done, we might widen the gap between the haves and the have-nots.”

### A Surgeon’s Judgment

Management of acute cholecystitis can occupy a unique space for general surgeons, hepatobiliary surgeons, gastrointestinal surgeons, and other medical team members who interact with these patients.

It is a common ailment, but because of variation in patient status, disease process at presentation, organ anatomy, availability of hospital resources, and





training of personnel, among other aspects, a surgeon's individual judgment is important.

"We know that certain patients clearly should proceed to cholecystectomy early, and we know that some patients clearly should have something else done other than cholecystectomy, like a PC tube," Dr. Poulouse said. "It's the middle ground where there is often a lot of variation between general surgeons themselves, as well as different surgical disciplines."

While laparoscopic cholecystectomy is the current gold standard of treatment for acute cholecystitis, surgeons must continue to be leaders in defining that middle ground so that all patients have access to the safest, most effective treatment available. **B**



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

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# Pancreatitis Management Evolves

with Minimally Invasive,  
Delayed Interventions

Jim McCartney

Recent advances in the management of pancreatitis—including minimally invasive surgical approaches and delayed interventions—have helped improve patient outcomes and quality of life. And now, with improved imaging, genetic testing, and artificial intelligence (AI), disease management is poised to advance even further.

### Differentiating Acute Versus Chronic Pancreatitis

Pancreatitis can be chronic or acute. Because it presents in many ways, it is easy to mistake for another gastrointestinal disease. In managing pancreatitis, it's critical to understand the initial insult, proper classification, and prognosis,<sup>1</sup> as acute pancreatitis and chronic pancreatitis are different, with completely different treatments.

#### Acute Pancreatitis

Acute pancreatitis is the leading cause of gastrointestinal-related hospitalizations in the US, and its frequency continues to rise in the US and worldwide.<sup>2</sup>

Treatment usually is conservative for mild disease, with mild acute pancreatitis accounting for approximately 75% of cases.<sup>2</sup> Gallstone pancreatitis, the most common cause of mild acute pancreatitis, is typically treated with intravenous fluids and supportive care in the early days after presentation.

One recent advance in treating mild acute pancreatitis is same-admission laparoscopic cholecystectomy, which decreases recurrence and readmissions. Another is the use of robotic-assisted cholecystectomy, which has increased 40-fold in the last decade; however, a large Medicare database study showed a higher rate of bile duct injury with robotic compared with laparoscopic cholecystectomy (0.7% versus 0.2%).<sup>3</sup>

“This threefold increase will need to be critically followed to ensure the rates decrease,” explained Karen D. Horvath, MD, FACS, a general surgeon at the University of Washington Medical Center–Montlake in Seattle. “I expect that it will decrease. However, if it does not, in my opinion, robotic-assisted cholecystectomy should be thoughtfully

reconsidered or even abandoned if necessary.”

In moderate-to-severe acute pancreatitis, which accounts for approximately 10% to 20% of acute pancreatitis patients, the mortality rate ranges from 15% to 30%, with 20% of patients developing necrosis, Dr. Horvath said. The treatment for patients with severe acute biliary pancreatitis is a delayed cholecystectomy.

Severe acute pancreatitis has high morbidity and mortality, and surgical or endoscopic interventions may be necessary for infected necrosis of the pancreas and other complications such as abdominal compartment syndrome, bowel ischemia, and debridement of collections not accessible via transgastric procedures.

Some of the biggest innovations in surgical management of severe acute pancreatitis include ways to debride patients with infected walled-off necrosis, aiming to reduce complications and mortality by minimizing surgical stress in the already critically ill patient. Among these innovations are:

- *Video-assisted retroperitoneal debridement procedure*, which includes surgical necrosectomy under the direct visualization of a laparoscope (This technique is especially useful in paracolic gutter and pelvic collections.)
- *Minimally invasive retroperitoneal pancreatectomy*, which is a novel technique developed in the UK where the dead pancreas is surgically removed through the patient's side using a special operating endoscope
- *Transgastric laparoscopic approaches through the lumen of the stomach* to remove diseased tissue and connect the stomach to the pancreas, allowing

drainage of the pancreas into the stomach  
(A robotic form of this approach allows for  
drainage of pancreatic pseudocysts and walled-off  
pancreatic necrosis.)

- *Transgastric endoscopic necrosectomy through a lumen-opposing metal stent*

A step-up approach is often applied in which percutaneous drainage is followed, if necessary, by one of these techniques.<sup>4</sup>

“Surgery is reserved for when all else has failed,” said Greg C. Wilson, MD, FACS, an assistant professor of surgery at the University of Cincinnati College of Medicine in Ohio.

Although the trend toward minimally invasive surgery has reduced the operating room role of surgeons for these patients, Dr. Wilson said surgeons should continue to stay engaged in care management decisions.

“We’re surprised all the time. Acute pancreatitis patients can develop catastrophic complications even on the day of discharge,” he said. “We still need to be intimately involved with the decision-making related to these patients, especially when they are inpatients. They can be very complicated.”

### **Chronic Pancreatitis**

Chronic pancreatitis is a longstanding inflammation of the pancreas that leads to irreversible destruction of exocrine and endocrine pancreatic parenchyma and other changes such as strictures, duct stones, and gland atrophy.<sup>5</sup> Chronic pancreatitis is often confused with recurrent acute pancreatitis, which is a subtype of severe acute pancreatitis.

“Recurrent acute pancreatitis is basically when a patient presents with acute pancreatitis and then

has recurrent attacks, like the waves on a seashore,” Dr. Horvath said. “Recurrent acute pancreatitis can eventually lead to chronic pancreatitis.”

In managing chronic pancreatitis, the role of surgery has shifted more to anatomic operations that focus on cancer. While there haven’t been as many major endoscopic innovations in the surgical

technology in the field,” said Dr. Wilson, adding that he also has had exposure to both the traditional and anatomic approaches, offering flexibility for managing patients with chronic pancreatitis.

Another innovation is the total pancreatectomy with islet cell transplantation. This procedure is intended for patients with genetic mutations that put their entire pancreas at risk, or for some patients with recurrent acute pancreatitis.

In the total pancreatectomy with islet cell transplantation procedure, the entire pancreas is removed, then islet cells isolated from the patient’s pancreas are injected into the portal vein and take up residence in the liver. The islet cells help control and secrete hormones that control blood glucose. While less than a third of patients end up truly insulin independent with the operation, it allows most patients to have diabetes that can be controlled with medications.

### Improved Outcomes

The advances and innovations in surgical management of pancreatitis have yielded a dramatic improvement in patient outcomes.

For acute pancreatitis patients, enhancement of critical care techniques, computed tomography (CT) scans, and percutaneous drains and minimally invasive debridement methods such as those described in this article have reduced mortality from 70% to 20%–30% over the last 50 years, according to Dr. Horvath.

“As we move toward later and more minimally invasive interventions, we see that after the patient recovers, pancreatic function is often preserved in a greater way than when we did maximal open surgery,” Dr. Horvath said.

Minimally invasive necrosectomy techniques have improved the long-term endocrine and exocrine functional outcomes as well as wound complications for these patients, which can be quite morbid, she added.

These improvements have not only helped save lives but have brought marked improvements in quality of life.

Surgical management also has improved quality of life and provided pain relief for chronic

**Multidisciplinary care is important to both types of pancreatitis patients, and this cross-functional approach is especially important to chronic pancreatitis patients before, during, and after surgery.**

treatment of chronic pancreatitis, robotic-assisted surgery has helped operations become more minimally invasive.

As a result, relevant surgical training is more focused on anatomic resections, such as the Whipple procedure, which removes the head of the pancreas; distal pancreatectomy, which removes the tail of the pancreas; and some of the duodenal-preserving resections, including the duodenum-preserving pancreatic head resection, a procedure with favorable short-term and long-term outcomes that has become the most common procedure.<sup>6</sup>

There is less emphasis on some of the traditional, less invasive pancreatitis operations, which include draining the pancreatic duct, removing parts of the pancreas, and the Frey procedure, which both drains and removes diseased tissue.

“I routinely do robotic Whipples. That’s probably the biggest kind of breakthrough and emerging

pancreatitis patients, many of whom are in serious condition at the time of operation.

“These patients will frequently live a life in which they’re just living from one hospitalization to the next,” explained Dr. Wilson. “They can’t keep a job because they have too many sick days. An operation or an intervention can improve their quality of life—basically get them back to a life.”

For long-term results, 1 in 3 patients will die within 10 years, according to Dr. Wilson. Among the many causes of death are infections, cardiovascular disease, diabetes, cancer, end-stage liver disease, end-stage renal disease, and suicide. Major causal factors for suicide in this context are psychosocial issues, including narcotic dependence, substance abuse, and mental health. In fact, a key determinant of survival after surgery for chronic pancreatitis is whether or not patients were able to get off their narcotic medications.<sup>7</sup>

## Multidisciplinary Care

Multidisciplinary care is important to both types of pancreatitis patients, and this cross-functional approach is especially important to chronic pancreatitis patients before, during, and after surgery.

The medical team may consist of the primary care doctor, gastroenterologist, surgeon, and mental health, pain management, and addiction care specialists.

“There is a plethora of evidence supporting that acute pancreatitis patient outcomes are better with a multidisciplinary team committed to the care of these complex patients,” Dr. Horvath explained.

Chronic pancreatitis patients often have been marginalized by the healthcare system. Even with advanced imaging, it can be difficult to diagnose chronic pancreatitis as compared with a gastrointestinal disorder. The severe abdominal pain experienced by these patients can be difficult to detect by imaging or other diagnostic techniques, so they are often labeled as “narcotics seekers,” Dr. Wilson said.

“They’re suffering, and they’re not getting treatment that’s helping them,” Dr. Wilson said. “They can require a lot of hands-on work—they’re in and out of the hospital, coming back or calling weekly.”

For acute pancreatitis patients, it’s essential to have

a multidisciplinary team along the continuum of care, Dr. Horvath said. This team includes surgery, gastroenterology, critical care, internal medicine, and interventional radiology. Numerous studies have shown these multidisciplinary teams produce better morbidity and mortality outcomes and lower patient and health system costs.

“Acute pancreatitis patients are unique in how their disease evolves over time with many unexpected events,” Dr. Horvath said. “They can have catastrophic complications at the drop of a hat, like a pulmonary embolism or a bleeding pseudoaneurysm, as well as complex biliary complications. They benefit from a care team that’s familiar with the disease and all the typical pitfalls.”

Patients with severe acute pancreatitis and some with moderate acute pancreatitis should be transferred to a regional care center for the large-volume experience, she said. In fact, “it’s extremely difficult to understand this disease unless you see a large volume of patients,” explained Dr. Horvath.

“If we’re going to advance the management of these patients for the benefit of future generations, it will need to happen in large-volume regional centers solely because of the low disease prevalence and extremely unique and nuanced expression of complications,” Dr. Horvath said.

## Improved Diagnostics and Preoperative Planning

Advanced imaging, including contrast-enhanced CT scans, magnetic resonance imaging, and endoscopic ultrasound, has been critical in improving the diagnosis of both acute and chronic pancreatitis and in helping to determine the most appropriate surgical procedure for the patient. CT scans, in particular, have completely changed the care of patients with pancreatitis.

Endoscopic ultrasound is an essential and necessary tool of the interventional endoscopist caring for pancreatitis patients, especially for classifying chronic pancreatitis patients.

“You want to make sure that you know the problem you’re dealing with and are not being fooled by something else that’s kind of mimicking it,” said Dr. Wilson.

Genomics also is a valuable diagnostic tool in identifying at-risk patients. For example, for acute pancreatitis patients, genetic testing can determine if the patient has hereditary pancreatitis or familial pancreatitis.

Unlike most forms of pancreatitis, patients with hereditary pancreatitis usually experience symptoms of acute pancreatitis in childhood with recurrent inflammation of the pancreas often progressing to chronic pancreatitis in early adulthood. This cohort has an increased risk (an estimated 40% lifetime risk) of developing pancreatic cancer, so patients with this gene need to be followed with more intensive cancer screening.

Familial pancreatitis is associated with families that have a higher-than-average incidence of pancreatitis and features at least two or more first- or second-degree family members with idiopathic pancreatitis not attributed to obstructive or environmental causes.

In chronic pancreatitis, three genetic mutations can help identify a genetically linked form of the disease. Dr. Wilson said the best approach for these patients is a total pancreatectomy with islet cell transplantation. More research needs to be done to better understand how to use the identification of some common mutations linked to chronic pancreatitis.

### Preoperative Risk Stratification and Planning

For moderate-to-severe acute pancreatitis patients, a key challenge is to determine when to perform surgery. Although, for most patients, the approach to surgery is to get the patient stronger and healthier before surgery, for severe acute pancreatitis patients, it's often the weakening patient that is most appropriate for surgery. Although careful attention to nutrition is critical for these patients, often with enteral tube feeds, some patients remain in a catabolic state.

"We often need to go to surgery as the patient is getting weaker and their serum albumin is falling so that we can reverse the tide and get them better," Dr. Horvath said. "We can't wait for them to be strong for surgery because they will never be strong."

