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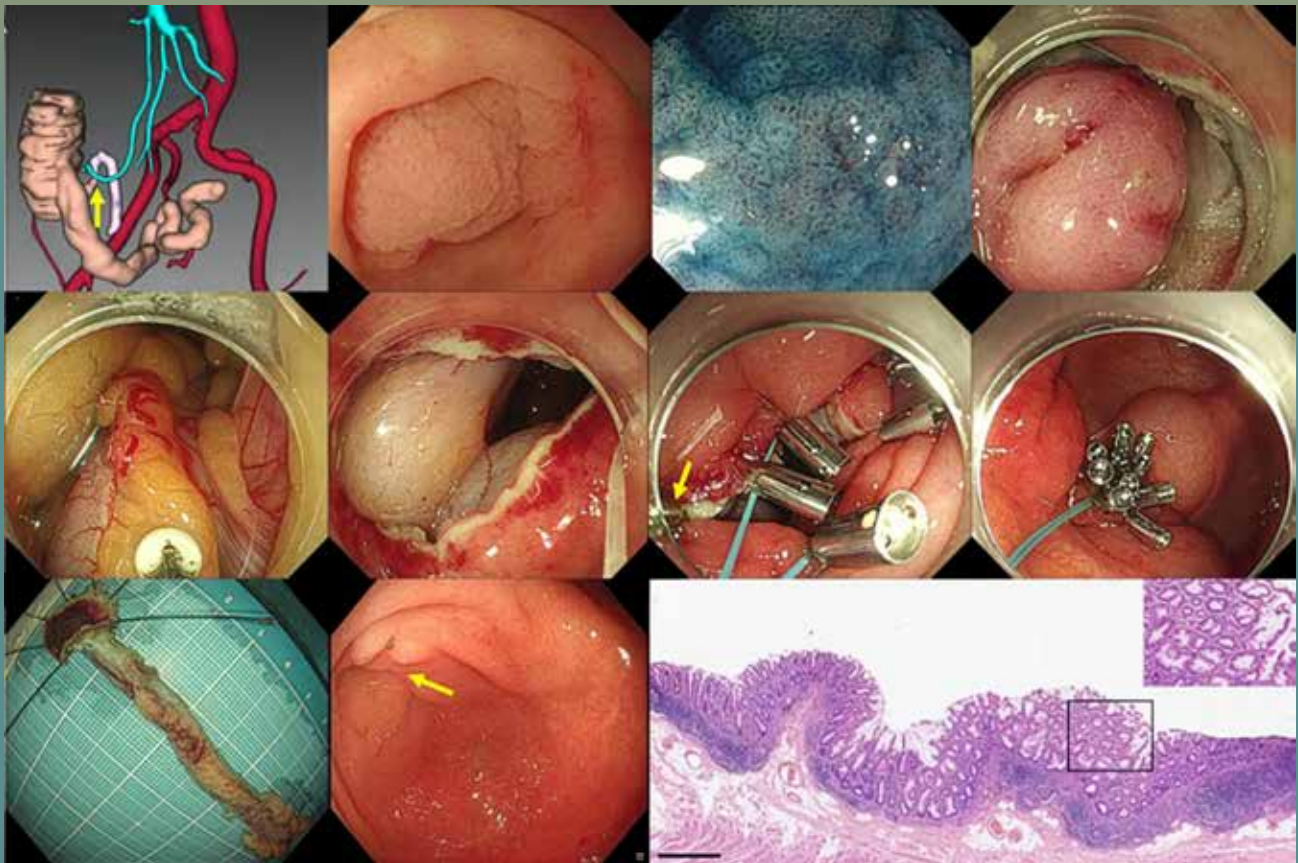
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SURGICAL TECHNOLOGIST

OFFICIAL JOURNAL OF THE ASSOCIATION OF SURGICAL TECHNOLOGISTS, INC.

Endoscopic Transcecal Appendectomy

Part 3



SAVE THE DATE — 2027 AST SURGICAL TECHNOLOGY CONFERENCE

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where the lake meets momentum

JUNE 3-5, 2027

Join us in Milwaukee, Wisconsin, for the 2027 AST Surgical Technology Conference—a premier opportunity to come together as a profession, learn from industry experts, collaborate with colleagues from across the country, and strengthen the future of surgical technology. Set along the beautiful shores of Lake Michigan, Milwaukee offers a unique blend of rich history, vibrant culture, renowned festivals, and exceptional dining. Whether you're attending educational sessions, networking with peers, or exploring a dynamic new city, the 2027 AST conference promises an engaging and memorable experience both inside and outside the convention center.

STATEMENT OF EDITORIAL PURPOSE The purpose of the *Journal* is to advance the quality of surgical patient care by providing a forum for the exchange of knowledge in surgical technology and by promoting a high standard of surgical technology performance.

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Endoscopic Transcecal Appendectomy, Part 3

KEVIN B. FREY, CST

Parts 1 and 2 of the appendectomy series included discussions on the anatomy and physiology of the appendix, the pathophysiology of appendicitis, and nonoperative management versus surgery. In a wrap-up of the series, the discussion in Part 3 will focus on one of the newer surgical approaches to appendectomy, endoscopic transcecal appendectomy, to include a brief review of the various techniques for closing the appendiceal stump.

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Let's Bridge the Gap

JAIME LOPEZ, CST, CSFA, RN, FAST, AST SECRETARY

BOARD MESSAGE

While I was representing AST as a CST-RN liaison a few months ago at the Association of Perioperative Registered Nurses (AORN) annual conference, I had the opportunity to observe and participate in many questions brought to the AST booth. Some of the many conversations and questions that came up included topics about nurses earning credits for attending AST conferences, contact hours for facility in-services, nurse educators inquiring about the process for their CSTs earning credit through AST and more.

As the AST and RN liaison to AORN, I was able to discuss all of these topics with our nurse peers so they can help us bridge the gap in continuing education. We are hopeful that each role could earn continuing education through our respective events in the future. There is a lot of behind-the-scenes work to take place, and I will continue to share our progress so both roles can be supported. All of us CSTs work cohesively in the operating room with one goal in mind: Aeger Primo! We can use that same mantra to help foster our relationship with other professions, especially nurses.

It's important that we work together to support both roles. A hot topic that kept coming up was on-the-job training. This was highly frowned upon, and we heard complaint after complaint. I personally asked AORN members to join our fight to make sure there is a properly trained CST in the operating room who has gone through a nationally recognized accredited educational program. We must join together to protect our patients, and we must collect the data to prove to the administrators this is not the solution for their short staffing issues.

"We must join together to protect our patients and we must collect the data to prove to the administrators this is not the solution for their short staffing issues."

By partnering with other organizations, doors begin to open and dots begin to connect. We can work together to make sure our profession stays at the forefront and our expertise is widely known. Results are not immediate and it will take time but as long as we can advocate and build a strong bond, our profession will continue to grow in the direction we need. I feel this is crucial for our profession, and I will continue to fight for our organization. As your newly elected secretary, I will continue to bring your questions, comments, and concerns to the board table and continue to share your great ideas.

AST EDUCATORS CONFERENCE

Save The Date!

Austin, TX

February 19-20, 2027

Preconference Event

February 18



Registration opening fall 2026.
Stay tuned for more information!

AST News

AT A GLANCE

NATIONAL NEWS

MEET AST'S 2026-2027 AST BOARD OF DIRECTORS

Congratulations to AST's 2026-2027 Board! The AST House of Delegates elected positions of secretary and four director positions to fill the open board positions.

CONGRATULATIONS TO THIS YEAR'S FAST RECIPIENTS

AST's highest honor is the Fellow of the Association of Surgical Technologists. This award recognizes those members who have significantly contributed to the surgical technology profession through professional activities that support the AST mission and dedication to the profession.

We congratulate this year's FAST recipients:

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- Kristi Brooks, CST, FAST
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- Krista Vylasek, CST, FAST

Watch the August journal for more highlights from AST's Surgical Technology Conference in Seattle.

SAVE THE DATES!

UPCOMING EVENTS



2027 AST Educators Conference – Austin, TX

February 19-20, 2027, with preconference February 18

Plan to join us for our next two AST Surgical Technology Conferences. We want to see you there!

2027 AST Surgical Technology Conference – Milwaukee

• June 3-5, 2027

2028 AST Surgical Technology Conference – Phoenix

• June 8-10, 2028



CONTINUING EDUCATION RESOURCES EARNING CE

Many of the CE credits processed by AST for CSTs and CSFAs are earned through one or more of the ways listed below.

None of these are subject to a processing fee.

- AST Distance CE (journal tests or CE packages)
- Hospital in-services
- Live lectures at AST state assemblies, national conference and others, such as ACS Congress
- College Courses
- Healthcare Manufacturer's Events. AST accepts CE credits that are offered at in-person events that have been planned and are sponsored and advertised by healthcare manufacturers - referred to as commercial interest organizations (CIO). However, for the CE credits to be accepted by AST, the in-person program must be approved by AST, and the program must be relevant to the practice of surgical technology or surgical first assisting. In-person events are stand-alone events, such as forums or hands-on workshops that are the sole responsibility of the CIO to plan and market as well as offer the CE credits and are held at the location of the CIO's choice.

CE CREDIT FEES

These only apply to a very small percentage of credits earned through commercial providers due to the increased time and resources required to research and assess CE credits earned through those providers, particularly those CE credits offered by commercial businesses that contract with healthcare facili-

ties, and now live events. There are no refunds given for AST online CE tests or CE credit packages.

Number of CE Credits	Processing Fee
*11-20	\$30
*21-30	\$45
*31-40	\$60
*41-50	75
*51+	\$90

Members: See above for any additional fee for processing CE credits excluding AST tests.

Nonmembers: Nonmembers may be subject to a processing fee at the time of submission.

Money orders, personal checks, institutional checks, Visa, MasterCard, and American Express are accepted. Checks payable to AST.

Qualifying CE Credits Checklist

- Are all CE your credits earned while an AST member?
- Are all CE credits earned within your current certification cycle established by the NBSTSA?
- Are all your CE credits relevant to the medical-surgical practice of surgical technology and surgical assisting?
- Have you submitted a CE Reporting Form? CE credits will be returned without a CE Reporting Form.
- Did you list each educational activity on the CE Reporting Form?
- Did you submit proper documentation for each education activity listed on the CE Reporting Form? Keep originals of documentation and submit copies.
- Is any applicable fee enclosed?

