



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

## CORRESPONDENCE

Readers may submit letters to the editor concerning articles that appeared in *Gastroenterology* within one month of publication. Detailed guidelines regarding the content are included in the Instructions to Authors.

### Pre-Procedural COVID Testing: The “New Normal”



Dear Editors:

We read with great interest “Yield and Implications of Pre-Procedural COVID-19 PCR Testing on Routine Endoscopic Practice” by Forde et al,<sup>1</sup> describing the early experience of resuming endoscopic procedures at an academic university hospital with universal pre-procedural coronavirus disease 2019 (COVID-19) testing after a negative symptom screen. This important study comes as endoscopy units throughout the country and across varied practice settings consider ways to reopen to serve their patients, while balancing the risk of COVID-19 exposure and transmission to patients and the health care team, in light of the fact that endoscopic procedures are aerosol-generating.<sup>2</sup> The authors describe their pre-procedure process for symptom assessment involving a screening phone call and temperature and symptom assessment on the day of the procedure, in addition to polymerase chain reaction (PCR)-based COVID-19 testing 72 hours before the procedure, which can serve as a model for endoscopy practices developing their own operating protocols. It is important to note that full personal protective equipment was used, including N95 respirators, irrespective of all patients testing negative for COVID-19. Their key findings were that of the 396 COVID-19 swabs performed on asymptomatic patients, only 1 patient tested positive; none of the endoscopy staff developed symptoms of, or tested positive for, COVID-19; and the rate of COVID-19 in their patients was lower than that of the surrounding general population.

We practice at a large comprehensive cancer center within Los Angeles County and, as such, our patients have required endoscopic procedures as part of their time-sensitive cancer care as it relates to diagnosis, staging, and management of complications of cancer therapy. Due to their immunosuppressed states, they are also at the highest risk for morbidity and mortality if infected with COVID-19. On March 19, 2020, a stay at home order was issued across our state, the first such order in the country. We implemented symptom screening and temperature checks before entry into our medical center and cancelled all outpatient and nonemergent inpatient endoscopy beginning March 16, 2020. Institutional endoscopy guidelines for case selection, universal pre-procedure COVID-19 testing (DiaSorin Simplexa COVID-19 Direct real-time reverse transcription PCR assay) 24 hours before the procedure (through an on-site, walk-in febrile respiratory clinic for outpatients) and within 24 hours for inpatients, and universal use of personal protective equipment, including N95 respirators, were adopted on March 24, 2020 based on the available data at the time.<sup>3,4</sup> On April 13, 2020, a drive-through clinic was implemented for pre-procedural COVID-19 testing, which was universally required 24

hours before the procedure, with up to 72 hours being allowed for patients with procedures on Mondays. Between March 24 and May 31, 2020, a total of 290 PCR nasopharyngeal swabs for COVID-19 were performed on our endoscopy patients before procedures and none were positive. To date, none of our endoscopy staff have displayed symptoms of, or tested positive for, COVID-19. In this same time period in Los Angeles County, of the 582,931 citizens tested, 49,179 (8.5%) have tested positive, with no publicly available data on the rates in asymptomatic patients in our county.

Taken together, the data on universal pre-procedure COVID-19 testing of asymptomatic patients suggests a very low positive rate of 0.14% (1 of 686), as well as no instances of suspected or documented transmission to the endoscopy staff in the setting of negative-tested patients. However, our interpretation of the data differs from that of the authors. Given that asymptomatic spread of COVID-19 is well established<sup>5,6</sup> and has likely contributed to the development of the pandemic,<sup>7</sup> we believe that reliance on symptom-based screening has proven to be inadequate and has the real potential to cause an outbreak.<sup>6,7</sup> Until further data are available from other endoscopy units using universal pre-procedural COVID-19 testing, we believe it is premature to suggest any alternative mode of screening. In fact, the current data simply support the recommendation for universal pre-procedure COVID-19 testing. We do agree that despite a negative COVID-19 test, full personal protective equipment should be used, given the possibility of a false negative and new infection between the time of test and endoscopy procedure.

We laud the authors for publishing their initial experience and hope that others from various practice settings will soon share their experience as well. Despite relaxing of social distancing regulations nationwide, we believe that ongoing vigilance is required to prevent the unintended spread in our endoscopy units and that the currently implemented strategies may be the “new normal.”

TRILOKESH D. KIDAMBI

GREGORY E. IDOS

JAMES L. LIN

Division of Gastroenterology

Department of Medicine

City of Hope Medical Center

Duarte, California

### References

1. Forde JJ, et al. *Gastroenterology* 2020;159:1538–1540.
2. Soetikno R, et al. *Gastrointest Endosc* 2020;20:34033–34035.
3. ACG New Team. <https://gi.org/2020/03/15/joint-gi-society-message-on-covid-19/>.
4. Repici A, et al. *Gastrointest Endosc* 2020;92:192–197.

5. Wolfel R, et al. *Nature* 2020;7809:465–469.
6. Arons MM, et al. *N Engl J Med* 2020;382:2081–2090.
7. Gandhi M, et al. *N Engl J Med* 2020;382:2158–2160.

