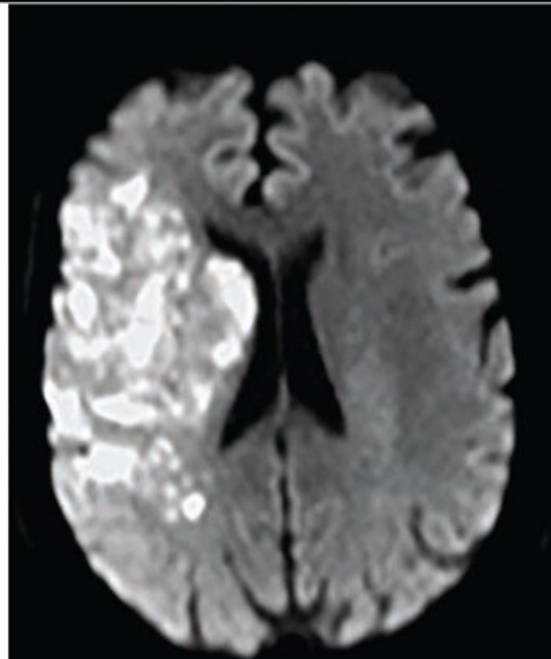
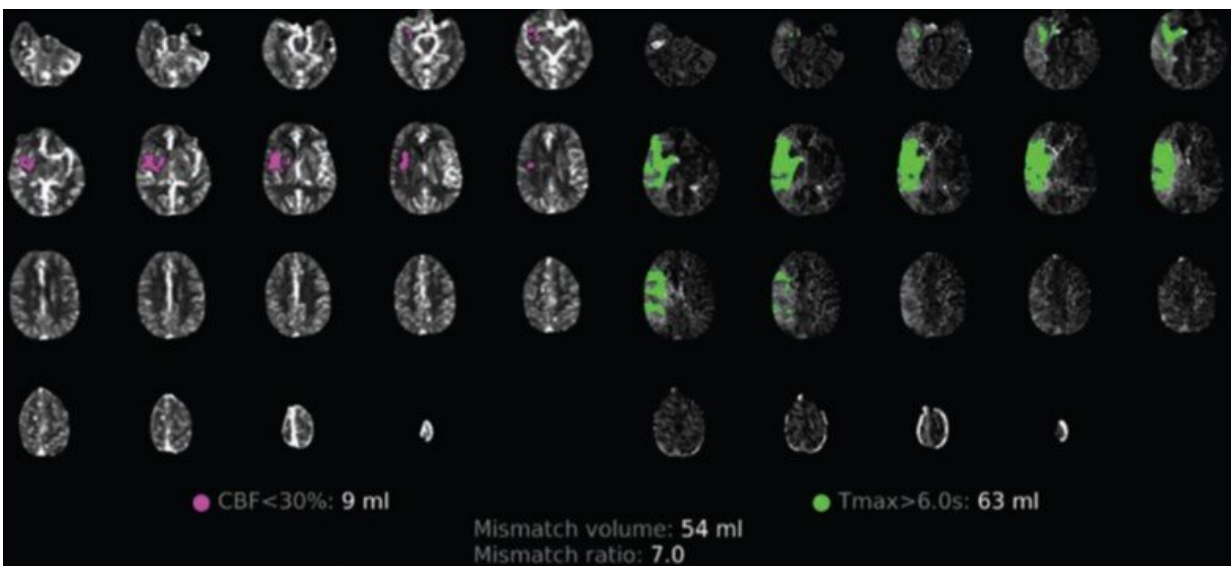


# Infarction growth, penumbral consumption after reperfusion in COVID vaccine-naïve patients

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Top: Automated readout summary of CT perfusion data at presentation shows large mismatch volume (54 mL). Bottom: Follow-up MR image shows progression in infarction growth, with final infarction volume of approximately 72 cm<sup>3</sup> (600% increase from CT perfusion imaging estimate of 9 mL shown in A). Credit: ARRS/AJR

According to a study published in the *American Journal of Roentgenology (AJR)*, SARS-CoV-2 infection may promote continued infarction progression, despite angiographic reperfusion, in vaccine-naïve patients with large-vessel occlusion acute ischemic stroke (AIS).

"The findings carry potential implications for prognostication, treatment selection, and [surveillance](#) for infarction growth among revascularized [patients](#) in future waves of infection by novel viral strains," wrote first author Seena Dehkharghani, MD, director of stroke and cerebrovascular imaging at New York University Langone Medical Center.

This *AJR* study compared 100 consecutively presenting patients with COVID-19 and AIS between March 2020 and April 2021 with a contemporaneous cohort of 282 patients with AIS who did not have COVID-19. Reperfusion classes were dichotomized into positive (extended thrombolysis in cerebral ischemia [eTICI] score = 2c–3) and negative (eTICI score

Ultimately, in this case-control study of vaccine-naïve patients with and without COVID-19 with infarct growth after endovascular reperfusion during [acute ischemic stroke](#), COVID-19 was a significant predictor for absolute infarct growth of 15 cm<sup>3</sup> or more (OR, 5.1 [95% CI, 1.0–25.95]; p = .05).

"These findings support the potentially aggressive clinical course of cerebrovascular events in patients with COVID-19, suggesting greater infarction growth and ongoing consumption of at-risk tissues, even following angiographic reperfusion," the researchers added.

**More information:** Seena Dehkharghani et al, Continued Infarction Growth and Penumbra Consumption After Reperfusion in Vaccine-Naïve Patients With COVID-19: A Case-Control Study, *American Journal of Roentgenology* (2023). [DOI: 10.2214/AJR.23.29296](https://doi.org/10.2214/AJR.23.29296)

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