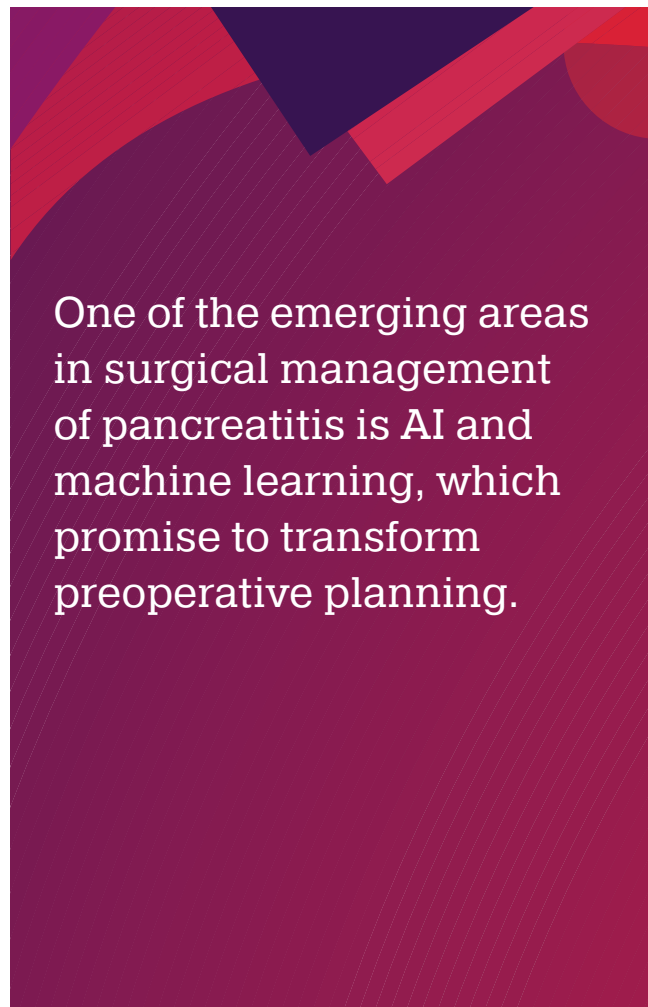
For chronic pancreatitis patients, it's important to optimize the patient's nutrition before surgery.

Often due to their increasing abdominal pain, they have avoided food and lost weight, so their resulting weak nutritional status puts these patients at risk of developing postoperative complications.

In addition, pain management strategies are important for these patients who are already likely to be on pain medicines and narcotics. "This means managing their pain after a big surgery can be quite difficult," Dr. Wilson said.

### Telemedicine Boosts Follow-Up Care

Telemedicine shows promise in helping to follow pancreatitis patients after surgery. For acute pancreatitis patients at the University of Washington in Seattle, Dr. Horvath and her colleagues often use telemedicine, especially for those for whom distance makes an office visit



One of the emerging areas in surgical management of pancreatitis is AI and machine learning, which promise to transform preoperative planning.



difficult, such as patients who come from rural Washington or surrounding states, including Wyoming, Alaska, Montana, and Idaho.

“Getting them back to their local physicians and their care teams, but still being able to help with next steps in their recovery, is critical to patients and their families,” she said.

Although Dr. Wilson acknowledges the benefits of telemedicine, including the reduced need for the patient to travel for doctors’ appointments, he worries that some patients might not be willing to speak up on a telemedicine phone call.

“If you’re not seeing them in person, you might not be able to pick up on some of the subtle cues that maybe you need to look into,” he said.

## What’s Next?

One of the emerging areas in surgical management of pancreatitis is artificial intelligence (AI) and machine learning, which promise to transform preoperative planning.

In acute pancreatitis, using AI to predict the severity of pancreatitis at admission and to indicate when it would be best to intervene and perform surgery rather than wait longer will help save lives and money. Two recent studies indicate that AI can effectively:

- Predict the development of pancreatic necrosis early on, with glucose, C-reactive protein, alkaline phosphatase, gender, and total white blood cell count as important factors in this process (Necrosis was associated with a four-to-eight-fold increased risk of local and systematic complications, severe disease course, and mortality.<sup>8</sup>)
- Plan the timing of the surgical intervention, with interleukin 6, infected necrosis, onset of fever, and C-reactive protein acting as important factors for patients with infected necrotizing pancreatitis<sup>9</sup>

Research using big data will be more effective with tighter classifications, Dr. Wilson explained. In many databases, chronic pancreatitis often is misapplied in patients, he said. Once diagnoses are more refined and accurate, big data will play a key role in future research endeavors.

Other research making strides in managing pancreatitis include the development of biologic agents to potentially treat chronic pancreatitis and optimization of islet cell transplantation so that patients are not insulin-dependent after the operation. **B**

**Jim McCartney** is a freelance writer.

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# **Surgical Mentorship for Next Generation Is Changing**

**Shruti Koti, MD  
Jennifer Xie, MD  
Maya Chopra  
Vihas Patel, MD, FACS**

IN THE 18TH AND early 19th centuries, the art of medicine and surgery was passed on through a close apprenticeship model, with students modeling their own practice after that of a trusted advisor and teacher. As the field of medicine moved into the modern era (early 1900s) and education became more formalized, physicians—including William Osler, MD, and former ACS President Harvey Cushing, MD, FACS—advocated for a mentor-mentee relationship to maintain the benefits of the ancient apprenticeship model.<sup>1</sup>

Traditionally, mentorship was viewed as a one-way downstream effort from a senior mentor to a junior mentee (see Figure 1, page 27). Fortunately, the changing landscape of healthcare has created new opportunities for collaboration and partnership at different career stages.

Between 2001 and 2009, the number of surgeons who reported having their own self-employed practices decreased from 48% to 33%, and the majority of surgeons are now employed in large group practices or as full-time hospital employees.<sup>2</sup> Additionally, subspecialty training is a reality for the majority of surgeons entering practice, particularly at academic centers.

Against this backdrop of a changing medical landscape, surgical trainees today also have more demands on their time than ever before, from clinical duties to increasing administrative burden and time spent on electronic

health records, to growing pressure to be productive in research, not to mention time spent fulfilling personal and familial obligations.

Given that mentors may have an enormous influence on a resident's specialty choice, professional niche, and well-being, it is important to pay closer attention to how we form and maintain these relationships.

As newer cohorts of medical students and residents begin to enter the workforce, it is becoming more apparent that generational differences affect medical education, workplace dynamics, and interpersonal relationships. Changes in medical school curricula, including a focus on competency-based education and flexible learning, have made their way into graduate medical training.

Trainees today place a higher emphasis on individual learning styles and preferences, and greater transparency. One study investigating Millennials and Generation Z trainees found that not only are newer generations more collaborative and optimistic than previous generations, but they also are more likely to desire clearly defined expectations with structured approaches to training.<sup>3</sup> This desire for clearly defined roles and expectations must be addressed in the mentor-mentee relationship, as well.

A recent survey of medical students posed the following question, “What do you want

from a mentor?” The responses included general career guidance, encouragement, networking opportunities, and research expertise—all demonstrating the range of mentoring preferences in students.<sup>4</sup> This wide variety of needs may be best addressed by different mentors.

In an opinion piece published in the *Journal of the American Medical Association*, four mentor archetypes are outlined to help mentees succeed in academic medicine.<sup>5</sup> While these models may be broadly applicable to trainees at all stages, surgical trainees experience a unique type of training. Growing demands on their time require a careful and deliberate crafting of a career that the mentee finds meaningful. Identifying what is meaningful for a surgical trainee is often a difficult and ongoing process, and one in which the mentor may play a key part.

With this in mind, it is important to clearly delineate one's role in the mentor-mentee relationship. The following sections describe four key mentor roles for surgeons (see Figure 2, page 28).

## Four Mentorship Styles for Surgical Trainees

### Cheerleader

The cheerleader may be thought of as a professional support system. This approach features a mentor who supports the mentee emotionally throughout their journey. The cheerleader has a willingness to share both positive

Figure 1.  
**Traditional Mentorship Model  
 versus Redefined Mentorship Paradigm**

and negative personal and professional experiences in order to provide a safe and comfortable environment where mentees can express themselves without fear of punishment or judgment.

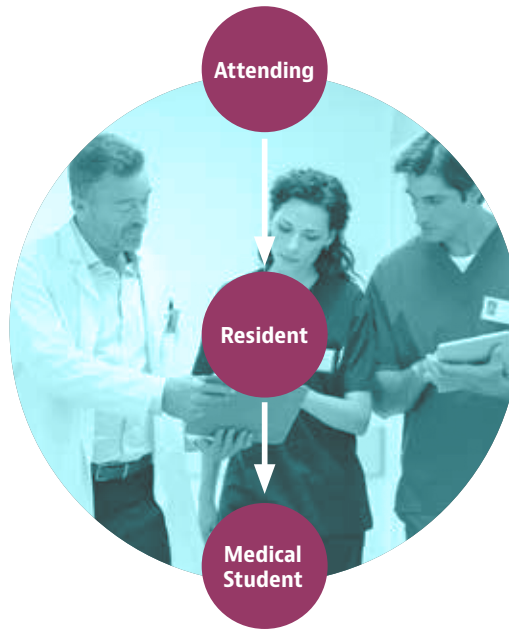
Previous work has described the importance of finding the “right chemistry” (a mutual connection) in order to foster successful mentorship relationships.<sup>6</sup> While this concept is important in all professional relationships, the idea of chemistry is perhaps most important in this mentor type.

In addition to providing the mentee with encouragement, the cheerleader may assist in identifying strengths and weaknesses, providing tools for improvement, and encouraging the mentee’s drive toward and focus on their career.

“The key is finding someone who cares about you, and therefore, genuinely prompts and challenges you,” said Jose Prince, MD, FACS, surgeon-in-chief at Cohen Children’s Medical Center in Queens, New York, and current President of the Brooklyn-Long Island ACS Chapter.

Though the cheerleader role can be adopted at any stage in one’s career, closeness in age and life experience may enable a personal connection. Therefore, for the junior resident for example, the cheerleader is most likely to be a junior faculty member, while for the medical student interested in surgery, the cheerleader might be a resident who can provide encouragement and perspective.

**Traditional Mentorship Model**



**Redefined Mentorship Paradigm**

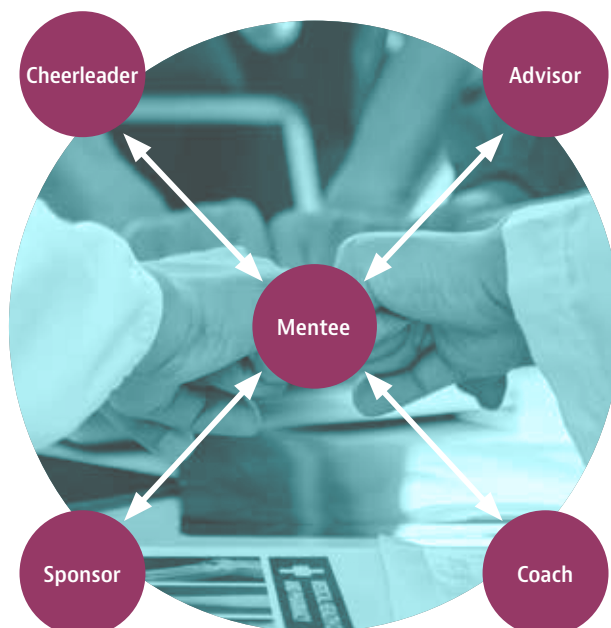
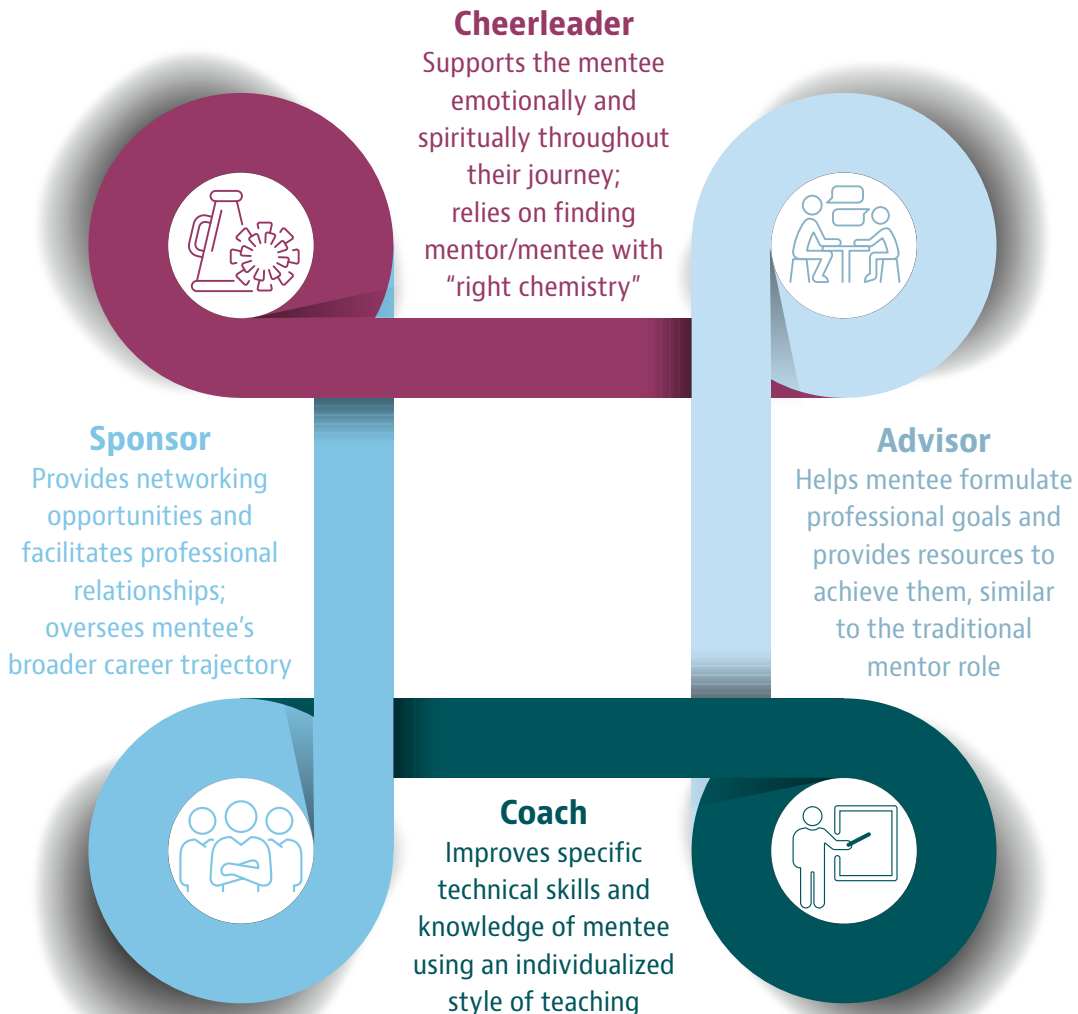


Figure 2.  
**Four Mentor Roles for Surgeons**



**Advisor**

The advisor is most closely aligned with the traditional mentor role. These individuals have professional experiences and resources to help guide mentees in their career trajectory, aid in scholarly work, and point them toward new career opportunities.

