

# Recommendations for Reopening Endoscopy Units in Turkey: A Set-up Plan from a Tertiary Center in Istanbul

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## ABSTRACT

In the midst of Coronavirus-19 (COVID-19) pandemic, endoscopic procedures have been separated for only urgent and semi-urgent cases for the last few months to prevent transmission in endoscopy units. This approach will perhaps resolve the burden of elective procedures in the months ahead of us. As we observe a downtrend in new cases of COVID-19 in Turkey, a strategy for reopening endoscopy units is required. We are stepping into a time period where we should not only re-provide the essential services to our patients but also maintain the safety of healthcare workers and preserve the valuable personal protective equipment as well. Herein, we aim to share the available knowledge in performing endoscopy during the pandemic and the set-up plan of a tertiary center in Istanbul for reopening the endoscopy unit in the era of the COVID-19 pandemic.

**Keywords:** Endoscopy, COVID-19, personal protective equipment

## INTRODUCTION

An outbreak of COVID-19 infection has rapidly spread throughout the whole world and is defined as a global pandemic in March 2020. Consequently, endoscopic procedures have been separated for urgent and semi-urgent cases for the last few months to prevent transmission in endoscopy units. This approach was rational, as we are still not aware of the exact proportion of asymptomatic carriers, and unfortunately, we are still not able to perform molecular COVID-19 test prior to endoscopic procedures. As we observe a downtrend in new cases of COVID-19 in Turkey, a strategy for reopening endoscopy units is required. Therefore, we sought to summarize the available knowledge in performing endoscopic procedures in the era of the COVID-19 pandemic and share our set-up plan of the endoscopy unit of the Marmara University to serve as a brief guide to the readers of the *Turkish Journal of Gastroenterology*.

### When Will We Be Able to Turn Back to Our Full Capacity?

For the first 3 months ahead of us, we are planning to perform elective procedures with 50% capacity. The full capacity of elective procedures will be applicable only when no new cases of COVID-19 are diagnosed for at

least 2 weeks considering the strict measures and precautions we will take.<sup>1</sup>

### What Physical Modifications Should We Organize in the Endoscopy Unit?

The ideal approach is to perform endoscopic procedures of confirmed or highly suspicious COVID-19 cases in a negative pressure room. However, not all hospitals have these special rooms in Turkey. An alternative set-up would be to perform endoscopic procedures of suspected or confirmed COVID-19 cases outside the unit in a room with sufficient external ventilation.<sup>1,2</sup> If this is not possible in your hospital, a "two separate pathways" approach is recommended.<sup>3</sup> A different entrance and exit, recovery area, and procedure room must be separated for those with high risk or suspicious of COVID-19. If this is not technically feasible, then patients with high risk or suspicious of COVID-19 should be taken to the procedure room as the last patient of the day.

### What Precautions Should We Take in the Pre-Procedure Period?

The capacity of the reception area for patients should be reduced to 50-75% capacity to maintain the >2 m

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distance rule for patients and companions. COVID-19-related symptoms, history of suspicious contact, and travel must be questioned via telephone within 3 days before the endoscopic procedure.<sup>4</sup> If the patient is considered high-risk for COVID-19, then the patient should be referred to COVID-19 testing and the procedure should be postponed. On the procedure day, the patient should be questioned again for risk stratification. However, due to the unknown rate of atypical clinical presentation and asymptomatic carriers, we suggest considering all patients as high-risk and take cautions accordingly. This approach will probably be maintained until rapid molecular testing is available before all endoscopic procedures.