**Conflicts of interest**

The authors disclose no conflicts.

**Most current article**

<https://doi.org/10.1053/j.gastro.2020.06.085>



**Reply.** We thank Kidambi et al<sup>1</sup> for their interest in and insightful feedback regarding our work “Yield and Implications of Pre-Procedural COVID-19 PCR Testing on Routine Endoscopic Practice.”<sup>2</sup> Resumption of elective endoscopy in the coronavirus disease 2019 (COVID-19) era has been challenging due to a lack of evidence-based guidance; conflicting levels of input from federal, state, and local governments; and widely variable COVID-19 prevalence rates by region. We previously reported our experience using a routine pre-procedure COVID-19 testing strategy for maintaining the safety of patients and staff.<sup>2</sup> During our study, outpatients with upcoming endoscopic procedures were contacted via telephone and asked a COVID-19 screening questionnaire regarding symptoms, exposures, and travel. Those with negative verbal screening underwent nasopharyngeal polymerase chain reaction (PCR) testing 48 to 72 hours before the planned procedure and, if negative, proceeded with their procedure as planned. We found 1 of 396 patients had a positive PCR test result after initial negative questionnaire screening (positive test rate 0.25%; 95% confidence interval, 0.01%–1.40%) in our intermediate-prevalence area at the time of the initial study period. Given this result, we concluded that while ideal if readily available, pre-procedure COVID-19 testing of asymptomatic individuals may be relatively low-yield when coupled with screening questionnaires in a low to intermediate prevalence settings. As such, we advocated a tailored approach to testing based on available resources and disease prevalence.

Our findings were particularly important for practices at an early stage in the pandemic, when resources such as PCR tests and personal protective equipment were limited. As highlighted by Kidambi et al,<sup>1</sup> there is a well-documented potential for asymptomatic spread of COVID-19; however, multiple studies of pre-procedure PCR COVID-19 testing have now demonstrated that asymptomatic carriers are rare in low prevalence areas.<sup>1–3</sup> In addition, PCR testing results may vary based on disease prevalence, prompting recent guidelines by the American Gastroenterology Association recommending against a pre-procedure testing strategy in low- or high-prevalence areas due to high false-positive or false-negative rates, respectively.<sup>4</sup>

Since proceeding with phased reopening in May 2020, Miami-Dade County has experienced an extensively publicized increase in COVID-19 prevalence, during which time

Florida encountered the highest COVID-19 cases per capita in the nation.<sup>5</sup> In order to further evaluate yield of routine pre-procedure COVID-19 testing of asymptomatic individuals, we continued to follow our PCR testing positivity rate within the context of our region’s transition from an intermediate to high prevalence area. In a retrospective cohort study of all patients with endoscopic procedures scheduled at our facility between April 13, 2020 and July 17, 2020, the proportion of positive tests pre and at each month post societal re-opening were compared. Post reopening, we encountered 17 of 1415 positive tests (1.22%; 95% confidence interval, 0.07%–1.94%). This rate is not statistically different from our previous positivity rate when Miami was an intermediate prevalence area (0.25% vs 1.22%;  $P = .09$ ). There was no significant change in test positivity rates in the month after re-opening (2 of 565 = 0.35%;  $P > .99$ ); however, a significant change was noted during month 2 (14 of 573 = 2.44%;  $P = .01$ ). The inflection point for significance coincided with the community test positive rate of approximately 20%.

As concluded by Kidambi et al,<sup>1</sup> the implications of even 1 positive patient in the endoscopy unit could result in catastrophic consequences. Despite the overwhelming rise in positive COVID-19 cases in our community, we continued to perform elective and semi-elective endoscopic procedures in a manner that proved safe both for patients and staff using our continued approach of pre-procedure screening questionnaires and PCR testing in addition to physical distancing, full barrier personal protective equipment, and hand hygiene. Our positivity rates among all prevalence levels have remained acceptably low and significantly lower than the positivity rate of the surrounding population. This suggests that screening questionnaires are in fact effective tools for selecting high-risk patients. Despite disease prevalence, it has been our experience that PCR testing provides a useful and crucial adjunct to screening questionnaires by decreasing the likelihood of staff exposures to asymptomatic or pre-symptomatic patients, and we continue to advocate for pre-procedure PCR testing whenever resources permit. Our practice pattern and PCR positivity results demonstrate that an endoscopy unit can continue to operate safely in a high prevalence COVID-19 region. Ultimately, we continue to recommend an approach guided by available resources, and our findings can be cited as justification to mitigate the deleterious and potentially catastrophic effects of medical distancing on the health of our communities.

JUSTIN J. FORDE

JODIE A. BARKIN

SUNIL AMIN

Division of Digestive Health and Liver Diseases

University of Miami Miller School of Medicine

Miami, FL

## References

1. Kidambi TD, et al. *Gastroenterology* 2021;160:2189–2190.
2. Forde JJ, et al. *Gastroenterology* 2020;159:1538–1540.