The advisor has a strong understanding of the mentee's professional potential and helps the mentee identify professional

goals. The relationship between the advisor and the mentee may be unidirectional, with advice and guidance coming primarily from the mentor to the mentee. The relationship with an advisor should entail specific and measurable goals and learning outcomes, with regular review of timelines within the mentoring process.

Dr. Prince shares some ways in which mentors can take on the

advisor role: "The advisor should really help the mentee answer the question 'who am I?' There are many ways to approach this. What kind of surgeon do you want to be? Can you handle the unknown, or do you need to have a plan in the OR? Do you want to be a generalist or a specialist? The advisor should help map out different ways to think about the decisions that a mentee needs to make."

### **Coach**

The coach is a mentor who can help improve the mentee's technical skills and expand his or her knowledge base. While research in this field is still developing, early work shows that coaching has the potential to improve performance and overall well-being.

Coaching offers the opportunity to individualize teaching and instruction based on the style and preference of the coach and mentee. As coaches provide short-term or singular guidance, they may have many mentees, and vice versa; a mentee may have many coaches.

“As a coach, even if your time with your mentee is short, setting clear expectations helps orient your mentee and figure out what their goals should be

during your time together,” said Susana Benitez Sanchez, MD, chief resident at Long Island Jewish Medical Center/Northwell Health in New York. “This helps build an atmosphere of open communication and ensures both coach and mentee are working toward the same endpoint.”

For residents, the coach often will be a more senior resident or faculty member who does not necessarily have the time to devote to a long-term relationship but can provide immediate feedback. Examples include senior residents teaching junior residents how to suture, perform a hand-sewn bowel anastomosis, or complete a complex surgical consultation.

For medical students, surgical residents may be the most appropriate type of coach, both

for teaching technical skills such as suturing, as well as sharing knowledge on logistical and institutional processes.

### **Sponsor**

The sponsor is a mentor who provides important networking opportunities, is able to facilitate professional relationships, and can introduce the mentee into different academic circles. The sponsor's experience and connections come into play when speaking on the mentee's behalf to committees and organizations and introducing them to new career opportunities.

The sponsor, unlike the cheerleader or advisor, may not be involved in the day-to-day life of the mentee; rather, a sponsor helps oversee the mentee's broad career trajectory.



For residents, sponsors should be leaders in their field, such as a department chair or institute director, who can use influence and position to propel mentees to the next stage of their career.

For medical students, a sponsor may not necessarily be a national leader in the field but should be in a leadership position within the institution. This might include a department chair, surgical residency program director, or dean of the medical school. Ideally, the sponsor also will have a large professional network to connect students with faculty in different fields for shadowing, research, or clinical opportunities.

### **Growing Your Mentor Network**

Often, mentorship is informal in surgical training and may be sporadic as schedules are difficult to align and trainees

and faculty have shifting responsibilities. A recent editorial in *The American Journal of Surgery* outlines strategies for identifying a mentor at different stages of training.<sup>7</sup>

The authors suggest that in order to form meaningful mentorship relationships, medical students should “contact residents, junior faculty, and more senior faculty from different specialties they are interested in pursuing. While the initial introductions might occur during a clinical rotation or by email, arranging a follow-up meeting is critical to solidifying the mentoring relationship.”

For residents, the authors suggest that “strategic mentors are the foundation for future professional growth and will most likely require an active effort as they arise from both internal and external connections within and outside

the field.” Much of this advice also may be incorporated by early career faculty.

However, maintaining a diverse mentor network requires an additional step: Assessing one’s professional needs and identifying potential mentors whose strengths align with those needs. By carefully considering the four mentor roles and one’s own personal learning style and growth needs, mentees can successfully grow their mentor network.

### **Women and Underrepresented Minorities in Surgery**

It has been well established that disparities in academic medicine often are linked to ineffective mentorship and sponsorship at multiple levels.<sup>8,9</sup>

Unconscious bias and stereotypical thinking by mentors and colleagues may pose additional barriers

**“With an increasing diversity of faculty, it is now easier to find a good fit for a broad variety of mentees.”**

Dr. Laura Hansen



for women and those underrepresented in medicine (URiM) who are frequently passed over for job opportunities in favor of their white male counterparts.<sup>10</sup> Acknowledgment of this unconscious bias is crucial, as mentors for surgical trainees often play a significant role in career advancement of the mentee. Additionally, it is important for leaders in the field to seek out mentees from a diverse range of backgrounds.

“With an increasing diversity of faculty, it is now easier to find a good fit for a broad variety of mentees,” explained Laura Hansen, MD, FACS, assistant professor of surgery at the Donald and Barbara Zucker School of Medicine at Hofstra/Northwell in Hempstead, New York, and a junior faculty member with a strong record of mentorship. “For me, having a female surgeon as a mentor who, like me, had children during training, helped me navigate different aspects of my career at different times. I wouldn’t have received that advice from someone who hadn’t faced similar challenges.”

To help promote success for women and URiM trainees on a larger level, institutions and programs could consider measuring and compensating faculty members who engage in mentorship and serve as advocates for trainees, as well as implementing institutional policies to address structural barriers. **B**

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# Surgeries of US Presidents Reveal History of Secrecy and Scrutiny

Brendan P. Lovasik, MD, and Gabrielle Manno, MD

November 5, 2024, is the day voters in the US will select their president for the next 4 years. However, despite the attention that political advertisements, news media channels, and late-night talk show hosts have placed on the election, the health of the president can be a very private topic.

IN THIS HISTORICAL retrospective, an overview of six sitting US presidents who underwent operations during their times in office is provided, along with how the surgical management of each case impacted American history.

## **President James Garfield's Assassination**

James A. Garfield (1831–1881; 20th US president, 1881) was shot by an assassin on July 2, 1881, as he and his family were boarding a train at the Baltimore and Potomac Railroad Station in Washington, DC, en route to a summer vacation.<sup>1</sup>

Charles Guiteau, an American with psychosis and delusions of grandeur, believed that he had been politically slighted after what he considered to be his substantial efforts contributing to President Garfield's victory in the election.

In reality, Guiteau had done little, if any, effectual campaigning and had been banned from the White House for his constant harassment of the president. On July 2, 1881, Guiteau emerged from the crowd of well-wishers at the railway station and shot President Garfield twice with a revolver. The first bullet grazed the president's shoulder, and the other

struck him in the upper back.

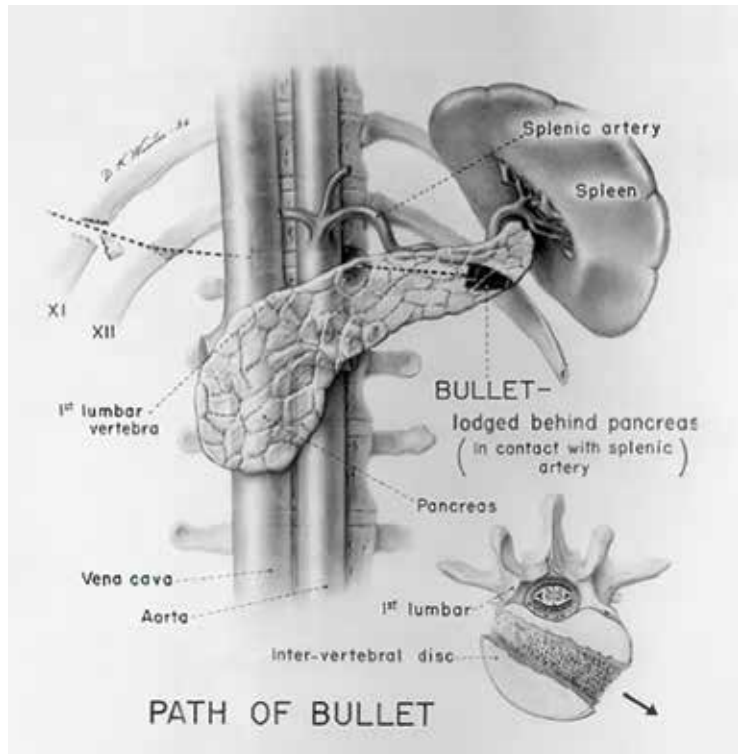
US Secretary of War Robert Todd Lincoln (son of President Abraham Lincoln) called for surgeon D. Willard Bliss, MD, to care for the president. Dr. Bliss's initial examination of President Garfield reported, "The president was deathly pale, almost pulseless...a very feeble pulse of about 40 beats per minute, and a marked pallor of the face; skin cold and covered with a clammy perspiration."

Dr. Bliss explored the wound with his finger to trace the path of the bullet and felt the shards of the president's 11th rib but not the



**Left:**  
This was the scene at the Baltimore and Potomac Railroad Station after President Garfield was shot by Charles Guiteau.

**Right:**  
A medical illustration shows the path of the bullet that struck President Garfield in the back during an assassination attempt.



bullet. When he guided a probe into the wound, it could only be passed 3 inches before it stopped.

During the first day after his injury, President Garfield was tachycardic, hypothermic, and had persistent emesis. Dr. Bliss and his team did not expect him to survive the night. The physician made urgent calls to surgeons David Hayes Agnew, MD, from the University of Pennsylvania in Philadelphia, and Frank Hastings Hamilton, MD, from Bellevue Hospital Medical College in New York City, New York, to lend their expertise to the dire situation.

Both physicians arrived in Washington and re-examined the president, including probing the wound with their unwashed fingers. The wound began to discharge “healthy looking pus,” and on one occasion, discharged a shard of bone and some bits of clothing. By this point, the president had developed jaundice and was having daily fevers.

The surgeons continued to

explore the wound daily with unsterile instruments and inserted a 2-inch surgical drainage tube to facilitate source control. The tube initially passed to 4 inches, then progressively deeper up to 12 inches toward the iliac fossa. The president, unable to take nutrition by mouth, was treated with warm nutritive enemas consisting of egg yolk, bullion, whiskey, milk, and opium.

Weeks of arduous attempts to locate the bullet, including using Alexander Graham Bell’s newly invented metal detector, widened the 3-inch wound into a 20-inch-long incision, beginning at the president’s ribs and extending to his groin. It soon became a superinfected, “pus-ridden, gash of human flesh,” and the president experienced a 120-pound weight loss during his illness.

President Garfield was taken to his beach cottage in New Jersey to convalesce, and he died on September 19, 1881, nearly 80 days after the shooting. During the president’s autopsy,

it was discovered that the bullet had traversed the pancreas and passed through the body of the first lumbar vertebra but spared the spinal cord, with a large retroperitoneal abscess tracked to the iliac fossa. He was noted to have a ruptured splenic artery aneurysm and perforated gallbladder.

President Garfield’s ultimate cause of death was ruled to be hemorrhagic shock without resuscitation, inadequate nutritional support, unchecked sepsis from the injured area, and bronchopneumonia.

### President Grover Cleveland’s Oral Tumor

S. Grover Cleveland (1837–1908; 22nd/24th US President, 1885–1889 and 1893–1897) took office during a tumultuous economic period: The “Panic of 1893,” which included an economic depression, widespread unemployment, and massive bank closures. Adding to this stressful time for President Cleveland, he

discovered a sore inside his left hard palate, on the side where he chewed his cigars.

A clandestine surgery was scheduled for July 1, 1893, aboard his friend Elias Benedict's yacht, the *Oneida*.<sup>2,3</sup> The surgical team included William Keen, MD, and Joseph Bryant, MD, while dentist Ferdinand Hasbrouck administered anesthesia using a combination of cocaine and ether. During the 90-minute operation, the surgeons extracted approximately one-third of the president's maxilla, and a prosthodontist fashioned a vulcanized rubber implant for him. The tissue sample was sent to William H. Welch, MD, at Johns Hopkins in Baltimore, Maryland, who diagnosed a maxillary carcinoma.

