Sample size calculation:

Sample size calculation was performed prior to initiation of the study as part of the grant proposal. We have added the sample size calculation as a supplement. Sample size was calculated for the primary outcome of incidence of ROSC with two different flush volumes, assuming 2-sided testing with alpha=5%. Assuming a 50% ROSC with 1 ml flush and 90% with 10 ml flush, we would be able to reject the null hypothesis with a sample size of 20 lambs for each flush volume with a power of 0.813.

We subsequently checked the power for two other outcomes – time to ROSC and epinephrine concentrations using this sample size (overall 40 lambs in the study).

Time to ROSC- flush volumes 1 ml vs. 3ml/kg: In a previously published study from our lab, the time to ROSC within each group was normally distributed with a standard deviation of 66 seconds (Vali et al JAH 2017). With 10 lambs in each group, this sample size would detect a difference of 90 seconds in time to ROSC with a power of 0.8 and a type I error probability of 0.05.

Epinephrine concentration: In the same study from our lab, the epinephrine concentrations within the 0.03 mg/kg group were normally distributed with a standard deviation of 132 ng/ml (Vali et al JAH 2017). With 10 lambs each in 0.03 mg/kg and 0.01 mg/kg groups (with different flush volumes), this sample size would detect a difference of 180 ng/ml in epinephrine levels with a power of 0.82 and a type I error probability of 0.05.