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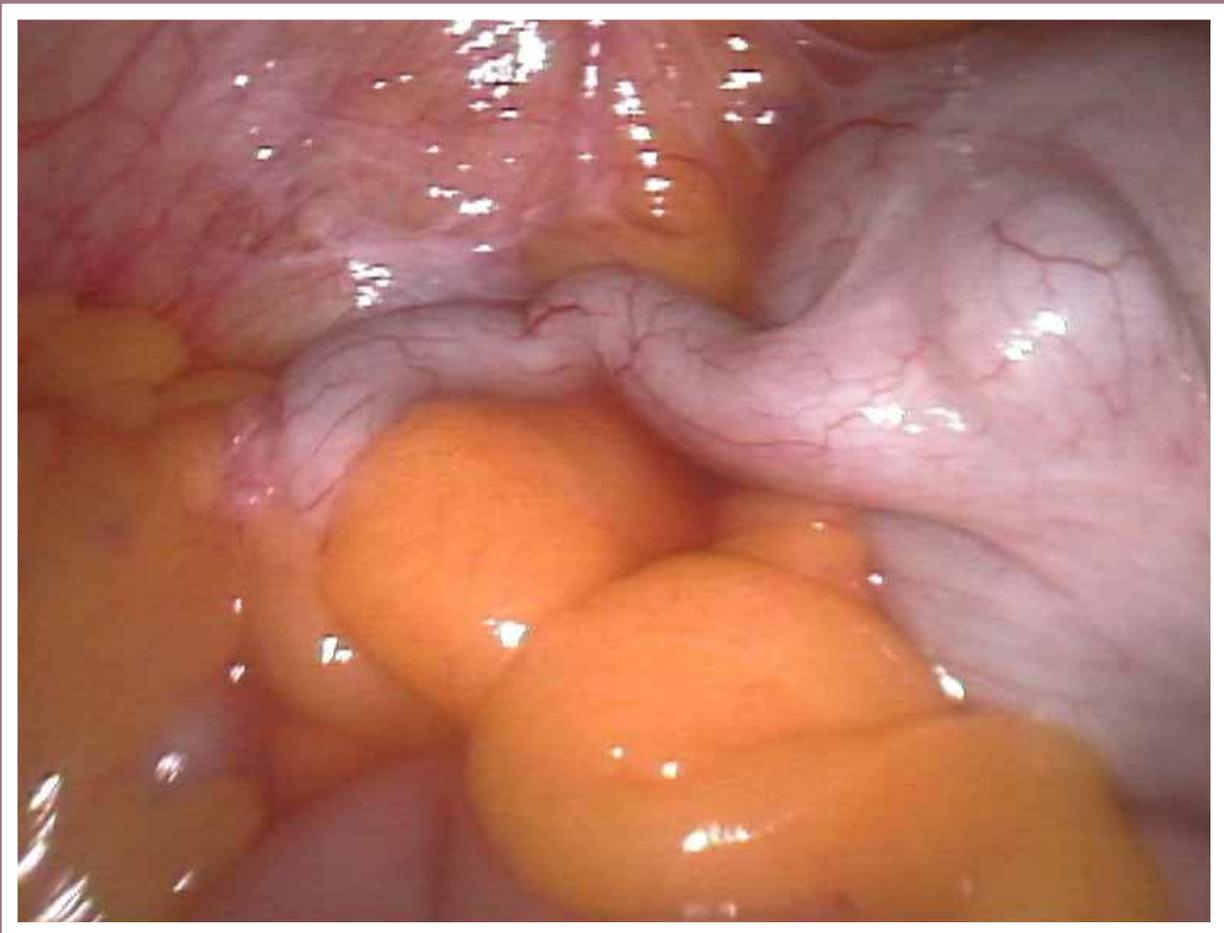
VOLUME 58 NO 3

# SURGICAL TECHNOLOGIST

OFFICIAL JOURNAL OF THE ASSOCIATION OF SURGICAL TECHNOLOGISTS, INC.

Review of the Appendix  
and Appendicitis

*Part 1*



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**Review of the Appendix and Appendicitis Part 1**

*KEVIN B. FREY, CST*

Appendicitis is one of the most common diseases worldwide, affecting hundreds of people on a daily basis. Historically, research in regard to the appendix itself has evolved from a view that it is an extension of the colon with no positive contributory function to one that may have a role in immunity. This month's article includes a review of the anatomy and histology of the appendix, pathophysiology of appendicitis, and the methods for diagnosing appendicitis to include details regarding the types of scoring systems for diagnosing infants, children, and adolescents and the imaging modalities.

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# The Power of Volunteering: Strengthening the Future of Surgical Technology

MONICA THULON, CST, CSFA, FAST, AST DIRECTOR

## BOARD MESSAGE



**V**olunteering with the Association of Surgical Technologists (AST) offers a powerful way to shape your profession, strengthen patient care, and grow as a healthcare leader. By giving your time and expertise, you help ensure that surgical technology remains a respected, evidence-based, and patient-centered field.

First, volunteering with AST allows you to directly influence the future of surgical technology. Professional associations depend on engaged members to develop practice standards, contribute to continuing education, and advocate for policies that protect both patients and practitioners. When you serve on committees, assist with conferences, or support certification and education initiatives, you help define what “best practice” looks like in the operating room. Your frontline experience becomes part of the collective voice that shapes guidelines, educational curricula, and legislative priorities that affect every surgical technologist.

Second, AST volunteering is a structured way to give back to the profession that supports your livelihood. Many technologists remember how a mentor, instructor, or colleague helped them through school, clinicals, or their first job in the OR. Volunteering lets you pay that forward—by speaking to students, helping with exam prep, or supporting local and national events. This service culture strengthens the pipeline of new technologists, promotes professionalism, and reinforces the idea that surgical technology is not just a job, but a career grounded in responsibility to patients and peers.

Third, volunteering with AST significantly expands your professional network. Working alongside technologists, educators, administrators, and surgeons from different regions exposes you to new perspectives, techniques,

and career paths. Those relationships can lead to mentorship, job opportunities, research or teaching roles, and invitations to participate in larger projects. In a competitive and evolving healthcare environment, being visible and engaged in your professional association can set you apart when you seek promotions, specialty roles, or leadership positions.

In addition, service with AST offers meaningful opportunities for personal and leadership development. Committee work, project planning, conference support, and speaking roles all build skills in communication, organization, teamwork, and conflict resolution. These are the same competencies that strong charge techs, preceptors, managers, and educators rely on every day. Volunteering becomes a practical leadership lab where you can try new roles, receive feedback, and grow in a supportive, mission-driven environment.

Finally, volunteering reinforces your sense of purpose and professional identity. Surgical technologists work in high-stakes environments where attention to detail, collaboration, and integrity directly affect patient outcomes. When you volunteer with AST, you connect your day-to-day work in the OR to a broader mission: advancing safe surgery, promoting the value of the CST credential, and elevating the voice of technologists nationwide. That connection can reduce burnout, boost pride in your role, and remind you why your contribution in the operating room matters.

Choosing to volunteer for the Association of Surgical Technologists means stepping beyond your individual job description to support the profession as a whole. You help protect patients, mentor the next generation, influence standards and policy, and develop your own leadership potential. In doing so, you not only strengthen AST and the surgical technology community, but also affirm the essential role that surgical technologists play in modern healthcare.

# Interested in volunteering with AST?

AST is always seeking individuals who are interested in supporting and advocating for the role of surgical technology and the association. As AST builds its role in advocating for safe patient care and safe surgery practices nationwide and around the globe, we need volunteers who are committed to the cause. Fill out your Consent to Serve now to be considered for future appointments and association happenings.

**Complete your CV and Consent:**  
**[www.ast.org](http://www.ast.org) – Leadership – Appointed Offices – CV and Consent**

# AST News

## AT A GLANCE

### SCHOLARSHIPS APPLY FOR FAST

Interested in being considered for the highest honor of the profession? This prestigious honor began in 2006 as an opportunity to recognize those individuals who have upheld the highest professional, ethical and moral standards and traditions of the surgical technology profession, and whose professional activity has been devoted to the advancement of the profession toward improving the quality of surgical patient care.



**Applications are available online and all applications are due by April 15.**

**Before You Apply:** Make sure to thoroughly read the selection criteria and gather all documents and information that are needed to complete the application prior to starting. Please plan ahead and allow for enough time to complete the application. If you close out of your window or browser before hitting submit, you will lose any details you have entered. Once you click submit, it will be submitted to the FAST Selection Panel. All required information must be completed before you are allowed to submit.

**Selection Criteria:** To see if you meet the criteria to apply to become a FAST, visit [www.ast.org](http://www.ast.org) – Members – Fellows of FAST – and click on the link selection criteria.

To apply for FAST, visit [www.ast.org](http://www.ast.org) – Members – Fellows of FAST. You will need to use your login information to sign into your AST account. Then look for FAST and click on the application.

### CONTINUING EDUCATION RESOURCES EARNING CE

The vast majority of all 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, in order 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 facilities, and now live events. There are no refunds given for AST online CE tests or CE credit packages.

Number of CE Credits	Processing Fee
* 1- 10	\$15
*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 your CE 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?

### 3 Ways to Submit Your CE Credits

- Mail to: AST, 6 West Dry Creek Circle, Ste 200, Littleton, CO 80120-8031
- Fax CE credits to: 303-694-9169 Do not mail credits that were previously faxed.
- Email scanned CE credits in PDF format to AST Member Services at [memberserv@ast.org](mailto:memberserv@ast.org). Do not mail credits that were previously emailed.

## Ways To Earn CE Credits

### State Assembly Meetings

State assemblies provide CE during meetings, as well as serving as the grassroots organization in regard to state legislative efforts. Announcements of state assembly meetings are published in *The Surgical Technologist*, on the states' websites, and the AST site, [www.ast.org](http://www.ast.org), under the State Assembly tab. State assemblies also contact state members of upcoming meetings through email and mailings.

### Submitting State Assembly CE Credits

- All state assemblies are required to complete the AST CE program approval prior to the date(s) of the meeting for the CE credits to be approved. The participant should verify that the meeting has been AST approved.
- The state assembly is required to provide a certificate of attendance to the participants even if "auto recorded."
- Member: Submit a copy of the certificate to AST for processing. The AST CE Reporting Form is not required to be submitted.
- Nonmember: Submit a copy of the certificate of attendance with the AST CE Reporting Form and \$400 nonmember processing fee.

### College Courses

College courses that are relevant to the medical-surgical practice of surgical technology or surgical first assisting can be submitted to AST for CE credits.

- College courses MUST be completed with a minimum grade of "C."
- The courses MUST be completed at an institution that is accredited by an organization recognized by the US Department of Education.
- Surgical first assistant college courses submitted for CE credits MUST be completed at a CAAHEP-accredited surgical first assistant program.
- General nursing and physician assistant college courses that are not specifically related to the medical-surgical practice of surgical technology or surgical first assisting will not be accepted for CE credits.
- Anatomy & physiology, microbiology, pathophysiology, and pharmacology must be advanced level college courses.

### Determining the Number of CE Credits:

- College courses are awarded five CE credits for each semester hour completed. For example, a three-college-credit semester course:  $3 \times 5 = 15$  CE credits.

### Submitting College Courses for CE Credits

- Member and Nonmember: Submit an unofficial college transcript from the institution where the courses were completed with the AST CE Reporting Form – no exceptions.
- Nonmember: Include the \$200 nonmember processing fee.

### **Recommendation**

- Provide a copy of the course descriptions from the current edition of the college catalog with the AST CE Reporting Form and transcript(s).
- The descriptions assist in determining the relevancy of the course(s) to the medical surgical practice of surgical technology or surgical first assisting.

### **Healthcare Facility Sponsored In-Services**

Healthcare facility sponsored in-services can be submitted to AST for CE credits as long as they are relevant to the medical-surgical practice of surgical technology or surgical first assisting. Employers are NOT required to submit healthcare facility in-services to AST for approval.

- AST accepts annual mandatory CE in-services relevant to the medical-surgical practice of surgical technology or surgical first assisting. For example, fire safety.
- Healthcare facility orientation is NOT accepted for CE credits.
- If the employer sponsors or provides funds for an employee(s) to attend a conference, forum, seminar, symposium, or workshop, or complete any other type of CE activity sponsored by an organization other than the healthcare facility, the program MUST be AST approved for the CE credits to count toward certification renewal.
- BLS, ACLS, and PALS are accepted for CE credits. Every 50-60 minutes of activity = 1 CE credit.
  - BLS includes CPR and automated external defibrillator (AED) training.
- CE credits are NOT awarded for on-the-job training, healthcare facility orientation, or work experience that the CST and CSFA completed as an employee of the healthcare facility providing the training.
  - Example: A CST is completing on-the-job training in learning the first scrub role to be a member of the healthcare facility's cardiovascular team. This training is distinct from attending healthcare facility sponsored in-services as described above.

### **Submitting In-Service CE Credits**

- A healthcare facility certificate of attendance, official healthcare facility transcript, or sign-in sheet with an authorized signature (for example, a surgery department supervisor, clinical educator, or other individual authorized by the employer).
- The documentation must also include the name of the healthcare facility, indicate it is an in-service, title

of in-service, date of in-service, number of CE credits, and signature of the CST or CSFA attendee. The documentation must be submitted with the AST CE Reporting Form.

## **CALL FOR SPEAKERS**

Interested in giving a clinical presentation or know someone who would? AST is actively accepting applications to present in webinars or at our national events. Interested? Complete our speaker package by visiting our website – ast.org – Educators – Speaker Application.

## **WRITE FOR US CALLING ALL WRITERS!**

We are always looking for new CE authors and surgical procedures that detail the latest advancements in the surgical arena. We'll also help you every step of the way, AND you'll earn CE credits by writing a CE article that gets published! Here are some guidelines to kick start your way to becoming an author:

- 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? Email us at [communications@ast.org](mailto:communications@ast.org).

## **MEMBER BENEFITS**

Being a member of AST really does have its benefits! Not only are you part of the largest organization that is focusing on surgical technologists, but Automatic transfer of CE credits to the National Board of Surgical Technology and Surgical Assisting (NBSTSA).

- Automatic recording of CE credits earned through AST online offerings and earned at AST events such as the national conference.
- Submittal of CE credits at any time during your membership so you don't lose the valuable certificates of completion/attendance.
- Maintenance of your CE credit certificates for 5 years.
- Annual CE credit letter – a tally of how many credits you earned throughout the year.