President Cleveland recovered well after the operation and resumed regular speaking addresses in August. However, on

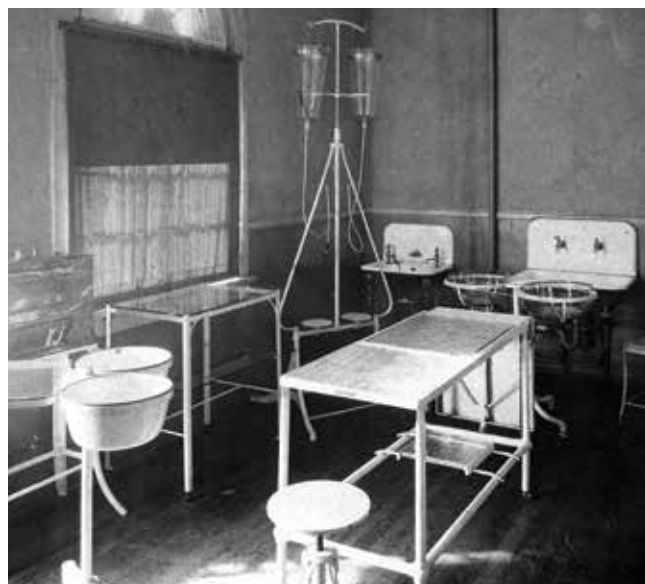
August 29, journalist E. J. Edwards published an exposé on the secret operation in the *Philadelphia Press*. The president flatly denied the report and Edwards was widely discredited. Rival papers labeled him a "disgrace to journalism" and a "calamity liar."

It was only in 1917 that Dr. Keen published the full account of the operation in the *Saturday Evening Post*. Dr. Keen regretted Edwards' mistreatment, and he said hoped to "vindicate Mr. Edwards' character as a truthful correspondent."

### President William McKinley's Assassination

William McKinley (1843–1901; 25th US President, 1897–1901) was assassinated while attending the 1901 Pan-American Exposition in Buffalo, New York.<sup>4</sup> President McKinley's early term was known for its pro-industry and protectionist policies that led to a rapid economic expansion and brought the US out of a recession. However, these policies caused a growing economic divide and were harmful to many working-class citizens.

On September 6, 1901, President McKinley arrived at the Temple of Music, a concert hall and auditorium built for the event, where he was greeted with a reception line. Leon Czolgosz, a 28-year-old American anarchist who sympathized with the impoverished working class, had been waiting in the receiving line and shot the president with a revolver that was concealed in a handkerchief. President McKinley was rushed to the exposition's hospital building.



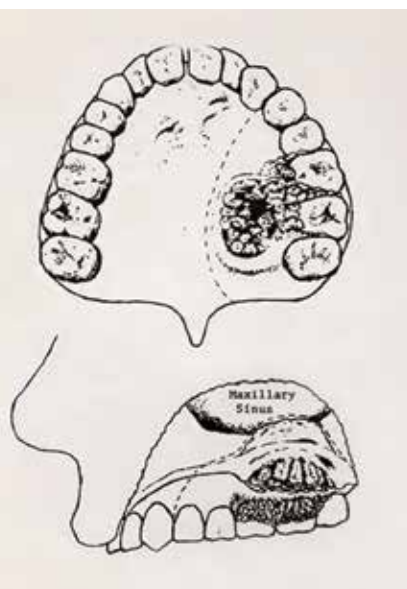
**Above:** After he was shot, President McKinley was rushed to this makeshift OR in the hospital building of the 1901 Pan-American Exposition in Buffalo, New York.

Matthew D. Mann, MD, a gynecological surgeon and dean of the University of Buffalo Medical School, was called upon to oversee the president's care. Unfortunately, Roswell Park, MD, a premier surgeon in Buffalo with extensive experience in trauma and gunshot wounds to the abdomen, wasn't available to operate on the president because he was out of town in Niagara Falls performing a radical neck dissection.

Dr. Mann decided to proceed with an exploratory laparotomy in the makeshift operating room of the expo hospital building. The sun was setting, and mirrors were used to guide the little remaining sunlight into the surgical wound. Electric lights were available at the exposition but not brought into the hospital.

Dr. Mann primarily closed the anterior and posterior gastric perforations with fine silk sutures. The bullet track proceeded

**Left:** Surgeons removed approximately one-third of President Cleveland's upper palate after discovering a suspicious rough patch.





President Dwight Eisenhower shares news with the American people via a special broadcast.

into the retroperitoneum and could not be fully exposed. Dr. Mann made the decision to stop his search for the bullet, as he believed that further retroperitoneal injury could not be successfully repaired even if it was found and, therefore, assumed that further time under the anesthetic would be detrimental. The decision not to drain the lesser sac has been criticized by contemporary surgeons.

The president survived for another 8 days after the shooting. During that time, several prominent physicians traveled to see him, including Dr. Park and Charles Heber McBurney, MD, of Columbia University in New York City.

On September 13, gangrene had developed on the walls of the president's abdomen and brought on severe sepsis. The president died the following day.

During the autopsy, both the anterior and posterior gastrotomy repairs were intact. However, the wound extended to involve retroperitoneal fat and a "considerable area of the pancreas," the superior

pole of the left kidney, the inferior aspect of the spleen, and the posterior aspect of the descending colon. Areas of the wound cavity had "gray slimy material with necrotic tissue."

In the fallout from President McKinley's death, the US Secret Service, whose original purpose was to control counterfeiting and other financial crimes as a bureau within the US Treasury Department, was expanded to provide protection for the president, vice-president, and their families.

### **President Dwight D. Eisenhower's Crohn Disease**

Dwight D. Eisenhower (1890–1969; 34th US President, 1953–1961) had a long-standing history of abdominal issues before he assumed the presidency.<sup>5,6</sup> In 1923, several episodes of lower abdominal pain led to an appendectomy, with histology demonstrating "chronic catarrhal appendicitis."

In 1938, he was admitted to the hospital with another major episode of abdominal pain and intestinal obstruction,

but the obstruction resolved, and he avoided a laparotomy. In the spring of 1956, President Eisenhower experienced another episode of abdominal pain with radiographic evidence of "regional enteritis," which prompted a short admission at what is known today as the Walter Reed National Military Medical Center in Bethesda, Maryland.

On the evening of June 7, 1956, President Eisenhower was attending a gala for the White House Press Photographer's Association emceed by entertainer Bob Hope. Shortly after midnight, the president developed progressive abdominal pain and vomited over a liter of bilious fluid. He was transferred to Walter Reed, where a series of radiographs demonstrated a small bowel obstruction. A nasogastric tube was placed, and a surgical team was assembled, including Leonard D. Heaton, MD, FACS (commander of Walter Reed), Isidore Schwaner Ravdin, MD, FACS (military), Brian B. Blades, MD (academic), and John H. Lyons, MD (private).



Serial radiographs showed no improvement in the obstruction, and the president was scheduled for surgery. On June 9, he underwent an exploratory laparotomy through a right paramedian incision. Following 30 minutes of adhesiolysis, the surgeons found a 30–40 cm area of fibrotic inflammation and stricture in the terminal ileum. The surgical team decided to bypass the obstructed segment with an internal ileo-transverse colostomy.

The decision to perform a bypass was not contested at the time of surgery, but it has been widely discussed by surgeons since then. According to reports, President Eisenhower had told Dr. Heaton that he was planning to run for a second term in office, and Dr. Heaton likely chose an internal bypass operation for rapid, complication-free recovery so the president would be ready for the rapidly approaching re-election campaign.

The press was updated hourly with significant detail, which was, before this time, unprecedented in the history of presidential illness. The

president had an uneventful postoperative recovery. His nasogastric tube was removed on postoperative day 5, and he was discharged from Walter Reed in just under 3 weeks. President Eisenhower had no further symptoms or issues associated with Crohn disease for the remainder of his life.

### **President Lyndon Johnson's Gallbladder**

Lyndon B. Johnson (1908–1973; 36th President, 1963–1969) experienced an episode of right subcostal pain in September 1965 while vacationing at his ranch in Texas.<sup>7</sup> He consulted with his physician George Burkley, MD, who ordered an oral cholecystogram, which confirmed cholecystitis. The president also was incidentally found to have concurrent bilateral nephrolithiasis.

James C. Cain, MD, a well-known gastroenterologist at the Mayo Clinic in Rochester, Minnesota, and the longtime personal physician of the president, was consulted for evaluation of the cholecystitis. Dr. Cain recommended a

cholecystectomy be performed at the Mayo Clinic.

President Johnson did not want to travel to Minnesota, and instead suggested that a Mayo surgical team travel to Washington, DC. Two prominent Mayo surgeons, George A. Hallenbeck, MD, FACS, and Donald C. McIlrath, MD, FACS, were recommended to perform the president's operation. Ormond Culp, MD, FACS, a urologist from the Mayo Clinic, also was consulted to evaluate his nephrolithiasis.

The surgeons met with President Johnson, along with his cardiologist John Willis Hurst, MD, and his operation was planned with two important pieces of information: the president wanted to know how long he would be incapacitated by the anesthesia; and he wanted his operation scheduled for a Friday, so that he could recover over the weekend and be well enough to address the press on Monday morning.

President Johnson's operation was performed on Friday, October 8, 1965, at the Bethesda Naval Hospital in Washington, DC. An open cholecystectomy

President Lyndon Johnson worked in bed after his gallbladder surgery at Bethesda Naval Hospital.



President Ronald Reagan holds a meeting with advisors while in the hospital.

using a “bottom-up” approach and a right ureterolithotomy was performed through a right subcostal incision, with an operating time of approximately 2 hours.

The president had an uncomplicated postoperative course and was able to address the press the following Monday as he had hoped. On postoperative day 12, he posed for an infamous photo where he lifted his shirt to expose his incision, and the press at the time asserted this action to be “unpresidential.” Nevertheless, President Johnson claimed he posed for the photo to avoid speculation of a cancer diagnosis.

He was discharged on postoperative day 17 and resumed his typical duties. Unfortunately, President Johnson would later develop a small incisional hernia at his surgical drain site, which was repaired by Dr. Hallenbeck in November 1966.

### **President Ronald Reagan: Two Terms, Two Operations**

Ronald W. Reagan (1911–2004; 40th President, 1981–1989) was operated on twice during his

presidency. The first operation was to treat a 1981 assassination attempt, while the second was an operation for colon cancer.

On March 30, 1981, 70 days after taking office, President Reagan exited the Hilton Hotel in Washington, DC, after addressing members of the American Federation of Labor and Congress of Industrial Organizations labor union.<sup>8</sup> John Hinckley Jr., emerged from the crowd and fired six shots from a revolver at the president.

The sixth shot ricocheted off the armored limousine and hit President Reagan in the left chest. He was pulled into the limousine by the US Secret Service and taken emergently to George Washington University Hospital in Washington, DC. He walked into the hospital under his own power, and then collapsed in the emergency department.

Joseph Giordano, MD, FACS, assumed care for the president who was hypotensive with a systolic blood pressure of 80 mm Hg on arrival. Examination of his chest revealed a 1.5 cm gunshot wound in the left posterior

axillary line at the fourth intercostal space with no exit wound. A chest tube was inserted into the left hemithorax, and a total of 2,275 cc of blood was drained. Breath sounds became audible, but brisk bleeding continued.

The president was taken to the OR for a left anterolateral thoracotomy, which revealed approximately 500 cc of clotted blood. The major intrathoracic structures were intact, and the bullet was retrieved 2.5 cm from the pericardium. A peritoneal lavage was negative, and total operative time was 105 minutes.

President Reagan reportedly quipped to his surgeon, “Please tell me you’re a Republican.” Dr. Giordano is said to have replied, “Today, Mr. President, we’re all Republicans.” The president was discharged from the hospital on postoperative day 12.

One of the other victims of the shooting, White House Press Secretary James Brady, was left permanently disabled and became a staunch advocate for gun control, leading the passing of the eponymous Brady Handgun



Violence Prevention Act, which mandated federal background checks on firearm purchases.

President Reagan's next operation occurred in the first year of his second term. In March 1985, Reagan's stool tested positive for occult blood, and his hemoglobin had been falling over several months.<sup>9</sup> On July 12, a colonoscopy revealed an ulcerated tumor in his cecum, with biopsy demonstrating carcinoma.

Prior to his operation, Vice-President George H. W. Bush was sworn in as acting president under the 25th Amendment, and this was the first time in US history that the amendment was enacted.

On July 13, a surgical team consisting of Dale W. Oller, MD, FACS, Lee Smith, MD, and Bimal Ghosh, MD, FACS, performed a right hemicolectomy. The operation lasted 2 hours and 52 minutes, and final pathology revealed a T2N0MX adenocarcinoma arising in a 5 cm tubulovillous adenoma of the cecum. He had an uneventful postoperative course and was discharged on postoperative day 6.

While President Reagan's perioperative period was uncomplicated, it did mark an interesting historical precedent as the first enactment of the 25th Amendment (Section 3).

As demonstrated by these six cases, operations performed on US presidents are complicated, and the surgical care of presidents is undeniably influenced by political situations. The president often embodies the "health of the nation," and the surgical care is high profile yet sometimes mired in secrecy and scrutiny. **B**

#### Acknowledgment

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**Dr. Brendan Lovasik** is a clinical fellow in transplant surgery at Washington University in St. Louis, Missouri.

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# **Multidimensional Approach Is Required to Diagnose and Surveil Breast Cancer**

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Camila R. Guetter, MD, MPH

THE US PREVENTIVE SERVICES Task Force (USPSTF) revised its guidelines for breast cancer screening in April 2024, lowering the recommended starting age to 40 and advising biennial screenings until age 75.<sup>1</sup> This adjustment has been praised as a positive step forward, although many organizations still advocate for more frequent screenings without an upper age limit.