2 Ways to Submit Your CE Credits

Mail to: AST, 6 West Dry Creek Circle, Ste 200, Littleton, CO 80120-8031

Email scanned CE credits in PDF format to AST Member Services. Do not mail credits that were previously emailed.

MILESTONES HAPPY ANNIVERSARY!

Congratulations to the following state assembly as it celebrates its anniversary this month! AST appreciates your hard work, dedication, and all your years of service for making our state assemblies the backbone of this organization.

- Nebraska – 22 years

2026 Approved AST Bylaws Amendments



During the 2026 AST Surgical Technology Conference in Seattle on June 2, the House of Delegates approved each proposed bylaw amendment with the required two-thirds majority vote. These actions reflect the collective voice and commitment of AST members to the continued growth and governance of the profession. The following bylaw updates were officially adopted and are effective immediately.

ARTICLE II Purpose, Section 1

To encourage employment of certified surgical technologists by promoting and maintaining communication and cooperative relationships and efforts with other professional health care organizations and individuals.

ARTICLE III Constituent Divisions, Section 1, State Assemblies

State assemblies of AST shall not adopt individual bylaws but shall operate under the AST State Assembly bylaws. State Assemblies shall sign and comply with the State Assembly Agreement. Meetings shall be determined by each state. A state assembly must remain in good standing, as defined in the AST Policy Manual, in order to retain its charter.

ARTICLE VII Officers, Section 3, Term of Office of Officers

The President, Vice President, Secretary, and Treasurer shall serve for a term of two years or until a successor is elected.

ARTICLE X Committees, Section 1, Standing Committees, C2. Committee term

All newly appointed committee members shall assume their positions once appointed by the President.

ARTICLE XI Official Publication, Section 1

The official publication of AST shall be *The Surgical Technologist* and it shall be available to each member of AST. The official publication may be printed or electronic.



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Beyond Membership: The Power of Getting Involved

KRISTEN URBANEK, CST, FAST
State Assembly Leadership Committee

STATE ASSEMBLY



Being a member of the Association of Surgical Technologists (AST) is more than a role—it is an opportunity to influence the direction of our profession. While membership reflects commitment, the true strength of AST depends on what its

members choose to do with that opportunity. The difference between simply belonging and truly making an impact comes down to one thing: involvement.

I'll be honest, early in my career, I wasn't interested in getting involved. My focus was on building my clinical skills, gaining confidence in the operating room, and doing my job well. Like many surgical technologists, I saw AST as important, but I didn't feel a strong need to go beyond being just a member.

That changed because someone saw more in me than I saw in myself. A mentor encouraged me to get involved with the Massachusetts State Assembly. My first reaction was hesitation. I questioned whether I had the time, the experience, or even the ability to contribute in a meaningful way. But I said yes, and that decision has changed everything.

Getting involved opened my eyes to the bigger picture of our profession. I saw firsthand the work that goes into advocating for surgical technologists, supporting education, and maintaining the standards that define our role. I also realized that none of this happens without active members. Organizations do not move forward on their own; they depend on people who are willing to step up.

As members of AST, our role is especially important. We represent the collective voice of surgical technologists,

and that voice only has strength when it is used. Sitting on the sidelines limits what AST can accomplish, but engaged members drive change, shape decisions, and move the profession forward.

Our perspective matters. Our experience matters. And our participation matters.

For me, getting involved didn't just impact the profession; it changed me. I gained confidence, developed leadership skills, and built meaningful professional relationships. It also led to opportunities I never expected, including encouragement to apply for a national AST committee. None of this would have happened if I had stayed in the background.

It's also important to recognize that getting involved doesn't require you to have all the answers or years of experience. It simply requires a willingness to participate. Whether it's speaking up in discussions, supporting initiatives, mentoring others, or taking on leadership roles, every action contributes to something bigger.

And ultimately, this work goes beyond us. Strong professional organizations lead to stronger standards, better advocacy, and improved patient care. When you get involved, you're not just helping AST, you're helping every surgical technologist and every patient we serve.

I never expected that something I once avoided would become such an important part of who I am as a surgical technologist. What started as hesitation turned into confidence, connection, and purpose. If you're unsure about getting involved, I understand that feeling, but I also know how much it can change you. Say yes to the opportunity. You may just find a part of yourself and your profession you didn't even realize was missing.

SAVE THE DATE

National
**Surgical
Technologists
Week**

September 20-26, 2026



State Assemblies as the Bridge: The Critical Role of Communication and Engagement Between Local Members and the National Organization

YASMIN GONZALEZ, CST, CSFA, FAST
BYLAWS, RESOLUTIONS, AND PARLIAMENTARY COMMITTEE



BYLAWS, RESOLUTIONS, AND PARLIAMENTARY COMMITTEE



Professional communication within surgical technology extends far beyond the operating room. Surgical technologists are highly skilled at communicating under pressure to protect patients, anticipate surgical needs, and support

surgical teams in complex and fast-paced environments. Clear, concise, and timely communication is essential to patient safety and surgical efficiency (Institute for Healthcare Improvement [IHI], 2026).

While surgical technologists are well versed in clinical communication, many members are less familiar with how communication functions within the professional organization that represents them. Understanding how communication flows within the Association of Surgical Technologists (AST) is essential to ensuring member voices are heard, valued, and ultimately reflected in national governance decisions. Effective professional advocacy does not begin at the national level; it begins with engagement at the state assembly level.

State assemblies play a vital role within AST and serve as the foundation of professional representation. They act as the critical bridge between individual members and the national organization. Through state assemblies, surgical technologists are provided an opportunity to engage in meaningful dialogue about professional issues, share concerns, and contribute to the collective direction of the profession.

Understanding the purpose of the state assemblies — and how to engage with them effectively — is essential to member empowerment and the continued strength of surgical technology as a profession. State assemblies should not be viewed solely as a meeting place to earn required continuing education (CE) credits. While education is an important component, assemblies also provide the space where professional discussion, governance input, and resolution development occur.

When members actively engage in state assemblies, they can participate in discussions that influence policies, standards, resolutions, and initiatives that directly affect surgical technologists nationwide. Engagement at this level transforms membership from passive participation to active professional involvement.

Local communication allows emerging issues to be identified early. Concerns related to scope of practice, role misrepresentation, workforce challenges, educational standards, or workplace expectations often surface at the local or state level long before they become national concerns. When these issues are communicated through state assemblies, they can be addressed proactively rather than reactively. State assemblies provide the structure necessary to capture these issues and bring them forward in a deliberate and organized manner.

Every effective organization relies on a structured communication pathway. Within AST, this pathway ensures voices are represented appropriately. It supports communication from individual members through state assemblies and their respective leadership and governance committees.

For communication to remain effective and actionable, state assemblies are supported by key leadership and gover-

nance structures. The State Assembly Leadership Committee (SALC) plays a central role in facilitating communication between state assemblies and the national organization by supporting assembly leadership, promoting engagement, and ensuring continuity in leadership development. SALC members serve as a resource for assemblies, helping guide discussion, encourage participation, and elevate emerging issues through appropriate channels.

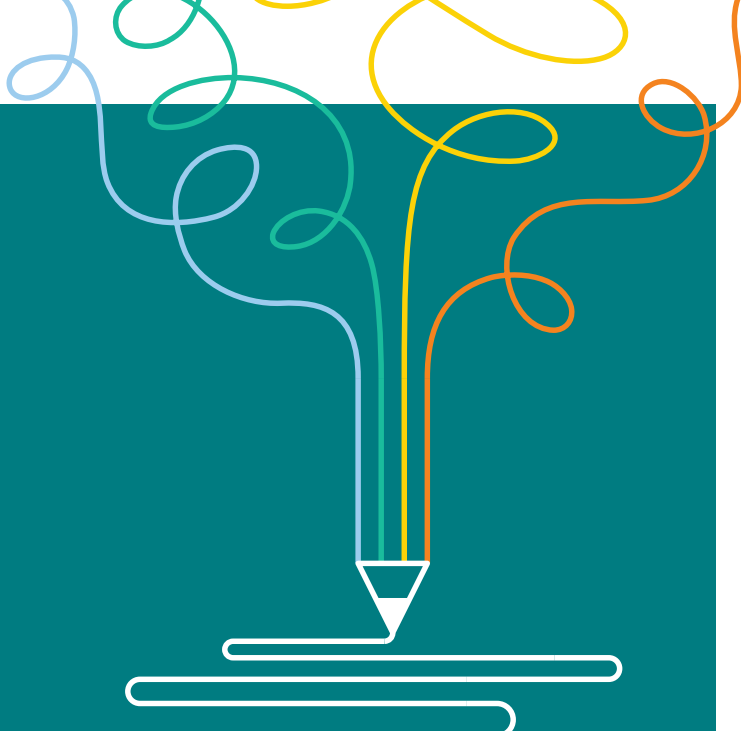
Complementing this structure, the Bylaws, Resolutions, and Parliamentary Procedures Committee (BRPPC) representatives ensure that concerns, proposals, and resolutions originating at the state level are reviewed and advanced in accordance with established governance processes. BRPPC representatives assist assemblies in refining resolutions, maintaining parliamentary integrity, and ensuring that member-driven initiatives are clearly articulated and properly presented for national consideration. Together, SALC and BRPPC provide the framework that transforms local dialogue into organized, effective advocacy within AST.

Professional empowerment is not limited to holding office or attending national conferences. It begins with understanding how to communicate effectively within the professional structure that already exists. Effective communication does not require perfection; it requires clarity, respect, and consistency. Members who bring concerns forward with a clear explanation of the issue and its impact help assemblies advocate more effectively on their behalf. Engagement strengthens professional identity and organizational trust (IHI, 2026).

Strong professions are built through strong connections. By engaging with their state assembly, surgical technologists ensure that their voices continue to shape the future of surgical technology at the local, state, and national levels. State assemblies remain the essential bridge between individual experience and national governance, transforming professional insight into collective action. Through structured communication, engaged leadership, and informed participation, every voice matters — and together, the profession grows stronger.

