Explore FRET Cohort LCA Classes

P R Barber

19 October 2018

Contents

Introduction **1**

Abbreviations **1**

Conclusions **2**

Load data set **2**

PFS Classes **2**
Boxplots . . . 2
T.tests . . . 13
Tables . . . 20

OS Classes **29**
Boxplots . . . 29
T.tests . . . 39
Tables . . . 45

Introduction

Are there any significant differences in the makeup of the FRET based LCA Classes?

Abbreviations

- LCA = Latent Class Analysis based on Baysian Hazards Regression.

Apart from the covariates in the original xls file from David Fisher, the following columns are available:

- FRET = The raw FRET efficiency score as a quantification of the proportion of HER3 in a dimer with HER2.
- FRETxHER3 = The FRET efficiency x pixel HER3 intensity as a measure of the total HER3 in a dimer with HER2.
- FRET.cohort = A flag to indicate this patient was in the cohort where FRET was measured from histology.
- Class.FRET.OS and PFS = Class assignment from LCA on the FRET cohort, where OS or PFS was used as the outcome.
- P1 and P2.FRET.OS and PFS = Class assignment probability for the 2 classes of Class.FRET.OS and PFS.
- Class.OS and PFS = Class assignment from LCA on the full cohort, where OS or PFS was used as the outcome.
- P1, P2 and P3.OS and PFS = Class assignment probability for the classes of Class.OS and PFS.
- RiskScore.OS and PFS = Patient risk scores calculated from the signature based on OS and PFS outcomes.

- BenefitScore.OS and PFS = Patient benefit scores calculated from the TRT cross terms of signature based on OS and PFS outcomes.

Conclusions

- Class 2 has higher metsites.
- Class 2 has higher NEUT score.
- Class 2 has higher FRET score.
- There is a difference in OS and PFS outcomes between the classes.

There may be other differences with a lower significance, see below.

Load data set

Load the data and separate FRET cohort.

```
load(file = "COIN_Final.Rdata")
fret_cohort <- patient_data[patient_data$FRET.cohort == 1,]
```

PFS Classes

```
class1 <- fret_cohort[fret_cohort$Class.FRET.PFS == 1,]
class2 <- fret_cohort[fret_cohort$Class.FRET.PFS == 2,]

for (d in ls(pattern="class")) print(paste(d, ":  ", dim(get(d))[1], "obs. of", dim(get(d))[2], "variabl
```

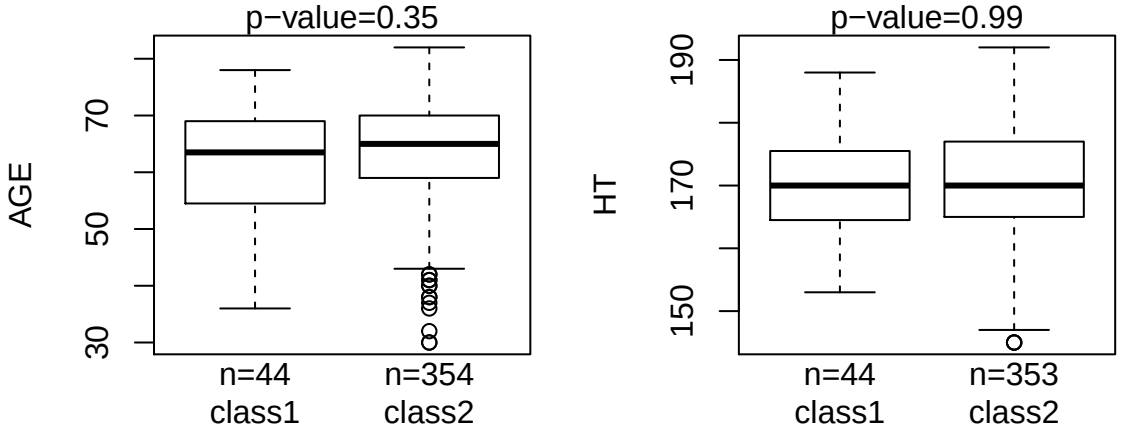
```
## [1] "class1 :   44 obs. of 93 variables"
## [1] "class2 :   354 obs. of 93 variables"
```