In 2009, the USPSTF shifted from recommending annual or biennial screening for all women over the age of 39 to biennial screenings for women aged 40 to 74, citing concerns over the risks associated with unnecessary procedures and treatments for false positives and overdiagnosis. Conversely, the American Cancer Society recommends annual screening starting at 45 years, with the option to transition to biennial screening at 5 years, and continuing as long as women in good health are expected to live at least 10 more years.

Additionally, the American Cancer Society recommends screening can begin as early as age 40.<sup>1</sup> Similarly, the American College of Radiology (ACR), National Comprehensive Cancer Network, National Consortium of Breast Centers, American

Society of Breast Surgeons (ASBrS), and Society of Breast Imaging (SBI) all advocate for annual screening starting at age 40, with no upper age limit barring severe health conditions.<sup>1</sup> The ACR recommendations highlight the importance of risk assessment starting at age 25 to tailor screening strategies based on individual risk profiles. Recommendations made by these different organizations are summarized in the table on page 44.

The rationale for advocating for earlier and more frequent breast cancer screening stems from several critical factors. Breast cancer can manifest at any age, raising the need for vigilance across all demographics and individualization of screening protocols for each patient and risk profile.

Higher breast density poses a well-known risk, underscoring the need for targeted supplemental screening in cases of extreme density. Moreover, given the aggressive nature of certain cancer types, a 2-year interval between screenings is insufficient for timely detection for adequate treatment. Additionally, there is no clear recommendation on the optimal

timing for cessation of breast cancer screening.

Addressing these and other challenges through research efforts and healthcare policy initiatives likely will lead to improved delivery of care to all women.

### **Limitations of Current Evidence**

Due to the lack of randomized clinical trials investigating women younger than age 39 and older than age 75, the USPSTF is unable to recommend for or against breast cancer screening in these age groups.<sup>2</sup> The situation is similar for frequency of screening, risk-based approaches, and supplementary investigations in individuals with dense breasts. Without high-quality clinical trials, the basis for the recommendations relies on trial emulations and statistical modeling. The potential for type II errors underscores the importance of cautious decision-making to avoid unintended harm to women.

The only trials assessing screening frequencies were conducted more than 2 decades ago, and since then, the incidence of breast cancer has continued to rise.<sup>2</sup> The USPSTF uses modeling

## Breast cancer can manifest at any age, raising the need for vigilance across all demographics and individualization of screening protocols to each patient and risk profile.

data to balance the benefits of screening (reduced mortality and increased life years) against harms (false positives). However, these models may not comprehensively consider factors like morbidity, disability, and financial costs.

In contrast to other organizations, the USPSTF takes a more conservative stance, awaiting more conclusive evidence before updating recommendations. Several ongoing randomized trials may provide such evidence, which could potentially influence future screening strategies.

### High-Risk Populations

Younger women with dense breasts often face faster growing, more aggressive breast tumors, suggesting that shorter screening intervals would be beneficial for this group by promoting early cancer detection. When the screening intervals in British Columbia, Canada, were changed from annual to biennial, a study performed in 2008 demonstrated that these claims may have been overstated.<sup>3</sup>

In contrast, a Swedish study indicated a mortality benefit in women aged 40 to 49 with a screening interval of 12 months, implying that optimal screening

intervals may vary by age group.<sup>3</sup> This variability suggests that less-frequent screenings might be prudent for older women to minimize potential harms, similar to recommendations made by the American Cancer Society.

Currently, notification of breast density during mammography is mandatory in 38 states and the District of Columbia.<sup>2</sup> Starting in September 2024, the US Food and Drug Administration will require mammography centers to inform patients of their breast density, the increased cancer risk in higher-density breasts, the challenges to detecting cancer in different breast densities, and the potential need for additional tests to screen for cancer.<sup>2</sup>

Despite the Dense Tissue and Early Breast Neoplasm Screening (DENSE) trial showing that the addition of magnetic resonance imaging (MRI) may lower the rate of interval cancers,<sup>4</sup> the evidence was insufficient for the USPSTF to make recommendations for supplementary investigations due to lack of data regarding morbidity, mortality, or cancer detection.<sup>2</sup> Nonetheless, some groups advocate for annual MRI screenings for high-risk women,

although insurance approval remains a significant barrier.<sup>5</sup>

The Japan Strategic Anti-Cancer Randomized Trial (J-START)<sup>6</sup> and the Adjunct Screening with Tomosynthesis or Ultrasound in Women with Mammography-Negative Dense Breasts (ASTOUND)<sup>7</sup> trials highlight that ultrasound can enhance cancer detection rates when added to mammography.<sup>8</sup>

Breast cancers that are not detected by mammography are more likely to be invasive, and certain guidelines recommend using ultrasound as the primary screening tool instead of mammography in patients with dense breasts, such as in Asian populations.<sup>9</sup> However, ultrasound also can increase false positives and, consequently, unnecessary biopsies. Ongoing technological advancements aim to address these challenges.

Despite breast cancer being most prevalent among nonHispanic White women, mortality rates are the highest in Black women<sup>8</sup> who face higher risks of marker-negative cancers and often present with advanced stage diagnoses.<sup>8</sup> This disparity is associated with systemic inequities, such as residential segregation,

**Table.** Recommendations for Breast Cancer Screening

Organization	USPSTF	American Cancer Society	ACR, ASBrS, SBI
Commencement	40	45 (Optional 40–45)	40
Screening interval	Biennial	<55 Annual ≥55 Annual or biennial	Annual
Cessation	74	Continue if expected to live ≥10 years	Continue if expected to live ≥10 years
High-risk groups and supplementary investigations	Evidence insufficient for recommendations	Annual MRI in addition to mammography for high-risk women starting at 30	The starting age (25–40) for annual mammography and additional MRI surveillance depends on the level of risk.

harmful environmental exposures, and limited access to timely healthcare.

Addressing this disparity requires a comprehensive approach starting with improved access to screening and treatment, as well as addressing the various other contributing social determinants of health. Modeling studies have found that screening Black women annually and other women biennially would reduce the disparity in mortality; however, biennial screening is more favorable in terms of benefits and harms.<sup>1</sup>

Achieving the targets set by

Healthy People 2030 for breast cancer screening will require an increase in the number of women screened and those receiving evidence-based preventive care. Healthcare policy is one method of alleviating obstacles to breast cancer screening. Such barriers to screening may disproportionately affect Black women and other vulnerable groups, and tackling them may reduce disparities in breast cancer mortality.

The SCREENS for Cancer Act was passed by the US House Energy and Commerce Health Subcommittee in 2023.

This act reauthorizes the National Breast and Cervical Cancer Early Detection Program, which provides screening, diagnostic, and treatment services to low-income, uninsured, and underinsured populations. Furthermore, the Find It Early Act proposed by Reps. Rosa DeLauro and Brian Fitzpatrick, and supported by the ACS, would ensure all health insurance plans cover screening and diagnostic breast imaging without cost sharing, which may lead to an increase in supplementary investigations for high-risk patients.

## Emerging Screening Modalities

Various innovations have been devised to augment traditional imaging techniques in breast cancer detection and surveillance. Ultrasound elastography, for example, identifies malignant tissue based on its stiffness relative to its surrounding tissues, potentially enabling earlier detection of smaller tumors and reducing unnecessary biopsies in some cases.<sup>9</sup>

Contrast-enhanced ultrasound can enhance visualization of the vasculature, aiding in the detection of malignancies by way of increased vascularity.<sup>9</sup> Automated whole-breast ultrasound, optoacoustic imaging, and ultrasound transmission tomography are other modalities that may enhance ultrasound screening compared to traditional handheld ultrasonography. Radiomics is another novel approach that leverages machine learning and artificial intelligence to evaluate imaging results that may provide valuable additional information to enhance diagnosis.<sup>1</sup>

Liquid biopsies are emerging techniques that use ELISA (enzyme-linked immunosorbent

assay) and mass spectrometric analysis of proteins in biological fluids to evaluate genomic profiles and can be used to monitor treatment response, resistance, and the presence of other malignancies.<sup>10</sup> Human epidermal growth factor receptor, carcinoembryonic antigen, the oncogenic protein RS/DJ-1, and circulating cytokeratin fragments may be detected using serum samples.<sup>10</sup>

Both digital mammography and digital breast tomosynthesis (DBT) are endorsed by the USPSTF. However, DBT must be supplemented with synthetic or traditional digital mammography.<sup>2</sup> Mammography has a sensitivity of 67.8% and a specificity of 75.0%, while DBT has a sensitivity of 90.8% and a specificity of 96.5% with the disadvantage of doubling the radiation exposure.<sup>10</sup> DBT can reduce the masking effect seen in dense breasts and detect smaller tumors.<sup>11</sup>

Other proteins such as apolipoprotein C1, carbonic anhydrase 1, and neural cell adhesion molecule L1-like protein may be expressed in different quantities in those with breast cancer compared to otherwise healthy women.<sup>10</sup>

Similarly, S100A8, S100A9, and galectin-3-binding protein are ocular proteins whose quantitative levels may vary in the presence of breast cancer, detected by analyzing tear samples.<sup>12</sup>

In addition to addressing the need for more robust studies investigating risk-based approaches, screening intervals, and supplementary investigations, it is evident that advancements in noninvasive tests with high specificity would be most beneficial in reducing the harm from false-positive screening results. These advancements would support more frequent screening in wider age groups.

Screening modalities such as the abbreviated breast MRI protocol being investigated in the FAST trial,<sup>13</sup> contrast-enhanced spectral mammography being studied in the Contrast-enhanced Mammography, Early detection biomarkers, Risk assessment, and Imaging Technologies (C-MERIT) study,<sup>14</sup> and the Rapid Access to Contrast-Enhanced spectral mammography (RACER) study,<sup>15</sup> blood-based detection of circulating tumor cells (TriNetra)<sup>16</sup> and tear-based

screening assays (Melody®)<sup>17</sup> are some of the investigational screening modalities in various stages of development.

Risk-based approaches to screening are being investigated in the Women Informed to Screen Depending On Measures of Risk (WISDOM) and Tomosynthesis Mammographic Imaging Screening Trial (TMIST) studies.<sup>8,18,19</sup> Additionally, the TMIST trial is comparing DBT and digital mammography to determine which one is superior for detection of early breast cancer. Various methods and approaches to risk assessment also are under investigation, including salivary genetic tests, questionnaires, and various outreach and educational interventions.

These advancements highlight the multidimensional approach required to diagnose and surveil breast cancer by leveraging cutting-edge technology to enhance accuracy, reduce invasiveness, and improve overall patient outcomes.

Innovative approaches like conducting mammograms in the workplace have improved screening use in Japan,<sup>20</sup> and intensive case management has yielded promising results

in inner-city populations in the US.<sup>21</sup> Educational and outreach programs using mobile mammography units, text messaging, and chatbots are other approaches to increase screening rates. These initiatives aim to make screening more accessible and convenient for diverse populations, ultimately improving early detection and outcomes in breast cancer care.

While breast cancer screening guidelines vary among organizations, several clinical trials investigating improved imaging techniques, liquid biopsies, and risk-based approaches may provide the necessary evidence for the USPSTF to update its guidelines. In an effort to increase breast cancer screening and detection rates, several policies have been proposed with bipartisan support. Keeping up with current guidelines, emerging techniques, and healthcare policy initiatives will allow surgeons and allied professionals to better advocate for patients. **B**

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Dr. Girma Tefera

# Vascular Volunteerism in Sub-Saharan Africa Requires Call to Action

Girma Tefera, MD, FACS



## The surgical workforce shortage in sub-Saharan Africa is dire.

THE ACS HEALTH OUTREACH PROGRAM for Equity in Global Surgery (ACS H.O.P.E.) has developed regional collaborations focused on surgical workforce training and infrastructure development. The three collaborative hubs are in Hawassa (Ethiopia), Lusaka (Zambia), and Kigali (Rwanda).

Contrary to what some may believe, surgical capacity-building requires subspecialty involvement. This viewpoint article focuses on the need for vascular surgical services in sub-Saharan Africa.

Cardiovascular diseases (CVD) and other noncommunicable diseases account for more than 70% of the mortality in low- and middle-income countries (LMICs). In Africa, the field of vascular surgery is relatively new, and the prevalence of peripheral vascular disease (PAD) in the region has not been well-studied.

