

Appendix 1

Sample size

According to the preliminary experiment results (N=45):

For FF: AUC =0.8597 (95% CI, 0.750–0.969), Std.Error =0.05578, P<0.001.

For T2*: AUC =0.6858 (95% CI, 0.5302–0.8413), Std.Error =0.07937, P=0.0328.

The sample size is calculated by PASS (15.0) (N-/N+=0.5):

Tests for FF ROC curve

Numeric Results for Testing AUC = AUC0 with Continuous Data

FPR1 = 0. FPR2 = 1. B = 1.

Target Power	Actual Power	N+	N-	N	Target R	Actual R	AUC0'	AUC1'	Diff'	AUC0	AUC1	Diff	Alpha
0.9	0.92123	15	8	23	0.5	0.53333	0.5	0.8597	0.3597	0.5	0.8597	0.3597	0.05

Tests for T2* ROC Curve

Numeric Results for Testing AUC = AUC0 with Continuous Data

Test Type = Two-Sided. FPR1 = 0. FPR2 = 1. B = 1.

Target Power	Actual Power	N+	N-	N	Target R	Actual R	AUC0'	AUC1'	Diff'	AUC0	AUC1	Diff	Alpha
0.9	0.9015	69	35	104	0.5	0.50725	0.5	0.6858	0.1858	0.5	0.6858	0.1858	0.05

Finally, our sample size: N(PFOA) =80, N(no-PFOA) =40