References

Institute for Healthcare Improvement. (2026). Effective communication and patient safety in healthcare systems. <https://www.ihl.org>



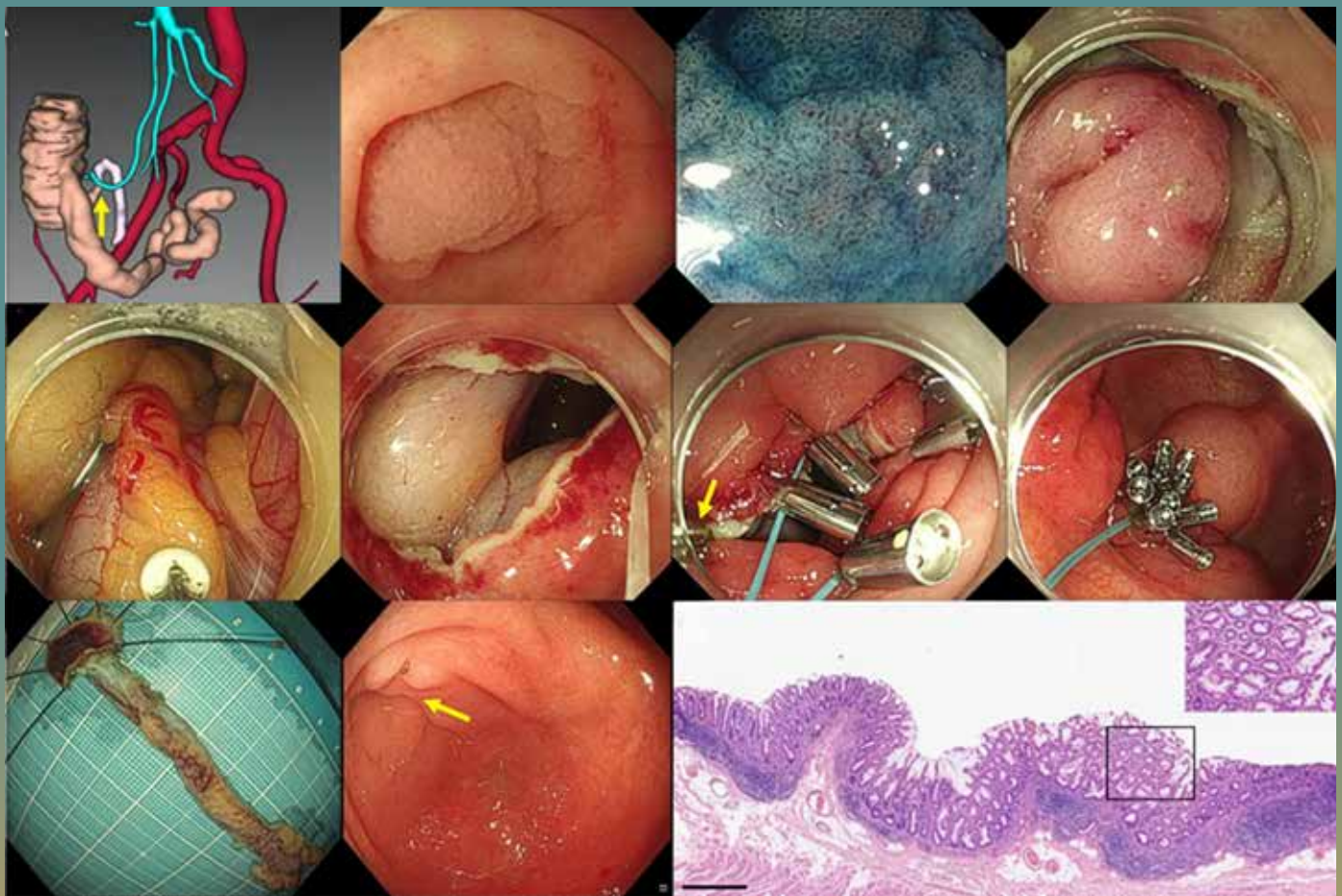
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- An article submitted for CE must have a unique thesis or angle and be relevant to the surgical technology profession.
- The article must have a clear message and be accurate, thorough, and concise.
- It must be in a format that maintains the journal's integrity of style.
- It must be an original topic (one that hasn't been published in the journal recently).

Ready to get started or have questions?
Email us at publications@ast.org.



Endoscopic Transcecal Appendectomy

Part 3

KEVIN B. FREY, CST

TECHNIQUES FOR CLOSING THE APPENDICEAL STUMP

One of the most critical steps of an appendectomy is closing the appendiceal stump to prevent a postoperative intra-abdominal infection resulting from fecal matter leaking into the abdominal cavity. Various closure devices for use during an endoscopic appendectomy have been developed including endoclips, endoloops, and staplers. The advantage of one over another has not been definitively established and is based upon surgeon's preference. What does matter is cost. For example, endoclips tend to be less expensive than the other methods of closure.

Endoclips are available in biodegradable or metallic form. The two main advantages of endoclips are the ease of loading them onto the laparoscopic clip applicator by the Certified Surgical Technologist (CST™) and the ease of application by the surgeon leading to reduced operative time. The main disadvantage of endoclips is limited width. Endoclips have been applied to appendiceal base diameters that are up to 16 mm, but their effectiveness decreases for diameters that are 1 cm or more causing concern for fecal leakage.^{1,2} Endoclips are much less expensive compared to other closure methods, which lowers the cost of the procedure for the patient as well as overall healthcare costs.

Endoloops are detachable snares that facilitate ligating pedicles during laparoscopic procedures, particularly during a laparoscopic appendectomy. The device typically consists of an 18-inch-long ligature within a plastic tube that is narrow at one end and scored at the other, where it is attached. The suture is formed in a ligature loop with a knot. The surgeon places

LEARNING OBJECTIVES

- ▲ Describe the various techniques for closing the appendiceal stump
- ▲ Discuss the advantages of the endoscopic transcecal appendectomy procedure
- ▲ Examine the disadvantages of the endoscopic transcecal appendectomy procedure
- ▲ List the equipment and instrumentation necessary for performing an endoscopic transcecal appendectomy
- ▲ Recognize the steps of the endoscopic transcecal appendectomy procedure
- ▲ Identify the postoperative complications that can occur

KEYWORDS

adverse events, appendiceal orifice, cecectomy, endoclips, endoloops, endoscopic full-thickness resection, endoscopy mucosal resection, endoscopic transcecal appendectomy, intra-abdominal abscess, hemicolectomy

DEFINITIONS

Colonic sessile serrated lesion: Pale or reddish colored lesions that are flat or slightly elevated (sessile) with a saw-toothed (serrated) appearance. The lesions are precancerous polyps, usually occurring in the cecum and ascending colon.

the ligature over the appendix and positions it at the base (Figure 1A). Once in place, the scored end is snapped and pulled upward to tighten the loop and secure the knot. The surgeon may place two endoloops, however, research has shown there may be no significant difference in surgical outcomes when using one endoloop versus two endoloops (Figure 1B).³

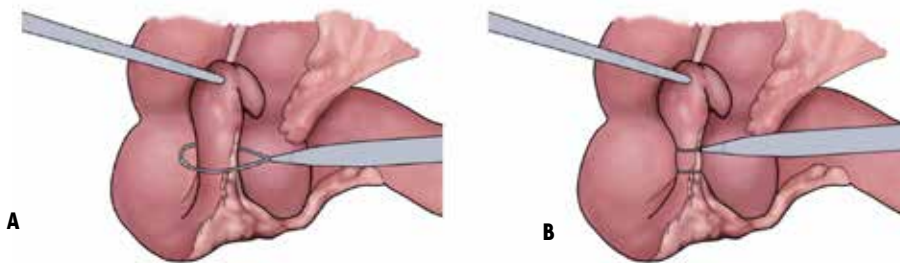


Figure 1 Application of endoloops around base of appendix.

Endoloops provide a low-cost option for safely securing the appendiceal base with excellent patient outcomes.^{3,4} The use of one endoloop provides additional cost savings for the patient and healthcare systems across the US considering the large number of appendectomies that are annually performed.

Staples, upon firing, form a closed staple line by simultaneously clamping and incising the tissue. Staples have multiple advantages including ease of loading and firing. In an appendectomy, the use of staples is particularly use-

ful in instances of acute inflammation that can be responsible for expanding the base of the appendix.^{5,6} The drawback of staples is the high cost, with a single endoscopic staple line costing approximately \$770.⁷

ENDOSCOPIC TRANSCERAL APPENDECTOMY

Discussion

With an emphasis upon and increase of colon cancer screening for individuals who are 45 years of age or older, the discovery of appendiceal and cecal lesions has increased.⁸ Right hemicolectomy and partial cecectomy have been the standard procedures for removing the lesions. Right hemicolectomy, however, has a history of a high rate of postoperative complications and can be considered an unnecessary procedure for the excision of relatively benign lesions such as adenomas, low grade appendiceal mucinous neoplasms and serrated lesions.⁸ Partial cecectomy is less invasive as compared to right hemicolectomy, but the procedure does not present the surgeon with the ability to fully visualize the lesion margins. Extended resections, such as right hemicolectomy, may be performed in certain cases when the surgeon needs to ensure negative margins have been attained.

Endoscopic transcecal appendectomy (ETA) procedure has been performed to remove the appendix for various

reasons including appendicitis, appendiceal retention cysts, appendiceal polyps, and colonic sessile serrated lesions. The ETA procedure was introduced in 2018 when Bing-Rong Liu, MD, published the first description of the procedure.⁹ The procedure involved a 53-year-old man who presented with

a cecal polyp located by the appendiceal orifice. Upon removal of the appendix, the pathological diagnosis was appendiceal retention cyst. The patient fully recovered and was discharged from the hospital three days postoperatively.⁹

Compared with open procedures, ETA has multiple advantages. The surgeon can directly visualize the inflamed appendix or if there is an associated appendiceal orifice lesion.⁸ This provides the surgeon with the ability to preserve the ileocecal valve and intestine. Because

the surgeon can visualize the appendix so well, it provides more direct access to the appendiceal orifice lesion, if present, and the appendix itself, which can decrease injuries to adjacent tissues, particularly in patients who have a history of abdominal surgery. Another potential advantage of ETA is that it provides the surgeon with a more accurate resection range.¹⁰ Another benefit of ETA is that the procedure does not leave scars on the patient's abdomen, thus eliminating postoperative complications such as incisional hernia and wound infection. Lastly, when the surgery is required due to the discovery of an appendiceal lesion, ETA provides for complete resection of the lesion and the appendix simultaneously.¹¹

"One of the most critical steps of an appendectomy is closing the appendiceal stump to prevent a postoperative intra-abdominal infection resulting from fecal matter leaking into the abdominal cavity."

