

Universal Screening for SARS-CoV-2 in Women Admitted for Delivery

TO THE EDITOR: In recent weeks, Covid-19 has rapidly spread throughout New York City. The obstetrical population presents a unique challenge during this pandemic, since these patients have multiple interactions with the health care system and eventually most are admitted to the hospital for delivery. We first diagnosed a case of Covid-19 in an obstetrical patient on March 13, 2020, and we previously reported our early experience with Covid-19 in pregnant women, including two initially asymptomatic women in whom symptoms developed and who tested positive for SARS-CoV-2, the virus that causes Covid-19, after delivery.^{1,2} After these two cases were identified, we implemented universal testing with nasopharyngeal swabs and a quantitative polymerase-chain-reaction test to detect SARS-CoV-2 infection in women who were admitted for delivery.

Between March 22 and April 4, 2020, a total of 215 pregnant women delivered infants at the New York–Presbyterian Allen Hospital and Columbia University Irving Medical Center. All the women were screened on admission for symptoms of Covid-19. Four women (1.9%) had fever or other symptoms of Covid-19 on admission, and all 4 women tested positive for SARS-CoV-2 (Fig. 1). Of the 211 women without symptoms, all were

afebrile on admission. Nasopharyngeal swabs were obtained from 210 of the 211 women (99.5%) who did not have symptoms of Covid-19; of these women, 29 (13.7%) were positive for SARS-CoV-2. Thus, 29 of the 33 patients who were positive for SARS-CoV-2 at admission (87.9%) had no symptoms of Covid-19 at presentation.

Of the 29 women who had been asymptomatic but who were positive for SARS-CoV-2 on admission, fever developed in 3 (10%) before postpartum discharge (median length of stay, 2 days). Two of these patients received antibiotics for presumed endomyometritis (although 1 patient did not have localizing symptoms), and 1 patient was presumed to be febrile due to Covid-19 and received supportive care. One patient with a swab that was negative for SARS-CoV-2 on admission became symptomatic postpartum; repeat SARS-CoV-2 testing 3 days after the initial test was positive.

Our use of universal SARS-CoV-2 testing in all pregnant patients presenting for delivery revealed that at this point in the pandemic in New York City, most of the patients who were positive for SARS-CoV-2 at delivery were asymptomatic, and more than one in eight asymptomatic patients who were admitted to the labor and delivery unit were positive for SARS-CoV-2. Although this prevalence has limited generalizability to geographic regions with lower rates of infection, it underscores the risk of Covid-19 among asymptomatic obstetrical patients. Moreover, the true prevalence of infection may be underreported because of false negative results of tests to detect SARS-CoV-2.³

The potential benefits of a universal testing approach include the ability to use Covid-19 status to determine hospital isolation practices and bed assignments, inform neonatal care, and guide the use of personal protective equipment. Access to such clinical data provides an important opportunity to protect mothers, babies, and health care teams during these challenging times.

Desmond Sutton, M.D.

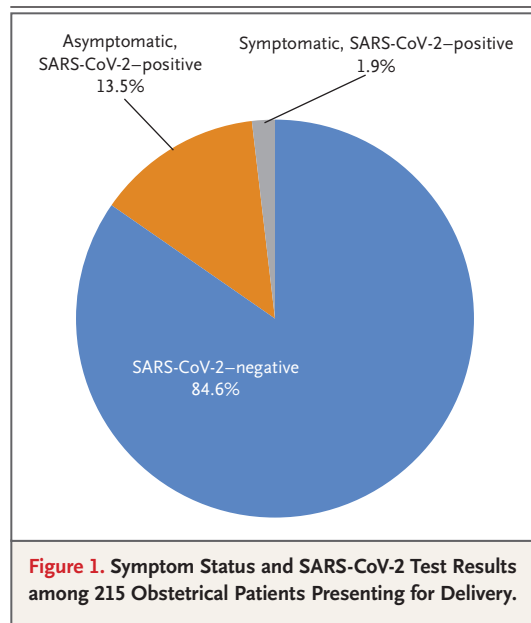
Karin Fuchs, M.D., M.H.A.

Mary D'Alton, M.D.

Dena Goffman, M.D.

Columbia University Irving Medical Center
New York, NY

dg2018@cumc.columbia.edu



Disclosure forms provided by the authors are available with the full text of this letter at NEJM.org.

This letter was published on April 13, 2020, at NEJM.org.