In one cross-sectional study in rural South Africa, the overall prevalence of PAD was 6.6% (95% confidence interval, 5.6–7.7).<sup>1</sup> Moreover, a literature review by Kushner and colleagues indicated that the prevalence of PAD in sub-Saharan Africa may be equal to or higher than that in high-income countries. The

authors also noted a higher prevalence of PAD in high-risk patients, smokers, and those affected by diabetes.<sup>2</sup>

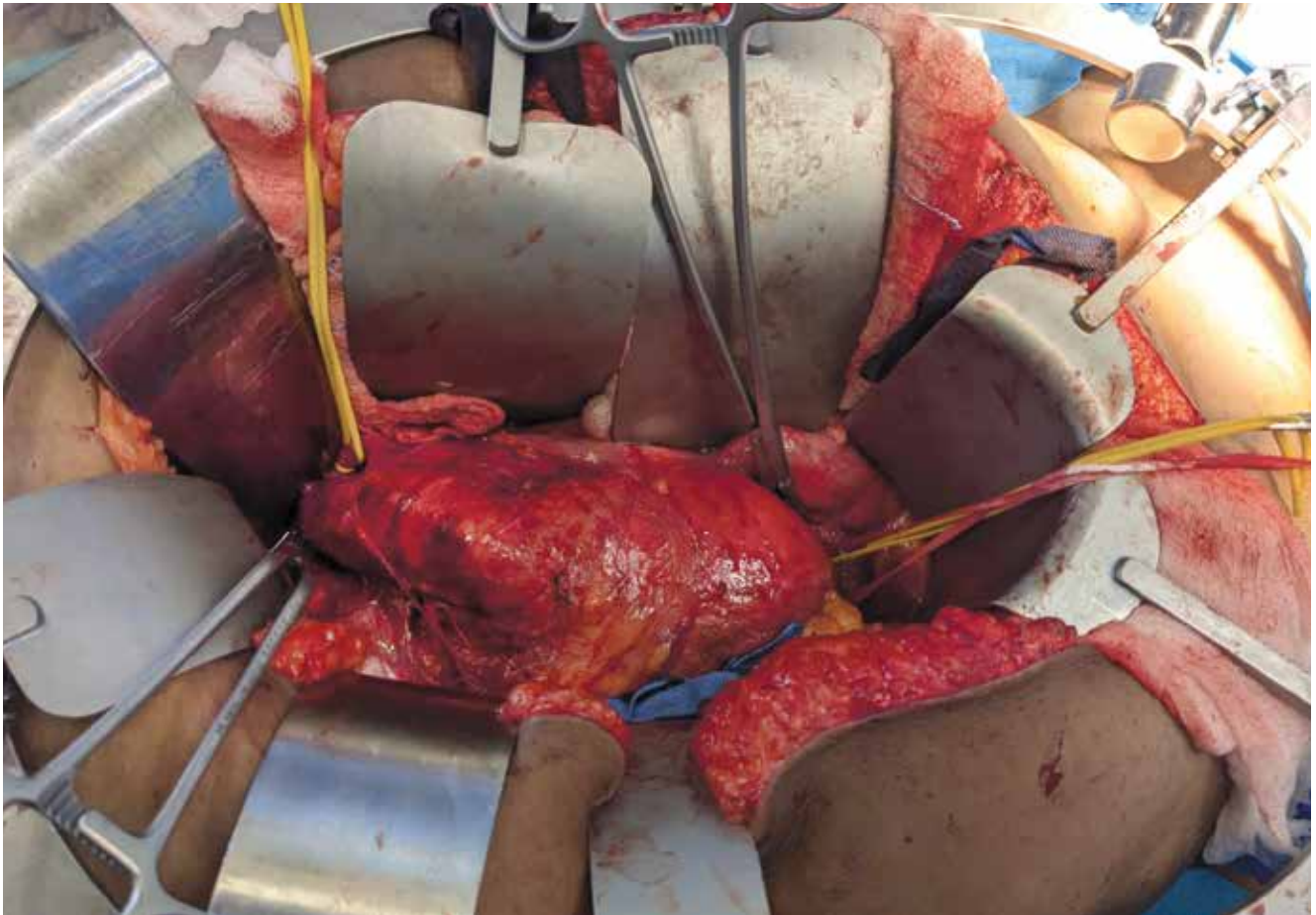
According to a report by the World Health Organization, nearly 80% of the world's more than 1 billion smokers live in LMICs. Thousands of women die every year from tobacco-related diseases in Africa, and this number will double by 2030.<sup>3</sup> In Africa alone, diabetes affects an estimated 24 million people, and this number is predicted to increase to 55 million by 2045.<sup>4</sup>

There are no trained vascular surgeons in Zambia (20 million population) or Rwanda (15 million population). Ethiopia, the second most populous country in Africa (110 million), has only seven vascular surgeons.

The ACS H.O.P.E. collaborative hubs in these three countries provide opportunities for vascular surgeons to volunteer in clinical care, teaching, and research.

Since January 2023, 10 vascular surgeons have traveled to the region and provided more than 600 hours of service. The government of Rwanda has identified two general surgeons to be trained as the first vascular surgeons for the country.


Dr. Girma Tefera operates with Dr. David Karenze, the first Rwandan vascular surgery fellow.



An open infrarenal abdominal aortic aneurysm repair is performed.

In Lusaka, Zambia, there is an acute need and interest expressed by the University Teaching Hospital for initiating vascular surgery service, and in Hawassa, Ethiopia, there is a newly trained vascular surgeon eager to collaborate on improving vascular care.

ACS H.O.P.E. is committed to creating global learning spaces by providing surgeons of all specialties the opportunities to teach and learn in our collaborative global health communities. ACS H.O.P.E. encourages volunteerism in all subspecialties, and specifically in vascular surgery, to advance the care of vascular patients at our partnership hubs.

For more information, email [acshope@facs.org](mailto:acshope@facs.org). 

#### Disclaimer

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

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Dr. Xane Peters

# Research Supports 12 Core Principles of the ACS Quality Verification Program

Xane D. Peters, MD, MS  
Amy Robinson-Gerace  
Clifford Y. Ko, MD, MS, MSHS, FACS

THE ACS HAS PROMOTED THE ADVANCEMENT of surgical quality for more than a century. Today, these efforts are reflected in surgical quality programs in more than 2,500 hospitals across the US. Tailored to be both condition-specific (e.g., trauma and cancer) and population-specific (e.g., children's surgery verification, geriatric surgery verification), each program is built on the ACS's four pillars that guide continuous quality improvement—standards, infrastructure, data, and performance.<sup>1</sup>

From the onset of these programs, the College has recognized the need to integrate these foundational principles across each institution, consolidating and aligning resources and infrastructure for quality improvement across specialties and patient populations. As a result, the ACS introduced the Quality Verification Program (QVP) in 2021, which includes 12 foundational principles of quality and safety to guide hospitals in improving patient care.<sup>2</sup> More than 60 academic, community, and military hospitals currently participate in this program.

To date, two articles published in the *Journal of the American College of Surgeons (JACS)* have reported evidence in support of several QVP standards, such as institutional administrative commitment, program scope and governance, infrastructure necessary for quality,<sup>3</sup> data surveillance, and systems like peer review and credentialing.<sup>4</sup> In a recently published article in *JACS*, the authors report current evidence in support of team-based and disease-based clinical programs, compliance with hospital-level regulatory metrics, and the programs' effects on patient outcomes.<sup>5</sup>

## **Current Evidence Supporting Perioperative, Multidisciplinary Surgical Care**

Increasingly familiar to most surgeons, enhanced recovery has become synonymous with standardized perioperative care pathways. These programs have expanded broadly from their initial application in colorectal surgery to include several other patient populations seen in this recent review, such as head-and-neck and hepatopancreatobiliary surgery. These programs incorporate several integral components for the perioperative recovery of the patient, including preoperative education and counseling, perioperative nutritional optimization, and standardized pain control. Across several different

types of perioperative protocols, improved outcomes have been demonstrated, including reduced hospital length of stay (LOS), readmissions, costs, and complications; increased likelihood of home discharge; reduced time to operation; and improved guideline-concordant care in cancer patients.

Similarly, multidisciplinary, disease-based management is increasingly identified throughout the healthcare landscape as an essential component of high-quality patient care. Targeting cancer and a variety of other conditions, these efforts frequently take the form of multidisciplinary treatment meetings, resembling tumor boards with perioperative care protocols, as well as clinical teams coordinating care in real time. Again, improved outcomes have been associated with reduced LOS, readmissions, adverse events, and death; and improved patient satisfaction and quality of life.

## **Improving Targeted Perioperative Care Pathways**

The findings noted earlier in this article from the evidence review in *JACS*<sup>5</sup> are becoming more widely intuitive for practicing surgeons and their clinical teams. However, gaps in the literature reflect opportunities for improvement. Within the perioperative care pathways reviewed, preoperative elements were largely confined to patient education elements. Opportunity exists to expand these preoperative elements, tailored to individual patient needs beyond nutritional optimization.

For example, screening for geriatric-specific conditions may allow for improved optimization of physical function and the incorporation of social determinants (e.g., family support, home living situation) into treatment and discharge planning. Additionally, the literature evaluating standardization of postoperative care after hospital discharge (postdischarge phase) is severely lacking, likely due to feasibility of data collection. Leveraging technology (e.g., smart tech, wearable tech, mobile applications) may help bridge this gap.

The outcome measures most tracked in evaluating standardized processes of care were regarding hospital use, specifically LOS and cost. While these are clearly important measures to demonstrate return on investment for hospital administrators and decrease hospital waste, future studies also should consider incorporating patient-reported outcomes to

ensure pathway development is as advantageous to patients as it is to hospitals.

Much like the growing trend of multiphasic standardized surgical care, many surgeons are familiar with these types of initiatives. Given the advancing knowledge, increasing specialization, and rapidly developing nonsurgical treatment options, multidisciplinary care for complex cancer patients appears intuitive and may additionally help identify patients eligible for clinical trials.

However, these trends are increasingly observed in other diseases (e.g., obesity). Not all conditions will require rigorous multidisciplinary management, and the potential value added by incorporating these practices appears to correlate with the complexity of both the disease itself (advanced cancer) and the available treatment options. Therefore, these programs should be applied strategically to maximize quality benefits in light of resource and timing costs.

### Verification and Accreditation Enhance Value

Participation and compliance with hospital-level regulatory and accreditation mechanisms is incorporated within the ACS QVP. Evidence exists to support the value of adhering to externally mandated process measures such as those advocated by the Surgical Care Improvement Project, The Joint Commission, and the Agency for Healthcare Research and Quality. Reported improved outcomes include reduced complications such as infection, venous thromboembolism, and death.

Other studies demonstrated little to no effect on outcomes, including single institution and large multicenter observational data. Evaluation of outcomes at accredited versus nonaccredited hospitals showed similarly mixed results, though most facilities reported reduced unplanned hospitalizations, death, and readmissions, as well as increased adherence to process measures.

Coupled with the mixed evidence in favor of process measure compliance, these findings suggest process measure compliance may be insufficient alone to effectively promote quality. A possible explanation for observing benefits in accredited centers is the added value of external oversight, incorporation of structural and process measures, and infrastructure investment that accompanies participation in external verification. Despite variable

evidence of the effects of externally promoted process measures on improving patient outcomes, reductions in mortality and unplanned hospitalizations were observed for select populations.

### ACS QVP

The ACS QVP was designed to define, assess, and ensure that healthcare institutions have the structures and processes necessary for safe, high-quality care. Evidence supports the validity and potential impact of these standards when applied independently. However, we anticipate exponential benefits resulting from the application of all 12 standards of the ACS QVP, which represent a comprehensive collection of essential principles to promote surgical quality across all surgical specialties. **B**

### Disclaimer

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

**Dr. Xane Peters** is a general surgery resident at Loyola University Medical Center in Maywood, IL, and just completed his term as an ACS Clinical Scholar in the College's Division of Research and Optimal Patient Care.

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American College of Surgeons

# ACS Cancer Program Initiatives Include New Focus on Rural Patients and Barriers to Care

Ronald J. Weigel, MD, PHD, MBA, FACS

Judy C. Boughey, MD, FACS

Amy J. Sachs, MSHS

THE ACS HAS BEEN A LEADER IN ADVANCING QUALITY patient care for more than a century. The ACS Cancer Programs have advanced quality cancer care for patients throughout the US. These programs include the Commission on Cancer (CoC), National Accreditation Program for Breast Centers (NAPBC), National Accreditation Program for Rectal Cancer (NAPRC), National Cancer Data Base (NCDB), American Joint Committee on Cancer (AJCC), Cancer Surgery Standards Program (CSSP), and Cancer Research Program (CRP).

Ronald J. Weigel, MD, PhD, MBA, FACS, became Medical Director of the ACS Cancer Programs in 2023, and together with a team of dedicated surgeons, other physicians, and staff, the following advances have been made.

## CoC

The CoC was established in 1920 and continues to be a national leader in the advancement of cancer care for patients in the US. There are currently approximately 1,400 CoC-accredited hospitals, all of which submit clinical data to the NCDB, which includes more than 74% of all cancer cases in the US.

Recently published data have demonstrated that CoC accreditation improves the quality of cancer care as measured by a greater adoption of guideline concordant care and reduced mortality.<sup>1-4</sup> Studies examining CoC accreditation in rural hospitals in Iowa have

demonstrated that becoming CoC accredited improves cancer care to patients in this setting, whereas hospitals that remain nonaccredited do not advance the quality of cancer care.<sup>5</sup>

One study performed in a rural setting in Iowa was designed to facilitate rural hospitals becoming CoC-accredited facilities. However, it has become clear that many rural hospitals lack the resources to attain CoC accreditation. With this in mind, we have begun an initiative to develop a Rural CoC Accreditation Program, which will use a set of standards that are more appropriate for patients receiving care in a rural setting. Recognizing that patients in rural regions are often underserved, the goal of the Rural CoC Accreditation Program will be to advance the quality of cancer care for patients in rural areas.

Another initiative will be to extend CoC accreditation to hospitals outside of the US. A process is being initiated to expand CoC accreditation to hospitals in Canada and plans are in place to explore the potential of expanding CoC accreditation in the UK.

## NAPBC

The NAPBC provides the structure and necessary resources to provide high-quality care to patients with breast cancer. The 2024 standards became effective earlier this year. New to the 2024 standards is an expansion of patient educational resources and initiatives related to breast survivorship.

The new standards also include a risk assessment in

the screening process and referral for genetic testing when appropriate. The NAPBC standards provide a comprehensive roadmap for the care of breast cancer patients from the point of screening and prevention through the diagnosis, treatment, and survivorship.

## **NAPRC**

The NAPRC is one of our newest accreditation programs and provides a comprehensive set of standards for the quality care of patients with rectal cancer. New NAPRC standards will be provided later this year.

