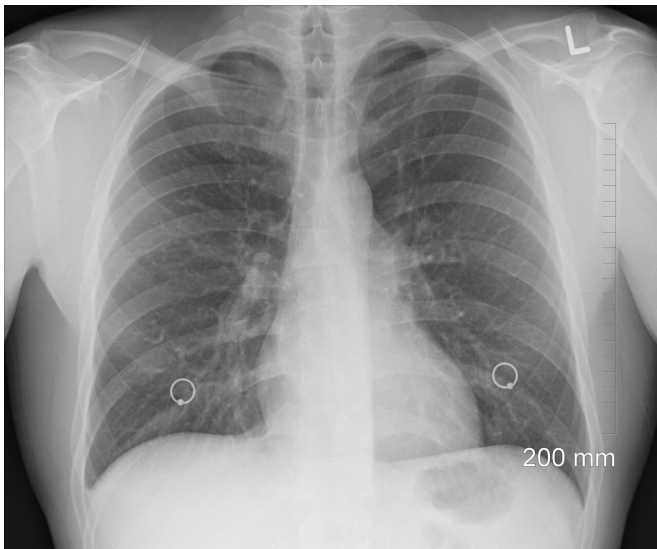


Similarities and differences of chest CT features between COVID-19 pneumonia and heart failure

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In a new publication from *Cardiovascular Innovations and Applications*, Zhaowei Zhu, Jianjun Tang, Xiangping Chai and colleagues from Central South University, Changsha, Hunan, China, analyze the similarities and differences of chest CT features between COVID-19 pneumonia and heart failure.

During the COVID-19 epidemic, chest computed tomography (CT) has been highly recommended for screening of patients with suspected COVID-19 because of an unclear contact history, overlapping clinical features, and overwhelmed health systems. However, there has not been a full comparison of CT for diagnosis of [heart failure](#) or COVID-19 [pneumonia](#).

This paper describes how patients with heart failure (n = 23) or COVID-19 pneumonia (n = 23)

and one patient with both diseases were assessed with clinical information and chest CT images being obtained and analyzed. No difference was found in ground-glass opacity, consolidation, crazy paving pattern, the lobes affected, and septal thickening between heart failure and COVID-19 pneumonia. However, a less rounded morphology (4 percent vs. 70 percent, $P = 0.00092$), more peribronchovascular thickening (70 percent vs. 35 percent, $P = 0.018$) and fissural thickening (43 percent vs. 4 percent, $P = 0.002$), and less peripheral distribution (30 percent vs. 87 percent, $P = 0.00085$) were found in the heart failure group than in the COVID-19 group. Notably, there were also more patients with upper pulmonary vein enlargement (61 percent vs. 4 percent, $P = 0.00087$), subpleural effusion (50 percent vs. 0 percent, $P = 0.00058$), and cardiac enlargement (61 percent vs. 4 percent, $P = 0.00075$) in the heart failure group than in the COVID-19 group. More fibrous lesions were also found in the COVID-19 group, although there was no statistical difference (22 percent vs. 4 percent, $P = 0.080$).

Although there is some overlap of CT features between [heart failure](#) and COVID-19, CT is still a useful tool for differentiating COVID-19 pneumonia.

More information: Shenghua Zhou, Similarities and Differences of CT Features between COVID-19 Pneumonia and Heart Failure, *Cardiovascular Innovations and Applications* (2021). [DOI: 10.15212/CVIA.2021.0016](https://doi.org/10.15212/CVIA.2021.0016)

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