1. Breslin N, Baptiste C, Miller R, et al. COVID-19 in pregnancy: early lessons. *Am J Obstet Gynecol MFM* (in press).
2. Breslin N, Baptiste C, Gyamfi-Bannerman C, et al. COVID-19 infection among asymptomatic and symptomatic pregnant

women: two weeks of confirmed presentations to an affiliated pair of New York City hospitals. *Am J Obstet Gynecol MFM* (in press).

3. Ai T, Yang Z, Hou H, et al. Correlation of chest CT and RT-PCR testing in coronavirus disease 2019 (COVID-19) in China: a report of 1014 cases. *Radiology* 2020 February 26 (Epub ahead of print).

DOI: 10.1056/NEJMc2009316

Lung-Cancer Screening and the NELSON Trial

TO THE EDITOR: At 10 years of follow-up in the NELSON (Nederlands–Leuven Longkanker Screenings Onderzoek) trial, de Koning et al. (Feb. 6 issue)¹ found that lung cancer–related mortality was 24% lower among current and former smokers who underwent repeated computed tomographic (CT)–based screening than among those who underwent no screening. However, neither the researchers in this well-conducted trial nor those in the previous National Lung Screening Trial (NLST)² reported relevant aspects of harm.^{3,4}

For example, in the NELSON trial, letters that were sent to persons who were invited to participate may have had psychological consequences. These letters, which were sent to 606,409 persons in the general population in order to identify 15,792 persons (2.6%) who were eligible to participate, may have caused fear.

In addition, the false positive test results had consequences. In 2069 CT scans, the findings were indeterminate, and only 203 of 22,600 CT scans (0.9%) detected lung cancer.

Overdiagnosis was another issue. Of 203 men who received a diagnosis of lung cancer, 160 (78.8%) died from lung cancer. Whether screening actually improved or prolonged their remaining lifetime should be considered.¹ Disutility is associated with the diagnostic workup, and patient discomfort and adverse events are associated with treatment for true positive results.

Finally, according to current internationally accepted criteria for screening, testing of current and former smokers for lung cancer must be cost-effective and acceptable to persons to whom the tests are offered.³⁻⁵ Thus, the recommendations by groups such as the U.S. Preventive Services Task Force for annual screening are hard to understand.

Jes S. Lindholt, M.D., D.M.Sc.

Rikke Sogaard, M.Sc., Ph.D.

Odense University Hospital
Odense, Denmark

jes.sanddal.lindholt@rsyd.dk

No potential conflict of interest relevant to this letter was reported.

1. de Koning HJ, van der Aalst CM, de Jong PA, et al. Reduced lung-cancer mortality with volume CT screening in a randomized trial. *N Engl J Med* 2020;382:503-13.
2. The National Lung Screening Trial Research Team. Reduced lung-cancer mortality with low-dose computed tomographic screening. *N Engl J Med* 2011;365:395-409.
3. Wilson J. Principles and practice of screening for disease. Geneva: World Health Organization, 1968.
4. Harris R, Sawaya GF, Moyer VA, Calonge N. Reconsidering the criteria for evaluating proposed screening programs: reflections from 4 current and former members of the U.S. Preventive Services Task Force. *Epidemiol Rev* 2011;33:20-35.
5. Snowsill T, Yang H, Griffin E, et al. Low-dose computed tomography for lung cancer screening in high-risk populations: a systematic review and economic evaluation. *Health Technol Assess* 2018;22:1-276.

DOI: 10.1056/NEJMc2004224

TO THE EDITOR: The NELSON trial is timely for providers and politicians who are planning lung-cancer screening programs. A previous European position statement challenged countries to set a timetable for implementing screening.¹

Although the number of false positive tests in the NELSON trial was lower than the number in the NLST,² participants in the NELSON trial with indeterminate pulmonary nodules constituted 19.7% of first-round participants and approximately 9.2% of the total group (with a lung-cancer detection rate of 0.9% [56 of 6309 participants and 203 of 22,600 participants, respectively]).

However, the authors have left questions unanswered. For example, what percentage of indeterminate pulmonary nodules progressed to positive nodules, and what percentage developed into lung cancer? Did the number of indeterminate pulmonary nodules per participant or the anatomical location of the nodules influence the development of lung cancer? How about the type of indeterminate pulmonary nodules (solid, sub-solid, or pleural-based) and cancer risk? Are indeterminate pulmonary nodules detected on interval screening more likely to be reclassified as lung cancer than those identified on initial CT? Was positron-emission tomographic CT used or