Given the success of the NAPRC program, the ACS is developing an umbrella program for high-risk cancer care under the CoC structure to develop accreditation programs in other complex cancers, including colon, pancreas, hepatobiliary, esophageal, and lung, that will be modeled based on the success of the NAPRC.

## **NCDB**

The NCDB is transitioning away from an annual call for data to monthly data submissions to deliver more real-time and actionable data and provide reports back to CoC-participating hospitals. Newly designed benchmarking, site by stage, and completeness reports take advantage of this move to concurrent data abstraction.

The use of new reporting technologies such as Tableau and the eventual incorporation of 30 quality

measures will add value to the program. In addition to the NCDB's role in generating an annual report and studies showing the value of CoC accreditation, the NCDB is collaborating with the AJCC and CRP to develop a cancer survival calculator incorporating machine learning to provide a comprehensive prognostic online tool to provide patients with survival estimates in real time. Calculators for each cancer type will be developed, providing more individualized survival estimates that take into account patient factors and treatment factors, as well as standard staging factors and other tumor factors.

## **AJCC**

AJCC Staging Online, launched in June 2024, provides real-time easy access to the AJCC staging system (see June *Bulletin*). AJCC Staging Online provides updated staging information based on the Version 9 Cancer Staging Protocols. Detailed information concerning the 2024 issue of the *AJCC Cancer Staging Manual*, 8th Edition, also is available online. This information will be updated continuously to provide the most comprehensive and up-to-date staging system through a seamless navigation format ensuring that information can be quickly available to oncologists.

## **CSSP**

The CSSP provides critical educational materials related to the technical conduct of cancer operations and sets standards for surgical care. The Operative

Standards Toolkit provides resources for implementation of the CoC operative standards and optimal resources for hospitals to comply with CoC Standards 5.3 to 5.8.

These standards include technical and documentation requirements for procedures, including sentinel lymph node biopsy for breast cancer, axillary lymph node dissection for breast cancer, wide local excision for primary cutaneous melanoma, colon resection, total mesorectal excision for rectal cancer, and pulmonary resection. Several of these standards have now been incorporated into the CoC standards. Additional work is underway to formally include the CSSP recommendations in the National Comprehensive Cancer Network guidelines for cancer care and include CSSP Cancer Surgery Protocols as a benefit of CoC participation.

## CRP

The CRP performs research that determines how to drive quality cancer care for all the ACS Cancer Programs. One of the key ACS resources used is the NCDB, which is the most comprehensive cancer database available in the US. Later this year, we will be publishing an annual report developed through the CRP which will describe the state of cancer care in the US.

Further efforts are underway to incorporate cost and additional financial data into the quality programs with an attempt to advance the value of cancer care considering both quality and cost of care. The CRP continues to seek additional funding sources to support innovative approaches to advancing quality surgical care. As one example, the CRP was awarded a recent grant from the National Cancer Institute to evaluate the impact of the current slate of CoC operative standards on short-term cancer outcomes and to evaluate implementation outcomes.


## Cancer Quality Improvement Initiatives

The newest area of ACS Cancer Programs— nationwide cancer quality improvement (QI) initiatives for CoC, NAPBC, and NAPRC participating sites—was launched in 2021. Past projects have focused on return to screening during the COVID-19 pandemic (in conjunction with the American Cancer Society), “Just Ask,” which focused

on smoking cessation, and “Beyond Ask,” designed to offer smoking cessation assistance.

In the NAPBC, the Patient-Reported Observations on Medical Procedure Timeliness (“PROMPT”) for Breast Patients study, a 2-year quality collaborative, was completed in January 2024. Current cancer QI projects include Breaking Barriers, aimed at reducing missed radiation therapy appointments, and Lung NODES, which seeks to help CoC programs improve compliance with CoC Standard 5.8 on nodal harvest during lung resection. Overall participation in national QI projects remains high, and new projects are being vetted.

ACS Cancer Programs leaders, staff, and volunteers are excited for what the future holds for these programs and how it can continue to collaborate with other ACS divisions and member organizations to improve the care for patients with cancer.

The annual ACS Cancer Conference is March 12–15, 2025, in Phoenix, Arizona. For more information about the ACS Cancer Programs, contact Dr. Weigel at [rweigel@facs.org](mailto:rweigel@facs.org) or Amy Sachs at [asachs@facs.org](mailto:asachs@facs.org). 

**Dr. Ronald Weigel** is the EA Crowell Professor and Chair of the Department of Surgery with joint appointments as professor in the Department of Biochemistry and Department of Molecular Physiology and Biophysics at the University of Iowa in Iowa City. For the ACS, Dr. Weigel recently took over as Medical Director of the Cancer Programs and was the past-Chair of the Board of Governors.

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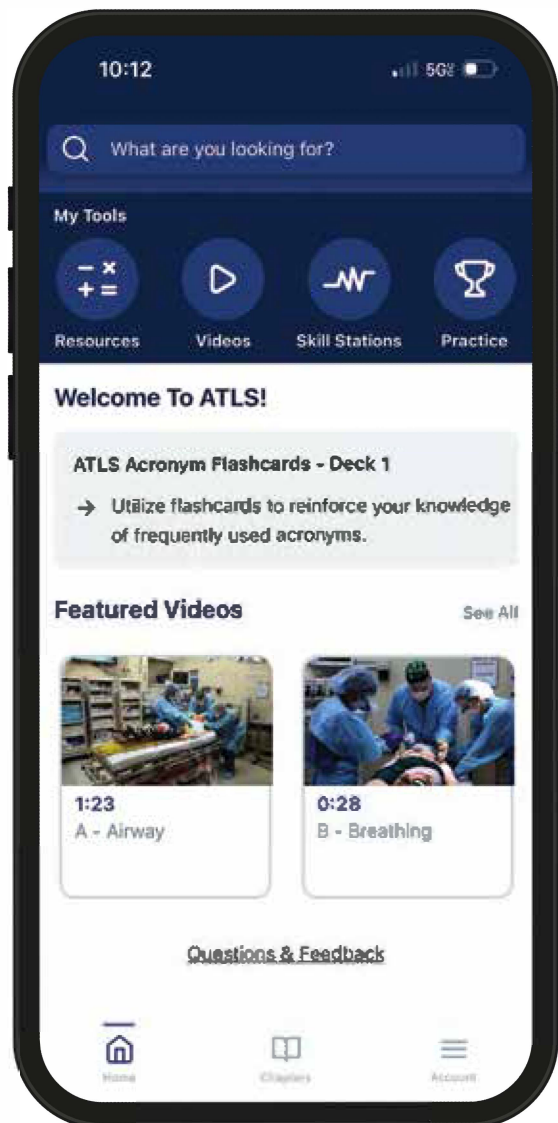
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# Quality and Safety Conference Focuses on Visions of Value in Surgery

Matthew Fox, MSHC

In a rapidly changing healthcare environment, “quality is more critical than ever before,” according to Clifford Y. Ko, MD, MS, MSHS, FACS, Director of the ACS Division of Research and Optimal Patient Care, in his introductory remarks at the 2024 Quality and Safety Conference.



“THERE ISN’T ENOUGH FUNDING, there isn’t enough workforce, there isn’t enough wellness—all of these challenges are happening right now in medicine, and perhaps in surgery most of all,” he said, making it clear that the power of value is a multifaceted and core part of improving care.

More than 1,500 surgeons, nurses, registrars, surgical quality officers, and other members of the healthcare community joined Dr. Ko and other leaders in quality improvement (QI) at the conference, themed “The Power of Value: Expanding Your Impact,” which took place July 18–21 in Denver, Colorado, to share and learn how value is inextricably linked to surgical QI and patient safety.

In addition to key general sessions summarized in this article, the conference featured new and engaging activities, including a “Quality Rumble: Family Feud Showdown,” as well as an interactive “General Session Workshop on Measuring Value—From Stakeholder to Stakeholder.” Dozens of breakout sessions, poster abstracts, several preconference workshops and courses, including the popular “QI Basics Preconference Workshop” and social events rounded out the meeting.

With quality as an undeniable partner to achieving value, Dr. Ko placed emphasis

on the seismic impact of the ACS National Surgical Quality Program® (NSQIP®) in this space, which is particularly notable in 2024—the 20-year anniversary of the introduction of NSQIP to the US health system.

“NSQIP has changed the way surgical safety is evaluated and achieved, and it continues to be recognized as the gold standard for clinical data registries and QI,” Dr. Ko said.

There is more to value than finances, according to Lillian S. Kao, MD, MS, FACS, the Jack H. Mayfield, MD, Chair in Surgery at the McGovern Medical School at The University of Texas Health Houston. In a session immediately following Dr. Ko, Dr. Kao laid out the key questions on the power of value.

“Value is in the eye of the beholder,” Dr. Kao said. “Through what lens should we be measuring value? And what does value mean to you? There are different answers for different stakeholders.”

She also explained that while patients will value personalized treatment, a healthcare team will value clinical outcomes, caregivers will value communication and compassion, and insurers will value cost containment. It is incumbent upon QI leaders to align the different definitions of value, she said.

Dr. Clifford Ko introduces the Quality and Safety Conference.



Rachel R. Kelz, MD, FACS, from the University of Pennsylvania in Philadelphia, shares how surgeons are in an era of “rapidly learning principles of satisfying patients, maintaining a sustainable work pace, and delivering value.”

## Expanding Your Impact through Leadership and Technology

Affecting long-lasting change comes with a learning curve and a need to understand your team and environment.

Part of the challenge is helping your team (e.g., hospital leadership, other surgeons, nurses, and technicians) understand that change is taking place and that the approach matters, according to Benjamin C. DuBois, MD, FACS, surgical quality director at CHRISTUS St. Michael Health System in Texarkana, Texas.

“It’s not the change itself, it’s how you change—it’s your approach to the change that you’re seeking,” he said, noting that change management incorporates three key skills: recognizing you are going through a change, communicating accurately about your change to stakeholders, and leading with introspection.

Dr. DuBois described how he managed change by introducing enhanced recovery after surgery and Strong for Surgery® checklists at his hospital-based preoperative clinic, and by creating buy-in and building a team of enthusiastic volunteers from across the five phases of surgical care. As a result, the institution was able to decrease overall complications, lengths of stay, and costs.

Modern technology such as artificial intelligence (AI) has the potential to impact surgeons’ speed and effectiveness in effecting change, noted Catherine Buck, MS, MBA, director of clinical informatics at Liberty University in Lynchburg, Virginia, and Jacob R. Gillen, MD, FACS, MHCDS, associate professor of surgery at the Virginia Tech Carilion School of Medicine in Roanoke.

Effective use of the technology comes with recognizing that it is more accurately described as “augmented” intelligence, not artificial, according to Buck.

AI is being used in forms such as ambient listening to summarize conversations and notes in the OR or for gathering quality data based on human-designed parameters. It is, as of now, dependent upon healthcare worker input to guide its actions. But if used correctly, AI can be useful for “balancing efficiency and accuracy with cost,” she said, adding that “humans need to make a choice in what to focus on, but technology can help solve that problem.”

Dr. Gillen added that AI can have an impact today by taking disparate information in a medical chart, such as progress notes, radiology reports, and lab values, and synthesizing the information and bringing relevant information forward.

The tool can turn “surgical clinical reviewers from scavengers into auditors who spend more time as clinical decision-makers, using their medical expertise to its fullest,” he said.

## Different Perspectives on Value

Practicing surgeons are likely to have broadly similar perspectives on the how and why of achieving surgical quality and safety. However, other groups of stakeholders, who can overlap with surgeons, will place value on distinct aspects of care.

Julie Ann Sosa, MD, MA, FACS, chair of the Department of Surgery at the University of California (UC) San Francisco, offered an account of what is important for patient caregivers, a role she has taken on for her elderly parents.



She explained that caregivers value a variety of things, including empathy, acknowledgment of difficulties, and authenticity, from the patient's medical team. As a surgeon, she knows that these elements can be difficult to provide in a stressed health system, but professionals should be expected to handle the burden, not families.

"If the burden of care is dropped by a system that is overwhelmed, the caregiver is left to assume the burden," Dr. Sosa said.

Ensuring that surgeons and care teams are meeting patient needs for value, along with quality and safety in their various forms, falls in the realm of regulatory and compliance entities, and "no other safety or quality entity has feet on the ground with the same reach and impact as The Joint Commission (TJC)," said Haytham M. Kaafarani, MD, MPH, FACS, medical director of quality and safety at Massachusetts General Hospital in Boston.

Dr. Kaafarani, who formerly served as TJC chief patient safety officer, provided a brief rundown of the commission's role in performing surveys to certify US hospitals as compliant to provide care.

He explained that although the organization has specific standards hospitals must meet, surveyors may need to take a nuanced approach to understanding how hospitals are applying the standards to ensure that the aim of quality care is being met.

All initiatives to achieve lasting quality and safety need to run through, and ideally be fully supported by, hospital leadership. Jacqueline M. Saito, MD, MSCI, MBA, FACS, chief quality and safety officer at Children's National Hospital in Washington, DC, offered the C-suite perspective on creating value for surgical teams and patients.

The starting point—from clinicians to hospitals leaders to policymakers to payers—must be the patient's needs, Dr. Saito said, noting that all parties must decide on what metrics really matter. It may be impossible in each situation to achieve your exact intent, but teams need to start somewhere, and focusing on intent, feasibility, and reliability of a measure are critical.

Importantly, "stakeholders must partner with patients, who can help find creative ways to capture the patient's voice and to find out what really matters to them," she said.

