Clinical Scenario Evaluation

# General information

## Project information

This report was generated by [Mediana's User] using the Mediana package version 1.0.7. For more information about the Mediana package, see http://gpaux.github.io/Mediana.

Project title: Case study 1

Description: Clinical trial in patients with pulmonary arterial hypertension

## Simulation parameters

Random seed: 42938001

Number of simulations: 1000

Number of cores: 4

Start time: 2018-07-16 10:32:00

End time: 2018-07-16 10:32:09

Duration: 8.79 secs

# Data model

## Sample size

Number of samples: 2

Number of sample size sets: 5

1. Sample size

| **Sample size set** | **Sample** | **Size** |
| --- | --- | --- |
| N = 50 | Placebo | 50 |
| Treatment | 50 |
| N = 55 | Placebo | 55 |
| Treatment | 55 |
| N = 60 | Placebo | 60 |
| Treatment | 60 |
| N = 65 | Placebo | 65 |
| Treatment | 65 |
| N = 70 | Placebo | 70 |
| Treatment | 70 |

## Outcome distribution

Number of outcome parameter sets: 2

Outcome distribution: Normal

1. Outcome parameter

| **Outcome parameter set** | **Sample** | **Parameter** |
| --- | --- | --- |
| Standard | {Placebo} | mean = 0, SD = 70 |
| {Treatment} | mean = 40, SD = 70 |
| Optimistic | {Placebo} | mean = 0, SD = 70 |
| {Treatment} | mean = 50, SD = 70 |

# Analysis model

## Tests

Number of tests/null hypotheses: 1

1. Tests

| **Test ID** | **Test type** | **Test parameters** | **Samples** |
| --- | --- | --- | --- |
| Placebo vs treatment | Student's t-test |  | {Placebo}, {Treatment} |

## Statistics

Number of descriptive statistics: 1

1. Statistics

| **Statistic ID** | **Statistic type** | **Statistic parameters** | **Samples** |
| --- | --- | --- | --- |
| Mean Treatment | Mean |  | {Treatment} |

# Evaluation model

## Criteria

Number of criteria: 2

1. Criteria

| **Criterion ID** | **Criterion parameters** | **Tests** | **Statistics** | **Label** |
| --- | --- | --- | --- | --- |
| Marginal power | alpha = 0.025 | Placebo vs treatment |  | Placebo vs treatment |
| Average Mean |  |  | Mean Treatment | Average Mean Treatment |

# Simulation results

## Outcome Parameter (Standard)

1. Results summary

| **Sample Size** | **Criterion** | **Test/Statistic** | **Result** |
| --- | --- | --- | --- |
| N = 50 | Marginal power | Placebo vs treatment |  0.8090 |
| Average Mean | Average Mean Treatment | 40.0991 |
| N = 55 | Marginal power | Placebo vs treatment |  0.8560 |
| Average Mean | Average Mean Treatment | 40.1142 |
| N = 60 | Marginal power | Placebo vs treatment |  0.8810 |
| Average Mean | Average Mean Treatment | 39.9170 |
| N = 65 | Marginal power | Placebo vs treatment |  0.9000 |
| Average Mean | Average Mean Treatment | 39.9796 |
| N = 70 | Marginal power | Placebo vs treatment |  0.9160 |
| Average Mean | Average Mean Treatment | 40.1157 |

## Outcome Parameter (Optimistic)

1. Results summary

| **Sample Size** | **Criterion** | **Test/Statistic** | **Result** |
| --- | --- | --- | --- |
| N = 50 | Marginal power | Placebo vs treatment |  0.9570 |
| Average Mean | Average Mean Treatment | 50.2538 |
| N = 55 | Marginal power | Placebo vs treatment |  0.9660 |
| Average Mean | Average Mean Treatment | 50.1426 |
| N = 60 | Marginal power | Placebo vs treatment |  0.9740 |
| Average Mean | Average Mean Treatment | 50.1545 |
| N = 65 | Marginal power | Placebo vs treatment |  0.9800 |
| Average Mean | Average Mean Treatment | 50.0855 |
| N = 70 | Marginal power | Placebo vs treatment |  0.9900 |
| Average Mean | Average Mean Treatment | 49.9990 |