





**Emergency Recommendation****Gastrointestinal endoscopy in the era of the acute pandemic of coronavirus disease 2019: Recommendations by Japan Gastroenterological Endoscopy Society (Issued on April 9th, 2020)**

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All gastrointestinal endoscopic procedures have a high risk of aerosol contamination of the coronavirus disease 2019 (COVID-19) to endoscopists, nurses, and healthcare assistants. Given the current pandemic situation of COVID-19, the Japan Gastroenterological Endoscopy Society issued the recommendation for gastrointestinal (GI) endoscopy based on the status of COVID-19 as of April 9, 2020, in Japan: (i) indications for GI endoscopy in the pandemic of COVID-19; (ii) practical protective equipment for medical personnel depending on the risk for COVID-19; (iii) preprocedural management, such as pharyngeal local anesthesia using lidocaine spray which has a

potential to generate the aerosols; (iv) ideal settings of the endoscopy room including the numbers of the staff and the patients; (v) postprocedural management, such as undressing and follow-up of the patients, as well as the involved staff, were documented to fit the practical scenarios in GI endoscopy, with the available data in Japan and the world. We believe that certain measures will prevent further spread of COVID-19.

**Key words:** coronavirus, COVID-19, gastrointestinal endoscopy personal protective equipment

**INTRODUCTION**

**G**IVEN THE CURRENT status of the coronavirus disease 2019 (COVID-19) pandemic, gastrointestinal endoscopy must be performed following the policies set forth by the government of Japan as well as the Ministry of Health, Labour and Welfare. Considerations should also be made on factors such as the situation of each healthcare facility. The following recommendations by the Japan Gastroenterological Endoscopy Society (JGES) for endoscopic procedure take the current status of the COVID-19 pandemic into account and do not impose any restrictions on procedures to be performed at each facility. Each facility

must refer to this proposal and develop detailed policies through collaboration with related internal departments and other groups, depending on the local and organizational situation. The recommendations are based on the status of COVID-19 as of April 9, 2020. Please note that the information provided in this document is subject to future changes in the situation and updates by the government.

This recommendation was developed by the JGES Health and Safety Committee, and has been authorized by the JGES board of directors.

**ROUTES OF COVID-19 TRANSMISSION AND TREATMENT WITH GASTROINTESTINAL ENDOSCOPY**

**T**HE PRIMARY MODES of coronavirus transmission are droplets and contact. It has been presumed that this is also the case for severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), a novel coronavirus.<sup>1,2</sup>

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Received 12 April 2020; accepted 20 April 2020.

Gastrointestinal endoscopies, especially those through the nasal and oral cavities, may induce coughing and subsequent emission of droplets and increase the risk of exposure of medical staff, including endoscopists, nurses, and healthcare assistants, to aerosol contamination.<sup>3</sup> The risk of viral transmission is presumed to increase during a prolonged stay in a closed environment, such as the endoscopic suite. In addition, transmission via colonoscopy has been suggested because viruses can be found in the feces.<sup>4,5</sup>

## INDICATIONS FOR GASTROINTESTINAL ENDOSCOPY

THE JAPANESE NATIONAL COVID-19 Unit has been updating the basic policy daily (<https://corona.go.jp/en/>). Given the current pandemic situation and unless it is urgently required (Table S1), gastrointestinal endoscopy should be avoided or postponed in a patient who has tested positive for SARS-CoV-2 on polymerase chain reaction testing and meets any of the criteria provided below (confirmed COVID-19 cases or clinically suspected COVID-19 cases: high-risk patients).<sup>4–10</sup> Meanwhile, those who do not meet the criteria (without clinically suspected cases of COVID-19: low-risk patients) may still have the virus and infect others. Therefore, gastrointestinal endoscopy should be performed on such patients after extensive deliberation, and it should also be postponed unless it is urgently required. Especially, in areas where a state of emergency has been declared according to the Act on Special Measures Concerning COVID-19 from the Japanese government, postponement or cancellation is strongly recommended to prevent the spread of infection and protect healthcare workers, even for low-risk patients. This is extremely important for saving personal protective equipment. In addition, if it is necessary to perform emergency gastrointestinal endoscopy, the procedure should be performed according to the facility's rules.

