Power analysis:

Using the PaO2/FiO2 ratio as the primary endpoint and using data published from the Acute Respiratory Distress Syndrome Network study on high versus low PEEP with conventional VC ventilation {Brower, 2004 #213} we assume a difference in protocol arm means of 37 with a standard deviation of 76 for primary outcome at day 3. Given a two-tailed test with an alpha = 0.05, to achieve 80% power we need 82 subjects per arm or 246 subjects in total for the 3 arm comparison (two tailed tests with each of 2 APRV arms compared to conventional treatment). (R v2.10.0). We planned for 2 interim reviews by the DSMB at 50 and 150 patients enrolled.