Surgical Technique Insights

There are several technical aspects of ETA to be considered. As with any appendectomy, whether an open procedure or performed endoscopically, identifying the anatomical position of the appendiceal artery within the mesoappendix is important to prevent hemorrhage. The variable location of the appendiceal artery suggests that the mesoappendix must be carefully resected to sufficiently expose the artery to achieve hemostasis. This is particularly important during an endoscopic procedure to prevent converting to an open procedure. A challenge, however, can be resecting fat tissue in the mesoappendix because of the higher electrical resistance in fat.⁸ Another challenge to the ETA procedure is the presence of distal intestinal looping that can hamper the ability of the surgeon to manipulate the endoscope.⁸

When performing ETA for removing a lesion that may be

pre-cancerous or cancerous, the surgeon must avoid rupturing the lesion that can cause tumor seeding within the abdomen (see Box 1 that refers back to the discussion of the ETA procedure that was first performed by Dr. Liu). The lesion must be kept intact when removing the appendix. This is achieved by circumferential full-thickness resection around the lesion as well as gently bringing it forward into the colon with the use of a snare.¹¹ It is recommended that ETA should not be performed for appendiceal orifice lesions with deep tissue infiltration that have a clear possibility of being malignant.^{8,11} ETA does not provide the ability to completely resect lesions that originate deep within the appendiceal orifice.⁸ Therefore, preoperative evaluation by computed tomography, endoscopy, or endoscopic ultrasound are essential to rule out lesions that may be highly malignant and deeply infiltrated.

PSEUDOMYXOMA PERITONEI

Retention cyst is a sub-type of appendiceal mucocoele that is typically benign. It appears as a balloon-shaped mucosal bulge protruding from the appendiceal orifice that is characterized by the inner accumulation of mucus. To remove the cyst an appendectomy is the common surgical procedure. It is important, however, to ensure the cyst is not ruptured during the procedure and is removed intact with the appendix. Rupture of the cyst releases the mucus into the peritoneal cavity, allowing the sticky fluid to spread and possibly cause pseudomyxoma peritonei (PMP), a rare type of cancer. Cancer cells develop that produce mucin, the jelly-like substance that is one of the components of mucus, that can eventually overwhelm the peritoneal cavity affecting the digestive system. The name of the disease means "false mucinous tumor of the peritoneum" because the cancer does not form a well-defined tumor.

Procedural Steps

The following is a list of the endoscopic instrumentation and supplies that will be required during the procedure.

- Endoloop
- Endoclips
- Dual knife
- Hook knife
- Endoclip applier
- Straight 4-mm clear cap
- Insulated-tip knife (IT knife)
- Single and double channel endoscopes¹⁰

The patient will either be intubated or non-intubated for delivery of general anesthesia depending on the decision of the anesthesia provider and surgeon. The most used patient position is left lateral, however, in some instances the patient may be placed in the prone position. The following are the procedural steps.⁹⁻¹²

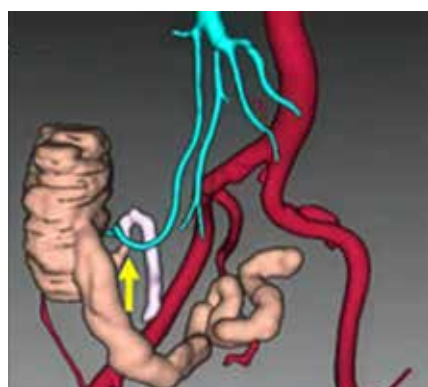


Figure 2
Three-dimensional reconstruction images showing the appendix (yellow arrow) and adjacent bowel and vessels.

1. After carbon dioxide insufflation of the abdomen is achieved, intestinal cleaning is completed. A 4-mm clear cap is attached to the tip of the endoscope. The terminal ileum, ascending colon, and cecum are irrigated several times with body temperature sterile water to thoroughly clean the operative site (Figure 2).
2. A dual knife is used to make a circumferential marking of the lesion border.
3. The dual knife, hook knife, or IT knife are used to make a full-thickness incision around the appendiceal orifice and lesion (Figure 3).

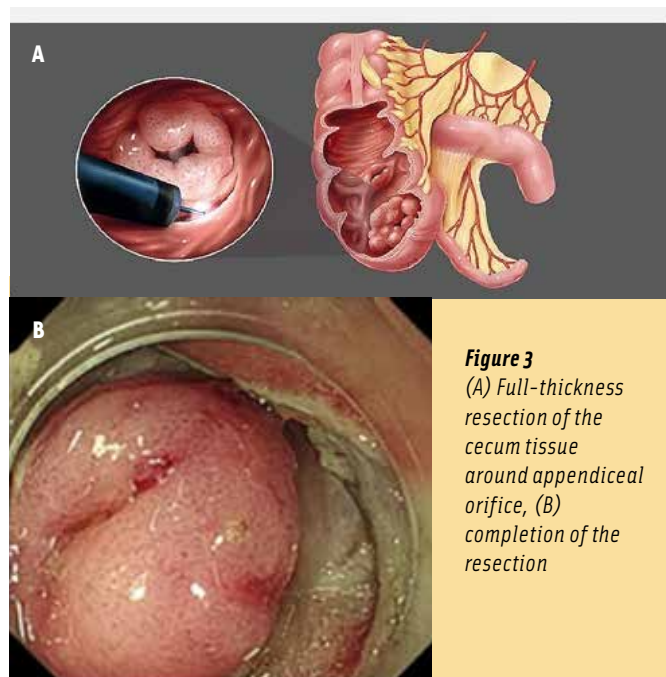


Figure 3
(A) Full-thickness resection of the cecum tissue around appendiceal orifice, (B) completion of the resection

4. The endoscope is inserted into the peritoneal cavity through the incision (Figure 4A).
5. Circumferential dissection is completed along the border of the appendix.
6. Using a dual knife or IT knife, the surgeon dissects the mesoappendix from the border of the appendix, in addition to cauterizing the appendicular artery. Snare traction is used to assist with the dissection (Figure 4B).

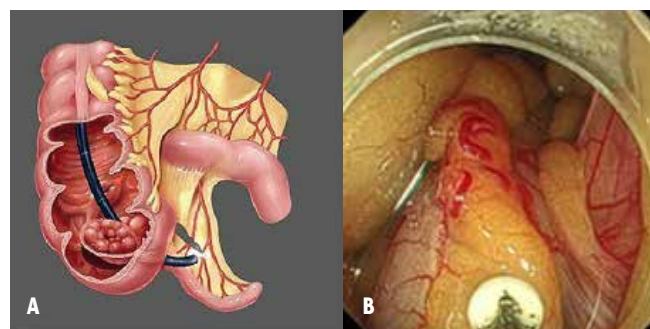
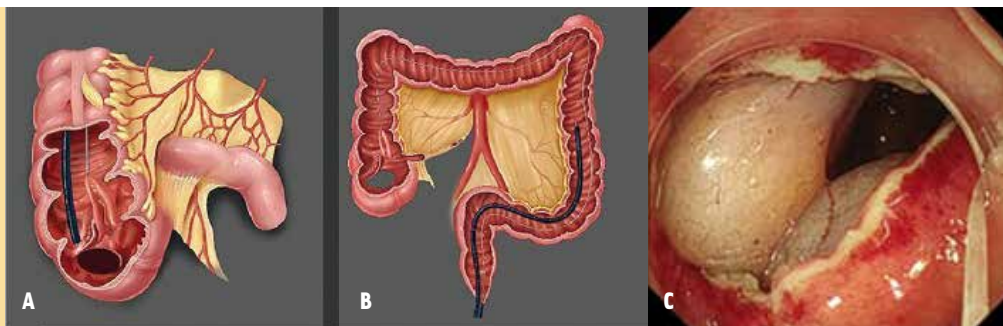


Figure 4 (A) Introduction of the endoscope into the peritoneal cavity through the incision to dissect the mesoappendix, (B) endoscopic dissection of the mesoappendix along the appendix by an IT knife.

7. The appendix is pulled into the colon with the use of the snare and removed through the anus with the continued use of the snare (Figure 5).

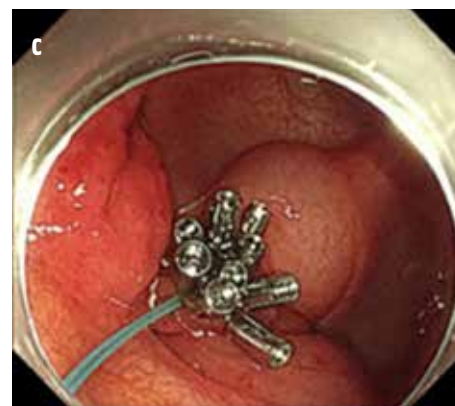
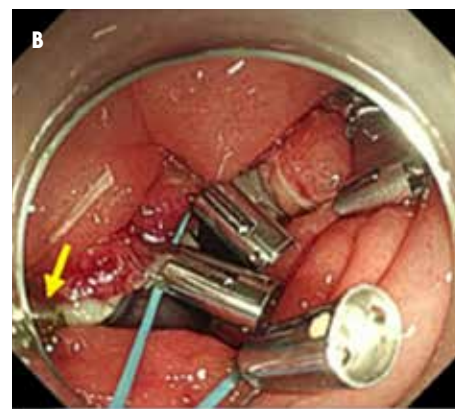
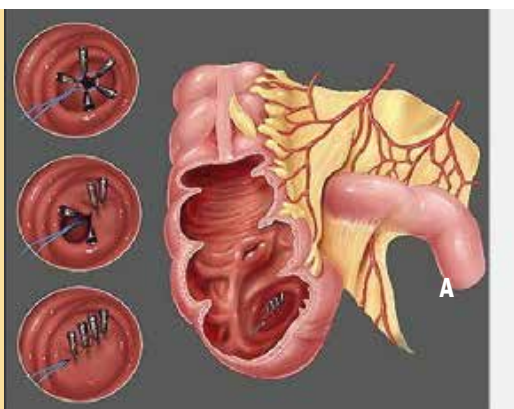
Figure 5 (A) Snare-assisted traction of the partially dissected appendix for adequate exposure of the cutting line, (B) a second endoscope was inserted for continuous dissection, (C) the cecal defect.