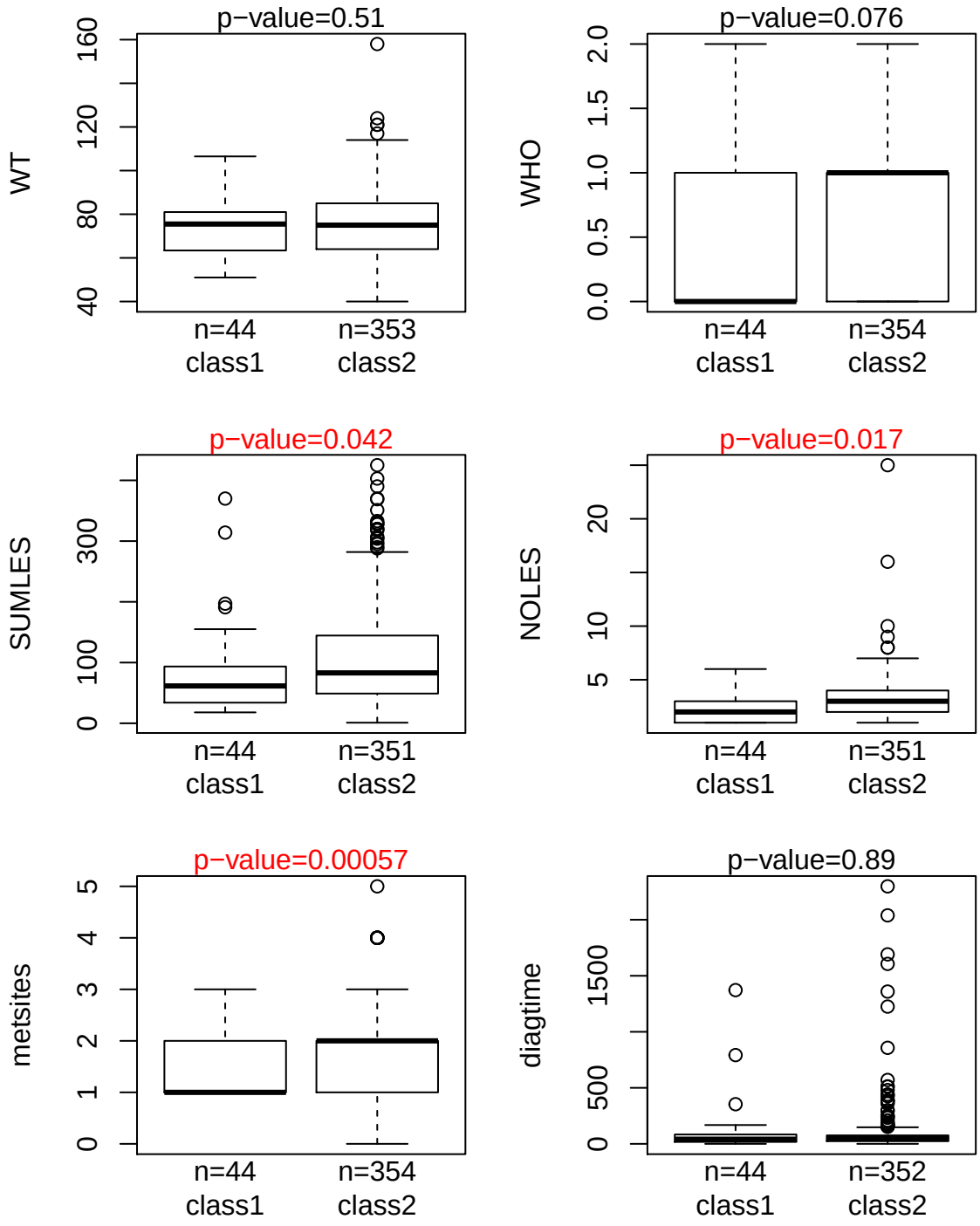
Boxplots