- Low membership fee. AST has kept the low fee a priority while other associations have raised its membership fees.
- Cost savings when registering for AST events, such as the national conference and Educators Event.
- State-specific legislative efforts driven by AST National to further along the profession.
- Legislative updates and support for your state.
- Access to the Map of State Laws.
- Discounted CE opportunities that are offered by AST, including CE Credit Packages.
- Having a say when it comes to your state's assembly board. Active members get to vote for their state assembly Board of Directors.
- Communications including *The Surgical Technologist*, monthly e-newsletters, AST social media sites, including special professional groups on LinkedIn, Facebook and more.
- Leadership opportunities to serve on state assembly and national boards as well as state and national committees.
- Scholarship opportunities for students, educators and CSTs.
- The AST Career Center, where you can post your resume and obtain information on job openings.

## DISCOUNTS

### MEMBER-GET-A-MEMBER

Earn two or more months of FREE membership with the Member-Get-A-Member program. Recruit colleagues and AST will extend your membership by the appropriate number of months. Here's how:

- Recruit a valid new member at the one-year membership rate of \$80.
- Make sure that each person you recruit provides AST with your name and your AST member number when filling out their application.
- After AST receives the recruited member's application, we will extend your membership by two months for each person you recruit.
- Recruit two members at the \$80-level, and we'll extend your membership by four months! The more people you recruit, the longer your membership gets extended.

*Bonus membership months are not applicable to members who recruit themselves, students or retired/disabled members. No substitutions will be permitted. Your membership must be current to receive the bonus months. Potential members MUST supply your name and your AST member number in order for you to receive bonus member-*

*ship months. If a person's membership has lapsed for more than a year, they are considered a new member.*

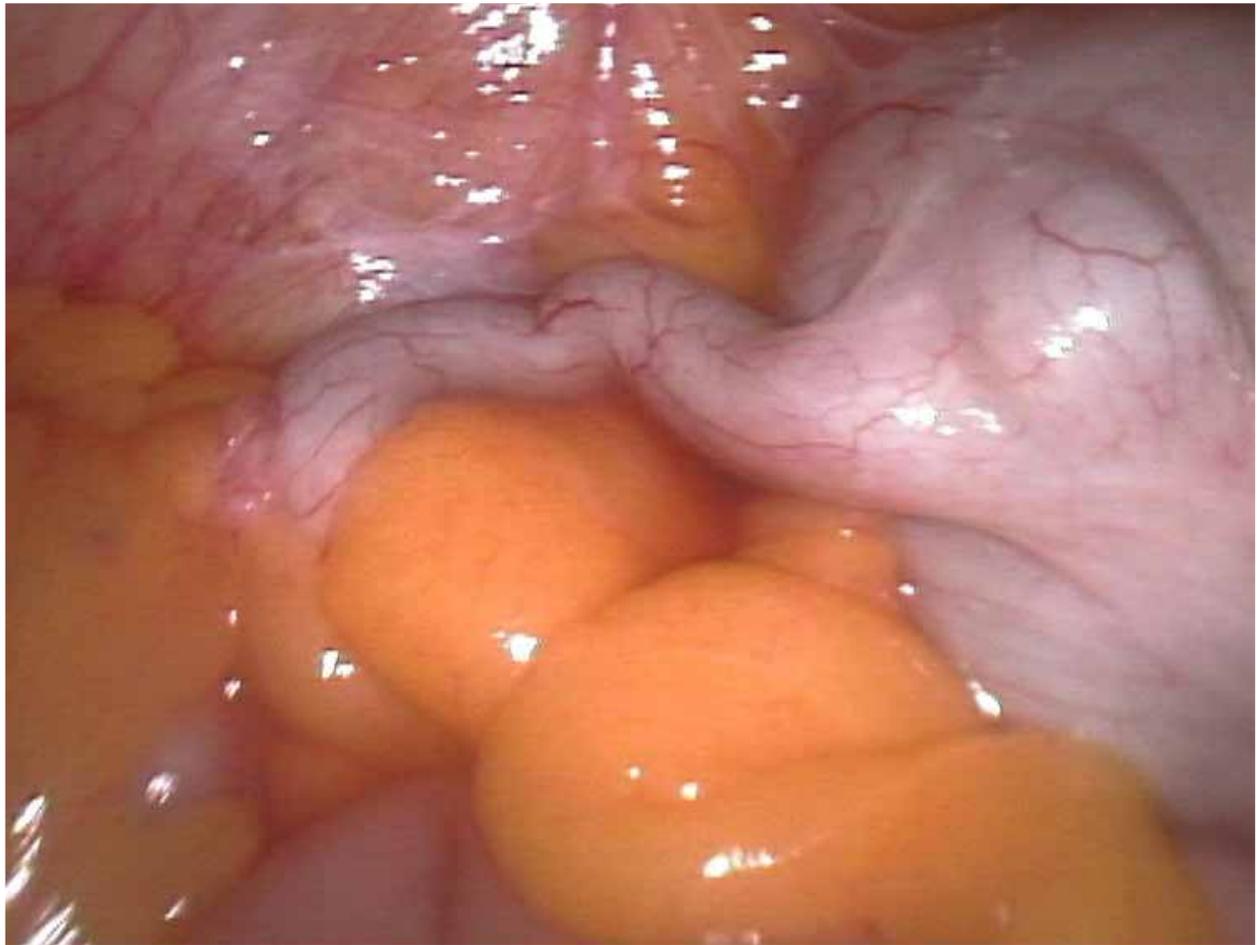
Reach out to our Member Services team at 1-800-637-7433 for more information.

## MILESTONES



Congratulations to the following state assemblies as they celebrate anniversaries this month! AST appreciates your hard work, dedication and all your years of service for making our state assemblies the backbone of this organization.

- Connecticut – 26 years
- Montana – 22 years
- North Dakota – 11 years

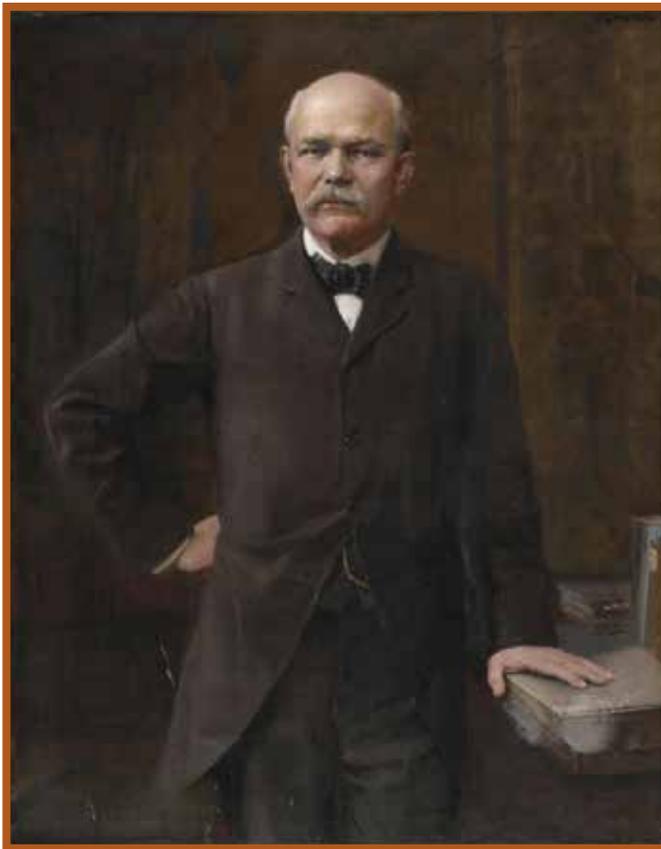


# Review of the Appendix and Appendicitis

## Part 1

KEVIN B. FREY, CST

Jacopo Berengario da Carpi (1460 – 1530), Italian physician, first described the human appendix in his publication *Isagoge breves* (1522 – English translation *A short introduction to anatomy*).<sup>1</sup> He was considered the most important anatomist before Andreas Vesalius. Reginald H. Fitz, American physician, provided the first detailed description of acute appendicitis in 1886 providing a clear concept of the course of the disease and is credited with giving the disease its name (Figure 1).<sup>2</sup>



**Figure 1** Reginald H. Fitz

### LEARNING OBJECTIVES

- ▲ Describe the anatomy of the appendix
- ▲ Understand the histology of the appendix
- ▲ Discuss the pathophysiology of appendicitis
- ▲ Review the details of the various types of risk scores

## KEYWORDS

acute appendicitis, complicated appendicitis, left shift, McBurney's point, uncomplicated appendicitis

## DEFINITIONS

**Acute appendicitis:** The general term referring to sudden appendicitis that includes uncomplicated and complicated appendicitis.

**Acute uncomplicated appendicitis:** Usually referred to as uncomplicated appendicitis. A phlegmonous inflamed appendix without signs of necrosis or rupture.

**Complicated appendicitis:** Occurs when focal or transmural necrosis is present that can lead to perforation. Also characterized by the presence of an abscess, phlegmon, and appendiceal rupture that can result in peritonitis.

**Guarding:** A finding during an examination of the abdomen. It is an involuntary reflex of the patient during palpation of a tender abdomen. The patient tenses the abdominal wall muscles in an attempt to "guard" the area during palpation.

**Leukocytosis:** Increase in the number of leukocytes in the circulating bloodstream. It can be a sign that the body is fighting an infection (bacterial or viral), inflammation, injury, or stress, but can be a sign of other serious conditions such as bone marrow disorders and leukemia. It can also temporarily occur because of intense exercise, pregnancy, and ingesting specific medications such as corticosteroids.

**Periappendiceal fat stranding:** Inflammation of the fat layer that surrounds the appendix. The fatty layer is normally dark in color but appears white and streaky on CT scan when the patient has appendicitis. During appendicitis, inflammatory substances are released that cause fluid and immune cells to leak into the fat layer causing the small vessels and lymphatics in the fat to swell. It's an important sign of acute appendicitis and can correlate with the severity of the condition.

**Phlegmon:** Inflamed mass.

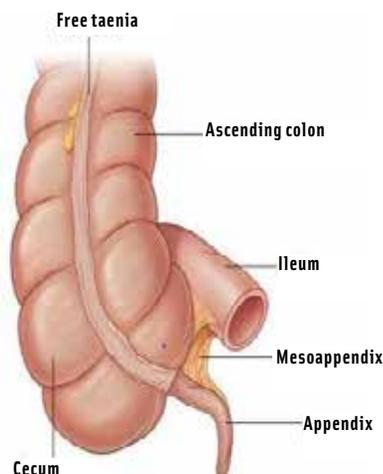
The incidence of appendicitis in North America is approximately one occurrence per 1,000 people per year.<sup>3</sup> In the United States (U.S.) the incidence rate ranges from 100 to 233 new cases per 100,000 individuals per year.<sup>4,5</sup> In the U.S., approximately 300,000 hospital visits are reported annually because of appendicitis.<sup>6</sup> Appendicitis remains one of the most common surgical emergencies in pediatric patients.<sup>1,2</sup> It is the fifth most common reason for hospitalization among children in the U.S.<sup>7</sup> The peak incidence in children and adolescents is 10 to 19 years of age.<sup>2,3</sup> Hospitalization related to appendicitis costs approximately \$3 billion per year within the U.S.<sup>7-9</sup>

Although acute appendicitis can occur at any age, it most commonly occurs between the ages of 5 to 45, signifying that the highest incidence of appendicitis occurs during childhood, adolescence, and early adulthood.<sup>10</sup> The lifetime incidence of acute appendicitis is slightly higher in males occurring 8.6% as compared to 6.7% in females.<sup>11</sup>

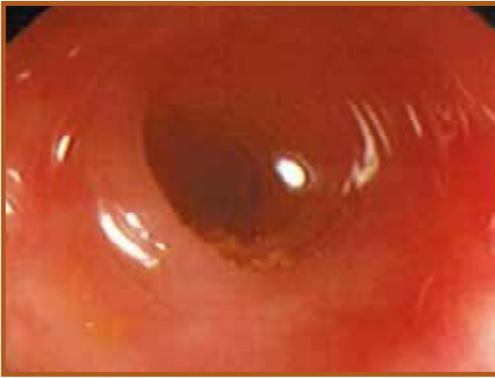
Combined with immature immunity and weakness of the appendix wall, perforation is more common in children with appendicitis, which is one of the most serious health-related problems worldwide. When the diagnosis of appendicitis is made in less than 24 hours in children 5 – 12 years of age the perforation rate is approximately 7%, if between 24 – 48 hours it increases to 38%, and if more than 48 hours is as high as 98%.<sup>12</sup>

## ANATOMY AND PHYSIOLOGY OF THE APPENDIX

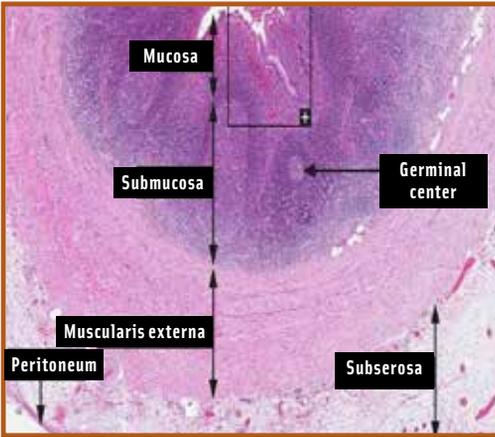
Simply put, the appendix is a narrow, elongated, blind-ended tube that is attached to the posteromedial end of the cecum. It is suspended from the terminal ileum by the mesoappendix, a fold of mesentery (Figure 2). In adults, the appendix is typically 6 – 10 cm in length and 3 – 8 mm in diameter with a 1 – 3 mm lumen (Figure 3).<sup>1,2</sup> In the neonatal, the appendix averages 4.5 centimeters (cm) in length.



