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Contents lists available at ScienceDirect

Clinical Radiology

journal homepage: www.clinicalradiologyonline.net



Re: a British Society of Thoracic Imaging statement: considerations in designing local imaging diagnostic algorithms for the COVID-19 pandemic



Sir—We read with great interest the statement from Nair and colleagues of the British Society of Thoracic Imaging (BSTI), which provides a thorough insight into the role of imaging in combating the COVID-19 pandemic; however, we noticed a potentially consequential error within the text. In answering Question 2, the authors comment that "CXR may be abnormal in the majority of COVID-19 cases", incorrectly inferring that the study of Huang et al. found "bilateral radiographic abnormalities in 40/41 (98%) of cases".¹ The study of Huang *et al.* in *The Lancet* does mistakenly state that they found "bilateral involvement of chest radiographs" in 40/41 patients in Table 2 of their results; however, from reading the main text, it is clear that the imaging method they are referring to is actually chest computed tomography (CT), not chest radiography (CXR): "On admission, abnormalities in chest CT images were detected among all patients. Of the 41 patients, 40 (98%) had bilateral involvement (Table 2)".² The mismatch between the results table and the main text in The Lancet may have contributed to this error.

In fact, it is evident from current literature that the sensitivity of CXR is limited for COVID-19. The study of Guan *et al.*, also cited by Nair *et al.*, reported CXR abnormalities in only 162/274 (59.1%) of COVID-19 patients.³ In addition, a more recent study by Wong *et al.* reported abnormal CXR in 44/64 (68.8%) of COVID-19 patients on presentation⁴; however, it is important to note that both of these studies included hospitalised patients, representing individuals with more severe illness.

A recently published study from New York City presents a different picture of the sensitivity of CXR in ambulatory care. Weinstock *et al.* reported CXR findings of 636 COVID-19 patients presenting to urgent-care centres and found that only 168 (26.4%) were reported originally as abnormal.⁵ Subsequently, they had 11 board-certified radiologists re-read these radiographs with prior knowledge of the patients' COVID-19 diagnosis. In spite of this, the panel classified only 41.7% of CXR findings as abnormal.⁵

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Therefore, in light of the above, it is possible that CXR may not be abnormal in the majority of COVID-19 cases presenting to emergency departments.

Declaration of interests

The authors declare no conflict of interest.

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https://doi.org/10.1016/j.crad.2020.05.009

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DOI of original article: https://doi.org/10.1016/j.crad.2020.03.008.