

# INTERNATIONAL PERSPECTIVES IN CYTOLOGY



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## International Perspectives: Impact of the COVID-19 Pandemic on Cytology

Just about every country in the world is being challenged by a potentially fatal infectious disease known as the coronavirus (COVID-19). The etiologic agent is a novel zoonotic coronavirus (severe acute respiratory syndrome coronavirus 2 [SARS-CoV-2]) that first was detected during an outbreak in Wuhan, China, at the end of 2019.<sup>1</sup> Governments around the globe have since responded with lockdowns to facilitate social distancing and declared national emergencies. Given the pathogenicity of this virus, many patients are becoming critically ill and require hospitalization, which is stressing many health care systems. Cytology laboratories also are being impacted by this pandemic in several ways.<sup>2</sup> Specimens, especially respiratory samples, may be submitted for cytologic evaluation. Not only are these contagious samples to be handled with strict biosafety measures (eg, following biosafety guidelines from the Centers for Disease Control and Prevention),<sup>3</sup> but their cytologic findings may be unique and something we likely have not encountered before.<sup>4</sup> Brave cytology staff who are being called to the front line to provide rapid on-site evaluation need to be adequately armed with personal protective equipment (eg, N95 respirator masks). Now is the time to leverage digital imaging technology in order for cytopathologists to perform telecytology remotely,

even from home if required. To allow for social distancing, cytotechnologists who are screening cases should be allowed to spread out as much possible. However, there still is much confusion and anxiety among the cytology community, and many questions remain unanswered at this time. Can cytotechnologists screen cases at home? Should air-dried smears be avoided? Are the alcohol-based fixatives typically used in cytology appropriate? Are cytospin preparations that can aerosolize material prohibited? Are cell blocks still required? Should all glass slides be wiped down with disinfectants? Should elective fine-needle aspirations performed by pathologists be cancelled? Must cytotechnologist training move online?

We have traveled down this road before with prior outbreaks (eg, influenza A virus subtype H1N1, SARS, Middle East respiratory syndrome [MERS], and the Ebola virus).<sup>5</sup> However, there remains much to be learned with COVID-19. Therefore, it is critical for us to gain knowledge from cytology colleagues who have had early experience during the current crisis. Accordingly, we are pleased to share with you timely publications regarding COVID-19 from Italy,<sup>6</sup> Taiwan,<sup>7</sup> and the United States<sup>8</sup> in this issue of *Cancer Cytopathology*.



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## References

1. Rothan HA, Byrareddy SN. The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. *J Autoimmun*. Published online February 26, 2020. doi:10.1016/j.jaut.2020.102433
2. Pambuccian SE. The COVID-19 pandemic: implications for the cytology laboratory. *J Am Soc Cytopathol*. Published online March 26, 2020. doi:10.1016/j.jasc.2020.03.001
3. Centers for Disease Control and Prevention. Coronavirus Disease 2019 (COVID-19): information for laboratories. Accessed March 27, 2020. <https://www.cdc.gov/coronavirus/2019-ncov/lab/index.html>
4. Giani M, Seminati D, Lucchini A, Foti G, Pagni F. Exuberant plasmacytosis in bronchoalveolar lavage specimen of the first patient requiring extracorporeal membrane oxygenation for SARS-CoV-2 in Europe. *J Thorac Oncol*. Published online March 16, 2020. doi:10.1016/j.jtho.2020.03.008
5. Pantanowitz L. Emerging infections and the cytology laboratory. *Cancer Cytopathol*. 2015;123:205-206.
6. Italian commentary. *Cancer Cytopathol*. 2020;128:000-000.
7. Taiwanese commentary. *Cancer Cytopathol*. 2020;128:000-000.
8. Madrigal E. Going remote: maintaining normalcy in our pathology laboratories during the COVID-19 pandemic. *Cancer Cytopathol*. 2020;128:000-000.

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