**Figure 2**  
Appendix anatomy



**Figure 3**  
Colonoscopy view of the lumen of the appendix

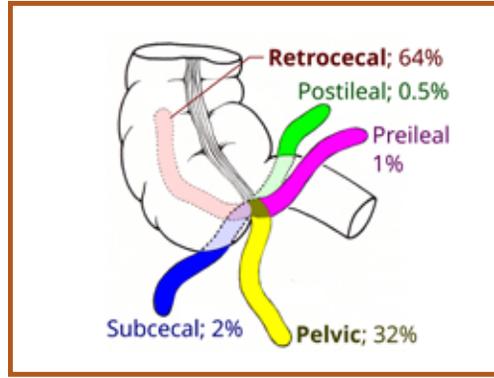


**Figure 4**  
Histology of appendix

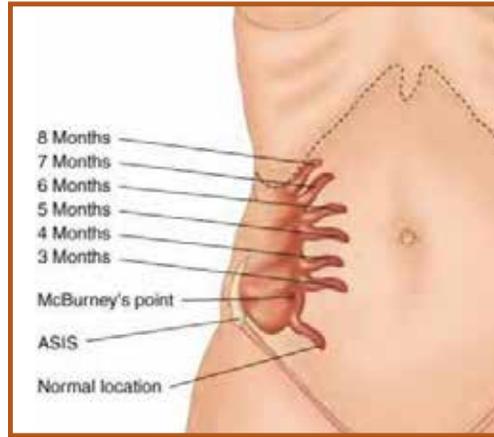
The appendix forms in the midgut of the fetus. At week 6 the cecal diverticulum has formed and is the origin for the development of the cecum and appendix.<sup>13</sup> The appendix is visible by the 8<sup>th</sup> week of pregnancy.<sup>2</sup> As the colon develops and elongates, the cecum and appendix medially rotate along with the rest of the midgut and descend into the right lower quadrant (RLQ). During the 14<sup>th</sup> and 15<sup>th</sup> weeks of pregnancy, the mucosa within the appendix develops lymphoid tissue, contributing to the suggestions made in recent multiple studies that the appendix has a function in immunity.<sup>13</sup> (This will be discussed in the Part 2 article.) By the age of 2 – 3 years, the appendix has matured.<sup>2</sup>

The layers are the same as the colon – mucosa, submucosa, muscularis propria, and serosa (Figure 4). However, the appendix differs from the other sections of the colon in that it contains a large concentration of lymphoid tissue, particularly in younger children. The significance of the presence of the lymphoid tissue and its relation to appendicitis in young patients is discussed later in the article.

The position of the appendix can vary and is categorized into five locations depending on the positional relationship to the cecum, ileum, and pelvis (Figure 5).<sup>1</sup> The positions can be remembered by applying clock positions:



**Figure 5**  
Various positions where the appendix can be located



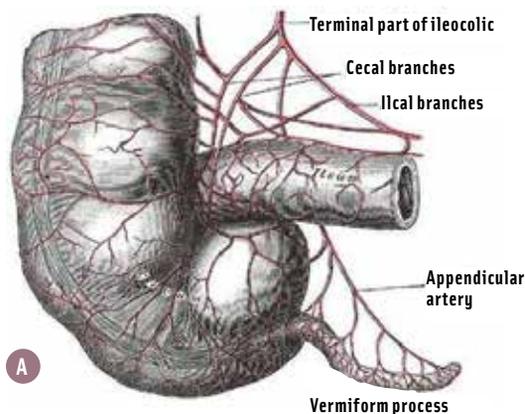
**Figure 6**  
Location of appendix during pregnancy

- Retrocecal – The most common position, behind the cecum at the 11:00 position.
- Post-ileal – Posterior to the terminal ileum at the 1:00 or 2:00 position.
- Pre-ileal - Anterior to the terminal ileum at the 1:00 or 2:00 clock position.
- Pelvic – Descending over the pelvic brim at the 5:00 position.
- Subcecal – Below the cecum at the 6:00 position.

The appendix also changes position in pregnant women depending on the month of pregnancy (Figure 6). (In the figure, ASIS refers to the anterior superior iliac spine).

**Vascular Supply**

The arterial supply is from the appendicular artery, a branch of the ileocolic artery which is a branch of the superior mesenteric artery.<sup>1</sup> The venous drainage occurs through the appendicular vein to the ileocolic vein, which is a branch of the superior mesenteric vein that drains through the liver via the hepatic portal vein.<sup>1</sup> The appendicular artery and vein are contained in the mesoappendix (Figure 7).



**Figure 7** Arterial supply: (A) Diagram of blood supply, (B) Mesoappendix displayed demonstrating the appendicular artery

### **Nerve Supply**

Sympathetic and parasympathetic branches of the autonomic nervous system innervate the appendix. The parasympathetic innervation arises from the fibers of the vagus nerve (CN X) and the sympathetic fibers arise from the lateral horns of the inferior thoracic spinal cord.<sup>1</sup> A clinically important note to remember is that the afferent nerve fibers of the appendix travel along the sympathetic pathway in reverse and attach to the spinal cord at the T10 level accounting for why the patient initially feels visceral pain in the central area of the abdomen during the early stages of appendicitis.<sup>1</sup>

### **Lymphatic Drainage**

The lymphatic drainage follows the arterial course in reverse from a single node contained within the mesoappendix to the ileocolic lymph nodes that surround the ileocolic artery and drainage proceeds into the superior mesenteric lymph nodes.<sup>1,13</sup>

## **ETIOLOGY AND PATHOPHYSIOLOGY OF APPENDICITIS**

Appendicitis is caused by the obstruction of the appendiceal lumen leading to inflammation. There are various causes of the obstruction such as appendiceal tumors, fecaliths, and hyperplasia of the lymphoid tissue, resulting in acute appendicitis. It is important to understand that the causes of the obstruction vary with age groups, emphasizing the need to take under consideration the specific factors that affect each age group when evaluating and diagnosing appendicitis.

In children and adolescents, the appendix contains a great quantity of lymphoid tissue that makes the young-

er patient prone to appendicitis because of lymphoid hyperplasia leading to inflammation and ischemia.<sup>11</sup> The inflammation increases the risk for perforation, the formation of an abscess, and proceeding peritonitis. Infancy through early middle childhood, the omentum is continuing to develop. It is during this period of time that it is not able to contain the purulent material that escapes when an appendiceal perforation occurs.<sup>12</sup> Therefore, the reason for peritonitis following perforation more likely happens in children.

In adults, acute appendicitis is commonly caused by fecaliths, infections, or tumors.<sup>10</sup> Appendiceal neoplasms occur in 1.2 cases per 100,000 in the U.S. Gastroenteropancreatic neuroendocrine tumors (GEP-NETs), also called carcinoid tumors, are one of the common types of appendiceal malignancies.<sup>14</sup> The neoplasm usually forms a 2 cm to 3 cm mass at the distal tip.<sup>13</sup> Fortunately, they rarely metastasize and if that occurs the primary metastatic sites are the liver and lymph nodes, thus prompting clinical evaluations of the liver and lymph nodes in patients suspected for GEP-NET. Because the tumor forms in the distal tip, they rarely cause an obstruction and can remain asymptomatic.<sup>13</sup> However, 10% of the tumors form at the base of the appendix and can cause appendicitis. An appendectomy that demonstrates negative margins is the only procedure that needs to be performed when the tumor is less than 1 cm in size.<sup>10</sup> However, a right hemicolectomy will be performed for tumors that are more than 2 cm in size, as well as if there are enlarged lymph nodes or mesenteric invasion.<sup>11</sup>

Irrespective of the cause, the obstruction of the lumen causes an increase in both the intraluminal and intramu-

ral pressures. The pressure produces the inability for lymph fluid to properly flow, occludes small vessels and causes thrombosis.<sup>10</sup> The appendix becomes distended because of the accumulation of mucus and the lack of lymphatic and vascular circulation that causes the wall of the appendix to necrose. Additionally, bacteria accumulate inside the appendix, beginning with aerobic microorganisms in the early stages of appendicitis followed by a mixture of aerobic and anaerobic microorganisms such as *Bacteroides*, *Escherichia coli*, and *Pseudomonas*.<sup>10</sup> The appendix is prone to perforation when it has become grossly inflamed and swollen and advanced necrosis has occurred.

## DIAGNOSING APPENDICITIS

### *Physical Signs and Symptoms and Examination*

Achieving an accurate diagnosis is obviously paramount to being able to properly treat the patient because there are multiple other pathologies that mimic the symptoms of appendicitis. For example, gastroenteritis is one of the most common misdiagnoses, with a history of diarrhea a common presentation.<sup>12</sup> To achieve an accurate clinical diagnosis, physicians rely on the physical signs and symptoms presented by the patient, laboratory results, and possibly imaging results. Most patients seek treatment when they are affected by the classic group of symptoms – diarrhea, fever, malaise, nausea and vomiting, and RLQ. The patient may not exhibit all the symptoms with fever and RLQ pain occurring most often. Approximately 40% of patients with acute appendicitis have a fever.<sup>10</sup>

Appendicitis remains one of most common surgical emergencies in pediatric patients.

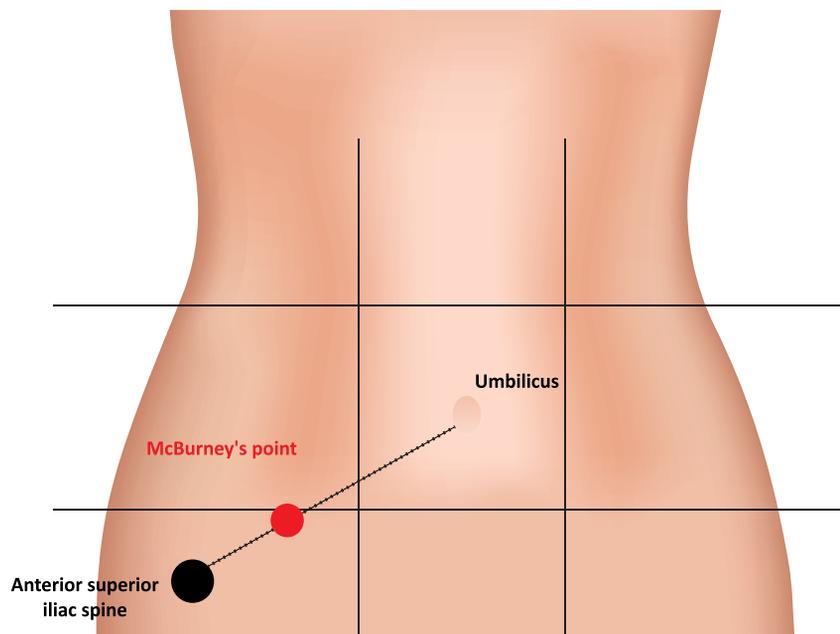


Figure 8 McBurney's Point

Initially, the primary symptom of acute appendicitis is diffuse or periumbilical pain caused by stimulation of the visceral afferent fibers that travel along the sympathetic innervation and enter the spinal cord at the T10 level.<sup>11</sup> As the appendix becomes more inflamed, it irritates the parietal peritoneum causing the classic sign of pain in the RLQ. The abdomen is most tender at McBurney's point located one-third the distance from the right anterior superior iliac spine to the umbilicus (Figure 8).<sup>13</sup>

There are three signs that can be encountered during the physical examination in patients with suspected appendicitis, but it must be emphasized that these signs are not diagnostic. The Dunphy sign, described by the physician John Dunphy (1908 – 1981) in his book *Physical Examination of the Surgical Patient* (1975), is when the patient experiences increased abdominal pain when coughing.<sup>10,15</sup> The Rovsing sign, established by the Danish surgeon Niels Rovsing (1862 – 1927), is RLQ pain that is prompted by palpation of the left lower quadrant.<sup>10,16</sup> If the surgeon has the patient extend their right leg it can elicit RLQ pain indicating a positive psoas sign.<sup>10</sup> The pain occurs because of irritation to the psoas muscle by the inflamed appendix, accounting for the reason why some patients flex the hip to shorten the muscle and relieve the pain.

The timeline for symptoms in acute appendicitis varies; however, symptoms may continue for 12 to 24 hours and possibly beyond 48 hours.<sup>10</sup> Approximately 75% of patients with acute appendicitis will present within the 24 hours of the onset of symptoms.<sup>10</sup> The risk of rupture also varies, with approximately 2% of cases rupturing within 36 hours after the onset of symptoms and the risk increases every 12 hours that passes.<sup>10</sup> However, the younger the patient the earlier the perforation has been shown to occur. Approximately 70% of patients less than three years of age experience perforation within 48 hours of the onset of symptoms.<sup>12</sup>

### Scoring Systems for Diagnosing Young Patients

To assist physicians in diagnosing infants, young children, and adolescents three scoring systems have been used for several years that are based on signs, symptoms, and laboratory values – Alvarado Score, Pediatric Appendicitis Risk Calculator, and Pediatric Appendicitis Score. However, before going into detail about the scoring systems, it will help to review the normal laboratory values for neutrophils and gain an understanding of the term “left shift”.

Leukocytes make up approximately 1% of the total blood volume in healthy adults (see Table 1).<sup>17,18</sup> The five types of leukocytes in order from highest percentage to lowest are neutrophils, basophils, lymphocytes, monocytes, and eosinophils. Neutrophils make up approximately 55% - 70% of leukocytes with an average blood count of 2,400 – 7,000 cells per microliter (these numbers are averages and can vary according to the research article consulted).<sup>17,18</sup> Of patients with appendicitis, approximately 80% - 85% will have a leukocyte count above normal.<sup>19</sup> About 78% of adults with appendicitis have a neutrophil count that is over 75% of their leukocytes, referred to as neutrophilia.<sup>19</sup> Among children, 93% will exhibit neutrophilia.<sup>19</sup>

**TABLE 1: NORMAL LEUKOCYTE COUNTS ACCORDING TO AGE GROUP<sup>17</sup>**

Age Group	Leukocyte Count Per Microliter of Blood
0 – 2 weeks	9,000 to 30,000/mm <sup>3</sup>
2 – 8 weeks	5,000 to 21,000/mm <sup>3</sup>
2 months to 6 years	5,000 to 19,000/mm <sup>3</sup>
6 – 18 years	4,800 to 10,800/mm <sup>3</sup>
19+	4,500 to 10,500/mm <sup>3</sup>

The term “left shift” has been a laboratory term used for many years to refer to the abnormal increase in the proportion of immature neutrophils in the circulating blood.<sup>3,20</sup> It is used to indicate that the bone marrow has increased the production of neutrophils that are released into the bloodstream prematurely in response to an infection or inflammation. Historically, when hematologists or laboratory technicians were viewing leukocytes through the microscope there would be a diagram of the line of neutrophils from the most immature on the left to fully mature on the right. Even though modern day microscopes no longer have the old style key for counting leukocytes to include neutrophils, the term has stuck throughout history and is still in use.