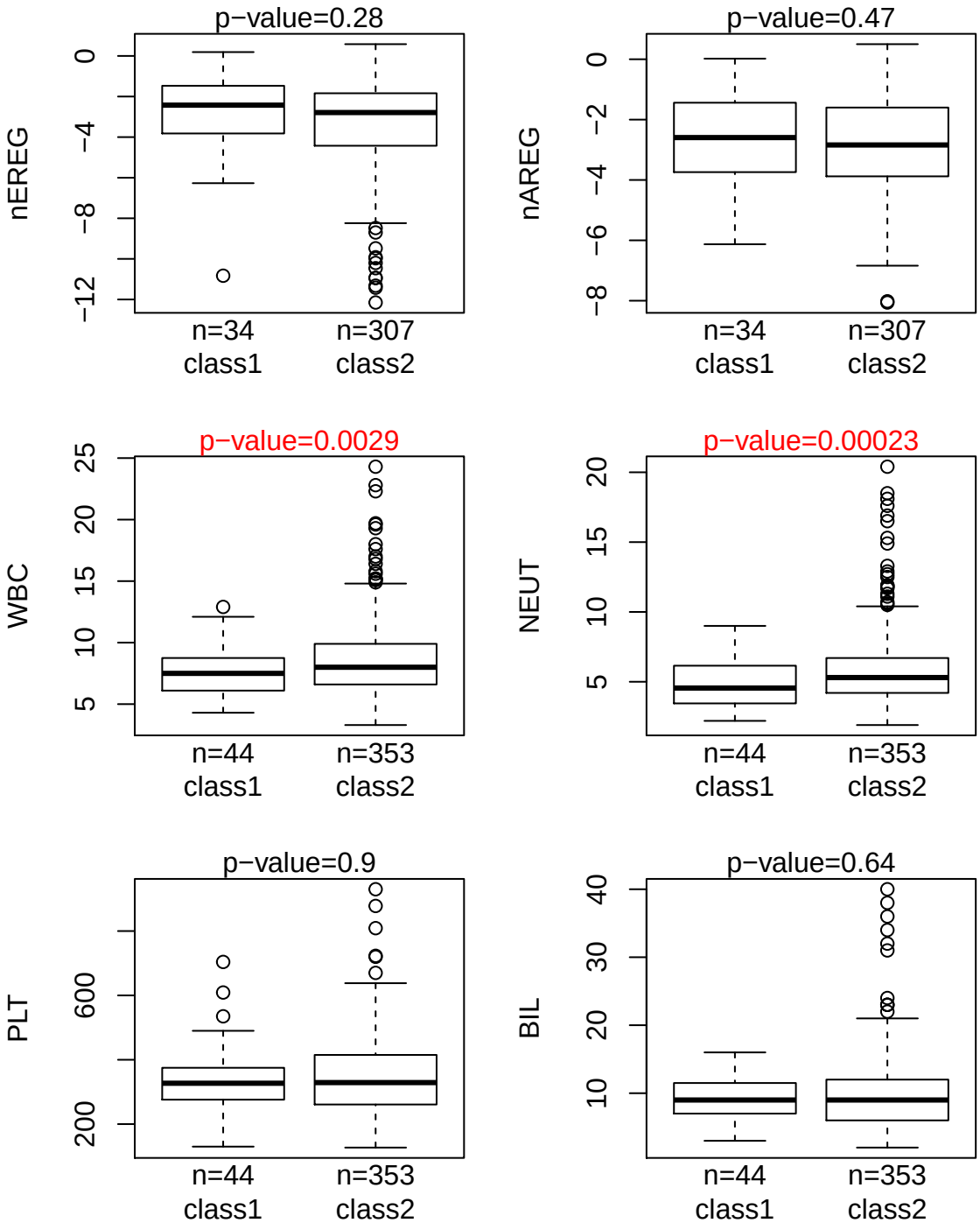
Boxplots for covariates where this is possible.