8. The single channel endoscope is replaced with a double-channel endoscope that allows the simultaneous insertion of the endoclip applicator and endoloop. The cecal defect is doubly closed with endoclips and endoloops. The endoloop is placed around the cecal defect and the endoclips are applied over the loop at several positions. Upon tightening of the endoloop, the edges of the defect are approximated, and the closure is completed (Figure 6).

"Compared with open procedures, ETA has multiple advantages."

Figure 6 (A) Closure of the defect using double endoscopic suture technique, (B) an intraoperative endoscopic image showing clips and endoloop used for closing the cecal defect (yellow arrow), (C) the cecal defect closed by clips and endoloop.



9. Depending on surgeon's preference, a drainage catheter may be inserted.

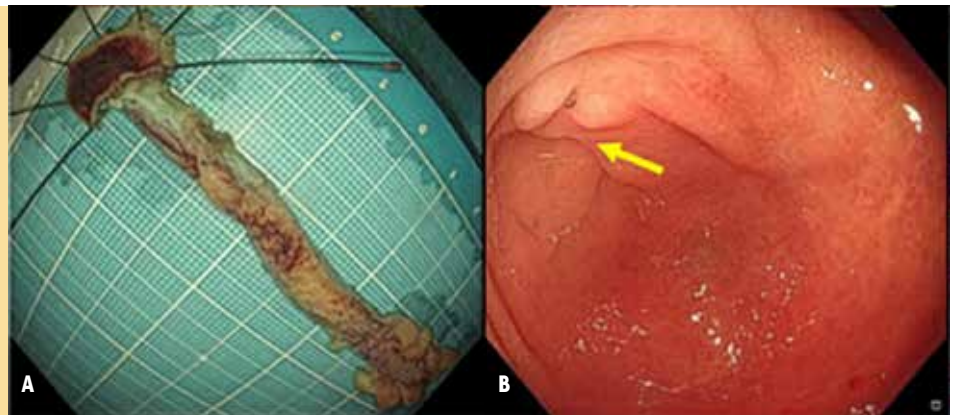
Total procedure time varies according to the surgeon's experience and slight variations in surgical technique; however, the procedural duration is typically about 60 minutes.¹³

Postoperative Care and Possible Complications

Postoperatively, the pathologist will perform a detailed evaluation of the resected lesion and appendix that will assist with forming the postoperative plan for treating the patient that underwent ETA (Figure 7). The patient's hospital stay can vary from three to eight days. The patient may have to fast for two to three days postoperatively. The patient also receives intravenous antibiotics for a minimum of three days.¹¹

"Endoloops provide a low-cost option for safely securing the appendiceal base with excellent patient outcomes."

Figure 7 (A) Specimen, (B) Endoscopic follow-up image showing the cecum 3 months after discharge (yellow arrow: the wound healing scar).



Postoperative adverse events that can occur include hemorrhaging, intra-abdominal abscess (IAA), and cecal perforation.¹¹ If a patient displays signs and symptoms of hemorrhaging an emergency endoscopy is performed to confirm the diagnosis. An IAA is considered an abscess inside the abdominal cavity that is confirmed by either ultrasound or computed tomography scan.¹¹



Links to Videos of Procedure

[pmc.ncbi.nlm.nih.gov/articles/PMC9132730](https://pubmed.ncbi.nlm.nih.gov/articles/PMC9132730)

[pmc.ncbi.nlm.nih.gov/articles/PMC12782822](https://pubmed.ncbi.nlm.nih.gov/articles/PMC12782822)

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Endoscopic Transcecal Appendectomy, Part 3

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1. Which of the following is a postoperative complication?
 - a. Cecal perforation
 - b. Bowel obstruction
 - c. Incisional hernia
 - d. Ileus
2. Which of the following presents a challenge to resecting the mesoappendix?
 - a. Ileocecal valve injury
 - b. Visualizing the artery
 - c. Presence of fat tissue
 - d. Appendix is retrocecal
3. What is used to bring the appendix within the colon?
 - a. Babcock forceps
 - b. Retrieval basket
 - c. Hook
 - d. Snare
4. Which of the following is a disadvantage of endoclips?
 - a. High cost
 - b. Limited width
 - c. Difficult to apply
 - d. Increased operative time
5. Which of the following is a type of cancer that can occur when mucus from a ruptured cysts enters the peritoneal cavity?
 - a. Pseudomyxoma peritonei
 - b. Colloid carcinoma
 - c. Squamous cell carcinoma
 - d. Leiomyosarcoma
6. Which technique is best for closing the appendiceal stump in instances of acute inflammation?
 - a. Staples
 - b. Endoclips
 - c. Endoloops
 - d. Electrocautery
7. Which patient position is commonly used to perform endoscopic transcecal appendectomy?
 - a. Prone
 - b. Supine
 - c. Left lateral
 - d. Lithotomy
8. Which of the following is a true statement regarding partial cecectomy?
 - a. More invasive than right hemicolectomy
 - b. Extended history of postoperative complications
 - c. Procedure of preference for excising adenomas
 - d. Inability to fully visualize the lesion margins
9. Which of the following is a false statement regarding endoscopic transcecal appendectomy?
 - a. Surgeon can preserve the ileocecal valve
 - b. Difficult for surgeon to visualize the appendix
 - c. Provides surgeon a more accurate resection
 - d. Less chance of injuring adjacent tissues
10. ETA is the preferred procedure for removing appendiceal lesions that originate deep in the tissue.
 - a. True
 - b. False

ENDOSCOPIC TRANSCECAL APPENDECTOMY, PART 3

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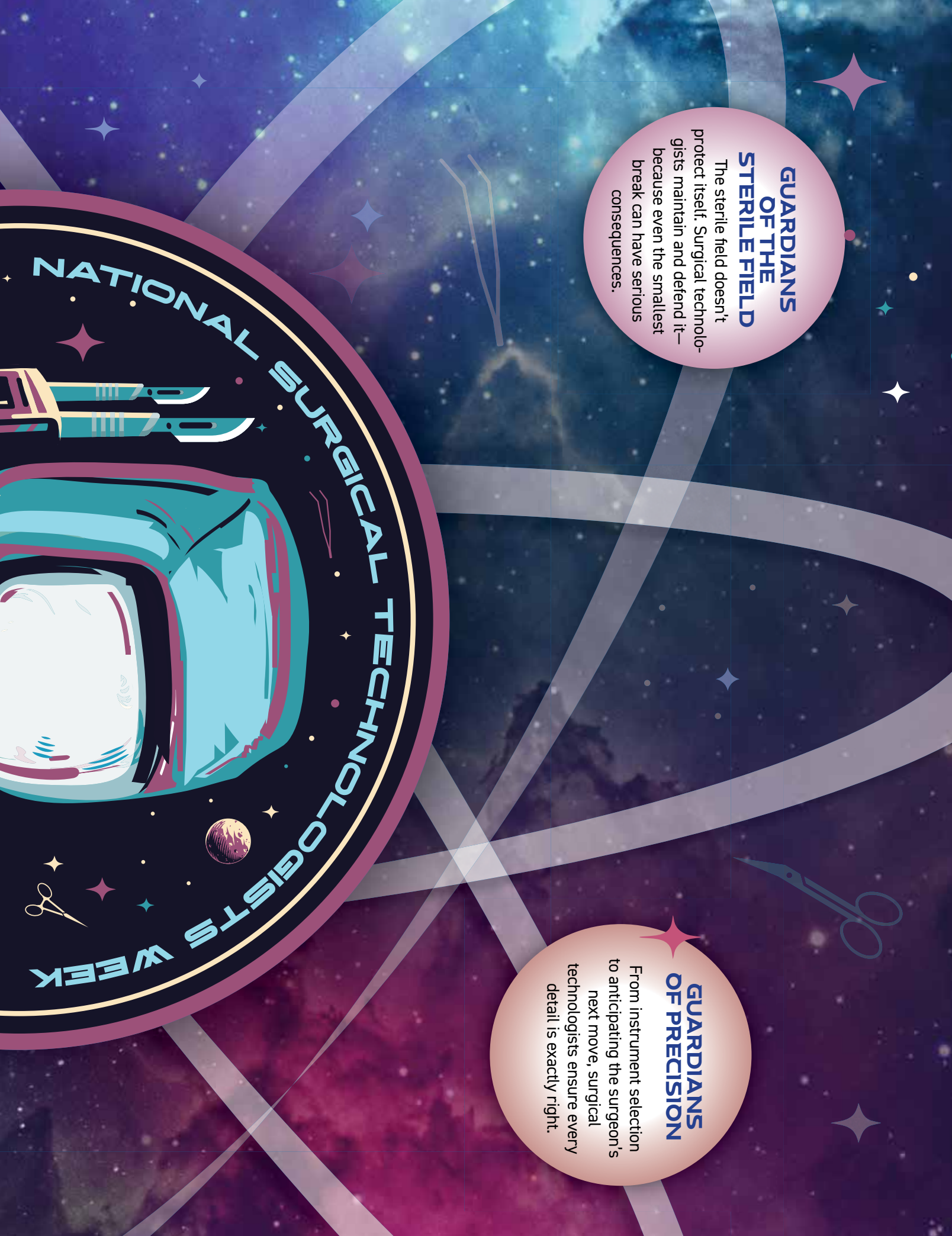
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50



Spotlighting AST's 50-Year Members

For 50 years, these dedicated AST members have helped shape and strengthen the surgical technology profession through their unwavering commitment to excellence, advocacy, and patient care. Their loyalty to both the profession and the Association of Surgical Technologists is a remarkable achievement and a testament to the lasting impact they have made on generations of surgical technologists. We proudly congratulate and thank all members who reached this incredible milestone this year for their decades of service, leadership, and dedication to advancing the profession.

When recognizing our 50-year members with commemorative plaques, we also ask them to reflect on their journey with AST. The following are just a few of the stories and memories they graciously shared.

If you have a 50-year story to share, email publications@ast.org.



**Carolyn H. Green, CST, FAST, CRCST, CIS, CER, CHL,
PUBLISHED AUTHOR, EDUCATOR, AS-BS**

"Thank you for the acknowledgement of my years of service. It is indeed an honor and a blessing to serve our country in a profession that has ethical and moral standards, is devoted to patient care, and advocates for the customers we serve.

My legacy in surgery is a life journey that can't be made up, but it's been fun educating the younger generation and blessing others. The outcome of every surgery was a job well done. No one died on my watch and I thank God who made me a mentor, while still teaching (subbing) the high school students to always do your best in a profession you love. Thank you."

