

Known pilot estimates



>> Linear mixed models of rate of change

>> Mixed Model Repeated Measures (MMRM)

ADNI-based pilot estimates



About

Inputs

Analysis type

Sample size

Total sample size (N)

50 — 1002,000

Power (%)

05095

Number of time points

1450

Standard deviation of observation of interest in group a (sigmaa)

1

Standard deviation of observation of interest in group b. (sigmab)

1

Type I error (sig.level)

0.051

Type of test

☒ two.sided

☐ one.sided

Select association structure

☒ exchangeable

☐ general

☐ ar1

Exchangeable correlation (rho)

0.25

Effect size scale

☒ Raw scale of the outcome

☐ Percent of placebo change

Estimate of the placebo change (beta)

0.5

Effect size (delta)

0.5

Allocation ratio (lambda)

2

Percent change in the pilot estimate of the parameter of interest (pct.change)

00.31

Retention in group a (ra)

t1	1
t2	1
t3	1
t4	1

Retention in group b (rb)

t1	1
t2	1
t3	1
t4	1

Working correlation matrix (Ra)

	t1	t2	t3	t4
t1	1	0.25	0.25	0.25
t2	0.25	1	0.25	0.25
t3	0.25	0.25	1	0.25
t4	0.25	0.25	0.25	1

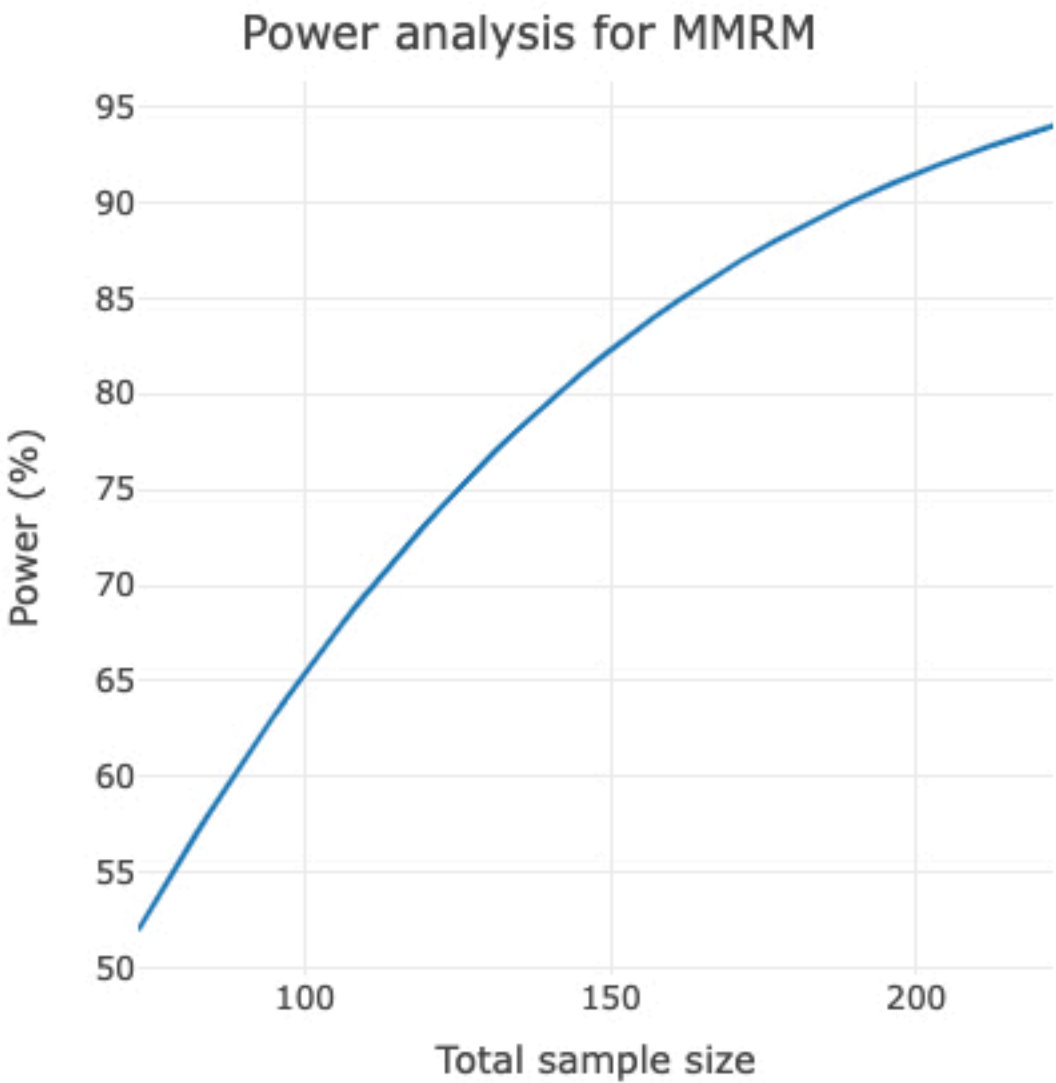
Working correlation matrix (Rb)

	t1	t2	t3	t4
t1	1	0.25	0.25	0.25
t2	0.25	1	0.25	0.25
t3	0.25	0.25	1	0.25
t4	0.25	0.25	0.25	1

Update/Enter

Use this action button to update size of correlation matrix

Power analysis results



Sample size/power calculation for a mixed model of repeated measures with exchangeable correlation structure. See Lu, Luo, & Chen (2008) for parameter definitions and other details.

Summary	Value
Var-cov structure	Compound symmetric, heterogeneous
Number of time points	4
Type of test	two.sided
Type I error	0.05
Placebo change	0.5
Effect size:	0.15
Allocation ratio	2