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The Authors’ reply

We are grateful to Dr Lazzeri et al\textsuperscript{1} for their interest in our paper.\textsuperscript{2} We agree entirely with their considerations about cardiovascular involvement and the role of echocardiographic assessment in patients with COVID-19. Since myocardial injury is frequently observed in hospitalised patients with COVID-19, only an integrated approach, weighting the relative contribution of factors associated with a primitive ‘cardiac’ injury and of those associated with a secondary involvement, may lead to appropriate diagnosis and treatment. In this context, combined heart and lung multimodality imaging can be particularly useful for diagnosis, risk stratification and potentially also therapeutic management.\textsuperscript{3} Several mechanisms have been proposed to explain myocardial injury during COVID-19, encompassing multiple pathophysiological pathways (acute ischaemic vs non-ischaemic injury or primary non-cardiac conditions); interestingly, troponin release was consistently found as a powerful prognostic indicator, even though detailed studies assessing the prognostic impact of each leading mechanism of myocardial injury are currently lacking.\textsuperscript{4}

Our study suggests that also raise in pulmonary pressure values is of prognostic relevance. Of note, this is true also for modest increment, greatly limiting the discriminatory capability of echocardiographic assessment. As Lazzeri et al suggest, a number of coexisting factors may justify pulmonary hypertension and right ventricular involvement in patients with COVID-19, including the severity of lung involvement, the type of mechanical ventilation and the occurrence of pulmonary thromboembolic events (or local thrombotic phenomena).\textsuperscript{5–8} Thereby, we believe that echocardiography plays a central role in identifying ‘higher risk’ patients, but these patients should then be offered a more refined diagnostic pathway, also including lung imaging, to better characterise the heart–lung interaction.

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