### Link between Collaboration and Value

A running subtheme of the Quality and Safety Conference was an emphasis on teamwork and a truly collaborative spirit.

The modern medical environment continues to reveal that interdisciplinary teamwork is a winning formula in healthcare, according to Michelle Humeidan, MD, PhD, an anesthesiologist and medical director of enhanced recovery at The Ohio State University Wexner Medical Center in Columbus.

"Interdependent collaboration, open communication, and shared decision-making generates value-added patient, organizational, and staff outcomes," Dr. Humeidan said. She noted that the complexity of modern health leads to more fragmentation, and teamwork based on communication—a notorious weak point in healthcare settings—is critical to ensure continuity of care.

A key stakeholder who is often overlooked in a collaborative team is the patient, according to Laurie J. Kirstein, MD, FACS, attending breast surgeon at Memorial Sloan Kettering Cancer Center in Monmouth, New Jersey.

Dr. Kirstein described a project undertaken at one of her institutions to address patients experiencing financial toxicity. The professional team came together with a plan to assist patients that was created with validated tools, and which involved reaching out to patients by phone to discuss their needs.

"The majority of patients who received the phone call either didn't answer or didn't want to talk about financial services," she said. "The project didn't meet patient needs—it had good intentions, but failed implementation."

The Young Fellows & Resident All Stars, are the winning team of the Quality Rumble: Family Feud Showdown. Team members, pictured with Dr. Clifford Ko, from left are: Lindsay Welton, MD, Lane Frasier, MD, MS, FACS, Emmanuel Gabriel, MD, PhD, Jason Wilson, MD, MBA, CPE, FACS, and Abby Gross, MD.



Dr. Kirstein said the problem was that patients were not stakeholders when creating the process. After reviewing facilitators and barriers to patient engagement, she explained that simply asking patients if they wanted to be contacted led to a substantial increase in calls being answered, indicating that communicating with patients directly can lead to success in some initiatives.

One of the arenas where surgical safety, efficacy, and quality are challenged directly is in the morbidity and mortality (M&M) conference. According to Mary Brindle, MD, MPH, director of the Safe Surgery/Safe Systems Program at Ariadne Labs in the Harvard School of Public Health in Boston, Massachusetts, the scope of an M&M conference should be expanded to multiprofessional sessions. M&M conferences help improve the quality of a



## Navigating the Future of Value

The conference's final session looked ahead to where visions of value in surgical QI may converge.

It will behoove surgeons to understand how payers play a part in value, according to Kenric M. Murayama, MD, MBA, FACS, executive vice-president and chief health officer for the Hawaii Medical Service Association.

Dr. Murayama, a retired surgeon, explained that “payers are trying more and more to be a part of the healthcare ecosystem.”

This reality in the US healthcare system means that surgeons need to be able to converse with and educate payers about value in a way that they can incorporate into their structures. Opportunities to work collaboratively can take the relationship from transactional to a partnership, which can aid in delivering better value outcomes for hospitals and patients.

One of the most direct ways that patients can observe the power of value in healthcare is by taking advantage of public reporting.

David Tom Cooke, MD, FACS, professor and founding chief in the Division of General Thoracic Surgery at UC Davis Medical Center in Sacramento, discussed the tools that are being increasingly offered by federal mandate or internal organization decisions and whether they affect patient or hospital actions.

The Society of Thoracic Surgeons, Dr. Cooke noted, has been publicly reporting thoracic surgery data for years, assigning institutions one, two, or three stars (worse than expected/as expected/better than expected). Does public reporting help? According to Dr. Cooke, it motivates institutions to at least raise their baseline.

“The fastest path to becoming a two-star program is having to tell the world you’re a one-star program,” he said, adding that fear, trust, and the complexity of information can encourage patients to take advantage of public reporting, though there is much more data needed to demonstrate value.

The 2025 Quality and Safety Conference—the 20th anniversary of the conference, dating back to its time as the ACS NSQIP Annual Conference—will take place July 17–20 in San Diego, California. **B**



**Left:** Dr. Jacqueline Saito joins Ben Harder, from *US News & World Report*, to discuss the value of data-based patient decision-making support tools.

**Right:** Attendees take part in an interactive breakout session.

clinician’s work by evaluating decision-making and technical performance and then sharing lessons learned. However, M&Ms are typically “single-discipline silos that don’t bear resemblance to how we actually treat our patients,” Dr. Brindle said.

Nurses traditionally have little representation in these conferences, but they gain the greatest value from attending them, Dr. Brindle noted. As frontline communicators in an OR, nurses are attuned to deficits in communication between members of a surgical team, and their perspective could provide value by clarifying where errors might have occurred in a case.

# Top 10 Abstracts

More than 800 abstracts were submitted for consideration at the Quality and Safety Conference, and the top 10 were featured in a General Session with brief presentations.

## Comparing Post Lumpectomy Analgesia

Irada Mamukadze, MD, University of Michigan Health Sparrow, Lansing

## Creating a Toolkit for SCRs New to EGS Abstraction

Christae A. Smith, MSN, RN, CPHQ, Atrium Health, Charlotte, North Carolina

## Development and Implementation of Paging and Escalation Guidelines to Improve Multidisciplinary Communication on Surgical Units

Michael Kochis, MD, EdM, Massachusetts General Hospital, Boston

## Establishing Outpatient Appendectomy Guidelines in a New Emergency General Surgery Program

Sioned K. Kirkpatrick, DO, Texas Health Resources Fort Worth

## From Chaos to Coordination: OR Case Classification Renovation

Valerie E. Vralbic, RN, BSN, CEN, Novant Health New Hanover Regional Medical Center, Wilmington, North Carolina

## Improving Discharge to Home Post Implementation of the Geriatric Surgery Verification Standards

Julie M. Giles, AGNP-C, Rochester Regional Health, New York

## Optimizing Initial Case on Time Starts in VA Operating Rooms: A QI Initiative

Elizabeth Dale Slater, MD, Vanderbilt University Medical Center, Nashville, Tennessee

## Refining Pain Management in Pectus Excavatum Repair through QI

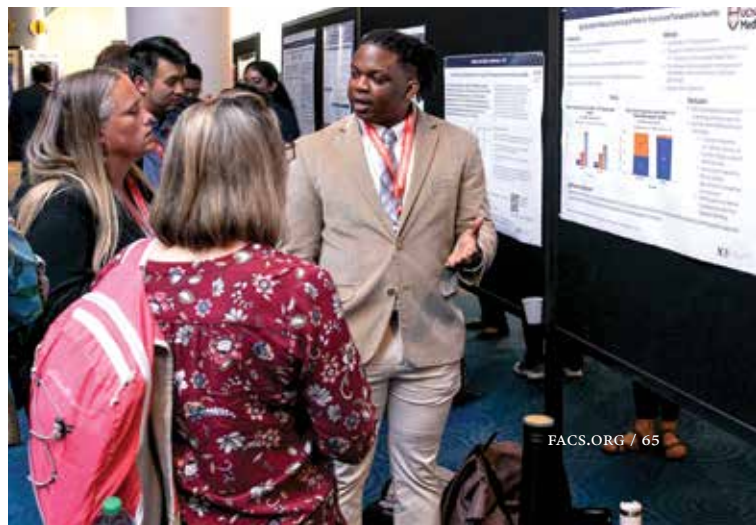
Krysta M. Sutyak, DO, The University of Texas Health Science Center in Houston

## Sustained Success of a Caprini Postoperative Venous Thromboembolism Prevention Protocol over One Decade

Anna Kobzeva-Herzog, MD, Boston Medical Center, Massachusetts

## Transition from Paper to Paperless Trauma Flowsheet: Enhancing Trauma Quality Documentation

Junky De Castro Singson, RN, MSN/INF, CCRN, SBH Health System, Bronx, New York



The following articles appear in the September 2024 issue 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](https://facs.org/jacs).

## Procedure Risk vs. Frailty in Outcomes for Elderly Emergency General Surgery Patients: Results of a National Analysis

*Bishoy Zakhary, MPH, Bruno C. Coimbra, Junsik Kwon, MD, and colleagues*

This study found that procedure risk had a stronger association with relevant outcomes in elderly emergency general surgery (EGS) patients compared with frailty. Assessing frailty in the elderly EGS patient population without adjusting for the type of procedure or procedure risk ultimately presents an incomplete representation of how frailty impacts patient-related outcomes.

### Scheduled Follow-Up and Association with Emergency Department Use and Readmission after Trauma

*Sophia M. Smith, MD, Xuewei Zhao, MPH, Kelly Kenzik, PhD, and colleagues*

In trauma patients, follow-up is not associated with reduced rate of emergency department (ED) use or readmission. Mental health comorbidity was a risk factor for both ED use and readmission, and non-White race was associated with ED use.

### Escalating Surgical Treatment for Left Ventricular Assist Device Infection and Expected Mortality: Clinical Risk Prediction Score

*Michael J. Finnan, MD, MS, David Chi, MD, PhD, Sarah N. Chiang, and colleagues*

Left ventricular assist device (LVAD) infection is challenging to manage, and clear treatment guidelines are lacking. This cohort study of 760 LVAD patients characterized three escalating strategies: medical management, surgical debridement, and flap reconstruction. In selected cases, escalating surgical treatment was associated with increased survival.

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# Annual Business Meeting of Members

ALL MEMBERS are welcomed and encouraged to attend the Annual Business Meeting of Members of the ACS on Tuesday, October 22, 2024, at 4:00 pm in Room 303-304 MS, at the Moscone Center in San Francisco, California. This session is in accordance with Article I, Section 6, of the *Bylaws*.

During the meeting, ACS Officers and Governors will be elected, and reports from officials will be presented. There also will be items of general interest to the Members that will be included on the agenda. Members are respectfully urged to attend.

**Sherry M. Wren, MD, FACS**

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# Member News

## Timmons Leads Neurosurgery in Wisconsin



Shelly D. Timmons, MD, PhD, FACS, has been appointed chair of the Department of Neurosurgery at the Medical College of Wisconsin in Milwaukee and named the Sanford J. Larson, MD, PhD, Chair in Neurosurgery. She comes from the Indiana University School of Medicine in Indianapolis where she was chair of the Department of Neurological Surgery. Dr. Timmons is a member of the ACS Board of Regents.

## Farma Is Chair of Surgery at Fox Chase



Jeffrey M. Farma, MD, FACS, was promoted to chair of surgery at Fox Chase Cancer Center in Philadelphia, Pennsylvania, following a succession of leadership roles at the center. Dr. Farma joined Fox Chase Cancer Center in 2009, and has served as professor of surgery, chief of the Division of General Surgery, surgical director of the Melanoma and Skin Cancer Program, director of the Complex General Surgical Oncology Program, and interim chair of surgery.

## Matthews Is Senior Physician Leader across UChicago Medicine



Jeffrey B. Matthews, MD, FACS, was appointed surgeon-in-chief for the University of Chicago Health System in Illinois. Dr. Matthews, a gastrointestinal surgeon, also will continue his role as chair of the Department of Surgery at The University of Chicago—a position he has held since 2006.

## Pryor Will Join Brown University as Chair



Aurora D. Pryor, MD, MBA, FACS, will take over as chair of the Department of Surgery at The Warren Alpert Medical School of Brown University, surgeon-in-chief of Rhode Island Hospital and The Miriam Hospital, and president of Brown Surgical Associates, all in Providence, Rhode Island. A bariatric surgeon, Dr. Pryor currently is surgeon-in-chief at Long Island Jewish Medical Center in New Hyde Park, New York, and system director for bariatric surgery at Northwell Health in Great Neck, New York. She also is a professor of surgery at the Donald and Barbara Zucker School of Medicine at Hofstra/Northwell in Uniondale, New York.



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



Additional Member News items are available on [facs.org](https://www.facs.org).

## Ivy Takes Helm at Gaylord Specialty Healthcare



Michael Ivy, MD, FACS, was appointed chief medical officer of Gaylord Specialty Healthcare in Wallingford, Connecticut. Prior to joining Gaylord, Dr. Ivy—a trauma surgeon—was deputy chief medical officer of the Yale-New Haven Health System in Connecticut.

## Raman Chairs Penn State Health Department of Urology



Jay D. Raman, MD, FACS, assumed the role of permanent chair of the Department of Urology at Penn State Health in University Park, after being named the interim chair in 2021. Dr. Raman has been with Milton S. Hershey Medical Center and Penn State College of Medicine for 16 years, most recently as chief of the Department of Urology. For the ACS, he serves on the Advisory Council for Urology.



## Freischlag Is Elected Chair of AAMC Board



Julie A. Freischlag, MD, FACS, will serve as chair of the Association of American Medical Colleges (AAMC) 2024-2025 Board of Directors. The term begins November 12. A vascular surgeon, Dr. Freischlag is chief executive officer and chief academic officer of Atrium Health Wake Forest Baptist in Winston-Salem, North Carolina, chief academic officer and executive vice president of Advocate Health, and executive vice president for health affairs of Wake Forest University. She also is an ACS Past-President.

## Boss Moves Up at Johns Hopkins



Emily F. Boss, MD, MPH, FACS, was promoted to director of pediatric otolaryngology at Johns Hopkins Medicine in Baltimore, Maryland—the first new division director in 30 years. With Johns Hopkins since 2008, she has held several leadership roles. Most recently, Dr. Boss was physician advisor for care coordination and clinical resource management at The Johns Hopkins Hospital and medical director for revenue cycle performance improvement for Johns Hopkins Medicine. [B](#)

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