```
##-------------------------------------------------------------------------------------------
## Alle M:
##-------------------------------------------------------------------------------------------
> pairwise.t.test(df_ww3y_m_all$S_KM_FN, df_ww3y_m_all$Ort,
+                 p.adjust.method = "bonferroni", alternative = "two.sided",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_all$S_KM_FN and df_ww3y_m_all$Ort

        Berlin  Chicago London  NewYork
Chicago 0.11109 -       -       -
London  1.00000 0.00432 -       -
NewYork 1.4e-09 0.00063 8.4e-14 -
Tokyo   1.00000 0.31366 0.65024 4.8e-11

P value adjustment method: bonferroni

##-------------------------------------------------------------------------------------------
> pairwise.t.test(df_ww3y_m_all$S_KM_FN, df_ww3y_m_all$Ort,
+                 p.adjust.method = "bonferroni", alternative = "less",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_all$S_KM_FN and df_ww3y_m_all$Ort

        Berlin Chicago London NewYork
Chicago 1.0000 -       -      -
London  1.0000 0.0022  -      -
NewYork 1.0000 1.0000  1.0000 -
Tokyo   1.0000 0.1568  1.0000 2.4e-11

P value adjustment method: bonferroni

##-------------------------------------------------------------------------------------------
> pairwise.t.test(df_ww3y_m_all$S_KM_FN, df_ww3y_m_all$Ort,
+                 p.adjust.method = "bonferroni", alternative = "greater",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_all$S_KM_FN and df_ww3y_m_all$Ort

        Berlin  Chicago London  NewYork
Chicago 0.05555 -       -       -
London  1.00000 1.00000 -       -
NewYork 6.8e-10 0.00031 4.2e-14 -
Tokyo   1.00000 1.00000 0.32512 1.00000

P value adjustment method: bonferroni

##-------------------------------------------------------------------------------------------
## Alle W:
##-------------------------------------------------------------------------------------------
> pairwise.t.test(df_ww3y_w_all$S_KM_FN, df_ww3y_w_all$Ort,
+                 p.adjust.method = "bonferroni", alternative = "two.sided",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_w_all$S_KM_FN and df_ww3y_w_all$Ort

        Berlin Chicago London  NewYork
Chicago 0.404  -       -       -
London  0.023  5.9e-07 -       -
NewYork 0.183  1.000   1.1e-11 -
Tokyo   0.042  1.000   9.8e-08 1.000
```

```
P value adjustment method: bonferroni
##------------------------------------------------------------------------------------------
> pairwise.t.test(df_ww3y_w_all$S_KM_FN, df_ww3y_w_all$Ort,
+                 p.adjust.method = "bonferroni", alternative = "less",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_w_all$S_KM_FN and df_ww3y_w_all$Ort

        Berlin Chicago London NewYork
Chicago 1.000  -       -      -
London  0.011  2.9e-07 -      -
NewYork 1.000  1.000   1.000  -
Tokyo   1.000  1.000   1.000  1.000

P value adjustment method: bonferroni
##------------------------------------------------------------------------------------------
> pairwise.t.test(df_ww3y_w_all$S_KM_FN, df_ww3y_w_all$Ort,
+                 p.adjust.method = "bonferroni", alternative = "greater",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_w_all$S_KM_FN and df_ww3y_w_all$Ort

        Berlin Chicago London  NewYork
Chicago 0.202  -       -       -
London  1.000  1.000   -       -
NewYork 0.091  1.000   5.6e-12 -
Tokyo   0.021  1.000   4.9e-08 0.884

P value adjustment method: bonferroni
##------------------------------------------------------------------------------------------
Top5 M:
##------------------------------------------------------------------------------------------
> # pairwise-test: two.sided
> pairwise.t.test(df_ww3y_m_top5$S_KM_FN, df_ww3y_m_top5$Ort,
+                 p.adjust.method = "bonferroni", alternative = "two.sided",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_top5$S_KM_FN and df_ww3y_m_top5$Ort

        Berlin  Chicago London  NewYork
Chicago 0.01089 -       -       -
London  1.00000 0.00417 -       -
NewYork 1.8e-11 0.00072 4.6e-14 -
Tokyo   0.00396 1.00000 0.00065 5.1e-05

P value adjustment method: bonferroni

##------------------------------------------------------------------------------------------
> # pairwise-test: less
> pairwise.t.test(df_ww3y_m_top5$S_KM_FN, df_ww3y_m_top5$Ort,
+                 p.adjust.method = "bonferroni", alternative = "less",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_top5$S_KM_FN and df_ww3y_m_top5$Ort

        Berlin Chicago London NewYork
Chicago 1.0000 -       -      -
London  1.0000 0.0021  -      -
NewYork 1.0000 1.0000  1.0000 -
Tokyo   1.0000 1.0000  1.0000 2.5e-05
```

```
P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
> # pairwise-test: greater
> pairwise.t.test(df_ww3y_m_top5$S_KM_FN, df_ww3y_m_top5$Ort,
+                 p.adjust.method = "bonferroni", alternative = "greater",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_top5$S_KM_FN and df_ww3y_m_top5$Ort

        Berlin  Chicago London  NewYork
Chicago 0.00545 -       -       -
London  1.00000 1.00000 -       -
NewYork 8.9e-12 0.00036 2.3e-14 -