The modified Alvarado Score for Acute Appendicitis has seven diagnostic categories in which a point system is used of either 1 or 2 points. Two points are given for RLQ tenderness and leukocytosis.<sup>3</sup> One point is given for fever, rebound tenderness in the RLQ, migration of pain to the RLQ, anorexia, and nausea or vomiting.<sup>10</sup> The highest score a patient can be assigned is 9 points. A score of 7 points or higher is a good indicator for acute appendicitis.

The Pediatric Appendicitis Score (PAS) also uses a point system based on eight signs, symptoms, and laboratory values. Two points are given for RLQ tenderness when coughing or palpation and tenderness over the right iliac fossa.<sup>3</sup> One point is given for anorexia, fever of more than or equal to 38.0 degrees C, nausea or vomiting, leukocytosis of more than 10,000, neutrophilia of more than 7,500, and migration of pain to the RLQ.<sup>3</sup> Less than 4 points is a low risk PAS and other causes of the

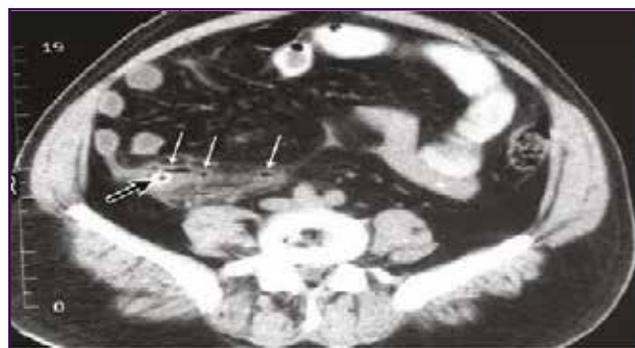
Achieving an accurate diagnosis is obviously paramount to being able to properly treat the patient because there are multiple other pathologies that mimic the symptoms of appendicitis

acute abdominal pain should be considered. A score of 4 to 6 is an indicator that imaging, such as abdominal computed tomography (CT) scan, magnetic imaging resonance (MRI) or ultrasound (US), can be helpful in arriving at a definitive diagnosis. A score of more than 6 is a high risk PAS and a surgical consult should be arranged.

The Pediatric Appendicitis Risk Calculator (pARC) is also based on eight categories but does not use a scoring system. Rather, the physician indicates what are the signs, symptoms, and laboratory values to arrive at a diagnosis. The pARC is intended for use in children more than or equal to 5 years of age with a duration of acute abdominal pain less than 96 hours. Multiple studies have shown that the pARC is possibly better than the PAS as it more accurately quantifies risk, improving imaging decisions by the physician and leading to fewer false positives.<sup>21,22</sup> It provides a continuous score rather than a point system cutoff to assist physicians in ruling patients in or out. The clinical signs and symptoms that are recorded include duration of pain in hours, white blood cell count, percentage of neutrophils, presence of maximum RLQ tenderness, presence of guarding, and history of migration of RLQ pain.<sup>23</sup>

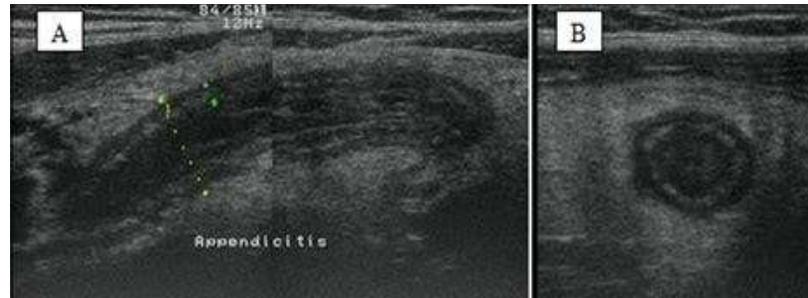
### Imaging Modalities

Acute appendicitis is primarily diagnosed based on clinical evaluation and history and physical examination of the patient. However, imaging such as CT scan, MRI, or US may be used as an adjunct in arriving at a diagnosis. CT scan with intravenous contrast has diagnostic accuracy and excellent visualization of the appendix.<sup>11</sup> It is particularly useful to evaluate complications associated with acute appendicitis including presence of an



**Figure 9** Abdominal contrast enhanced computed tomography scan showing a fecalith (black arrow) at the base of a distended (>6 mm) appendix with intramural gas (white arrow).

abscess, fistula formation, and perforation. The criteria for diagnosing appendicitis when CT scan is used include an appendix with an outer diameter of more than 6 mm to 9 mm, a thick appendiceal wall that measures more than 2 mm to 3 mm, periappendiceal fat stranding, inflamed tissue at the appendiceal base, and the presence of a fecalith.<sup>11</sup> A fecalith can be easily detected with CT scan (Figure 9). However, the main disadvantages are exposing young patients to ionizing radiation when their tissues are more radiosensitive and the higher cost.<sup>4,20</sup>



**Figure 10** Ultrasound of acute appendicitis

Ultrasound is the preferred imaging modality for children and pregnant women because of the lack of ionizing radiation and contrast media (Figure 10).<sup>10,20</sup> It is more convenient because it can be performed at the bedside and is less expensive. However, the disadvantage is that it has a lower diagnostic accuracy when compared to CT scans, with reports of 50% to 80% of normal appendices not visualized on US.<sup>10</sup> A primary limitation is its use in patients with an unhealthy weight. The increase in the adipose tissue makes it challenging to visualize the appendix and assess for signs of appendicitis.<sup>10</sup>

Abdominopelvic MRI is also useful when US results are inconclusive. It is equal to CT scans in accuracy and visualization of the appendix, without the risk of ionizing radiation. However, it has several limitations including high cost, the need for a specialized interpreter who has the skills for interpreting the images and longer scan times. Because of the increased scan time, younger children may require sedation. Additionally, intravenous gadolinium contrast should not be used in pregnant women because of placental diffusion.<sup>11</sup>

### Conditions That Can Mimic Acute Appendicitis in Infants and Sexually Active Adolescents

There is a wide range of conditions that can cause abdominal pain that may mimic acute appendicitis. Thorough

clinical evaluation that includes history and physical examination and laboratory and imaging studies are essential to rule appendicitis in or out. The following are examples of those conditions.

- Ectopic pregnancy – Should be ruled out in sexually active adolescent females. It can present with lower abdominal pain, amenorrhea, and possibly vaginal bleeding.<sup>11</sup>
- Gastroenteritis – As previously stated, gastroenteritis is a common misdiagnosis. It causes symptoms like appendicitis including abdominal pain, diarrhea, nausea and vomiting.
- Intussusception – The condition may be initially missed when the patient is being evaluated because it mimics the pain symptoms of appendicitis. It presents with intermittent, severe abdominal pain and an abdominal mass that can be felt upon palpation.
- Pelvic inflammatory disease – This condition should be considered in sexually active adolescent women who present with lower abdominal or pelvic pain.<sup>11</sup>

Part 2 will include a broad discussion of the various facets of an appendectomy and focus on the recent information regarding antibiotic non-operative treatment.

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# Review of the Appendix and Appendicitis *Part 1*

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1. **What percentage of patients with acute appendicitis have a fever?**
  - a. 40%
  - b. 35%
  - c. 30%
  - d. 25%
2. **What histologically differentiates the appendix from the rest of the colon?**
  - a. Tissue layers are thinner
  - b. There are only three layers
  - c. Contains lymphoid tissue
  - d. Is not attached by mesentery
3. **Which white blood cell's count increases during appendicitis?**
  - a. Lymphocytes
  - b. Eosinophils
  - c. Monocytes
  - d. Neutrophils
4. **Where is the abdomen most tender when the pain has localized?**
  - a. Periumbilicus
  - b. Left lower quadrant
  - c. McBurney's point
  - d. Pubic tubercle
5. **The appendicular artery is a branch of the:**
  - a. ileocolic artery.
  - b. anterior cecal artery.
  - c. right colic artery.
  - d. inferior mesenteric artery.
6. **Which of the following is a common misdiagnosis of appendicitis?**
  - a. Esophagitis
  - b. Mesenteric ischemia
  - c. Peptic ulcer
  - d. Gastroenteritis
7. **Which of the following refers to the patient experiencing pain upon flexing the hip?**
  - a. Rovsing sign
  - b. Psoas sign
  - c. Obturator sign
  - d. Dunphy sign
8. **What is the reason for patients initially feeling pain from appendicitis in the middle of the abdomen?**
  - a. Afferent nerve fibers attached at T10 level of spine.
  - b. Vagus nerve is irritated by the inflammation.
  - c. Appendicitis causes inflammation of surrounding tissues.
  - d. Fluid buildup places pressure on the peritoneal layer.
9. **What is the most common anatomic position of the appendix?**
  - a. Subcecal
  - b. Pelvic
  - c. Post-ileal
  - d. Retrocecal
10. **What should the CST be ready for the surgeon to perform if a GEP-NET is larger than 2 cm?**
  - a. Ileectomy
  - b. Right hemicolectomy
  - c. Appendectomy
  - d. Total colectomy

## REVIEW OF THE APPENDIX AND APPENDICITIS *PART 1*

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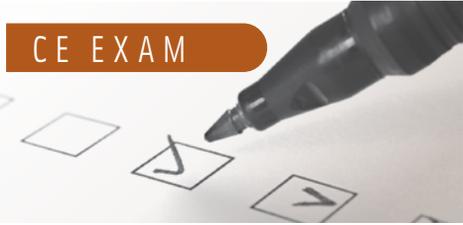
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# 2026 Candidates for National Office

## SECRETARY (VOTE FOR ONE)

**JAIME LOPEZ, CST, CSFA, RN, FAST**  
TEXAS SURGICAL CENTER  
MIDLAND, TEXAS



### AST INVOLVEMENT

■ **NATIONAL:** AST Director, 2024-2026; Foundation for Surgical Technology, 2024-2026; AST Medical Mission Committee, 2024-2026; AORN Liason, 2025-2026.

■ **STATE:** Texas State Assembly Treasurer 2025-2027; Texas State Assembly President, 2022-2025; Texas State Assembly Vice President, 2019-2022; Texas State Assembly Secretary, 2018-2019; Texas State Assembly Director, 2015-2018.

### CANDIDATE STATEMENT

I'm Jaime Lopez, CST, CSFA, RN, FAST and I'd like to represent our great organization as the next Secretary.

I will work on addressing any concerns brought forth by our members and help keep a working rela-

tionship with our partnering organizations. Serving as a current director and working alongside a great mentor of Rob Blackston, MEd, CST, CSFA, FAST, I feel I have the necessary tools to serve in this executive role.

With your support, let's keep our organization going in a positive direction, keeping our profession in the forefront.

**SHERRIDAN POFFENROTH, CST, CRCST, CHL, FAST**

SPOKANE VALLEY AMBULATORY  
SURGERY CENTER  
SPOKANE VALLEY, WASHINGTON



### AST INVOLVEMENT

■ **NATIONAL:** AST Director, 2021-2024; AST Policy and Procedures Committee, 2021-2024; Surgical Technology Community Outreach & Medical Mission Committee, Chair 2021-2023; Surgical Technology Medical Mission Committee Chair, 2023-2024; AST Sunshine Fund 2021; AST State Assembly Leader-

ship Committee, 2015-2021; AST State Assembly Leadership Committee Chair, 2018-2020.

■ **STATE:** Washington State Assembly Treasurer 2025-2027; Washington State Assembly Secretary, 2017-2021; Washington State Assembly President, 2011-2015; Washington State Assembly Vice President, 2011; Washington State Assembly Board of Director, 2009-2011, 2016-2017.

### CANDIDATE STATEMENT

My name is Sherridan Poffenroth, and I am asking for your vote to serve as your next AST Secretary. My AST history includes many years at all levels of service. For almost 20 years, I have been involved at the local level with Spokane Community College; first as a student, then as a representative on the advisory committee, and now as an adjunct instructor in a career that I love. It was a third career for me, but I am happy to say that I found my place, and this will be my last.

During these years, I have served on the Washington State's Board of Directors in every capacity, and I am currently serving in my last available role as the treasurer. It has been a privilege to be part of this group for so long, working alongside special mentors and being able to return the gesture as I serve now with those that are young and excited about their new career.

Though I have served as an AST National Director from 2021-2024, I feel that I still have much to offer as your new secretary. Those that have worked with me in the past will attest to my strong organizational and communication skills; both required to fill this role. And because I have served already, returning to the board will be an easy transition. I truly understand the importance of stewardship, honesty, and transparency to the membership.

I also know that the relationships we attain and retain with our industry partners, will help us grow stronger as a membership organization. I look forward to working with these partners to continue building up the Certified Surgical Technologist as an essential member of the operating room team. I strongly believe I can be an integral part of AST's leadership.

Thank you for this opportunity and for considering me as your new secretary. I look forward to seeing and speaking with you at our national conference in Seattle.

## DIRECTOR (VOTE FOR FOUR)

**STEPHANIE AUSTIN, EdD, CST, FAST**  
GADSDEN STATE COMMUNITY COLLEGE  
ANNISTON, ALABAMA



### AST INVOLVEMENT

■ **NATIONAL:** AST Director, 2024-2026; AST State Assembly Leadership Committee, 2022-2024; Surgical Technology Sunshine Fund/Outreach Committee, Chair, 2025.

■ **STATE:** Tennessee State Assembly President, 2025-2027; Tennessee State Assembly Vice President, 2022-2025; Tennessee State Assembly Board of Director, 2019-2022.

### CANDIDATE STATEMENT

Hello everyone. My name is Dr. Stephanie Austin, CST, FAST, and I am seeking reelection as director on the AST National Board. Over the past two years, I have worked diligently to serve you. I have listened to your concerns, brought them to the Board, and advocated for the resources you identified as essential. While many of these needs have been addressed, important work remains. I am committed to continuing to serve as a strong and informed voice for surgical technologists across the nation.

As we navigate ongoing changes in policy, procedures, and role expectations, we must approach

each encounter — with colleagues, patients, and the public — with professionalism and respect. By giving respect, we earn respect. Above all, we share a responsibility to protect our patients and uphold the highest standards of care.

If reelected, I will continue to advocate for the tools, resources, and support you need to deliver safe, high-quality patient care and to represent the needs of your facilities effectively. I hope I can count on your vote in the 2026 election for Director. Thank you for your trust and support over the past two years.

**RAETTA COLEMAN, CST, FAST**  
ROBESON COMMUNITY COLLEGE  
LUMBERTON, NORTH CAROLINA



### AST INVOLVEMENT

■ **NATIONAL:** State Assembly Leadership Committee, 2020-2026.

