

# Mayo Clinic offer guidance on treating COVID-19 patients with signs of acute heart attack

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Much remains unknown about COVID-19, but many studies already

have indicated that people with cardiovascular disease are at greater risk of COVID-19. There also have been reports of ST-segment elevation (STE), a signal of obstructive coronary artery disease, in patients with COVID-19 who after invasive coronary angiography show no sign of the disease. This false signal of coronary artery disease may cause patients to undergo procedures that present unnecessary risks, especially in the COVID-19 environment, according to a special article published in *Mayo Clinic Proceedings*.

The article, written by a team of Mayo Clinic cardiologists and radiologists, proposes algorithms for evaluating [patients](#) and determining a course of treatment.

"The impact of false activation of the catheterization laboratory includes inherent risks, beginning with the invasive arterial procedure itself and related care for these patients," says J. Wells Askew, M.D., a Mayo Clinic cardiologist. In cases where patients test positive for COVID-19, the risks include [respiratory failure](#), and potential exposure of medical staff and the downstream effects on cardiac catheterization laboratories and cardiac imaging services.

"Nonetheless, it's critically important for patients who are experiencing a [heart attack](#) due to coronary occlusion to receive immediate and appropriate treatment," says Dr. Askew. "There is an urgent need for an algorithm that guides triage of patients with suspected or proven COVID-19 patients with STE to determine initial invasive or noninvasive pathways."

The article notes that acute myocardial injury, arrhythmia and shock are common in patients with acute respiratory infections such as COVID-19. Myocardial injury is defined by an elevated cardiac troponin level; when myocardial injury is acute and occurs in the setting of acute myocardial ischemia, it can signal a heart attack.

The article proposes algorithms, based on expert consensus, for responding to patients with STE and acute myocardial injury. It also provides guidance on decision-making regarding the use of an echocardiogram or a coronary CT angiogram for patients with suspected or confirmed COVID-19.

"The reported experiences from countries in which significant exposure to COVID-19 has occurred highlight the challenges we have in treating patients with COVID-19 and STE on the electrocardiogram," says Dr. Askew. "Health care facilities need to rapidly prepare for this, so they can appropriately triage these patients with invasive or noninvasive pathways. This is critically important to minimize risks for the patient as well as risk of COVID-19 exposure to medical personnel."

Provided by Mayo Clinic

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