FIGURE 1 THE MULTIORGAN IMPACT OF COVID-19

Coronavirus Disease 2019 (COVID-19) is best known as a disease of the lungs. In severe cases it can cause pneumonia and acute respiratory distress syndrome (ARDS), which are associated with difficulty breathing and low blood oxygen levels. If unchecked, ARDS can progress to respiratory failure, which is the cause of death in many fatal COVID-19 cases. As physicians and researchers learn more about COVID-19, an increasing number of organs and organ systems beyond the lungs appear to be affected by the disease, and many effects could be potentially long-lasting. Among parts of the body most frequently affected by COVID-19 are the heart, brain, kidneys, liver, intestines, blood vessels, blood, and immune system. Understanding the effects on blood vessels, blood, and immune system is a particularly active area of research investigation because an overactive inflammatory response and abnormal blood clotting are emerging as important factors in severe disease. Effects of COVID-19 on the skin, liver, eyes, and nose have also been reported in some patients. Researchers are investigating whether the multiorgan failure is a direct effect of SARS-CoV-2 infection of the organs, or if it is induced indirectly by an overactive immune response, infiltration of immune cells into the organs, dysfunction of cells that line blood vessels, or by blood clotting abnormalities. Further knowledge of the mechanisms of multiorgan damage associated with severe COVID-19 will help to improve the outcomes for patients.