■ **STATE:** South Carolina State Assembly Director, 2023-2027; South Carolina State Assembly Treasurer, 2019-2023; South Carolina State Assembly President 2015-2019; South Carolina State Assembly Vice President 2011-2015.

### CANDIDATE STATEMENT

I am standing for election as a Director for the Association of Surgical Technologists. I believe strongly in the role the Association of Surgical

Technologists plays in supporting its members, strengthening our profession, and shaping a future that is inclusive, sustainable, and forward looking.

Throughout my professional experience, I have seen how effective leadership, clear communication, and genuine collaboration can make a real difference. AST is at its best when it listens to its members, advocates clearly on their behalf, and creates opportunities for connection, professional growth, and shared purpose. As a Director, I will be committed to upholding these values and ensuring that decisions made at the board level reflect diverse needs and voices of our membership.

If elected, my priorities would include transparency in governance, strong member engagement, and practical support that responds to the many challenges our members face. I am particularly interested in strengthening communication between the board and its members, so that feedback flows both ways and members feel informed, heard, and valued. I also believe AST should continue to invest in leadership development and mentoring, helping to build capacity not just at the top, but across the entire organization. I bring to this role a thoughtful, collaborative approach, along with a willingness to ask hard questions and work constructively toward solutions. I value evidence-based decision making, respectful debate, and a focus on long-term outcomes rather than short-term fixes. Most importantly, I am motivated by service – the responsibility to act in the best interest of our organization and its members. Serving as an AST Director would be both an honor and a responsibility.

I am ready to contribute my time, skills, and energy to help AST continue to grow, adapt, and advocate effectively in a changing environment. I would be grateful for your support and the opportunity to serve.

LISA DAY, MA, CST, CSEA, FAST  
REYNOLDS COMMUNITY COLLEGE  
RICHMOND, VIRGINIA



#### AST INVOLVEMENT

■ **NATIONAL:** AST Director, 2024-2026; Foundation for Surgical Technology, 2025; State Assembly Leadership Committee Chair, 2022-2024; State Assembly Leadership Committee, 2018-2024.

■ **STATE:** Virginia State Assembly Secretary, 2022-2026; Virginia State Assembly President, 2017-2022; Virginia State Assembly Vice President, 2015-2017; Virginia State Assembly Board of Director, 2014-2015.

#### CANDIDATE STATEMENT

Serving on the National Board of the Association of Surgical Technologists has been one of the most meaningful experiences of my professional career. It has reinforced my belief that effective leadership must be grounded in service, guided by strong and thoughtful governance, and centered on supporting our members while protecting the surgical patients we serve. Surgical tech-

nologists and surgical first assistants are practicing in an increasingly complex healthcare environment that presents real challenges to professional practice and patient safety.

As a Director, I believe AST's responsibility is to be forward-thinking and proactive — not only reactive — by anticipating emerging trends, preparing members through education and advocacy, shaping policy early, and ensuring that organizational decisions consistently align with the Association's strategic plan while remaining responsive to an ever-changing healthcare climate. Membership value is the foundation of a strong professional organization. Members should be able to see, feel, and experience the value of their association through meaningful advocacy, high-quality education, reliable support, and strong representation. When AST remains responsive, proactive, and member-focused — while continuously evaluating data, member feedback, and external pressures to refine its strategic direction — it strengthens trust, engagement, and the long-term vitality of the profession.

I have been honored to serve on several AST committees, and through this work, I have contributed to strengthening governance processes, supporting members during times of hardship, and engaging in forward-looking discussions related to the evolving role and advocacy needs of our profession. This service has reinforced the importance of collaboration, transparency, and mission-driven decision-making.

As a Director, I bring a balanced perspective that values strategic oversight, ethical leadership, and long-term sustainability, while remaining open to revisiting and refining prior-

ities as conditions, regulations, and member needs evolve. I am deeply committed to ensuring AST remains a strong, trusted, and forward-looking advocate for its members and a responsible leader within the health-care community.

I respectfully ask for your support and the opportunity to continue serving as a Director, working alongside fellow leaders to advance the profession with integrity, purpose, and a proactive commitment to those we serve.

**NICOLE VAN VONDEREN, CST, FAST**  
NORTHCENTRAL TECHNICAL COLLEGE  
WAUSAU, WISCONSIN



#### AST INVOLVEMENT

■ **NATIONAL:** AST Director, 2023-2025; Foundation for Surgical Technology, 2023-2025; AST Career Development Committee 2024-2025; AST Sunshine Fund Committee, 2023-2024; AST Bylaws, Resolutions and Parliamentary Procedures Committee, 2019-2023.

■ **STATE:** Wisconsin State Assembly President, 2021-2025; Wisconsin State Assembly Vice President, 2019-2021; Wisconsin State Assembly Board of Director, 2015-2019.

#### CANDIDATE STATEMENT

I am honored to run for a position on the National AST Board because

I believe deeply in the future of the surgical technology profession and the importance of advocating for who we are and what we do. As a surgical technologist, educator, and AST leader, I have seen firsthand how policy, education, and early exposure shape the strength of our profession. If elected, my focus will be on expanding AST's advocacy efforts at both the national and state levels. Legislative advocacy is critical to protecting our scope of practice, advancing professional recognition, and ensuring safe patient care. I am committed to continuing this work and strengthening collaboration between AST, state societies, and legislators.

I am also passionate about working more closely with HOSA to build strong pipelines into surgical technology. By engaging students early, increasing visibility, and clearly communicating who surgical technologists are and the vital role we play in the operating room, we can inspire the next generation and address workforce needs. Spreading awareness of our profession — within healthcare, education, and the public — is essential. I bring experience, dedication, and a collaborative approach to leadership, and I am committed to representing AST members with integrity, transparency, and purpose.

I would be honored to serve on the National AST Board and continue advocating for our profession and its future.

# SEATTLE

AST SURGICAL TECHNOLOGY CONFERENCE

## NEW SETUP THIS YEAR

**Sunday, May 31 – Tuesday, June 2, 2026**

Seattle, Washington

**Conference Location:** The Summit – Seattle Convention Center, 900 Pine St, Seattle, WA 98101

**Group Hotel: The Westin Seattle, 1900 5th Ave, Seattle, WA 98101**

Room block closes on Tuesday, May 5, after which hotel rates will increase. Book today!

### Iconic Seattle Experiences

**Space Needle** – Go up for panoramic views of the city, Mount Rainier, and Puget Sound.

**Seattle Great Wheel** – A relaxing way to see the waterfront, especially at sunset.

**Pike Place Market** – Watch the fish toss, explore local shops, and grab fresh seafood or pastries.

**Chihuly Garden and Glass** – Stunning glass art right next to the Space Needle.



**Coffee hopping** – Try local favorites like Storyville, Victrola, or Elm Coffee (beyond Starbucks).

**Seafood** – Don't miss salmon, chowder, or Dungeness crab.

**Food tours** – Especially around Pike Place or Capitol Hill.



# REGISTRATION IS OPEN!

	Early-bird by March 31	Regular	After 4/30 - onsite
Member	\$350	\$425	\$500
Student		\$150	\$200
Student - NM		\$195	\$245
Non-member		\$580	\$620
Retired/Disabled		\$225	



## Neighborhoods & Culture

**Capitol Hill** – Lively area with shops, nightlife, and great restaurants.

**Fremont** – Funky, artsy, and home to the famous Fremont Troll.

**Ballard Locks** – Watch boats pass through and (seasonally) see salmon swim upstream.

**Museum of Pop Culture (MoPOP)** – Music, sci-fi, and pop culture in a striking building.



Step into the OR like never before with our Surgical Technologist Escape Room—a fast-paced, immersive experience where precision, teamwork, and critical thinking are the keys to success. Participants must solve clinically inspired puzzles, identify emergent protocol processes, follow sterile technique, and respond to realistic surgical scenarios—all against the clock. Perfect for students, educators, and CST, this interactive challenge turns essential surgical tech skills into an unforgettable, high-energy adventure. Can your team scrub in, think fast, and save the patient?



## Nature & Outdoor Activities

**Capitol Hill** – Discovery Park – Forest trails, beaches, and lighthouse views.

**Kerry Park** – One of the best skyline photo spots.

**Waterfront walk or ferry ride** – Take a ferry to Bainbridge Island for views and a charming town.

## Sports & Entertainment

- Catch a Seahawks, Mariners, or Sounders game.
- Enjoy live music—Seattle's scene is legendary.
- Comedy shows, theater, and concerts are easy to find year-round.



## Local Tips

- Dress in layers—weather can change quickly.
- Public transit and walking work well downtown.
- Don't let light rain stop you—it's part of the Seattle vibe.

# The CST as Leader: Stepping into Management & Leadership Roles

Cortney Hartman, MBA, CST, FAST

## BEYOND THE MAYO



**Y**ou already lead in ways you may not realize. Every time you anticipate a surgeon's next move, organize a mayo stand for efficiency, or mentor a new CST, you're demonstrating leadership. The truth is that leadership

doesn't start with a title — it starts with influence. For certified surgical technologists, stepping formally into management and leadership roles is a natural extension of the skills already honed in the operating room.

In this month's article, we'll explore how CSTs can translate their OR experience into leadership beyond the mayo stand.

### Why Leadership Matters

Operating rooms are complex, high-stakes environments. They rely on teamwork, communication, and coordination to function smoothly. Leaders in perioperative services ensure that these moving parts align — from scheduling and staffing to supply chain management and surgeon relations.

Without strong leadership, patient safety, staff morale, and efficiency can all suffer. That's why CSTs who step into leadership roles often find themselves making a profound impact, not just on a single case, but on the performance of entire departments.

### Pathways Into Leadership

There are multiple career trajectories for CSTs interested in leadership:

#### 1. Lead or Senior Surgical Technologist

- Oversees daily case assignments, serves as a resource for peers, and often participates in training.
- Acts as the bridge between staff CSTs and

management.

#### 2. Operating Room Manager or Coordinator

- Manages surgical schedules, staff assignments, and OR workflow.
- Works closely with surgeons and anesthesia providers to ensure efficiency and safety.

#### 3. Director of Surgical Services

- Oversees multiple operating rooms or entire perioperative departments.
- Responsible for budgeting, staffing, and regulatory compliance.
- Often requires additional education (bachelor's or master's degree).

#### 4. Specialty Coordinator

- Manages surgical service lines (orthopedics, neurosurgery, robotics, etc.).
- Ensures instrumentation, supplies, and training are optimized for the specialty.

Each of these roles builds on CST experience — the ability to anticipate, coordinate, and problem-solve under pressure.

### Skills CSTs Already Bring to Leadership

Many CSTs hesitate to pursue leadership roles because they underestimate the transferable skills they already possess. Consider how these everyday OR competencies prepare you for leadership:

- **Anticipation:** Just as you anticipate the surgeon's needs, leaders anticipate staffing, scheduling, and resource needs.
- **Communication:** CSTs communicate quickly and clearly in the OR — essential in leadership for resolving conflicts and giving direction.
- **Adaptability:** Surgeries change course unexpectedly, and CSTs adjust seamlessly. Leaders must do the same when staffing shortages or emergencies arise.

- **Organization:** From managing instrument trays to maintaining sterile fields, CSTs know the value of organization — a cornerstone of management success.

### Building Leadership Competencies

While CSTs have a strong foundation, leadership roles also require new skills. These can be developed intentionally through experience, training, and mentorship:

- **Conflict Resolution:** Learning to navigate disagreements between staff, surgeons, and departments.
- **Budgeting & Resource Management:** Understanding how supplies, staffing, and finances intersect.
- **Team Development:** Motivating, coaching, and mentoring staff for long-term success.
- **Strategic Thinking:** Seeing beyond daily cases to the bigger picture of efficiency, growth, and patient care.

Many hospitals offer leadership development programs, and professional organizations provide courses in healthcare management. Pursuing a bachelor's degree in healthcare administration, management, or a related field can also enhance advancement opportunities.

### Overcoming Challenges in the Transition

Moving from peer to supervisor is one of the most common challenges new leaders face. Yesterday's lunch buddy may now be reporting to you. Navigating this shift requires professionalism, fairness, and consistency.

Other challenges include:

- Balancing clinical responsibilities with administrative duties.
- Managing performance issues while maintaining morale.
- Learning to “let go” of being in the room for every case and instead focusing on the bigger picture.

These challenges are real — but so are the rewards. With preparation and mentorship, CSTs can thrive in leadership.

### Practical Steps to Move into Leadership

If you're considering a leadership role, here are actionable steps to begin preparing now:

1. **Volunteer for Added Responsibility.** Offer to manage a supply room, lead an in-service, or coordinate a specialty area.
2. **Seek Mentors.** Find OR leaders who can guide your development and share insights from their own journeys.

3. **Invest in Education.** Explore courses in management, healthcare finance, or human resources.
4. **Get Involved Professionally.** Leadership in AST or your state assembly provides valuable skills that transfer directly into management.
5. **Document Your Impact.** Track projects you've led, improvements you've made, and problems you've solved — these are proof points for future applications.

### Rewards of Leadership

CST leaders often describe the rewards of leadership in terms of impact:

- Shaping team culture.
- Improving efficiency and safety.
- Supporting staff growth and advancement.
- Contributing to the long-term success of surgical departments.

Leadership may move you physically away from the mayo stand, but it draws you closer to shaping the future of surgery itself.

### Closing Thoughts

Leadership isn't about titles, it's about influence — and CSTs already demonstrate leadership every day in the OR. Formal management roles give you the chance to amplify that influence, shaping not just one surgery at a time, but the systems and teams that make surgical excellence possible.

If you've ever felt the pull to step up, mentor others, or improve how your department runs, leadership may be your next step. The operating room has prepared you more than you know.

The question is no longer *“Am I ready for leadership?”* — it's, *“How far will I let my leadership reach?”*

### Leadership Readiness Reflection

- Do I enjoy guiding or mentoring others?
- Am I comfortable with accountability and decision-making?
- Do I see opportunities for improvement and feel motivated to address them?
- Am I ready to balance clinical expertise with administrative responsibility?



## Who Is the Person Behind the Mayo Stand?

NICOLE VAN VONDEREN, CST, FAST  
ROSS CLAY, MBA  
CATHERINE HOUSER, MST, B.S.



