

## ADDENDUM B

### Laparoscopy Adjustments During COVID-19

Created: March 31, 2020

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Like many of our professional societies, SAGES has released a statement to try and assist surgeons during the COVID crisis. While much of what they suggested mirrored that which was said by the ACS and other organizations they did have a specific statement about laparoscopy. While we want to maximize laparoscopy to get patients discharged as soon as possible for bed availability and so that we can minimize the use of PPE as we round and care for them, we have to balance that for exposures to the anesthesia and OR staff during the case itself.

The combined OR and Anesthesia leadership has created a OR Procedure Algorithm to guide in how to triage patients.

<https://www.nebraskamed.com/sites/default/files/documents/covid-19/perioperative-guidelines-for-patients-requiring-perioperative-services.pdf>

When assessing the risk for the purposes of this algorithm laparoscopic abdominal surgery is “low risk”.

The larger algorithm addresses how patients should be screened, the PPE that the anesthesia and surgical staff should wear.

This addendum will address the measures that the surgeon can take to improve smoke management.

1. During the time out, review concerns that it is unknown if COVID can be aerosolized by laparoscopy so we would be taking precautions to minimize release of laparoscopic vapor.
2. Avoid Step trocars as air escapes from the white sleeve as you place the trocar, Consider using the VersaOne Cannula trocars to prevent sliding in and out OR other trocars that are designed to stay in such as Hassan trocars or Balloon tipped trocars
  - a. see picture at the end of document-we stock in 5, and 12 in the optical entry and the 11 in the cutting. We are working to get the 11 in the optical entry
  - b. Taut has a 8 mm ribbed bladeless trocar that gyn uses that we also stock
3. To the least dependent trocar, connect a smoke evacuator. All pneumoperitoneum should be vented through this trocar.
  - a. Our standard smoke evacuator is the SeeClear, the pink smoke evacuator. This evacuates smoke passively through a ULPA filter that filters to 0.1 microns. Please see the next pages on the manufacturer’s instructions on how to use.
    - i. If you have ever used the pink smoke evacuators, you know that they can fill with fluid and not work so watch them closely and if the tubing fills with fluid, then replace them.
  - b. The two robot rooms do have the CONMED AirSeal. This does NOT vent through a filter so you should an active smoke evacuator. The manufacturer recommends use of an active smoke evacuator at the same time, we have a limited number.
    - i. If no active smoke evacuator is available we would recommend not using the AirSeal and using standard laparoscopy and a SeeClear smoke evacuator.
4. All instruments need to have stopcock valves on them to prevent smoke leak from the side ports.
5. Pneumoperitoneum needs to be the lowest value that can be achieved.

6. Avoid long dissecting times with cautery, ultrasonic scalpels to avoid production of smoke.
7. Minimize Trendelenburg as this can cause respiratory compromise and mobilization of virus.
8. If you have a specimen, vent all pneumoperitoneum before extracting the specimen. For example in a lap chole, after the specimen is placed in the bag, the gas was turned off; vent all of the gas through the single trocar with the smoke evacuator. Only once the abdomen was flat was the specimen bag removed.

As the specimen is extracted, the surgeon should ask everyone to either be looking straight at the trocar or have back to field. The weakest part of protection from splatter is the side of shields, eyewear and masks so either be looking straight on or completely away. The trocar was reinserted, and the abdomen was re-inflated.

Because the trocar site was now larger than the trocar, the trocar may need to be sewn in place to prevent it from sliding in and out.

The operation was completed.

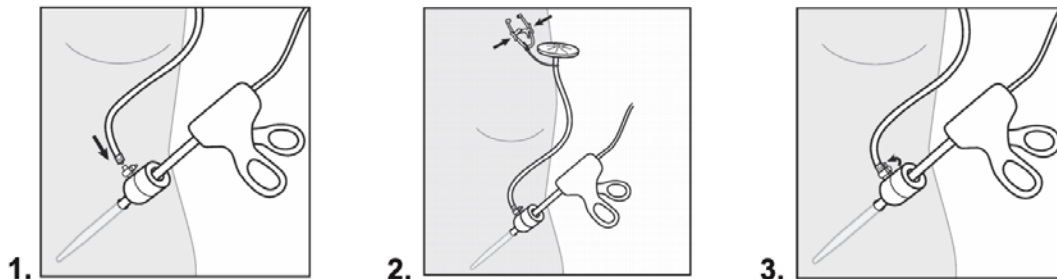
9. At the end of the operation, all the gas should be vented though the trocar with the smoke evacuator.
10. Do not use a Carter Thompson or other facial closure device where gas might escape during closure because gas often vents during this facial closure technique. Use S retractors once the abdomen is completely deflated.
11. Close all incisions with subcuticular absorbable incisions so that patient does not have to return for follow up and visits can be done via telehealth.
12. It is not recommended to insert Raytecs or other sponges because pneumoperitoneum can escape on insertion or removal. In general, try and avoid removing the trocar caps.
13. Avoid hand assisted surgery because you vent gas every time your hand goes in and out. Using a hand port for trocar placement and specimen extraction is different.



**VersaOne™ Universal Cannula**

**SeeClear MAX® (SC062500) / SeeClear XCL® (SC082500)**  
Laparoscopic Smoke Evacuation System

CE0086



**SeeClear MAX® (SC062500) / SeeClear XCL® (SC082500) • Laparoscopic Smoke Evacuation System**  
**Instructions for Use**

English

1. Attach the SeeClear® to the side port of the trocar that is **largest and closest to the source of smoke or mist**.
2. Position the SeeClear filter housing away from the operative site. Secure it to the surgical drape at a level **elevated above the trocar**.
3. Open the side port of the trocar to its full open position **before smoke or mist is created**. The SeeClear filter is not a catch-up device.

**Note:** Elevating the SeeClear filter prevents condensation from collecting in the filter housing and reducing flow rate.

**Caution:** U.S. Federal law restricts this device to sale by or on the order of a physician.

Not made with natural rubber latex.

**Caution:** The product is for single use and not to be reused due to risk of contamination.

Dispose of in accordance with all applicable Federal, State and local Medical/Hazardous waste practices.

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1. Annals of Surgery- Lessons Learned from China and Italy-  
<https://journals.lww.com/annalsofsurgery/Documents/Minimally%20invasive%20surgery%20and%20the%20novel%20coronavirus%20outbreak%20-%20lessons%20learned%20in%20China%20and%20Italy.pdf>
2. See Clear Instruction Sheet: <https://www.coopersurgical.com/medical-devices/detail/see-clear-surgical-smoke-evacuation-system#>
3. Most recent SAGES recommendations:  
<https://www.sages.org/resources-smoke-gas-evacuation-during-open-laparoscopic-endoscopic-procedures/>