



Adopted by BOD March 2014

## **ASA Guidelines for Trocar Insertion**

### **Introduction**

The following Guidelines were researched and authored by the ASA Education Committee, and have been approved by the ASA Board of Directors. They are effective March 15, 2014.

The purpose of the Guidelines is to support healthcare facilities in the reinforcement of best practices related to laparoscopic trocar insertion. The Guidelines provide information that surgical assistants working in the perioperative setting can use to develop and implement policies and procedures in the workplace for the insertion of trocars. It is noted that this Standard **only** addresses the insertion of trocars; the surgical assistant should **never** perform the insertion of the Veress needle due to the highly technical nature of the initial insertion of the Veress needle and the risks it presents to the patient. The Guidelines are presented with the understanding that it is the responsibility of the healthcare facility to develop, approve, and establish policies and procedures for trocar insertion according to existing healthcare facility protocols.

### **Rationale**

The following Guidelines relate to safely performing trocar insertion in the perioperative setting. The first endoscopic procedures performed on a human were by Hans Christian Jacobeus in 1910; he was an internal medicine physician who introduced thoracoscopy for the lysis of pleural adhesions in the treatment of patients with tuberculosis as well as performing the first laparoscopy.<sup>2,8</sup>

Over the years, endoscopic procedures have become more extensive with a wide range of pathologies that can be treated; consequently, the surgical team needs to learn complicated endoscopic surgical techniques including the insertion of trocars in various anatomical locations of the body. Obviously, the primary surgical error associated with Veress needle and trocar insertion is injury to internal viscera and vessels; however, research has contributed to reducing the concern in regard to the incidence of bowel and vessel injury with the Veress needle.<sup>3,5</sup> Related, the incidence of visceral injuries due to trocar placement is rare with the incidence of bowel injury between 0.04% - 0.05%.<sup>7,9</sup>

More importantly, 30% - 50% of the bowel injuries are not intraoperatively diagnosed leading to a mortality rate of up to 30% for unrecognized bowel injuries.<sup>7,8</sup> These sobering statistics support that the surgical assistant must have the same detailed knowledge as the surgeon of surgical anatomy and technical skills for the insertion of trocars to avoid patient injuries, including the ability to recognize visceral and vessel injuries in order to immediately treat.

### **Guideline I**

**Only surgical assistants who have detailed knowledge of surgical anatomy and completed training in the insertion of trocars should perform insertion techniques.**

1. The surgical assistant should complete trocar insertion training in a simulated environment under the instruction of a surgeon.
  - A. The surgical assistant should have detailed knowledge of surgical anatomy in order to safely perform high-level technical skills to include inserting trocars.<sup>1</sup>
  - B. It is recommended the surgical assistant acquire the didactic knowledge of inserting trocars.
    - (1) The surgical assistant should have the fundamental knowledge in regard to endoscopic techniques, including being familiar with the details and specifics of each procedure that includes trocar insertion.<sup>4,6</sup>
  - C. It is recommended the surgical assistant practice trocar insertion in a simulated environment under the instruction of a surgeon(s).<sup>4</sup>
    - (1) The surgeon should document the training as well as confirm the competency of the surgical assistant to move forward in performing trocar insertion on patients in the operating room.
2. The surgical assistant shall insert trocars into the patient in the operating room under the supervision of the surgeon and never in an independent manner to prevent patient injuries and comply with supervision laws.
  - A. Safe insertion of trocars depends on the surgical assistant adhering to recognized principles of trocar insertion, knowledge of surgical anatomy, and recognition of the hazards created by the patient having previous surgery.<sup>7</sup>
  - B. The surgical assistant shall use positive communication skills with the surgical team during trocar insertion to avoid patient injury.<sup>6</sup>

## **Guideline II**

**The surgical assistant should have knowledge of the technique of Veress needle insertion in order to assist the surgeon when he/she inserts the needle.**

1. The surgeon is responsible for inserting the Veress needle; however, the surgical assistant should have detailed knowledge of the technique in order to assist the surgeon.
  - A. The surgical assistant should know the techniques for elevating the skin to facilitate placement of the Veress needle.<sup>3,6,7</sup>
  - B. The surgical assistant should have knowledge of monitoring the insufflator for flow rate and establishing the correct intraabdominal pressure.<sup>4,6,7</sup>

## **Guideline III**

**The surgical assistant should have knowledge of the various types of complications associated with Veress needle and trocar insertion, and the treatment options.**

1. The surgical assistant should be able to assist the surgeon in identifying complications, in particular patient injuries associated with the insertion of the Veress needle and trocars.

- A. The surgical assistant should know the signs and symptoms specific to the type of injury that can be caused by trocar and Veress needle insertion, e.g., vascular injury/bleeding, bowel injury, subcutaneous emphysema, and air embolus.<sup>7,8</sup>
- B. The surgical assistant should know the intraoperative treatment options for the various types of injuries in order to assist the surgeon.<sup>7</sup>

Please note, surgical assisting is prohibited in a few states. Given the variation between surgical assistants' related state statutes, rules and regulations, it is essential that surgical assistants have a clear understanding of how their scope of practice is defined by their state's laws and regulations, as well as any opinions promulgated by the state regulatory agency. Local surgical assistant scope of practice is usually defined by the supervising surgeon, the hospital credentialing body, the state's board of medicine and applicable state statute and regulation.

### Competency Statements

Competency Statements	Measurable Criteria
<ul style="list-style-type: none"> <li>1. The surgical assistant has detailed knowledge of surgical anatomy.</li> <li>2. The surgical assistant possesses the knowledge and skills to insert trocars to include application of sterile technique.</li> <li>3. The surgical assistant has knowledge of the complications that can occur with trocar insertion, including treatment options.</li> </ul>	<ul style="list-style-type: none"> <li>1. Educational Guidelines as established in the current edition of the <i>Core Curriculum for Surgical Assisting</i>.<sup>1</sup></li> <li>2. The subjects of surgical anatomy and sterile technique are included in the didactic studies of the surgical assistant student.</li> <li>3. The surgical assistant student demonstrates knowledge of sterile technique and trocar insertion in the simulated operating room setting and during clinical experience.</li> <li>4. As practitioners, surgical assistants perform trocar insertion under the supervision of the surgeon.</li> <li>5. Surgical assistants complete continuing education to remain current in their knowledge of the techniques of trocar insertion including treatment of intraoperative patient injuries.</li> </ul>

### References

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