

Re: “International Expert Consensus Statement on Chest Imaging in Pediatric COVID-19 Patient Management: Imaging Findings, Imaging Study Reporting and Imaging Study Recommendations”

Article Type: Letter to the Editor

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Editor:

We are writing to express concerns about the recently published “International Expert Consensus Statement on Chest Imaging in Pediatric COVID-19 Patient Management” which has been widely disseminated. We would like to make readers aware of the following limitations.

The title and Methods section suggest the statement reflects a broad-based consensus representing more than author opinions. “Expert consensus statement” implies review by recognized organizations and widespread expert agreement, rather than 9 self-selected radiologists who conducted a literature review and participated in a single conference call. The authors state they are “current active members” of 6 international pediatric radiology societies, giving the impression that these organizations support their views; however, this manuscript was neither reviewed nor endorsed by the Society for Pediatric Radiology or the European Society of Paediatric Radiology. Collaborating with international societies would be prudent to avoid circulating potentially conflicting messages.

The manuscript contains recommendations that are unsupported. The authors recommend structured reporting, classifying findings as “typical”, “indeterminate”, and “atypical” for COVID-19. For chest radiographs (CXRs), the authors base their recommendations on a single published report of 10 cases¹. The authors include peribronchial thickening as a finding in the “indeterminate” category for CXRs, supported by a publication that reviewed only CT findings². Instead, larger collaborative studies of pediatric COVID-19 imaging should inform these recommendations. In a review of 91 pediatric COVID-19 patients (81 with CXRs), submitted to

Pediatric Radiology and under revision, the broad range of findings on CXR in COVID-19 did not allow such stratification of findings.

The manuscript contains unsupported statements that could affect decision-making and interpretation of imaging studies. “There are differences emerging in imaging features between pediatric and adult cases...of which both radiologists and referring physicians should be aware” suggests that knowledge of these differences is necessary to best care for children with COVID-19; however, insufficient data are provided to support this statement. A misleading statement on radiation risk, always a consideration when deciding whether to utilize CT, may result in inappropriate and potentially medically negligent care if it results in avoidance of advanced imaging in a potentially life-threatening illness due to fear of radiation.

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Response:

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Response

The COVID-19 pandemic brought unprecedented uncertainty. Such uncertainty is particularly challenging for radiologists, who are on the front lines interpreting imaging studies that play an essential role in managing pediatric patients with COVID-19. At the time that our article was published at the end of April, and even now, only limited data related to the imaging findings of pediatric COVID-19 were available, a limitation that is clearly stated in our article.

In this era of uncertainty due to COVID-19, there are various potential approaches to creating resources in this uncharted territory. With limited data, one cautious approach may be to wait for all scientific evidence. However, this would require standing still in the face of great need, during a global health crisis. A different approach might be to face the uncertainty of COVID-19 by investigating the next best practice, which may be, by many measures, a more prudent alternative. Before submission of our article, we disclosed to the journal the lack of endorsement by specific radiological societies. However, in the setting of limited data, widely used textbooks [1, 2] as well as knowledge from investigators whose previous scientific work focused on other coronavirus infections [3 - 5], are crucial to further our understanding of this

novel infection. Our article is a response to pleas from many struggling radiologists and clinicians for some guidance on the pediatric imaging findings of COVID-19, based on available resources and our collective experience with pediatric COVID-19 after extensive discussions among the authors.

Planning during uncertainty is particularly essential. Therefore, in collaboration with the World Federation of Pediatric Imaging (WFPI), the next step is already underway: to survey radiologists regarding the impact of COVID-19 on international pediatric radiology practices. Updated information from recent publications and meta-analysis study results will be included for the additional refinement of our statement, as already mentioned in our article.

We also believe that success in this time of pandemic crisis and uncertainty requires collaborative efforts among international experts as well as local, national, and international societies. Such concerted efforts can strengthen our courage and conviction to overcome this unique challenge together.

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