

# Explify Respiratory Case Report

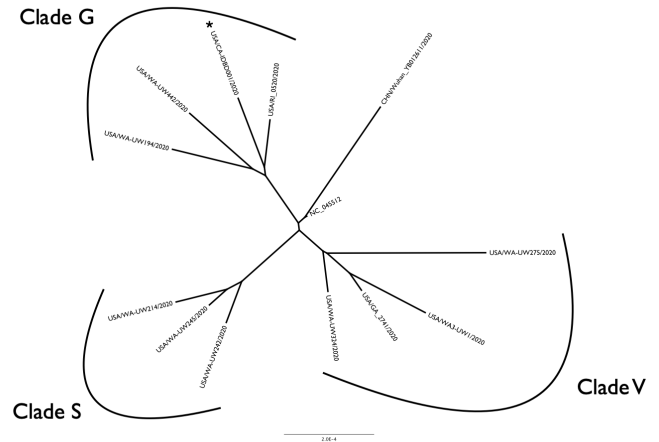
## COVID-19 Diagnosed by Next Generation Sequencing (Explify®)

### In Brief

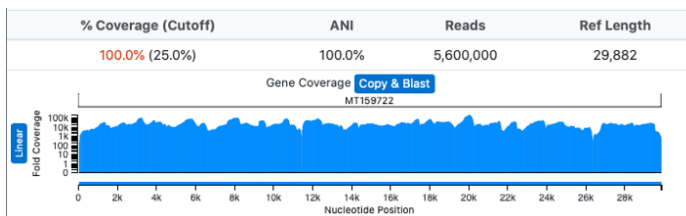
Explify® Respiratory pathogen detection identified SARS-CoV-2 in an elderly patient presenting with fall-related trauma, lung opacities, and hypoxia.

### Case Vignette

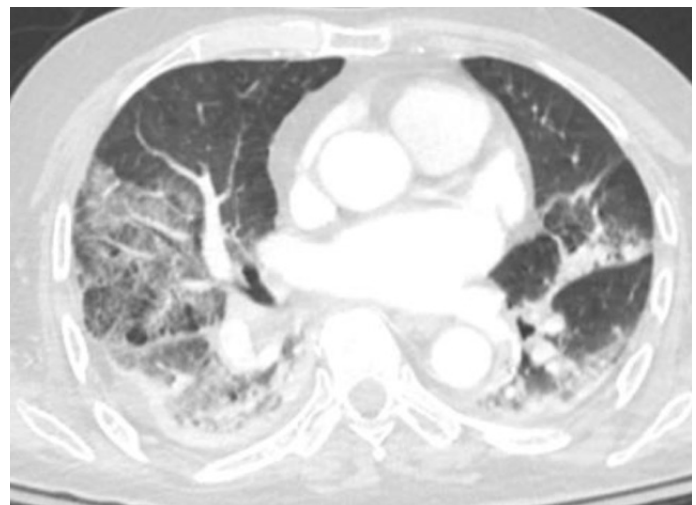
An elderly man presented at a California emergency room with trauma-related injuries, including subdural hematoma and a radial fracture, suffered from a fall at his home. Pulse-oximetry indicated hypoxia. A chest CT scan revealed lung opacities with a ground-glass appearance. He was intubated for hypoxic respiratory failure and admitted to the ICU. A tracheal aspirate was sent for directed RT-PCR and to IDbyDNA for Explify® Respiratory pathogen detection, which returned a strong positive result for SARS-CoV-2. 100% genome coverage was obtained with shotgun sequencing. Comparison with other sequences in public databases revealed the virus was most closely related to Clade G viruses with close similarities to other strains circulating in the United States. Unfortunately, the patient did not survive.



Unrooted neighbor-joining tree of representative SARS-CoV-2 genomes in the public domain with patient's strain noted by an asterisk\*.



Screen shot of coverage and depth obtained by Explify®. Median depth calculated at 20,060.



Representative axial cut lung windowing of patient's admission chest CT showing diffuse ground glass opacities