Tokyo   0.00198 1.00000 0.00033 1.00000

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
## TOP5 W:
##-------------------------------------------------------------------------------------------
> ## pairwise-test: W TOP5
> # pairwise-test: two.sided
> pairwise.t.test(df_ww3y_w_top5$S_KM_FN, df_ww3y_w_top5$Ort,
+                 p.adjust.method = "bonferroni", alternative = "two.sided",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_w_top5$S_KM_FN and df_ww3y_w_top5$Ort

        Berlin  Chicago London  NewYork
Chicago 0.5244  -       -       -
London  1.0000  0.0135  -       -
NewYork 1.3e-07 0.0090  2.0e-13 -
Tokyo   0.0216  1.0000  0.0008  1.0000

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
> # pairwise-test: less
> pairwise.t.test(df_ww3y_w_top5$S_KM_FN, df_ww3y_w_top5$Ort,
+                 p.adjust.method = "bonferroni", alternative = "less",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_w_top5$S_KM_FN and df_ww3y_w_top5$Ort

        Berlin Chicago London NewYork
Chicago 1.0000 -       -      -
London  1.0000 0.0068  -      -
NewYork 1.0000 1.0000  1.0000 -
Tokyo   1.0000 1.0000  1.0000 1.0000

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
> # pairwise-test: greater
> pairwise.t.test(df_ww3y_w_top5$S_KM_FN, df_ww3y_w_top5$Ort,
+                 p.adjust.method = "bonferroni", alternative = "greater",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_w_top5$S_KM_FN and df_ww3y_w_top5$Ort

        Berlin  Chicago London  NewYork
Chicago 0.2622  -       -       -
London  1.0000  1.0000  -       -
```

```
NewYork 6.7e-08 0.0045  9.9e-14 -
Tokyo   0.0108  0.5912  0.0004  1.0000

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
## TOP3 M:
##-------------------------------------------------------------------------------------------
> ## pairwise-test: M TOP3
> # pairwise-test: two.sided
> pairwise.t.test(df_ww3y_m_top3$S_KM_FN, df_ww3y_m_top3$Ort,
+                 p.adjust.method = "bonferroni", alternative = "two.sided",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_top3$S_KM_FN and df_ww3y_m_top3$Ort

        Berlin  Chicago London  NewYork
Chicago 0.00279 -       -       -
London  1.00000 0.01873 -       -
NewYork 6.2e-10 0.02758 1.6e-09 -
Tokyo   0.00021 1.00000 0.00141 0.02144

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
> # pairwise-test: less
> pairwise.t.test(df_ww3y_m_top3$S_KM_FN, df_ww3y_m_top3$Ort,
+                 p.adjust.method = "bonferroni", alternative = "less",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_top3$S_KM_FN and df_ww3y_m_top3$Ort

        Berlin Chicago London NewYork
Chicago 1.0000 -       -      -
London  1.0000 0.0094  -      -
NewYork 1.0000 1.0000  1.0000 -
Tokyo   1.0000 1.0000  1.0000 0.0107

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
> # pairwise-test: greater
> pairwise.t.test(df_ww3y_m_top3$S_KM_FN, df_ww3y_m_top3$Ort,
+                 p.adjust.method = "bonferroni", alternative = "greater",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_m_top3$S_KM_FN and df_ww3y_m_top3$Ort

        Berlin  Chicago London  NewYork
Chicago 0.00139 -       -       -
London  1.00000 1.00000 -       -
NewYork 3.1e-10 0.01379 8.1e-10 -
Tokyo   0.00011 1.00000 0.00070 1.00000

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
## TOP3 W:
##-------------------------------------------------------------------------------------------
> ## pairwise-test: W TOP3
> ## pairwise-test: two-sided
> pairwise.t.test(df_ww3y_w_top3$S_KM_FN, df_ww3y_w_top3$Ort,
+                 p.adjust.method = "bonferroni", alternative = "two.sided",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD
```

```
data:  df_ww3y_w_top3$S_KM_FN and df_ww3y_w_top3$Ort

        Berlin  Chicago London  NewYork
Chicago 1.00000 -       -       -
London  1.00000 0.92528 -       -
NewYork 1.2e-08 0.00059 2.7e-09 -
Tokyo   0.03960 0.67502 0.02493 1.00000

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
> # pairwise-test: less
> pairwise.t.test(df_ww3y_w_top3$S_KM_FN, df_ww3y_w_top3$Ort,
+                 p.adjust.method = "bonferroni", alternative = "less",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_w_top3$S_KM_FN and df_ww3y_w_top3$Ort

        Berlin Chicago London NewYork
Chicago 1.00   -       -      -
London  1.00   0.46    -      -
NewYork 1.00   1.00    1.00   -
Tokyo   1.00   1.00    1.00   1.00

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
> # pairwise-test: greater
> pairwise.t.test(df_ww3y_w_top3$S_KM_FN, df_ww3y_w_top3$Ort,
+                 p.adjust.method = "bonferroni", alternative = "greater",
+                 paired = FALSE, pool.sd = FALSE)

    Pairwise comparisons using t tests with non-pooled SD

data:  df_ww3y_w_top3$S_KM_FN and df_ww3y_w_top3$Ort

        Berlin  Chicago London  NewYork
Chicago 0.73199 -       -       -
London  1.00000 1.00000 -       -
NewYork 5.9e-09 0.00029 1.4e-09 -
Tokyo   0.01980 0.33751 0.01246 1.00000

P value adjustment method: bonferroni
##-------------------------------------------------------------------------------------------
```