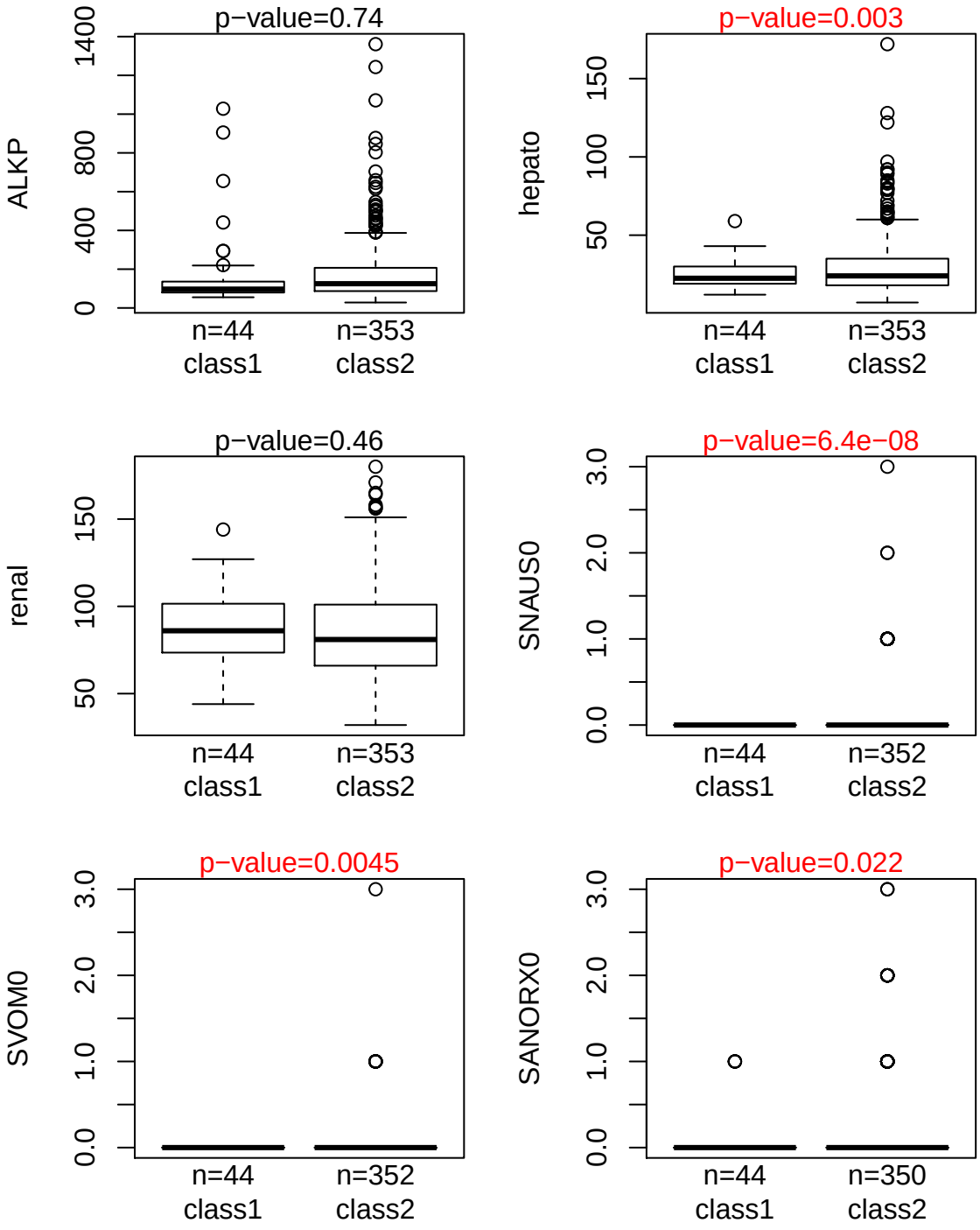
```
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
```