All endoscopy staff should wear a surgical mask when entering the endoscopy unit. For those taking care of general patient triage, surgical mask, face shield or goggles, disposable gloves, and an isolation gown is generally considered sufficient. For staff taking care of patients with suspected or confirmed COVID-19, wearing full personal protective equipment (PPE) with N95 or an equivalent respirator mask, face shield or goggles, disposable gloves, and a water-proof isolation gown is recommended.<sup>1</sup>

All patients should wear a surgical mask before and after the upper gastrointestinal endoscopy procedures. All companions should be abandoned from entering the procedure room except for some special circumstances such as a companion of a disabled patient. For those entering the procedure room, we recommend to put on full PPE regardless of the COVID-19 risk of the patient and the type of procedure (including colonoscopy), as all patients should be considered as high risk at the moment. A step-by-step approach for putting on and removal of the PPE is presented in Table 1.<sup>5,6</sup> One substantial point to remember is that hand hygiene should be implemented after touching any surface in each step of the procedure. Proper hand hygiene with soap and water or hand sanitizers containing

at least 60% alcohol is sufficient.<sup>7</sup> Besides, each center should repeat the training for proper use of PPE within designated intervals.

### **What Measures Should We Implement in the Post-Procedure Period?**

All horizontal surfaces and ground should be disinfected immediately after the procedure. Staff in charge of this step should donate full PPE as they are in the procedure room. After the procedure, the room should not be used for at least half an hour after disinfection and sufficient ventilation. In the pre-procedure and post-procedure period, the patient should recover in the same area and same bed. The oxygen mask used in the procedure room should also be used in the post-endoscopic period.<sup>4,7</sup>

After the procedure, a quick information can be given to the patient or companion at the exit of the endoscopy unit. The patient or companion should be informed about the development of any COVID-19-related symptoms in the following 7-14 days and must be given a contact phone number to communicate in case of any symptom development.<sup>8,9</sup>

### **Any Changes in the Cleaning and Disinfection Rules Implemented in the Pre-COVID Period?**

Routine high-level disinfection implemented in the cleaning of endoscopes and accessories is generally accepted to be protective.<sup>10</sup> Nurses should put on full PPE in the reprocessing period as well. Usage of EPA-registered hospital-grade disinfectant solutions and wipes are recommended for the cleaning of the procedure room. For kitchen and personal areas, germicidal tissue wipes are considered sufficient.<sup>4</sup> Tables, computers, phones, etc., should be disinfected with germicidal wipes at least two times a day. Patient toilets must be cleaned after each patient, if possible.

**Table 1.** A Step-By-Step Guide for the Usage of Personal Protective Equipment

Putting on the Protective Equipment	Removal of the Protective Equipment
<ol style="list-style-type: none"> <li>1. Perform hand hygiene</li> <li>2. Put on disposable hairnet</li> <li>3. Wear long-sleeved, water resistant gown</li> <li>4. Put on N95 respiratory mask or equivalent <ul style="list-style-type: none"> <li>• Put on a surgical mask above N95 mask to prevent decontamination and maintain long-term use of N95 mask</li> </ul> </li> <li>5. Put on goggles and/or face shield</li> <li>6. Wear double gloves</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove gown and hairnet inside the procedure room</li> <li>2. Remove glove inside the procedure room <ul style="list-style-type: none"> <li>• Exit the room after this step</li> </ul> </li> <li>3. Perform hand hygiene after exiting the room and put on a new pair of gloves</li> <li>4. Remove face shield and/or goggles <ul style="list-style-type: none"> <li>• Disinfect surface with a germicidal wipe</li> <li>• Put the equipments to a disinfected protection area for the reuse in the next procedure</li> </ul> </li> <li>5. Remove the surgical mask first and then the N95 respiratory mask <ul style="list-style-type: none"> <li>• Store N95 mask in a disinfected protection area for the reuse in the next procedure</li> </ul> </li> <li>6. Put on the surgical mask and keep it until the next procedure</li> </ol>

### **What If a Second Peak in the Number of New COVID-19 Cases Occurs?**

In this situation, our approach would be postponing all elective procedures again and perform only urgent cases and selected semi-urgent cases based on the PPE supply of our hospital and priority of the procedures described by previous position statements of European Society of Gastrointestinal Endoscopy (ESGE).<sup>2</sup>

### **Final Message**

In conclusion, perhaps the COVID-19 pandemic will create a new routine in our endoscopy units. We must apply the principles of standard protective measures and assume that every patient requiring endoscopy carries COVID-19 and protect ourselves accordingly.

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