**H**ave you ever needed to have surgery? Has a close family member ever had surgery? Many people know about their doctors, what they do, and their background, but what about the others that help them? In a typical operating

room, you will have a registered nurse, an anesthesiologist, a certified registered nurse of anesthesia (CRNA), a physician assistant, or a certified first assistant. You may not know about one more key person: the person behind the Mayo stand, the surgical technologist. That person behind the Mayo stand is a massive part of your care team, so why is it viewed as less important? Every other team-

mate has many years of experience and either hold a license or is board certified. If others in the operating room must have a degree and license, why is it different for surgical technologists when they are just as valuable at saving someone's life?

A surgical technologist is a right-hand man and co-pilot to the surgeon. They maintain the sterile surgical field and ensure all room members adhere to sterile techniques to prevent surgical site infections. In addition, they provide instruments and supplies to the surgeon and the assistants during surgery. Surgical technologists prepare each operating room with the necessary instruments and supplies that will be needed for the procedure. At any given point, a surgical technologist may have 1-20 different instrument pans open. They also handle dangerous medications, prepare bone drills, prepare implants, operate complex robotic equipment, manage cancer specimens, and play a vital role in saving lives during

bleeding emergencies. According to the Federal Bureau of Labor Statistics (2022), there are 128,700 surgical technologists employed throughout the United States. They must know every single instrument on their field, what it does, and what it is used for. They must be able to think about the surgery and be one step ahead of what the surgeon may need. A surgical technologist must anticipate and be ready at any given moment for the unthinkable.

Upon graduation from the surgical technologist program, a surgical technologist in some states must attend an accredited school and sit for their National Registry Exam by the National Board of Surgical Technology and Surgical Assisting. You can only sit for this exam if you attend a CAAHEP or ABHES-accredited school. In 2021, schools were told to change from teaching surgical technology as a technical diploma to a two-year associate degree program. This change will allow students to have one full year of lab training and simulated surgeries before even setting foot in an operating room. In addition, they will have a vast amount of knowledge of the instruments and supplies used rather than starting clinicals within the first few months of the technical diploma and learning as they go. Some states allow surgical technologists to train on the job, but that person cannot sit for the exam and will have a more challenging time if they ever want to leave that employer. Wait, train on the job? It is crazy that a person behind the Mayo stand handing your surgeon instruments could have started last week and may not have any idea about sterile technique. The ones being trained on the job are a complete gut punch to those who spend time going to school to become certified. The Association of Surgical Technologists motto is "Aeger Primo- The Patient First" (AST FAST Selection Criteria, 2021). The ones who put in the time and commitment always display this; how does someone trained on the job display this when they have no idea what it even means? I want to understand why everyone else responsible for your life in the operating room is board certified and has gone to school for years. Why should this be any different for the surgical technologist?

Regulating education provides medical professionals with a high-quality experience. The operating room is an extremely fast-paced environment. You will see the leadership team, surgeons, and anesthesiologists pressing for time to get things done. Surgical technologists may be rushed at trauma speed during a particular case or at different times to ensure things are accomplished but always put the patient first. Graduating from an accredited college will teach the surgical technologist how to perform under pressure. There

will be some instances where the surgical technologist will have more time to set up and have things ready when it is not an emergency. Having your Certified Surgical Technologist degree demands a broad area of knowledge and the development of skills that someone who graduates from an accredited program will be able to achieve. Some of the items that a surgical technologist will need to know, but are not limited to, include anatomy and physiology, surgical wounds, infection control, decontamination, disinfection, sterilization, legal responsibilities, stress management, laser safety, and professional standards of conduct. They learn to protect themselves and everyone else in the operating room. A surgical technologist must perform very well to ensure medications do not get mixed up, implants are correct, foreign objects are not retained in the patient, and surgical fires are not started (Day, 2017).

According to the National Library of Medicine, roughly 28 million surgeries are performed annually, and approximately 1,500 retained foreign objects are left inside patients (Zejnnullahu, 2017). A retained foreign object is defined as foreign bodies left inside the patient after the operation, and in general, a further procedure is necessary (Zejnnullahu, 2017). These foreign objects can be anything from a sponge to an instrument to any extra supply that may have been opened. Before any procedure, the Registered Nurse and the Surgical Technologist perform a count to have a baseline of what they start with. Throughout the case, any time something that is a countable item is added to the surgical field, it is added to the counts. When the procedure is over, and closing begins, the Registered Nurse and the Surgical Technologist complete a count, sometimes more than once. According to the Association of Surgical Technologists, a count must be completed by the Registered Nurse and the Certified Surgical Technologist (Recommended Standard of Practice for Counts, 2006). This is extremely important because it can be costly to the patient and the hospital if someone does not know what instruments or supplies they are counting. In some instances, it can lead to death as well. According to Urology Times, one lawsuit with a retained foreign object can be settled, costing up to 2 million dollars (Goodwin, 2020). Over four years, it cost physicians 26 million dollars and with settlements ranging from \$105,000 to \$856,000 in total payouts (Goodwin, 2020). With the surgical technologist being the wingman and copilot to the surgeon, it is their job and responsibility to ensure all items are accounted for and not left behind.

Surgical site infections can be easily prevented when the staff in the room knows right from wrong. According to the

Centers for Disease Control, a surgical site infection occurs after surgery in the part of the body where the surgery took place (CDC, 2010). A surgical site infection can be superficial or deep and involve the organs. The cost to the patients and the hospitals for treating surgical site infections is rising, and it is deemed that nearly half of all surgical site infections are preventable (Berríos-Torres SI, 2017). Typically, the cost for a surgical site infection can range from \$10,000 to \$25,000, and if it involves a total joint replacement, it can be up to \$90,000 (Berríos-Torres SI, 2017). When a surgical technologist learns about the ways of contamination, you will see the team having two separate tables and set-ups when dealing with bowel or cancer cases to avoid cross-contamination and surgical site infections. Any current Certified Surgical Technologist has passed a National Register Exam by the National Board of Surgical Technology and Surgical Assisting. This will demonstrate that they meet the National Standards for Surgical Technology and are adept at preventing surgical site infections. Anyone with the title CST has graduated from a high-quality educational program and has passed a rigorous exam to demonstrate their knowledge about the surgery and how to prevent unnecessary things from happening.

It is essential to have these educational standards to make surgical technology a more respected field. The following states have laws already regulating education and certification: Idaho, South Carolina, Texas, Indiana, New Jersey, Massachusetts, Tennessee, New York, Oregon, Nevada, Pennsylvania, and Virginia. These states require their surgical technologists to be certified and pass the National Exam by the NBSTSA. It will be up to the surgical technologist to maintain this certification, including getting 30 continuing education credits in two years and submitting them to remain certified. They can obtain these credits by participating in their state assembly, attending meetings to advocate for their profession, and learning the newest technologies. They can also earn credits online through the Association of Surgical Technologists or attend the national conference and get credits that way. Every Certified Surgical Technologist will submit their credits and pay a fee to maintain this highest requirement for surgical technologists. Education for surgical technology has grown to more than 200 accredited colleges or technical schools because of the demand in hospitals and surgery centers. Any surgical technologist who has upheld

the highest professional, ethical, and moral standards and traditions for the surgical technology profession is eligible to apply for the Fellow of the Association of the Surgical Technologists (AST FAST Selection Criteria, 2021). This is the highest honor you can receive as a surgical technologist.

Think about everyone in that room with board certification or license, and what about others that also need a certificate to work? So why should this be any different for someone who could be saving your life? Everyone in an operating room plays a vast and vital role in patient care and should be treated with respect for their dedication. Therefore, it is critical and essential that every person in that room is board certified or holds a certificate. Someone who comes in off the street and does not have the necessary schooling presents a dangerous risk to the patients, staff, and hospital. In addition, we need to advocate for the copilot to surgeon in the operating room and have all surgical technologists certified. We need to have a person behind that Mayo stand that knows sterile technique and can minimize the risk of surgical site infections, retained foreign objects and knows what they are doing.

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**4<sup>TH</sup>  
Edition**

# The New Edition

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# Helen Brooke Taussig, MD: The Mother of Pediatric Cardiology

AST Staff

## MEDICAL MARVELS



*“I suppose nothing would ever give me as much delight as seeing the first patient change from blue to pink in the operating room...bright pink cheeks and bright lips.”<sup>1</sup>*

### Challenges Early in Life

Dr. Taussig was born in Cambridge, Massachusetts, the youngest of four children (Figure 1). Her father, Frank W. Taussig, was a world renowned economist who was Chair of the Economics Department at Harvard University and credited with establishing the foundations for modern trade theory, and her mother, Edith Thomas Guild, was one of the first women to attend Radcliffe College in Cambridge, studying biology and zoology.<sup>2</sup> Her grandfather was a teacher at a school for blind students and had a lifelong interest in science. Dr. Taussig later said she descended “from a direct line of teachers, and an indirect line of doctors.”<sup>2</sup>

Her childhood presented multiple challenges that did not deter her from succeeding. Her mother died of tuberculosis when she was 11 years old, and she struggled in school because of dyslexia. Additionally, while recovering from the flu, she had a middle ear infection that caused her to become partially deaf.<sup>2</sup> Her father, being the academician, recognized the challenges presented by the deafness and dyslexia, and dedicated himself to tutoring his daughter, always stressing the need for her to finish school and continue into college.

### Succeeding in College

In 1917, she followed in her mother’s footsteps and entered Radcliffe College where she also became the college’s tennis champion.<sup>2</sup> Two years later, she transferred to the University of California – Berkley where she earned her bachelor’s degree in 1921. Her father thought it was best for her to seek employment at the Department of Health and therefore, she entered the Harvard University School of Public Health.<sup>2</sup> However, she encountered another set of academic challenges one of which was having to cope with an unfriendly dean,



**Figure 1** Helen B. Taussig, MD  
(May 24, 1898 – May 20, 1986)

and it was made clear that as a woman, she could take courses but would never receive a degree. This actually worked in favor of Dr. Taussig who desired to be a physician. She transferred to Boston University Medical School where she studied biology and anatomy for two

years. But even then, the women students were segregated from the male students with separate classrooms, particularly when viewing anatomical illustrations and images.<sup>2</sup>

When completing her thesis on the muscular structure of the cow's heart she became interested in the human heart. Because the thesis was so well written, her professor, Alexander Begg, Dean of Boston University Medical School, encouraged her to continue studies at the John Hopkins Medical School in Baltimore, one of the few universities at that time that allowed women to enter. She completed her medical degree in 1927.<sup>2</sup> Her focus was on specializing in Internal Medicine, but there was only one opening for a women in that specialty, and it had already been awarded. This was fortunate for the world of medicine, because she decided to enter pediatrics in which her contributions would advance the treatment of children with cardiac malformations.

In 1930, she was made head of the Cardiac Clinic in the Harriet Lane Home at John Hopkins Hospital and stayed there until her retirement in 1963. The Harriet Lane Home was established in 1912 and was the first children's clinic associated with a major medical school. Eventually treating over 60,000 children a year, the clinic was recognized as a leader in research, teaching, and treatment. The clinic underwent name changes, and it is now the Harriet Lane Outpatient Clinic that continues to treat hundreds of children each year.

In the 1930s, a pediatric cardiologist needed three tools – knowledge of normal and abnormal heart sounds, a stethoscope, and good hearing.<sup>2</sup> Dr. Taussig, whose deafness progressed over the years, developed skills to compensate. Using a hearing aid and an auditory amplifier on the stethoscope initially helped. But over time she learned to lip read and listen to the hearts of pediatric patients with her fingertips (Figure 2). She became proficient at “listening with her fingertips” and so much so, that she was just as good as a pediatrician with normal hearing using a stethoscope at detecting normal and abnormal heart sounds.<sup>2</sup>

### **Solving Tetralogy of Fallot**

For many years, an infant that presented with most any kind of cardiac malformation was unfortunately doomed for a short life. A surgeon that figured out a surgical treatment for one kind of malformation was Dr. Robert Edward Gross, pediatric heart surgeon at Boston Children's Hospital. By devising a successful procedure to close the ductus arteriosus in infants when spontaneous



**Figure 2** Dr. Taussig using her fingertips to examine her young patients' heart

closure failed, he earned the worldwide nickname “the ductus surgeon.”<sup>2</sup> However, Dr. Taussig made an important observation regarding infants born with Tetralogy of Fallot or “blue baby syndrome.” The blue babies whose ductus arteriosus remained open after birth did much better compared to those whose ductus closed.<sup>2</sup> Therefore, it was important for the ductus to remain open or replace it with an artificial shunt. Based on this reasoning, she approached the “ductus surgeon” with her hypothesis and proposal. However, the reply she received from Dr. Gross was less than satisfying: “I have enough trouble closing a patent ductus, without creating one.”<sup>2</sup>

Not one to be discouraged, Dr. Taussig approached another surgeon who had recently come to John Hopkins Hospital from Vanderbilt University in Nashville, Tennessee – Dr. Alfred Blalock. Dr. Blalock did not turn down her proposal to create an artificial shunt. He discussed the idea with his personal surgical technologist, Vivien Thomas, who went to work in the laboratory inventing the Blalock-Thomas-Taussig shunt that created an end-to-side connection between the subclavian artery and the pulmonary artery. Once the connection worked perfectly in dogs, the time came for a human trial. (The shunt was originally called the Blalock-Taussig shunt because Mr. Thomas was an African American who was the grandson of a slave. Because of the racial discrimination, his contribution to the development of the shunt was unknown outside of John Hopkins Hospital. Finally, in 2024, the shunt was officially renamed the Blalock-Thomas-Taussig shunt by hospitals in Canada and the United States (U.S.) in recognition of his significant contributions to surgery).

In November 1944, fifteen-month-old Eileen Saxon, weighing only five kilograms, arrived at the John Hopkins

Hospital emergency department gasping for air, unable to drink milk, and with purple-blue skin.<sup>2</sup> Dr. Taussig immediately diagnosed Tetralogy of Fallot with severe pulmonary hypertension using her fingertips. On November 9, 1944, she was taken to the operating room where Dr. Blalock incised the subclavian artery and performed an end-to-side anastomosis onto the pulmonary artery, all the time with Mr. Thomas behind him communicating how to perform each step of the procedure and Dr. Taussig in the observatory.<sup>2</sup> The procedure was a success with Eileen's skin changing color immediately from a blue to pink complexion. She could start drinking milk and eat healthily, gaining weight. She was discharged two months after the procedure but unfortunately became cyanotic within a few months and died shortly before her second birthday.