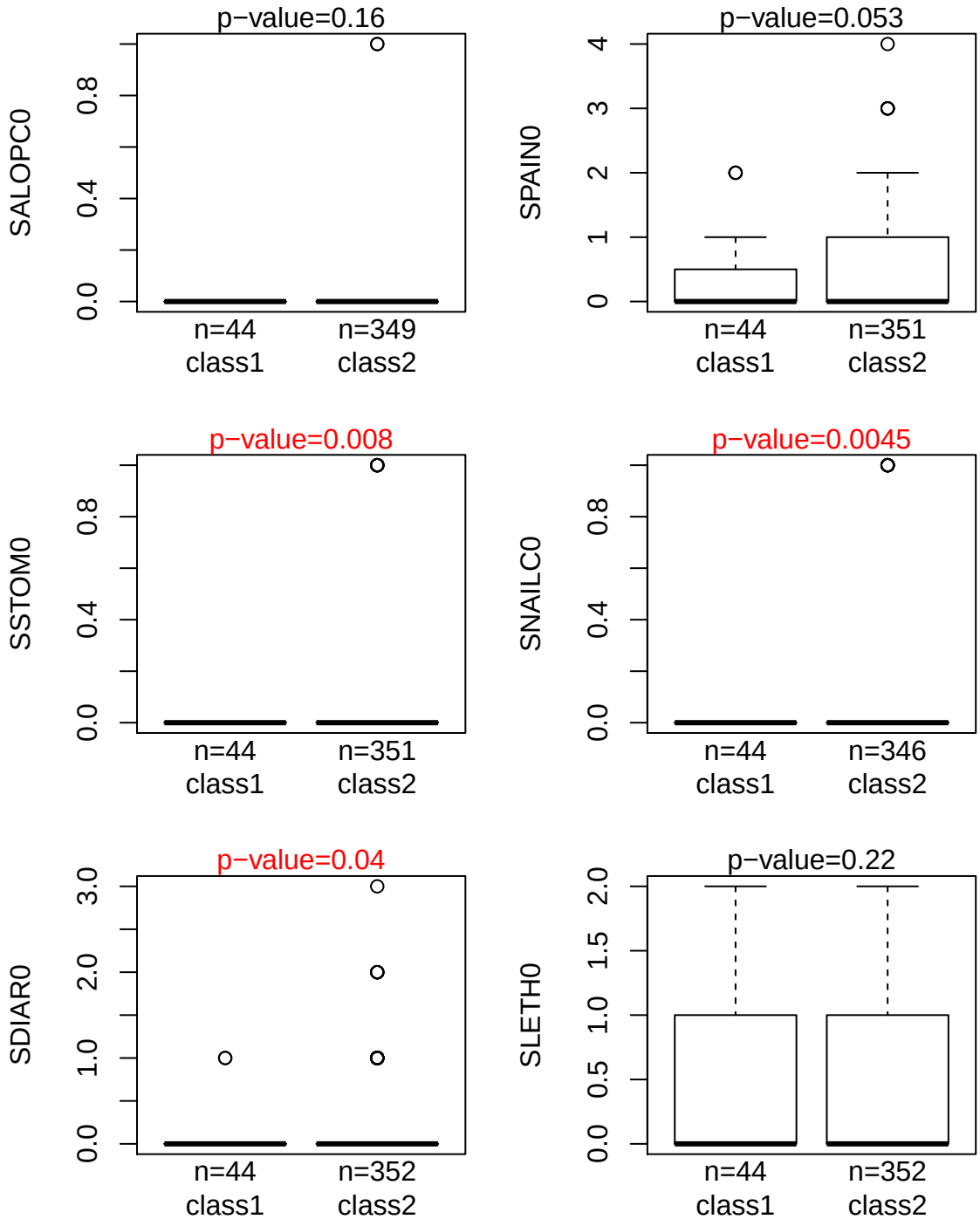
```
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in if (t$p.value < 0.05) {    significant_covars <- c(significant_covars, name)}: missi

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in t.test.default(class1[, name], class2[, name]): not enough 'x' observations>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>

## <simpleError in oldClass(stats) <- cl: adding class "factor" to an invalid object>
```