**— Carolyn H. Green, CST, FAST, CRCST, CIS, CER, CHL,
Published Author, Educator, AS-BS**



Linda Schaeffer, CST

"Thank you very much for the plaque/ recognition. The 50 years passed so quickly. I am very lucky I am still scrubbing away! It has been quite an amazing journey...."

— Linda Schaeffer, CST



Mary V. Conner, CST, FAST

"When she recieved the plaque she was very excited to share it with me. After I read the letter that accompanied it, I suggested that we take a picture after her weekly hair appointment. She brought the plaque with her and we followed through.

Amazingly, she still gets her publication mailed to her and reads it.

As an active member of the labor movement in our community, I didn't realize at the time what an accomplishment my mother made rising to the level of president of AST."

— L. Wm. Conner, Jr.



Emma Lee Bowers, CST

"In 1972, I started working in surgery as a ward secretary. In 1974 my supervisor asked me if I would like to become a surgery tech. I accepted the position and started taking evening classes at The Children's Hospital in Columbus, Ohio...I took the three-part certification exam in 1975, and passed!...In February of 2020, I decided to completely retire...I love keeping up my certification and knowledge. You're never too old to learn...It is my pride and pleasure to be a CST and always will be!"

— Emma Lee Bowers, CST

Policy & Advocacy: The CST Voice in Legislation and Professional Associations

Cortney Hartman, MBA, CST, FAST

BEYOND THE MAYO



When you think of advocacy, your mind may first go to politics — crowded committee hearings, lawmakers debating bills, or lobbyists in suits. But advocacy doesn't always look like that. Sometimes, it

looks like a CST at a podium explaining what we do and why certification matters. Or a CST writing a letter to their legislator. Or a CST serving on their state assembly board.

Policy and advocacy are about using your voice to shape the future of surgical technology. For too long, decisions about our profession have been made without us. By stepping into advocacy, CSTs ensure that the people who understand the work best — those of us at the Mayo stand and beyond — are the ones guiding its direction.

Why Advocacy Matters

Healthcare is heavily influenced by legislation and policy. Laws can determine:

- Whether certification is mandatory
- How surgical technologists are defined in scope of practice
- Which professionals are recognized (or overlooked) in regulations
- How patient safety standards are enforced

Without CST involvement, these laws risk being shaped by people who don't understand what we do. Advocacy ensures our perspective is included while protecting patients and strengthening our profession.

Ways CSTs Can Get Involved

Advocacy isn't one-size-fits-all. There are many entry points depending on your interest and availability:

1. Professional Associations

- Join AST at the state and national level.
- Volunteer on committees or run for leadership roles.
- Help organize state assembly committees, which often lead local advocacy efforts.

2. Legislative Engagement

- Contact your state representative or senator when CST-related bills are under consideration.
- Attend “Day at the Capitol” events with your state assembly.
- Provide testimony about why certification and education matter as part of a state-led or national-lead initiative.

3. Community Awareness

- Educate your hospital administrators and colleagues about the role of CSTs.
- Write articles, blogs, or social media posts raising awareness.

4. Policy Committees in Healthcare Systems

- Serve on committees that influence hospital policy, infection control, or surgical standards.
- Bring the CST perspective to internal decision-making.

Every level of advocacy matters — from speaking up at a staff meeting to standing in front of lawmakers.

Skills CSTs Bring to Advocacy

CSTs are uniquely equipped to be strong advocates:

- **Attention to Detail:** Just as we account for every sponge and needle, we catch important details that can help shape policy language.

Every level of advocacy matters — from speaking up at a staff meeting to standing in front of lawmakers.

- **Calm Under Pressure:** Testifying in front of lawmakers may be stressful, but CSTs are used to high-pressure environments and speaking up.
- **Teamwork:** Advocacy is a collective effort — CSTs already know how to work seamlessly as part of a team.
- **Commitment to Patient Safety:** At its core, advocacy is about protecting patients — the same mission we serve every day in the OR.

Building Advocacy Skills

If you're new to advocacy, here are areas to develop:

- **Public Speaking:** Confidence in front of audiences is key for testimony or presentations.
- **Networking:** Building relationships with legislators, administrators, and other healthcare professionals.
- **Legislative Literacy:** Learning how bills are introduced, debated, and passed.
- **Writing Skills:** Crafting persuasive letters, testimony, or articles.

AST and many state assemblies provide advocacy training and mentorship for CSTs who want to get involved.

Common Misconceptions About Advocacy

Many CSTs hold back from advocacy because of misconceptions:

- **"I don't know enough."** If you understand your daily work and its importance to patients, you have what you need.
- **"I don't have time."** Even writing one email to your legislator can make a difference.
- **"I'm just one person."** Every movement starts with a single voice — and collective advocacy is powerful.

You don't need to be an expert in politics to be an effective advocate. You just need to care enough to speak up.

Success Stories

Across the country, CST advocacy has already made an impact.

- States like Texas, South Carolina, Indiana, and Tennessee have passed legislation recognizing or requiring certification. *Check out the map on the AST website to see which other states require certification and/or registration.*
- CSTs have testified in front of legislatures, helping ensure laws protect patients and acknowledge our profession.

These wins didn't happen because of lobbyists alone — they happened because CSTs raised their voices and joined the fight.

Challenges of Advocacy

Of course, advocacy has its challenges:

- **Slow Progress:** Legislation takes money and time, sometimes years, to move forward.
- **Opposition:** Other groups may resist CST recognition to protect their own interests.
- **Burnout:** Advocacy can be emotionally demanding, especially when change feels slow.

But these challenges are balanced by the knowledge that advocacy is making a difference for patients, colleagues, and the future of the profession.

Practical First Steps

If you're ready to step into advocacy, here are easy starting points:

1. **Join Your State Assembly:** Attend a meeting or conference.
 2. **Follow Legislation:** Check out the legislation page on the AST website.
 3. **Write One Letter:** Contact a legislator about why CST certification matters. The AST Government Affairs Department makes this easy for us with fill-in-the-blank letters. Watch for when AST sends emails asking you to help and raise your voice.
 4. **Share Your Story:** Talk with colleagues, administrators, or students about the importance of CST recognition. Network with other state assemblies to hear about the process and what challenges they faced.
- Small steps add up to big change when multiplied across the profession.

Closing Thoughts

Advocacy is about more than politics — it's about ensuring that CSTs are recognized, valued, and equipped to protect patients. Every CST has a voice that matters. Whether you're writing an email, mentoring through AST, or testifying at the statehouse, your contribution strengthens the profession.

We are not just silent figures behind the Mayo stand. We are educators, leaders, and advocates — and our voices belong in every conversation about patient safety and surgical standards.

If you've ever thought, *"Someone needs to say something about this,"* that someone can be you.



R

Shape

Terry Edwards CST, CSA, LSA

Every role in the operating room (OR) requires specialized education and training. We spend years learning and developing the skills required to work in the operating room, but what about the physical demands of the job? So much importance is placed on acquiring knowledge, but working in the operating room is just as much a physical challenge as it is a mental one. Working in the OR is a very physical job. We are constantly pushing and pulling stretchers, moving patients, and moving equipment and instrument sets. Some procedures can last for several hours and simply standing in one position for the duration can be exhausting. Many people start

a career in the OR when they are young, and while a younger person may adapt more easily to the physical requirements, it still takes time to get into “OR shape.” This is something that is not talked about much and is equally important to do the best job you can for your patients, doctors, and co-workers. When you first start working in the operating room it can be a lot. You go home those first couple of weeks mentally and physically drained. You will get some of the best sleep of your life during that “conditioning period” we call orientation. You may not even realize it is happening because you



are so overwhelmed and busy. The workload seems to constantly increase with the need to complete one more case just a little faster. There comes a point when you are exhausted and do not want to go anymore, but somehow we find the strength to do one more case.

To combat work fatigue in the OR it is extremely important to achieve a work-life balance. We work many hours, days, and times that other people do not. How do you achieve a work-life balance when you work eight to 12 hours a day, come home physically and mentally exhausted and now have to deal with the life part? And when we start so early in the morning, it adds another level of tiredness that seems to never go away. In the winter it is common not to see the sun. You may go to work in the dark and come home in the dark, which can add to your exhaustion. The time constraints are real when you work in the operating room so you have to be creative to make it all work, but we do it all the time in the OR so we figure it out.

One way that can help with all this overload is conditioning your body. Physical conditioning is crucial to being in the best possible OR shape. Running, cycling, pickleball, walking, and spin class are all good ways to condition your heart and body as many times a week as you can. Yes, this requires some time management. You might have to get up at 4 am to get that three-mile-run in before your shift. Know your own habits. For example, if I don't work out before my shift, I won't work out at all because I'm simply too tired afterward. I've learned that about myself, so I make it a point to work out before my shift. While working in the OR is physical, it is important to complete the cardio and strength training of working out to keep you in good physical condition.

Diet can be another challenge while working in the operating room. Meal planning and stocking your lunch bag or locker with healthy choices, high protein, and produce can help fuel us throughout the day. Unfortunately, the free food often provided to the operating room staff is usually



not the healthiest of choices. Hydration is also a balancing act. Drinking too much water at once is not always practical, but not drinking enough can contribute to both physical and mental fatigue. The key is to develop a routine and take advantage of opportunities to drink water throughout the day. Being intentional about staying hydrated can help maintain your energy, focus, and overall well-being during long shifts.

It is of the utmost importance during this crazy cycle we call life, that you take time to live it. Your job is important, but it comes with a lot of stress, and you must make time to get away from it. Most employers give vacation time, and you need to use it. Get creative and take an extra day at the beginning or end of a three-day weekend. Just make sure to give yourself some time to get back into OR shape upon your return!

If you can achieve a work-life balance, eat healthy, and exercise regularly, this will contribute to making you a better surgical technologist and overall stronger and healthier individual.

ABOUT THE AUTHOR



Terry Edwards, CST, CSA, and Texas Licensed Surgical Assistant, has dedicated 37 years to the surgical profession. He began his operating room career in 1988 while serving in the U.S. Army as a 91D Operating Room Technologist and was honorably discharged in 1992. Since then, he has worked in the Houston area, earning his Certified Surgical Assistant credential in 2001 and becoming a Licensed Surgical Assistant in 2003. For more than two decades, Terry practiced as an independent surgical assistant and currently serves with Advanced Surgical Assistants, LLC. Outside the operating room, he is a devoted husband, father of four, and proud grandfather-to-be of seven grandchildren.