1. Patients with symptoms suggestive of upper respiratory infection or a body temperature  $\geq 37.5^{\circ}\text{C}$ .
2. Patients who have had close contact with subject(s) with established or suspected COVID-19 within the last 2 weeks.
3. Patients with a history of travel to area(s) with pandemic COVID-19 within the last 2 weeks. Please be sure to check up-to-date information on pandemic areas as new cases are confirmed daily in an increasing number of areas.
4. Patients complaining of severe general fatigue and/or shortness of breath.

5. Patients complaining of dysosmia and/or dysgeusia with no clear cause.
6. Patients complaining of gastroenterological symptoms, such as diarrhea, that last for 4–5 days with no clear cause.

## PROTECTIVE PROCEDURES FOR GASTROINTESTINAL ENDOSCOPY

IT HAS RECENTLY become evident that asymptomatic subjects may have been infected by the virus. In this regard, JGSE strongly recommends standard precautions when performing gastrointestinal endoscopy. Additionally, strategies for preventing droplet and contact transmission should be included as standard precautionary measures (Table S1). The use of personal protective equipment (PPEs), including a face mask with a face shield (or a goggle and a face mask), gloves, a cap, and a gown (long sleeves) should be enforced. The PPEs should not be reused for examinations; new ones must be used. Areas from fingertips through the elbow of both hands should be carefully washed after each examination. Infection prevention measures should be implemented to the maximum possible extent, depending on the availability of medical resources such as PPEs at each facility.

Special attention should be paid to the avoidance of coughing and aerosols when administering lidocaine; Jackson Spraying for local anesthesia of the pharynx should be opposed. Please consider using the above PPEs on this occasion. Finally, please take the above-mentioned precautions seriously for carrying and cleansing endoscopic instruments after each examination. The guidelines issued by the JGES for standardized cleansing and disinfection of gastrointestinal endoscopes<sup>11</sup> must be followed.

Furthermore, the countermeasures for pre- and post-endoscopic procedure (e.g., the disinfection/closure of the endoscopy room, the possible duration of the closure, and the time of reopening the room) should be discussed at each facility for the following situations: (i) endoscopic procedure must be performed in a patient with a confirmed case of COVID-19; (ii) if COVID-19 is revealed after the endoscopic procedure.<sup>12</sup> The PPEs used for the patient with a confirmed case of COVID-19 must be disposed of immediately after use.

## MEDICAL PROFESSIONALS INVOLVED IN TREATMENT WITH GASTROINTESTINAL ENDOSCOPY

IF ENDOSCOPISTS OR medical staff meet any of the above criteria 1–6, they should not be involved in the

performance of endoscopic procedures, even if the situation allows, from the perspective of infection control.

## MEASURES TO BE TAKEN IN THE ENDOSCOPY SUITE AND THE ENVIRONMENT THEREOF

ON THE DAY of endoscopy, a detailed medical interview and the measurement of body temperature are highly recommended before entering the endoscopy suite. The decision to proceed with endoscopy should be carefully made, based on the information. It is also important for patients preparing to undergo gastrointestinal endoscopies to distribute thermometry tables in advance and regularly describe their body temperature and abnormalities until the day of the examination.

At the endoscopy suite, it is important to keep all patients at an appropriate distance from each other.<sup>13</sup>

## CONFLICT OF INTERESTS

AUTHORS ATSUSHI IRISAWA and Akio Katanuma are an Associate Editor of *Digestive Endoscopy*, and Takayuki Matsumoto is an Editor-in-Chief of *Digestive Endoscopy*. Other authors declare no Conflict of Interests for this article.

## FUNDING INFORMATION

NONE.

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## SUPPORTING INFORMATION

ADDITIONAL SUPPORTING INFORMATION may be found in the online version of this article at the publisher's web site.

**Table S1** Measures to be taken for high-risk patients.