It didn't take long, though, for successes to continue and the patients to live productive lives. By the third successful operation, Drs. Taussig and Blalock published their results in *The Journal of the American Medical Association*. The shunt procedure quickly became well known and accepted around the world. The two surgeons were busy traveling to all parts of the U.S. and to Europe lecturing about the procedure. By the end of 1951, the surgical team at John Hopkins Hospital had performed the procedure 1,037 times providing those infants a chance at life.<sup>2</sup> The mortality rate was only 5%.<sup>2</sup>

### **Preventing Tragedy in the U.S.**

In 1954, the German pharmaceutical company Chemie Grünenthal introduced the drug thalidomide, brand name Softenon. It was promoted as a non-toxic drug that was used to treat morning sickness in pregnant women. On December 25, 1956, the first thalidomide-affected infant was born to a Chemie Grünenthal employee.<sup>3</sup> It was eventually determined that the drug was the cause of phocomelia, a congenital condition in which the hands or feet are attached close to the trunk. For example, the hands attached at the shoulders, or they experience underdeveloped or absent limbs. Pregnant women would take the drug between day 35 and 49 of their pregnancy when the embryo's arms and legs are forming and their development would be blocked.<sup>2</sup> It is estimated that 100,000 infants were affected, but accurate figures are a challenge because many women on thalidomide had miscarriages, still born infants, or infants that died soon after birth.<sup>3</sup> It is estimated that

over 10,000 infants were born worldwide with phocomelia because of thalidomide.<sup>3</sup>

When the situation was first occurring, the overseas medical community began the search for the cause of phocomelia, which is a rare disease. In November 1961, the German pediatrician and geneticist Widukind Lenz was the first to connect phocomelia to the use of thalidomide.<sup>2</sup> In January 1962, a student told Dr. Taussig of the European situation. She immediately went to Europe and in various cities examined affected infants as well as collected their medical history.<sup>2</sup> She came to the same conclusion as Dr. Lenz that thalidomide was the cause. As soon as she got back to the U.S., she gave lectures at conferences of the American College of Physicians and spoke to the members of the Senate about the dangers of the drug, as well as authored several articles that were published in non-medical journals. Eventually, overcoming the powerful pharmaceutical lobby, she convinced the Senate and the FDA that the drug should not be allowed into the U.S. and therefore, it never entered the U.S. drug market. Her campaign contributed to another significant outcome, the passage of the Drug Efficacy Amendment in 1962 that established stricter drug regulation rules.

### **Achievements and Never One to Slow Down**

Dr. Taussig achieved many firsts as a woman physician. The following is a list of some of the honors she received:

- 1953 – Honorary medal from the American College of Chest Physicians.
- 1959 - First woman to be made a full professor at the John Hopkins Medical School.<sup>4</sup>
- 1964 - One of the greatest honors bestowed upon Dr. Taussig occurred when President Lyndon Johnson awarded her the Medal of Freedom, the highest civilian honor of the U.S. government.<sup>5</sup>
- 1965 - Inducted as the first woman Master (equivalent to a Fellow) by the American College of Physicians.<sup>4</sup>
- 1973 – Elected to the National Academy of Sciences (27 years after Dr. Blalock was elected for the work on the Blalock-Thomas-Taussig shunt).
- 1973 - Member of the first 20 women in the U.S. to be inducted into the National Women's Hall of Fame located in Seneca Falls, New York, the city considered the birthplace of the women's rights movement.

Dr. Taussig retired in 1963, but she was determined to remain active. Throughout her life, she was a prolific author of many medical articles as well as published what is considered the foundational text of pediatric cardiology, *Congenital*

*tal Malformations of the Heart*, in 1947. In 1961, the textbook was expanded into two volumes. Of the 200+ medical articles that she authored, 40 were published during retirement.<sup>2</sup> In 1965, at the age of 67, she continued to open doors for women physicians by becoming the first female president of the American Heart Association.<sup>5</sup> Despite the challenges she faced including deafness, dyslexia, losing her mother at an early age, and sexism, she persevered and made her mark in medicine. In 2005, to remind the medical community of the woman who discovered the cause of blue baby syndrome, John Hopkins School of Medicine named the Helen B. Taussig Congenital Heart Disease Center in her honor.

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# Placing Patient in the Left Lateral or Supine Position Improves ERCP Procedural Efficiency?

OF INTEREST IN THE MEDICAL ARENA

## Digestive Diseases and Sciences

**Corresponding Author:** To contact corresponding author Divyanshoo R. Kohli, MD, email [divyanshoo.kohli@providence.org](mailto:divyanshoo.kohli@providence.org)

**Topline:** Endoscopic retrograde cholangiopancreatography (ERCP) had a shorter procedure time when performed on patients placed in the left lateral or supine position as compared to the prone position. The shorter procedure times were due to a decrease in endotracheal intubation (ETI) rates. Additionally, the two positions did not have an increase in post-procedure hospitalization rates.

**Why the Research is Important:** Choledocholithiasis continues to be the most common pathology treated through the ERCP procedure. National registries indicate that 96.1% of procedures to treat choledocholithiasis were through ERCP, confirming that the procedure is the gold-standard for managing the disease.<sup>1</sup> ERCP is a minimally-invasive procedure that has been shown to be safe and effective. It has typically been performed with the patient placed in the prone position after ETI. However, it can also be performed with the patient in the left lateral or supine position. Research studies comparing the efficacy and outcomes of the positions are few and the results inconsistent.

**Participants in the Study:** The study involved 6,510 patients with a mean age of 60.28 years and 47% were male (3,059).<sup>2</sup> The patients were divided among the three positions – 999 prone, 2,149 left lateral, and 3,362 supine.<sup>2</sup> The study involved 11 hospitals in Washington state.

**Study Design and Measures:** The retrospective multi-center study compared the procedural metrics\* and outcomes of ECRP performed on patients placed in the three positions. The primary outcome was the length of time performing ECRP starting with the insertion of the flexible side-viewing duodenoscope to

its removal.<sup>2</sup> Secondary outcomes included anesthesia induction time and readmission rates.<sup>2</sup>

**Authors of the Study:** The study was led by Divyanshoo R. Kohli, MD, Pancreas and Liver Clinic, Providence Sacred Medical Center, Spokane, Washington; Nishant Puri, MD, Pancreas and Liver Clinic, Providence Sacred Medical Center, Spokane, Washington; Douglas A. Hanes, PhD, Senior Biostatistician, Providence Sacred Medical Center; Jack Brandabur, MD, Digestive Health Center, Prosser Memorial Health, Prosser, WA; Wichit Srikureja, MD, Pancreas and Liver Clinic, Providence Sacred Medical Center, Spokane, Washington

**Study Results:** ETI was performed at a significantly higher rate for patients in the prone (95%) and supine (90%) positions as compared to the left lateral position (27%).<sup>2</sup> The mean duration of ERCP was shorter for left lateral (31.71 minutes) and supine (36.49 minutes) positions as compared to the prone position (40.99 minutes).<sup>2</sup> The study showed that ECRPs performed with patients in the prone position required more time at every phase of the procedure. ETI was the most significant factor for increased induction time (100%), anesthesia ready time (97%), and duration of ERCP (55%). Additionally, the readmission rate at seven days post-op was lower in the supine position as compared to the prone position.

**Study Limitations:** The limitations of the study included the following:

- It was a retrospective study that did not include detailed procedural information.
- Patient variables were not assessed such as comorbid conditions, physical status classification, and anesthesia tolerance.<sup>2</sup>
- Some facilities had policies requiring ETI and prone positioning, whereas, other facilities were more flexible in selecting the position, potentially

introducing bias.<sup>2</sup>

**Study Conclusion:** “Supine and left lateral positions improve procedural efficiency primarily due to reduced endotracheal intubation rates, without increasing readmission”, the authors stated in the study.<sup>2</sup>

**Conflicts of Interest:** Dr. Kohli reported receiving research support and equipment loan from Fujifilm for an unrelated project. The authors declared having no competing interests.

**\*Procedural metrics:** Also called process measures, in health care it refers to emphasizing the actions the health care provider takes when delivering care to a patient, whereas outcome measures evaluate the effectiveness of those actions.

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## National Trial Conducted to Investigate Water Vapor Ablation of Prostate Cancer

The FDA granted the Vanquish Water Vapor Ablation System 510(k) clearance on December 2, 2025. The FDA granted the clearance based on data from the VAPOR 2 study showing the system eliminated localized prostate cancer in the initial cohort of patients. The trial has been conducted to assess the efficacy and safety of the system that consists of a transurethral thermal water vapor device to treat patients with localized intermediate-risk prostate cancer. However, genitourinary specialists say more comprehensive data is needed to prove if the device is effective in eliminating prostate tumors. The approval provides Francis Medical, a privately owned medical device company located in Maple Grove, Minnesota, the ability to initiate the system in the market while gathering two more years of data to gain the FDA’s support through the premarket approval application.

Prostate cancer is the second most common cancer in U.S. men, as well as the second-leading cause of cancer death.<sup>1</sup> Approximately 1 in 8 men will be affected by prostate cancer. It can occur at any age, but the older a man gets the higher the risk for it happening. Most cases of

prostate cancer affect men over the age of 65.<sup>1</sup> It occurs more often in African American men as compared to other ethnicities and race.<sup>1</sup> Additionally, a man’s risk increases when one or more close relatives have been affected by prostate cancer.

Focal therapies have been developed over the years to treat prostate cancer including cryotherapy, high-intensity focused ultrasound, laser ablation, and transurethral ultrasound ablation. Two important goals of research teams in working towards developing the best treatment have been to decrease the incidence of erectile dysfunction and incontinence associated with the therapies.

The prospective, multicenter, single-arm study has been conducted by co-principal investigators Arvin George, MD, urologic oncologist, Director of Prostate Cancer Programs, and associate professor of clinical urology at John Hopkins University School of Medicine, and Samir Taneja, MD, urologic oncologist and Director of the GU Program at NYU Langone Health’s Perlmutter Cancer Center.

The initial data from the VAPOR 2 trial was presented by Dr. George at the annual meeting of the Society of Urologic Oncology, held December 2 - 5, 2025, in Phoenix, Arizona.<sup>2</sup> The data reported at the meeting as well as to the FDA is based in results from the initial cohort of 110 patients enrolled in the study. The goal is to expand the trial to enroll 235 patients conducted at 26 clinical trial sites in the U.S. and gather data for two years.<sup>2</sup> The primary endpoint of the trial is to determine the number of participants who are free from clinically significant cancer.

Six-month biopsy data showed that a single treatment of the Vanquish system eliminated clinically significant, established as Gleason Group 2\*, prostate tumors in 91% of the 110 patients.<sup>2</sup> Additionally, the researchers reported no device-related adverse events and low rates of erectile dysfunction and incontinence.<sup>2</sup>

The system consists of a small transurethral “wand” that is inserted through the urethra into the prostate. A small catheter needle is attached to the wand that is placed into the targeted treatment area and delivers water vapor to the prostate tissue.<sup>3</sup> Once the vapor is delivered, the stored thermal energy is released onto the cancerous cells as the vapor condenses back to its liquid state.<sup>3</sup> The energy transfer ablates the cellular membrane causing cell death. An advantage of the system is that the use of water vapor minimizes the damage to healthy surrounding tissue. The surgeon uses an image-tracking system to identify the location of the tumor that helps in directing

the needle to the target tissue.

The VAPOR 2 study has been funded by Francis Medical. Dr. George reported being a paid consultant, principal investigator, and speaker for Angiodynamics, Francis Medical, Sonablate, and Wasatch Medical.

**\*Gleason Group:** A numbering system that indicates the aggression (how fast the cancer is growing) level of prostate cancer cells. The cells are obtained through needle tissue biopsy. The pathologist assigns a grade to each sample ranked on a scale of 1 – 5, where 1 is least aggressive and 5 is most aggressive.

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## ALABAMA STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 14, 2026  
**Title:** Rocking the Surgical Field in the Rocket City!  
**Registration:** [alabamaastinfo.org](http://alabamaastinfo.org)  
**Location:** Calhoun Community College, 102 Wynn Dr NW, Huntsville, AL 35805  
**Contact:** Jessica Sirmon, 850-525-5369, [alabamaastinfo@gmail.com](mailto:alabamaastinfo@gmail.com)  
**CE Credits:** 6 Live Planned

## ALASKA STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 21, 2026  
**Title:** Alaska State Assembly Annual Spring Conference and Elections  
**Location:** Alaska Native Medical Center, 4000 Ambassador Dr, Anchorage, AK 99508  
**Contact:** Taylor Malnarick, 907-317-6564, [tamalnarick@gmail.com](mailto:tamalnarick@gmail.com)  
**CE Credits:** 6 Live Planned

## ARIZONA STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 7, 2026  
**Title:** Spring into Action  
**Registration:** [azsaofast.org](http://azsaofast.org)  
**Location:** HonorHealth Network Support Services Center (NSSC), 2500 W Utopia Road, Phoenix, AZ 85027  
**Contact:** Teresa Sochacki, [azsa.assembly@gmail.com](mailto:azsa.assembly@gmail.com)  
**CE Credits:** 4 Live approved by AST

## ARKANSAS STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** April 11, 2026  
**Title:** Bloom Where You Scrub-ARSA Spring Workshop  
**Location:** Arkansas State University-Newport, 7648 Victory Blvd, Newport, AR 72112  
**Contact:** Tamara Morgan, PO Box 10301, Fort Smith, AR 72917, 479-414-6720, [ark-stateassembly@gmail.com](mailto:ark-stateassembly@gmail.com)  
**CE Credits:** 6 Live Planned

## COLORADO/WYOMING STATE ASSEMBLY

**Program Type:** Webinar (approved only for Colorado/Wyoming State Assembly members)  
**Date:** April 25, 2026  
**Title:** April Showers  
**Contact:** Julie Beard, 720-256-5863, [information@coloradoast.com](mailto:information@coloradoast.com)  
**CE Credits:** 3 Live Planned

## CONNECTICUT STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 28, 2026  
**Title:** Hidden Highways  
**Location:** Yale New Haven Hospital, Park St Auditorium, 55 Park St, 2nd Floor, New Haven, CT 06511  
**Contact:** Sharkia Bookert, 203-506-7900, [bookertsharkia@yahoo.com](mailto:bookertsharkia@yahoo.com)  
**CE Credits:** 6 Live Planned