Caroline (Hampton) Halsted: The First to Wear Gloves in the Operating Room

AST Staff

MEDICAL MARVELS



"Why shouldn't the surgeon use them as well as the nurse?" – William Halsted, MD¹

Rebelling Against Her Family

Caroline Halsted (Figure 1) grew up in South Carolina and was a member of a well-known family. Her mother, Sally Baxter, was originally from New York. Sadly, she died from tuberculosis at the age of 29 in 1862 when Caroline was only a year old.¹ Early in 1863 her father, Frank Hampton, died in battle during the American Civil War leaving Caroline an orphan.¹ Fortunately, Frank Hampton's three sisters raised Caroline. The aunts groomed her to be a southern debutant and belle, but Caroline did not embrace that role. She rebelled against the three aunts and entered nursing school in 1885 graduating from the New York Hospital (founded by a royal charter from King George III in 1771. January 1998, New York Hospital merged with Presbyterian Hospital and is currently known as the New York-Presbyterian Hospital) in 1888.^{1,2} When the Johns Hopkins Hospital opened in 1889, she moved to Baltimore to work at the hospital. Soon afterward, Dr. William Halsted appointed her as the chief nurse of the operating room.

Brief History of Infection Control

For many decades up through the early 1850s, hospitals were a feared institution that people avoided because of the high level of mortality due to postoperative infections. The mortality rate hovered around 50% for many years. The surgical team had no concept of infection prevention practices. Surgeons would move from patient to patient wearing the same blood-coated laboratory coat considering it an indication of the great work they were doing. Beginning in the mid-1800s, however, several scientific breakthroughs occurred that changed everything regarding the approach to preventing infections.



Figure 1
Caroline (Hampton) Halsted (11/20/1861 – 11/27/1922)

In 1843, Oliver Wendell Holmes, Sr., MD, after taking a year of studying case reports and other medical literature about puerperal fever, presented his research to the Boston Society for Medical Improvement arguing the cause of puerperal fever was from patient-to-patient contact via treating physicians. He was much ahead of

his time with this information that predated the germ theory of disease. He was soon criticized by two well-known obstetrics professors, Hugh L. Hodge, MD, and Charles D. Meigs, MD, who strongly disagreed with Dr. Holmes's conclusions. Four years later in 1847, the Hungarian physician, Ignaz Semmelweis, further strengthened Dr. Holmes findings by requiring his students to wash their hands with a chlorine solution between each patient and in the process lowering the morbidity rate from 18% to 1%.

In 1867, the English physician, Joseph Lister, MD, (Figure 2) published his groundbreaking paper "Antiseptic Principle of the Practice of Surgery." He used 5% carbolic acid solution (phenol) to spray surgical instruments and wounds as well as required the surgical team to wash their hands before and after each surgical procedure. He presented his findings in the U.S. and William Halsted, MD, believed in what Dr. Lister was advocating, even though Dr. Lister also came under criticism. Dr. Halsted began having his surgical instruments boiled using a gas stove.¹

The next big step forward occurred in 1882, when the German physician and microbiologist, Robert Koch, MD, (Figure 3) published what are called Koch's Postulates that established the existence of microorganisms as a cause of disease. This was quickly followed by Gustav Neuber, MD, a German surgeon, who had surgical instruments and operative field sterilized and was the first to require the surgical team to wear sterile head covers and gowns.¹ In 1897, Jan Milulicz, a Polish Austrian Surgeon, was the first to use a surgical mask and required the surgical team to also wear gloves. This leads back to Caroline Halsted.



Figure 2 Joseph Lister, MD (April 5, 1827 – February 10, 1912)

Introducing Rubber Gloves

Dr. Halsted required the surgical team to disinfect the hands starting with soap followed by dipping them in a caustic solution of potassium permanganate and a hot oxalic acid bath.^{1,2} After doing all of that, however, the team members were required to wash the hands again with a mercury-chloride (phenol) compound.² The combination of chemicals surely killed the resident and transient organisms, but also killed skin cells. Caroline always had sensitive skin, even having to wear gloves when tending to a garden. The chemical hand and arm scrub caused her to develop severe rashes and eczema and her skin would peel. Dr. Halsted was worried when she told him she was leaving surgery. He suggested that Caroline coat her hands in collodion, but after hardening it would crack when she flexed her fingers.² Next, he had plaster casts made of her hands which were sent to the Goodyear Rubber Company located in New York to make rubber gloves with cuffs. The following is a quote from Nuland's book, *Doctors: The Biography of Medicine* in which Halsted described the situation.³

In the winter of 1889 and 1890 – I cannot recall the month – the nurse in charge of my operating room complained that the solutions of mercuric chloride produced a dermatitis of her arms and hands. As she was unusually efficient woman, I gave the matter my consideration and one day in New York requested the Goodyear Rubber Company to make as an experiment two pair of thin rubber gloves with gauntlets. On trial these proved to be so satisfactory that additional gloves were ordered. In the autumn, on my return to town, an assistant who passed the instruments and threaded the needles was also provided with rubber gloves to wear at the operations. At first the operator wore them only when exploratory incisions into joints were made. After a time the assistants became

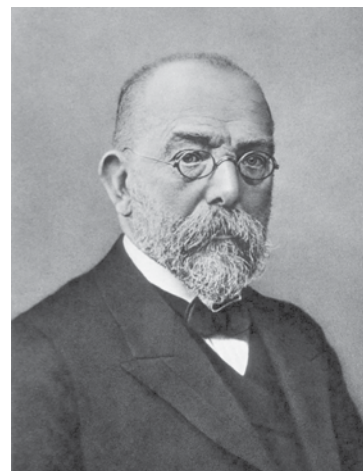


Figure 3 Robert Koch, MD (December 11, 1843 – May 27, 1910)

so accustomed to working in gloved that they also wore them as operators and would remark that they seemed to be less expert with the bare hands than with the gloved hands.

The gloves worked and Caroline's hands and arms were safe from the caustic scrub solution. The gloves were not disposable and had to be pulled on over soapy hands as well as boiled between procedures, but her skin healed.² This was not the end of the glove saga.

Dr. Joseph Bloodgood (Figure 4), who started out as a surgical resident under Dr. Halsted at Johns Hopkins Hospital and eventually was appointed as a clinical professor of surgery, made one of the most important research advances regarding wearing gloves. Beginning in 1893, Dr. Bloodgood began wearing gloves and he noted a dramatic decrease in postoperative infections.² He conducted one of the most thorough research studies of its time. He found that in 220 herniorrhaphies performed without gloves, 38 patients, or 17%, developed postoperative infections.²



Figure 4 Joseph Colt Bloodgood, MD (November 1, 1867 – October 22, 1935)

In 226 herniorrhaphies, however, performed with gloves, only 4 patients, or 1.8%, developed a postoperative infection.² Dr. Bloodgood published his findings in 1899. He became the first surgeon to require all members of the surgical team to wear gloves.

Dr. Halsted soon followed suit also requiring all team members to wear gloves, saying, "Why was I so blind not to have perceived the necessity for wearing them all the time?"¹ (Figure 5) The benefits of wearing gloves could not be ignored and by 1911 half of all surgeons were wearing them. This cleared the path for the consistent use of other personal protective equipment such as facial masks.



Figure 5 Dr. William Halsted in surgery. Note that the sterile team is wearing gloves but have not yet adopted wearing masks.

Arriving at a solution for Caroline's hands and arms not only allowed Dr. Halsted to keep his favorite nurse in the operating room, but most likely also to fulfill another reason for keeping her close. Dr. Halsted was in love with Caroline and in June 1890 were married. For Caroline, however, this was a double-edged sword being married to the man she loved, but as a sign of the times the expectation was for her to resign as a nurse to take care of the household. She continued with life by running the household in Baltimore and the farm from April to November of every year in North Carolina. She started gardening again and was said to enjoy taking frequent buggy rides with Nip and Tuck, her dachshunds.² She will, though, always be known as the caregiver that broke the barrier in being the first to wear gloves in the operating room.

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Lobectomy May be a Viable Alternative in the Surgical Treatment of Medullary Thyroid Carcinoma

OF INTEREST IN THE MEDICAL ARENA

Topline: Evidence from a retrospective study showed that performing thyroid lobectomy to surgically treat sporadic medullary thyroid carcinoma may achieve the same outcomes when compared to total thyroidectomy.

Why the Research is Important: Medullary thyroid carcinoma (MTC) is a neuroendocrine tumor that accounts for approximately 2% - 4% of all thyroid cancers or 1,080 - 1,620 new diagnoses per year in the United States (US).¹ MTC accounts for approximately 8% of deaths from thyroid cancer.^{2,3} In the US, the incidence rate of MTC increased from 2000 to 2019.³ This is in contrast to the other types of thyroid cancer that have been declining by 2% a year since 2014.¹ Sporadic MTC, non-hereditary, accounts for about 75% of MTC cases and the remaining 25% are hereditary.²

The thyroid gland is divided into lobules that consist of small units called thyroid follicles. The thyroid follicles are the structural and functional units of the thyroid gland. Within the walls of the thyroid follicles are the parafollicular cells, called the C cells, that secrete the hormone, calcitonin. MTC occurs when the C cells multiply rapidly.

Total thyroidectomy has been the established surgical standard of treatment for MTC. For unilateral sporadic MTC, however, it has not been studied if performing a lobectomy has the same or better outcomes as compared to a total thyroidectomy.

Study Measures: The research team set out to determine what are the oncologic outcomes of total thyroidectomy versus lobectomy in patients with sporadic MTC.⁴ The primary outcomes of the study were biochemical cure,* distant metastasis development, mortality, overall survival, and structural recurrence**.⁴

Study Design: Using the Cochrane Register of Controlled Trials, Embase, MEDLINE, and Scopus, researchers completed a systematic review and meta-analysis of studies of patients with sporadic MTC who underwent a total thyroidectomy or lobectomy to compare the oncologic out-

comes of the two procedures.

A total of 1,371 patients were identified from nine retrospective studies that consisted of 531 (38.7%) patients who underwent a lobectomy and 840 (61.3%) who underwent a total thyroidectomy.⁴

Results:⁴

The overall survival between the two groups of patients was similar with no significant statistical difference.

At five years, the mortality did not statistically differ between the two groups of patients. The mortality outcomes, additionally, were also similar for both approaches after five years.

