## Groep P5-P8

Conditie 1 = corticosteron

Conditie 2 = mifepreston

Conditie 3 = 17AAG

Conditie n = negatieve controle (geen ligand toegevoegd)

Conditie p = positieve controle (cortisol)

**Beschrijvende statistiek**

Hier is alleen de kolom percentage van belang.

Bij conditie zie je op hoeveel n (resultaten van hoeveel duo’s) de resultaten zijn gebaseerd.

df$conditie: 1

 dekglas conditie value percentage

 Min. :54.00 1:6 Min. : 8.00 Min. :0.3750

 1st Qu.:55.25 2:0 1st Qu.:10.50 1st Qu.:0.4062

 Median :56.50 3:0 Median :12.00 Median :0.5625

 Mean :56.50 n:0 Mean :13.50 Mean :0.6049

 3rd Qu.:57.75 p:0 3rd Qu.:14.25 3rd Qu.:0.7969

 Max. :59.00 Max. :24.00 Max. :0.9000

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df$conditie: 2

 dekglas conditie value percentage

 Min. :60.00 1: 0 Min. : 8.00 Min. :0.5500

 1st Qu.:62.25 2:10 1st Qu.:14.25 1st Qu.:0.8400

 Median :64.50 3: 0 Median :23.00 Median :0.9268

 Mean :64.50 n: 0 Mean :26.50 Mean :0.8639

 3rd Qu.:66.75 p: 0 3rd Qu.:30.75 3rd Qu.:0.9594

 Max. :69.00 Max. :61.00 Max. :1.0000

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df$conditie: 3

 dekglas conditie value percentage

 Min. :70 1:0 Min. : 5.00 Min. :0.00000

 1st Qu.:72 2:0 1st Qu.:10.00 1st Qu.:0.00000

 Median :74 3:9 Median :16.00 Median :0.05000

 Mean :74 n:0 Mean :16.56 Mean :0.08784

 3rd Qu.:76 p:0 3rd Qu.:24.00 3rd Qu.:0.12500

 Max. :78 Max. :30.00 Max. :0.30000

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df$conditie: n

 dekglas conditie value percentage

 Min. :79.00 1: 0 Min. : 6.00 Min. :0.00000

 1st Qu.:83.25 2: 0 1st Qu.: 9.75 1st Qu.:0.00000

 Median :89.50 3: 0 Median :14.00 Median :0.05083

 Mean :88.83 n:18 Mean :17.33 Mean :0.11402

 3rd Qu.:93.75 p: 0 3rd Qu.:19.50 3rd Qu.:0.16667

 Max. :98.00 Max. :58.00 Max. :0.50000

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df$conditie: p

 dekglas conditie value percentage

 Min. : 99.0 1: 0 Min. : 3.00 Min. :0.2500

 1st Qu.:104.8 2: 0 1st Qu.: 7.00 1st Qu.:0.9034

 Median :110.5 3: 0 Median :11.50 Median :1.0000

 Mean :110.5 n: 0 Mean :18.42 Mean :0.9096

 3rd Qu.:116.2 p:24 3rd Qu.:22.00 3rd Qu.:1.0000

 Max. :122.0 Max. :77.00 Max. :1.0000

**Assumpties testen**

df$conditie: 1

 Shapiro-Wilk normality test

data: dd[x, ]

W = 0.87629, p-value = 0.2524

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df$conditie: 2

 Shapiro-Wilk normality test

data: dd[x, ]

W = 0.77907, p-value = 0.008066

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df$conditie: 3

 Shapiro-Wilk normality test

data: dd[x, ]

W = 0.8575, p-value = 0.09005

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df$conditie: n

 Shapiro-Wilk normality test

data: dd[x, ]

W = 0.79589, p-value = 0.00133

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df$conditie: p

 Shapiro-Wilk normality test

data: dd[x, ]

W = 0.5896, p-value = 4.739e-07

H0 = de data is normaal verdeeld

HA = de data is niet normaal verdeeld

Niet alle p-waarden zijn boven de 0,05. Dus niet alle condities zijn normaal verdeeld 🡪 non-parametrisch testen.

(Levene-test doet het niet bij mij…)

**Hypothese toetsen (Kruskal-Wallis en post-hoc)**

Conditie 1 = cortisosteron

Kruskal-Wallis test for condition 1 and controls

 Kruskal-Wallis rank sum test

data: x$percentage by x$conditie

Kruskal-Wallis chi-squared = 36.455, df = 2, p-value = 1.213e-08

P<0,05 dus het percentage translocatie in de positieve controle, negatieve controle en corticosteron is niet gelijk.

Condition 1 and controls

 Pairwise comparisons using Tukey and Kramer (Nemenyi) test

 with Tukey-Dist approximation for independent samples

data: x$percentage and x$conditie

 1 n

n 0.087 -

p 0.147 8.9e-09

P value adjustment method: none

Het percentage translocatie bij corticosteron verschilt niet van de positieve controle (p=0.147).

Het percentage translocatie bij corticosteron verschilt niet van de negatieve controle (p=0.087).

Conditie 2 = mifepreston

Kruskal-Wallis test for condition 2 and controls

 Kruskal-Wallis rank sum test

data: x$percentage by x$conditie

Kruskal-Wallis chi-squared = 36.643, df = 2, p-value = 1.104e-08

P<0,05 dus het percentage translocatie in de positieve controle, negatieve controle en mifepreston is niet gelijk.

Condition 2 and controls

 Pairwise comparisons using Tukey and Kramer (Nemenyi) test

 with Tukey-Dist approximation for independent samples

data: x$percentage and x$conditie

 2 n

n 0.0012 -

p 0.4861 1.4e-08

P value adjustment method: none

Het percentage translocatie bij mifepreston verschilt niet van de positieve controle (p=0.4861).

Het percentage translocatie bij mifepreston verschilt wel van de negatieve controle (p=0.0012).

Conditie 3 = 17AAG

Kruskal-Wallis test for condition 3 and controls

 Kruskal-Wallis rank sum test

data: x$percentage by x$conditie

Kruskal-Wallis chi-squared = 37.709, df = 2, p-value = 6.482e-09

P<0,05 dus het percentage translocatie in de positieve controle, negatieve controle en 17-AAG is niet gelijk.

Condition 3 and controls

 Pairwise comparisons using Tukey and Kramer (Nemenyi) test

 with Tukey-Dist approximation for independent samples

data: x$percentage and x$conditie

 3 n

n 1 -

p 3.7e-05 1.9e-07

P value adjustment method: none

Het percentage translocatie bij 17-AAG verschilt wel van de positieve controle (p=3.7\*10^-5).

Het percentage translocatie bij 17-AAG verschilt niet van de negatieve controle (p=1).

Test voor alle condities

Kruskall-Wallis test for all conditions

 Kruskal-Wallis rank sum test

data: df$percentage by df$conditie

Kruskal-Wallis chi-squared = 51.605, df = 4, p-value = 1.668e-10

P<0,05 dus het percentage translocatie in de verschillende condities is niet gelijk.

Post-hoc:

All conditions

 Pairwise comparisons using Tukey and Kramer (Nemenyi) test

 with Tukey-Dist approximation for independent samples

data: df$percentage and df$conditie

 1 2 3 n

2 0.81442 - - -

3 0.28527 0.00475 - -

n 0.20146 0.00065 1.00000 -

p 0.27954 0.89573 7.4e-06 8.8e-09

P value adjustment method: none

**Plotjes**