## GEORGIA STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 14, 2026  
**Title:** Spring Forward: Advancing Surgical Technology Education  
**Registration:** [ast-gasa.com/spring-2026-meeting](http://ast-gasa.com/spring-2026-meeting)  
**Location:** Chattahoochee Technical College - North Metro Campus, 5198 Ross Road SE, Acworth, GA 30102  
**Contact:** Erin Baggett, PO Box 109, Auburn, GA 30011, 678-226-6943, [gasawebmaster@gmail.com](mailto:gasawebmaster@gmail.com)  
**CE Credits:** 7 Live approved by AST

## IDAHO STATE ASSEMBLY

**Program Type:** Webinar (approved only for Idaho State Assembly members)  
**Date:** April 18, 2026  
**Title:** The Womb Where It Happens  
**Contact:** Dani Hammer, 208-283-3693, [daniroesler5@gmail.com](mailto:daniroesler5@gmail.com)  
**CE Credits:** 4 Live Planned

## ILLINOIS STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 21, 2026  
**Title:** Illinois State Assembly Annual Business Meeting, Elections, and Seminar  
**Location:** Illinois Central College Student Center Peoria Campus, 5407 N University St, Peoria, IL 61635  
**Contact:** Sonya Conton, 5407 N University St, Peoria, IL 61635, 309-690-7568, [illinois-stateassembly@gmail.com](mailto:illinois-stateassembly@gmail.com)  
**CE Credits:** 7 Live Planned

## INDIANA STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** March 7, 2026  
**Title:** ISA Spring Conference 2026  
**Registration:** [indianastateassembly.org/events](http://indianastateassembly.org/events)  
**Location:** Ivy Tech Valparaiso, 3100 Ivy Tech Dr, Valparaiso, IN 46383

**Contact:** Sara Velligan, 219-808-8240, svelligan@hotmail.com  
**CE Credits:** 6 Live Planned

#### IOWA STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** April 18, 2026  
**Title:** IASA Spring Workshop  
**Registration:** ia.ast.org  
**Location:** WinnMed - formerly Winneshiek Medical Center, 901 Montgomery St, Decorah, IA 52101  
**Contact:** Tim Danico, 319-540-6008, timothy-danico@uiowa.edu  
**CE Credits:** 8 Live Planned

#### KANSAS STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 28, 2026  
**Title:** Annual Business Meeting and Spring Workshop  
**Registration:** ksast.net  
**Location:** Performance Rehab KCOI, 11250 Tomahawk Creek Pkwy, Leawood, KS 66211  
**Contact:** Melanie Meyer, 785-550-4101, melanie.meyer0713@gmail.com  
**CE Credits:** 4 Live Planned

#### KENTUCKY STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** April 10-11, 2026  
**Title:** Spring Conference  
**Registration:** <https://www.ticketleap.events>  
**Location:** Southcentral Kentucky Community & Technical College, 1845 Loop Dr, Bowling Green, KY 42101  
**Contact:** Stephanie Smith, 937-657-6685, stephlt18@yahoo.com  
**CE Credits:** 10 Live Planned

#### MAINE STATE ASSEMBLY

**Program Type:** Workshop & Webinar (webinar approved only for Maine State Assembly members)  
**Date:** March 28, 2026  
**Title:** Maine State Assembly of Surgical Technologists Spring Workshop  
**Location:** Maine General, 35 Medical Center Pkwy, Augusta, ME 04330  
**Contact:** Lori Swenson, 207-329-8402, lor-rainekimball@yahoo.com  
**CE Credits:** 6 Live Planned

#### MASSACHUSETTS STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** April 25, 2026  
**Title:** 25th Anniversary Celebration  
**Location:** St John of Damascus, 300 West St, Dedham, MA 02026

**Contact:** Kristen Urbanek, 617-257-5384, rdsox805@yahoo.com  
**CE Credits:** 4 Live Planned

#### MICHIGAN STATE ASSEMBLY

**Program Type:** Webinar (approved only for Michigan State Assembly members)  
**Date:** April 18, 2026  
**Title:** Spring Ahead with Surgery  
**Registration:** msaast.weebly.com  
**Contact:** Renona Gauthier, 248-891-3989, michiganassemblyofast@gmail.com  
**CE Credits:** 3 Live Planned

#### MINNESOTA STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** April 18, 2026  
**Title:** MNSA 2026 Spring Workshop  
**Registration:** mnast.mn/events  
**Location:** Methodist Hospital, 6500 Excelsior Blvd, St Louis Park, MN 55426  
**Contact:** Jolianne Mohler, 763-458-2764, mnast2016@outlook.com  
**CE Credits:** 7 Live Planned

#### MISSISSIPPI STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 21, 2026  
**Title:** Mississippi March Madness  
**Location:** Holmes Community College Pat McGowan Workforce Bldg, 412 W Ridgeland Ave, Ridgeland, MS 39157  
**Contact:** Shea Coleman, 601-605-3396, msstateassembly25@yahoo.com  
**CE Credits:** 6 Live Planned

#### MISSOURI STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 6-8, 2026  
**Title:** Annual Spring Conference with Elections 2026  
**Location:** Liberty Hospital, 2525 Glenn Hendren Dr, Liberty, MO 64068  
**Contact:** Shannon Clark, 816-209-2982, missouriassemblyast@gmail.com  
**CE Credits:** 13 Live Planned

#### NEBRASKA STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 7, 2026  
**Title:** NESA Winter Workshop 2026  
**Registration:** ne.ast.org  
**Location:** CHI Health Creighton University Medical Center - Bergan Mercy, 7500 Mercy Road, Omaha, NE 68124  
**Contact:** Castin Martin, PO Box 67034, Lincoln, NE 68506, 402-217-7735, nebras-kastateassembly@gmail.com  
**CE Credits:** 6 Live approved by AST

#### NEW HAMPSHIRE/VERMONT STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** April 4, 2026  
**Title:** NH/VT Spring Conference  
**Location:** Wentworth-Douglass Hospital, 789 Central Ave, Dover, NH 03820  
**Contact:** Kendall Addison, 603-534-0453, keo225kendall@gmail.com  
**CE Credits:** 6 Live Planned

#### NEW JERSEY STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** April 18, 2026  
**Title:** NJ State Assembly Spring Workshop 2026  
**Location:** St Joseph's Wayne Medical Center, 224 Hamburg Turnpike, Meyer Conference Room, Wayne, NJ 07470  
**Contact:** Wouter Smits, PO Box 218, Ridgefield Park, NJ 07660, 973-703-0939, njast3@icloud.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

#### OHIO STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** April 17-19, 2026  
**Title:** The Best in the Midwest Workshop and Conference  
**Location:** Renaissance Hotel, 409 Altair Pkwy, Westerville, OH 43082  
**Contact:** Heather Buchan, ohioast@gmail.com  
**CE Credits:** 15 Live Planned

#### OKLAHOMA STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 28, 2026  
**Title:** Spring Conference & Business Meeting 2026  
**Registration:** OklahomaStateAssemblyofSurgicalTechnologists.eventbrite.com  
**Location:** Canadian Valley Technology Center - Cowan Campus, 1701 S Czech Hall Road, Yukon, OK 73099  
**Contact:** Rochelle Lewis, 918-772-8002, rochelle-lewis@cherokee.org  
**CE Credits:** 6 Live Planned

### OREGON STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 7, 2026  
**Title:** OAST Spring Conference/Business Meeting  
**Registration:** oast-registration.square.site  
**Location:** Linn-Benton Community College Lebanon Center, 44 Industrial Way #D, Lebanon, OR 97355  
**Contact:** Jeffrey Rebo, 406-291-7220, jefreyrebo.oast@gmail.com  
**CE Credits:** 4 Live Planned

### PENNSYLVANIA STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** March 14, 2026  
**Title:** PA Spring Workshop  
**Location:** UPMC Hamot Women's Hospital, 118 East 2nd St, Erie, PA 16507  
**Contact:** Mary Ball, 814-490-1152, ballmc@upmc.edu  
**CE Credits:** 5 Live Planned

### SOUTH CAROLINA STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** March 28, 2026  
**Title:** SCSA Spring Workshop  
**Registration:** scsaast.org  
**Location:** We Are Sharing Hope Facility, 2215 Henry Tecklenburg Dr, Charleston, SC 29414  
**Contact:** Kenni Branham Reynolds, 803-229-2756, kenni.branham@gmail.com  
**CE Credits:** 8 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

### TEXAS STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 7-8, 2026  
**Title:** Best Little Workshop in Texas  
**Registration:** texasstateassembly.org  
**Location:** Radisson Hotel North Fort Worth-Fossil Creek, 2540 Meacham Blvd, Fort Worth, TX 76106  
**Contact:** Kristie Cole, 806-787-8298, kcole@southplainscollege.edu  
**CE Credits:** 15 Live Planned

### UTAH STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 28, 2026  
**Title:** Small But Mighty - Pediatrics in the Operating Room  
**Registration:** <https://m.signupgenius.com/>  
**Location:** Intermountain Medical Center, Building 6 - Doty Education Center, 5121 S Cottonwood St, Murray, UT 84107  
**Contact:** Tazia McAfee, 801-671-9631, mcaffetaz@gmail.com  
**CE Credits:** 4 Live approved by AST

### VIRGINIA STATE ASSEMBLY

**Program Type:** Annual Meeting/Elections  
**Date:** March 21, 2026  
**Title:** VCSA Annual Business Meeting, Elections, and Workshop  
**Registration:** vcsaofast.org  
**Location:** Reynolds Community College, 1651 East Parham Road, Richmond, VA 23228  
**Contact:** Lisa Day, 540-422-9471, ldaycsfa@gmail.com  
**CE Credits:** 5 Live Planned

### WASHINGTON STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** March 14, 2026  
**Title:** Spring Workshop and Scrub Bowl  
**Location:** Yakima Valley College, W Nob Hill Blvd & S 16th Ave, Yakima, WA 98902  
**Contact:** Eugene LeRoy, PO Box 18394, Spokane, WA 99228, 360-292-0770, wa.association.of.ast@gmail.com  
**CE Credits:** 6 Live Planned

### WISCONSIN STATE ASSEMBLY

**Program Type:** Workshop  
**Date:** April 11, 2026  
**Title:** Elevating CST Practice Beyond the Back Table  
**Registration:** wisconsinast.org  
**Location:** Thedacare Regional Medical Center-Appleton, 1818 N Meade St, Appleton, WI 54911  
**Contact:** Merette Abad, 262-751-0210, merette.abad@gmail.com  
**CE Credits:** 6 Live Planned

## Connect to Opportunity

LinkedIn



Build your professional presence and connect to AST.

## STATE ASSEMBLY ANNUAL BUSINESS MEETINGS

Members interested in the election of officers & the business issues of their state assembly should ensure their attendance at the following meetings.

### ALABAMA

Huntsville  
March 21, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### ALASKA

Anchorage  
March 21, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### ARIZONA

Phoenix  
March 7, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### CONNECTICUT

New Haven  
March 28, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### GEORGIA

Acworth  
March 14, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### ILLINOIS

Peoria  
March 21, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

### KANSAS

Leawood  
March 28, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

### KENTUCKY

Bowling Green  
April 10-11, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

### MASSACHUSETTS

Dedham  
April 25, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

### MISSISSIPPI

Ridgeland  
March 21, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

### MISSOURI

Liberty  
March 6-8, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

### NEBRASKA

Omaha  
March 7, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### NEWYORK

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

### OHIO

Westerville  
April 17-19, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### OKLAHOMA

Yukon  
March 28, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### OREGON

Lebanon  
March 7, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate  
Elections

### TEXAS

Fort Worth  
March 7-8, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

### UTAH

Murray  
March 28, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

### VIRGINIA

Richmond  
March 21, 2026  
Annual Meeting  
2026 BOD Elections  
& 2026 Delegate Elections

**Program Approvals:** Submit the State Assembly Program Date Request Form A1 no less than 120 days prior to the date(s) of the program for AST approval. The form must be received prior to the first (1st) of the current month for program publication in the next month of the AST monthly journal, *The Surgical Technologist*. The Application for State Assembly CE Program Approval A2 must be received at least thirty (30) days prior to the date(s) of the program for continuing education credit approval. An application submitted post-program will not be accepted; no program is granted approval retroactively.

Contact [stateassembly@ast.org](mailto:stateassembly@ast.org) or 800.637.7433, ext. 2547.

# Empower YOURSELF



## YOUR VOICE, YOUR POWER

- The Workforce Shortage: A Message from AST
- Turning the Workforce Chute into a Ladder
- CSTs Many Lifesaving Roles
- Education and Certification as an Appropriate Minimum
- Standard for Surgical Technology and Patient Safety
- AST Position Statement on Minimum Education for Surgical Technologists
- AST Position Statement on Accreditation, Certification, Official Title of the Profession, and OJT Training
- ACS Statement Supporting Surgical Technology Accredited Education and the CST
- AORN Job Description Supporting Surgical Technology Accredited Education and the CST
- AST Encourages Healthcare Facility Leaders to Support Local, Accredited Surgical Technology Educational Programs
- AST Recommendations for CSTs, Program Directors, and State Assemblies when Addressing OTH Training with a Healthcare Facility
- Message to Surgical Technology Program Directors Regarding Alternative Certification Credentials from the AST, ARC/STSA, and NBSTSA
- Should Healthcare Facilities Require CST Certification for Surgical Technologists? Yes...Here's Why



Association of Surgical Technologists

Your Voice <sup>is</sup> Your Power  
ADVOCATING FOR THE  
PROFESSION





## FOUNDATION *for* SURGICAL TECHNOLOGY

### **What is The Foundation for Surgical Technology?**

The Foundation is a 501c3 organization comprised of representatives from the Association of Surgical Technologists (AST) and the National Board of Surgical Technology and Surgical Assisting (NBSTSA). This type of organization also means any donation you give to the Foundation is tax deductible.

### **Who does The Foundation support?**

The Foundation provides scholarships to the following:

- ✦ Students
- ✦ Educators
- ✦ Military personnel
- ✦ and those who have helped others by serving on medical mission trips

### **When are the annual deadlines for the scholarships?**

- ✦ Students scholarships - March 1
- ✦ Military scholarships - March 1
- ✦ Constellation (Educator) Awards - December 1
- ✦ Medical mission reimbursement - December 31

**Learn more at [www.ffst.org](http://www.ffst.org) and give today!**

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- ✓ student rate discounts



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