The analysis by the researchers showed there were no differences in biochemical cure at five years for both procedures.

The analysis showed there were no differences in distance metastasis at five years for both procedures.

The researchers reported that postoperative complications were more common in total thyroidectomy.

Study Limitations:

The studies included in the research were all retrospective, making the research predisposed to incomplete data capture. Because MTC is rare, large prospective randomized trials have likely not been completed and sample sizes varied extensively. Long-term outcomes were lacking because of the scarcity of studies providing patient follow-up after five years.

Study Conclusions:

"Findings in this systematic review and meta-analysis, based on data from retrospective studies, suggest that thyroid lobectomy may be associated with oncologic outcomes comparable to total thyroidectomy in selected patients with sporadic MTC," the researchers wrote.⁴

* **Biochemical cure:** Cancer free after long-term, post-treatment indicating successful elimination of cancer cells, which is distinct from clinical remission. Used to evaluate the effectiveness of surgery.

** **Structural recurrence:** Reappearance of cancer cells that have formed a new tumor following a period when there was no evidence of disease after initial treatment(s).

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ARIZONA STATE ASSEMBLY

Program Type: Workshop
Date: September 19, 2026
Title: Bring the Heat
Registration: azsaofast.org
Location: HonorHealth NSSC, 2500 W Utopia Road, Phoenix, AZ 85027
Contact: Teresa Sochacki, azsa.assembly@gmail.com
CE Credits: 4 Live Planned

ARKANSAS STATE ASSEMBLY

Program Type: Annual Meeting/Elections
Date: October 3, 2026
Title: Fall Workshop/Business Meeting
Location: TBA, Fort Smith, AR
Contact: Tamara Morgan, PO Box 10301, Fort Smith, AR 72917, 479-414-6720, ark-stateassembly@gmail.com
CE Credits: 6 Live Planned

CALIFORNIA STATE ASSEMBLY

Program Type: Workshop
Date: July 18, 2026
Title: Northern Exposure 4
Location: Stanford Health Care Newark Campus, 7600 Gateway Blvd, Newark, CA 94560
Contact: Jessica Ramirez, PO Box 616, North Hollywood, CA 91603, 650-519-8429, jessica22ten@yahoo.com
CE Credits: 6 Live Planned

COLORADO/WYOMING STATE ASSEMBLY

Program Type: Webinar (approved only for Colorado/Wyoming State Assembly members)
Date: August 4, 2026
Title: Summer School
Contact: Julie Beard, 720-256-5863, information@coloradoast.com
CE Credits: 2 Live Planned

FLORIDA STATE ASSEMBLY

Program Type: Annual Meeting/Elections
Date: September 26, 2026
Title: Florida Surgical Technologists: YOU Matter!
Location: Sheraton Orlando North Hotel, 600 N Lake Destiny Road, Maitland, FL 32751
Contact: Florida State Assembly, flsastate-assembly@gmail.com
CE Credits: 6 Live Planned

GEORGIA STATE ASSEMBLY

Program Type: Workshop
Date: September 12, 2026
Title: 25th Anniversary Celebration
Registration: ast-gasa.com/fall-2026-meeting
Location: Brenau Downtown Center, 301 Main Street SW, Gainesville, GA 30501
Contact: Erin Baggett, PO Box 109, Auburn, GA 30011, 678-226-6943, gasawebmaster@gmail.com
CE Credits: 7 Live Planned

IOWA STATE ASSEMBLY

Program Type: Annual Meeting/Elections
Date: October 10, 2026
Title: Fall 2026 Workshop and Business Meeting
Registration: ia.ast.org/
Location: Mary Greeley Hospital, 1111 Duff Ave, Ames, IA 50010
Contact: Joyce Ortega, 515-954-8332, jaortega@dmacc.edu
CE Credits: 7 Live Planned

MAINE STATE ASSEMBLY

Program Type: Annual Meeting/Elections
Date: October 10, 2026
Title: Fall Workshop and Annual Meeting With Elections
Location: Northern Light Mercy Hospital, 175 Fore River Pkwy, Portland, ME 04102
Contact: Lorraine Swenson, 207-329-8402, lorrainekimball@yahoo.com
CE Credits: 5 Live Planned

MINNESOTA STATE ASSEMBLY

Program Type: Annual Meeting/Elections
Date: September 19, 2026
Title: MNSA Fall 26 Workshop and Business Meeting
Registration: mnast.mn
Location: TBD
Contact: Jolianne Mohler, 763-458-2764, mnast2016@outlook.com
CE Credits: 6 Live Planned

MISSOURI STATE ASSEMBLY

Program Type: Workshop
Date: September 19, 2026
Title: Missouri State Assembly Fall Workshop
Location: State Fair Community College, 1701 N 2nd St, Clinton, MO 64735
Contact: Victoria Thompson, PO Box 1740, Camdenton, MO 65020, 573-836-0637, missouriassemblyast@gmail.com
CE Credits: 8 Live Planned

NEBRASKA STATE ASSEMBLY

Program Type: Workshop & Webinar (webinar approved only for Nebraska State Assembly members)

Date: August 1, 2026

Title: NESA Summer Workshop 2026

Registration: ne.ast.org

Location: CHI Health Nebraska Heart, 7500 S 91st St, Lincoln, NE 68526

Contact: Castin Martin, PO Box 67034, Lincoln, NE 68506, 402-217-7735, nebraskastateassembly@gmail.com

CE Credits: 6 Live Planned

NEW YORK STATE ASSEMBLY

Program Type: Annual Meeting/Elections

Date: October 2-4, 2026

Title: NYAST Fall Conference, Business Meeting, and Elections

Location: Renaissance Albany Hotel, 144 State St, Albany, NY 12207

Contact: Alisia Pooley, 315-575-0403, boardnyast@gmail.com

CE Credits: 12 Live Planned

PENNSYLVANIA STATE ASSEMBLY

Program Type: Annual Meeting/Elections

Date: September 19, 2026

Title: Shaping Tomorrow's OR

Location: Central Penn College, 600 Valley Road, Enola, PA 17025

Contact: Chris Kapp, 717-728-2230, christopherkapp@centralpenn.edu

CE Credits: 5 Live Planned

SOUTH CAROLINA STATE ASSEMBLY

Program Type: Annual Meeting/Elections

Date: September 26-27, 2026

Title: SCSA 25th Fall Business Meeting and Workshop

Registration: scsaast.org

Location: Southeastern Institute of Manufacturing Technology, 1951 Pisgah Road, Florence, SC 29501

Contact: Katrina Williams, 843-615-7454, katinawilliams89@yahoo.com

CE Credits: 12 Live Planned

TENNESSEE STATE ASSEMBLY

Program Type: Workshop Cruise

Date: October 2-5, 2026

Title: CE's at SEA

Location: Carnival Glory, 1492 Charles M. Rowland Dr, Cape Canaveral, FL 32920

Contact: Ellen Wood, 865-283-5901, ellenwoodtnast@gmail.com

CE Credits: 6 Live Planned

Program Type: Annual Meeting/Elections

Date: March 6-7, 2027

Title: CEs in the Hub City

Location: Jackson-Madison County Hospital, 620 Skyline Dr, Jackson, TN 38301

Contact: Ellen Wood, 865-283-5901, ellenwoodtnast@gmail.com

CE Credits: 12 Live Planned

TEXAS STATE ASSEMBLY

Program Type: Workshop

Date: September 12, 2026

Title: West TX Workshop

Registration: texasstateassembly.org

Location: Knipling Education and Conference Center, 21st St & Louisville Ave (6th Floor), Lubbock, TX 79410

Contact: Kristie Cole, PO Box 152982, Arlington, TX 76015, 806-787-8298, kcole@southplainscollege.edu

CE Credits: 8 Live Planned

Program Type: Workshop

Date: September 26, 2026

Title: South Texas CEs

Registration: texasstateassembly.org

Location: Texas State Technical College - Cultural Arts Center, 2425 Boxwood St, Harlingen, TX 78550

Contact: Kristie Cole, PO Box 152982, Arlington, TX 76015, 806-787-8298, kcole@southplainscollege.edu

CE Credits: 8 Live Planned

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ARKANSAS

Fort Smith
October 3, 2026
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2026 BOD Elections
& 2027 Delegate Elections

IOWA

Ames
October 10, 2026
Annual Meeting
2026 BOD Elections
& 2027 Delegate Elections

MINNESOTA

TBD
September 19, 2026
Annual Meeting
2026 BOD Elections
& 2027 Delegate Elections

PENNSYLVANIA

Enola
September 19, 2026
Annual Meeting
2026 BOD Elections
& 2027 Delegate Elections

FLORIDA

Maitland
September 26, 2026
Annual Meeting
2026 BOD Elections
& 2027 Delegate Elections

MAINE

Portland
October 10, 2026
Annual Meeting
2026 BOD Elections
& 2027 Delegate Elections

NEW YORK

Albany
October 2-4, 2026
Annual Meeting
2026 BOD Elections
& 2027 Delegate Elections

SOUTH CAROLINA

Florence
September 26-27, 2026
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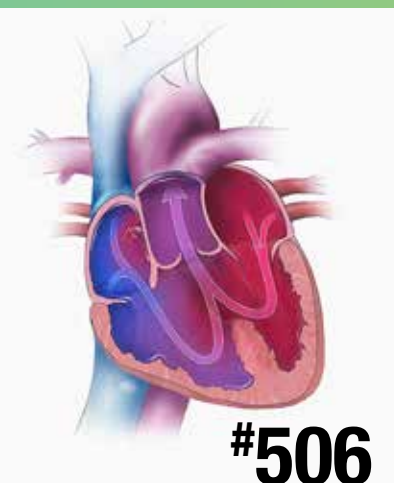


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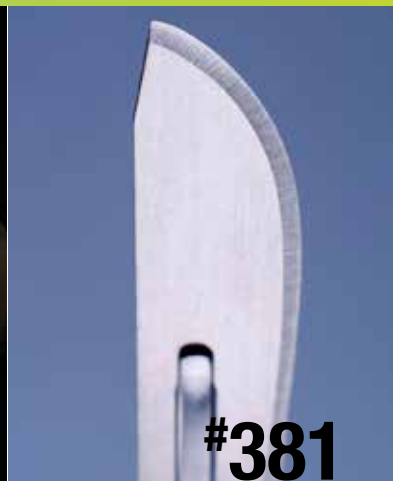
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