### COVID-19 and Long-Term Lung Damage (Interview Transcripts)

#### Nasser Zakieh, M.D., Pulmonologist and Medical Director Critical Care Medicine, OSF HealthCare

"Not all patients who end up with long-term lung damage have underlying diseases. We do have healthy people who got infected with COVID and they have significant lung disease even if they don't have any prior medical condition. So they don't have diabetes, cancer, kidney disease – they are completely healthy, and all different age groups. There are patients who are 20, 30, or 40 years old who have COVID who are healthy before and ended up on home oxygen with significant lung disease." (:35)

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"Some recover very well. They have minimal exertional dyspnea. That means if they were able to, let's say, walk two city blocks before the disease, they are now able to walk one city block. If they are able to do, let's say, four flights of stairs, some of them are now able to do two flights of stairs." (21)

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"Some patients do not improve completely 100%. We do what's called a pulmonary function test which is a test to examine the lungs and the effects of the infection on the lung tissue and the airway. Pulmonary function test does show permanent damage to the airway and to the lung tissue." (25)

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"When we do a breathing test, or a pulmonary function test, the majority have what's called restrictive lung disease. That means the lung volume gets smaller, and that is consistent with what's called interstitial lung disease. So the lung tissue itself gets inflamed, scarred. Scarring of the lung, we don't know if this is going to improve. Some patients do have airway disease similar to asthma – called reactive airway disease – induced by the COVID infection itself." (:28)

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"Being on a ventilator for a long time has many complications, including on the lung itself. This is what is called Ventilator-Induced Lung Injury. So some patients will have injury from the ventilator itself." (:14)