



## Infection Control Guidelines of gastrointestinal endoscopy during COVID-19 pandemic

COVID-19 has the potential to be transmitted during gastrointestinal procedures, via aerosolized droplets from the posterior pharynx and bronchioles, and possibly via fecal shedding. **Given the current pandemic status of COVID-19, it may be reasonable to consider that all patients at high-risk for COVID-19 infection.**

### General comments

- Whenever possible, in patients who are considered to be at high risk or who are known to be positive for the COVID-19 virus, GI endoscopy should be performed only if medically indicated. All protective measures should be taken and the risk of postponing endoscopy versus the risk of COVID-19 infection should be considered.
- Urgent endoscopies should be performed by appropriately trained staff: keeping the number of staff to a minimum. Ample time should be allowed for infection control measures before and after endoscopy.
- Health Care Professionals (HCP) should be triaged daily: symptoms and signs (daily measurement of temperature) with those considered to be at high-risk of COVID-19 should be isolated and tested.
- If feasible, online care should be provided (e. g. telemedicine).
- Washing of hands with soap and warm water (for at least 20 seconds) or use of alcohol-based hand rub, before and after all patient interactions, after contact with potentially infectious sources, and before and after gowning, should be done by all GI endoscopy unit personnel.
- Mobile phones, pens, computer workstations, and medical equipment should not be shared. Jewelry (watches, rings, bracelets) should not be worn by GI endoscopy unit HCP.

### Pre-procedure Risk Management

- Risk stratification of patients for possible COVID-19 infection should be done 1 day prior to GI endoscopy (by phone preferably) and then again on the day of endoscopy by questioning for symptoms and contacts.
- During patient assessment, use of surgical masks is recommended for both the HCP and the patient and a distance of at least 1 – 2 meters is recommended.
- Relatives and caregivers should not have access to the GI endoscopy unit.
- For patients who are considered at high risk for COVID-19, separate pre- and post-GI endoscopy recovery areas (or timeslots) should be arranged.
- For patients with suspected or confirmed COVID-19 who require emergency endoscopy, the endoscopic procedure should be performed at the end of the session.

### Intra-procedure risk management

- During the current situation, only essential and fully trained endoscopy personnel should be present in endoscopy cases, all using a full set of PPE.
- Healthcare workers performing upper or lower GI endoscopy procedures should use the N95 respirator, regardless of a patient's COVID-19 status.
- Endoscopists should double-glove (i.e., one pair under the gown sleeve and another above it) during procedures regardless of a patient's COVID-19 status.
- Healthcare workers should not use surgical masks as a substitute for N95 masks during GI procedures in patients with confirmed or presumed COVID-19.
- PPE should include two pairs of gloves, protective eyewear (goggles or face shield), waterproof gowns, booties/shoe covers, and N95 respirator. Putting on and taking off PPE must be performed as recommended.

- Extra precaution is recommended during colonoscopies as prolonged faecal shedding of SARS-CoV-2 can occur. Colonoscopy should be considered a high-risk procedure and careful decontamination procedures vigilantly performed.
- Whenever possible, in patients who are considered to be at high risk or who are known to be positive for the COVID-19 virus, GI endoscopy should be performed if available, in a negative-pressure room by experienced staff. If the only negative-pressure rooms are located outside the endoscopy unit, it must be ensured that these rooms are properly equipped for performing any GI endoscopy procedure. If negative-pressure rooms are not available, endoscopy should be performed in a dedicated room with adequate ventilation.
- For patients in intensive care units (ICUs), GI endoscopy should be performed bedside.
- Since the virus has been found in multiple cells in the gastrointestinal tract and all fluids including saliva, enteric contents, stool and blood, surgical energy should be minimized.
- Endoscopic procedures that require additional insufflation of CO<sub>2</sub> or room air by additional sources should be avoided until we have better knowledge about the aerosolization properties of the virus. This would include many of the endoscopic mucosal resection (EMR) and endoluminal procedures.

### **Post-procedure risk management**

- Consider tracing and contacting patients at 7 and 14 days to inquire about any new COVID-19 diagnosis, or development of COVID-19 symptoms.
- Contaminated waste and endoscopic devices from patients at high risk of or with suspected or confirmed COVID-19 should be disposed of as infectious waste.
- Removal of caps on endoscopes could release fluid and/or air and should be avoided.
- Endoscopic equipment used during procedures with COVID-19 positive or high risk patients should be cleaned separately from other endoscopic equipment.
- Endoscopy room should be cleaned after these procedures on high risk patients with staff using appropriate PPE. This should include: gown, surgical mask, eye-protection, and gloves.
- The disinfection and reprocessing of the endoscope and instruments used for a patient with COVID-19 will be similar to those used in standard practice. All disposable devices used for a patient with COVID-19 should not be re-used. If treatment of patients with COVID-19 is performed in negative pressure rooms, a delay of 30-45 min is recommended before a new patient enters the room.
- During reprocessing, mucosal surfaces must be protected as recommended. Additional precautions should be taken in the reprocessing of equipment, such as N95 respirator, after endoscopy in confirmed COVID-19 cases.

### **References**

1. ESGE and ESGENA Position Statement on gastrointestinal endoscopy and the COVID-19 pandemic.
2. Practice of endoscopy during COVID-19 pandemic: position statements of the Asian Pacific Society for Digestive Endoscopy (APSDE-COVID statements)
3. SAGES and Recommendations regarding surgical response to COVID-19 crisis 29 March 2020. EAES <https://www.sages.org/recommendations-surgical-response-covid-19>.
4. Management of endoscopes, endoscope reprocessing, and storage areas during the COVID-19 Pandemic. <https://www.sages.org/management-endoscopes-reprocessing-storage-covid-19/>
5. Guideline on Endoscopic Procedures During the COVID-19 Pandemic. American Gastroenterological Association (AGA). April 3 ,2020. <https://www.jwatch.org/na51292/2020/04/03/guideline-endoscopic-procedures-during-covid-19-pandemic>