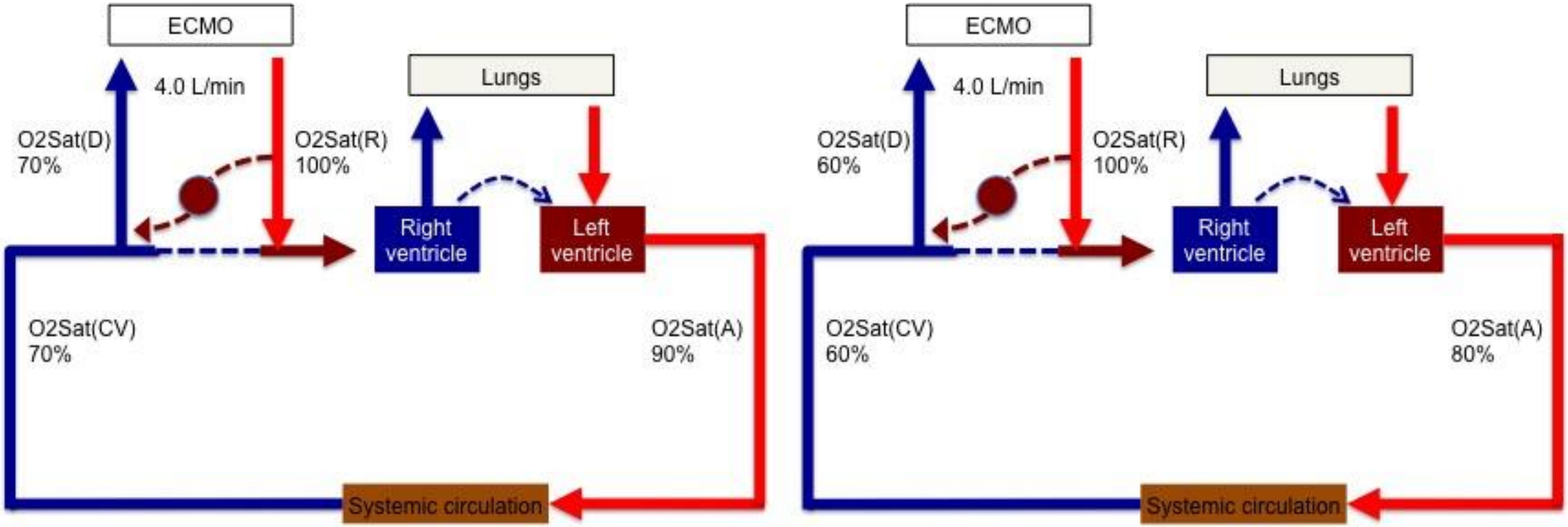

SUPPLEMENTAL FIGURE 3: Assuming lungs do not oxygenate blood, the shunt fraction equation can be calculated as Qp/Qs = (O_2SatA-O_2SatCV)/ (O_2SatR-O_2SatD). On the left, Qs = 4/(O_2SatA-O_2SatCV)/[O_2SatR-O_2SatD) = 4/(0.2/0.3) = 6.1L/min. Thus, VV-ECMO flow at 66% of cardiac output maintains arterial saturation >90%. On the right, Qs = 4/(O_2SatA-O_2SatCV)/(O_2SatR-O_2SatD) = 4/(0.2/0.4) = 8L/min. VV-ECMO flow at 50% of cardiac output results in arterial saturation of only 80%. Hence, high native cardiac output relative to VV-ECMO flow would result in low arterial oxygen saturation. It is assumed that recirculation is negligible.