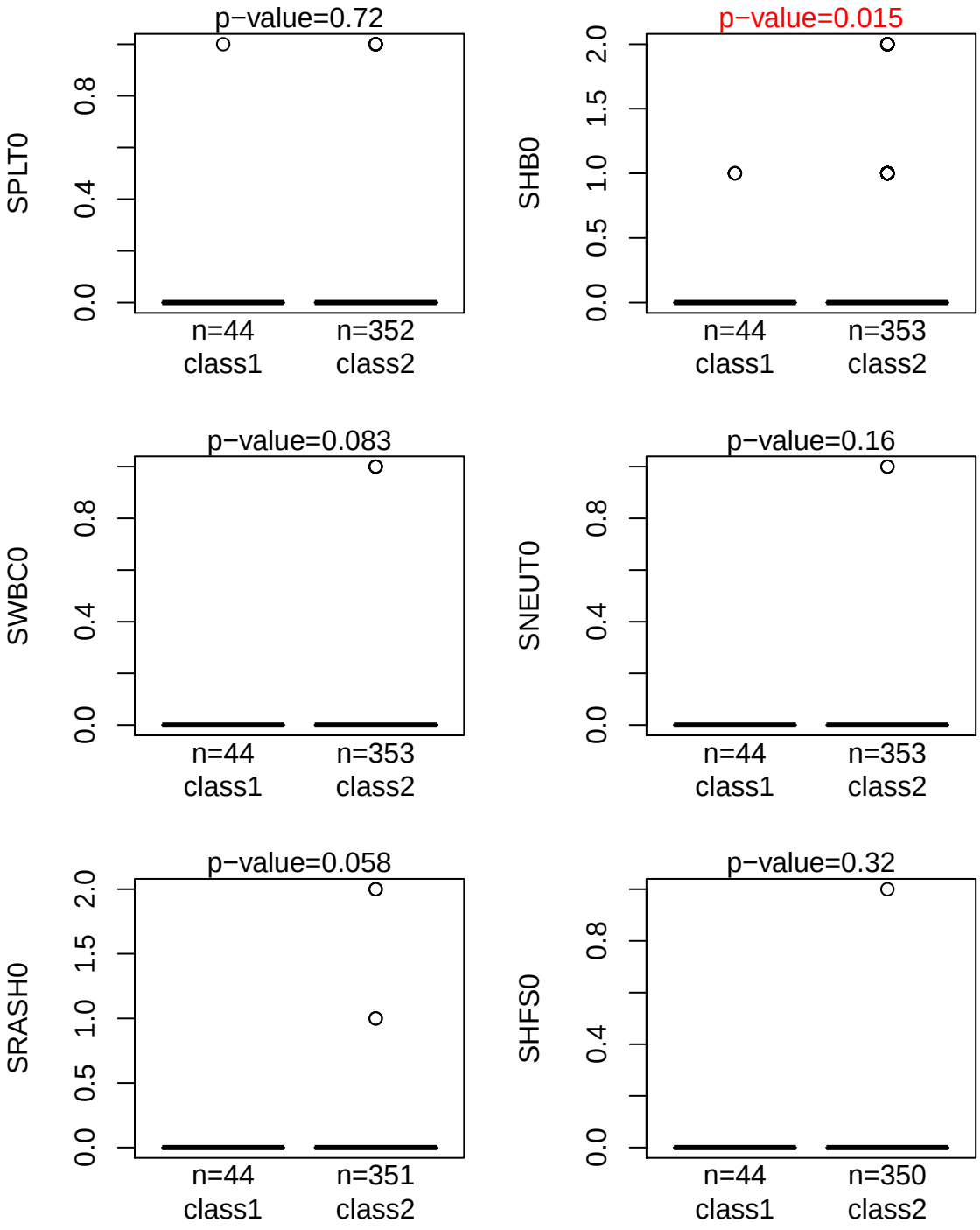


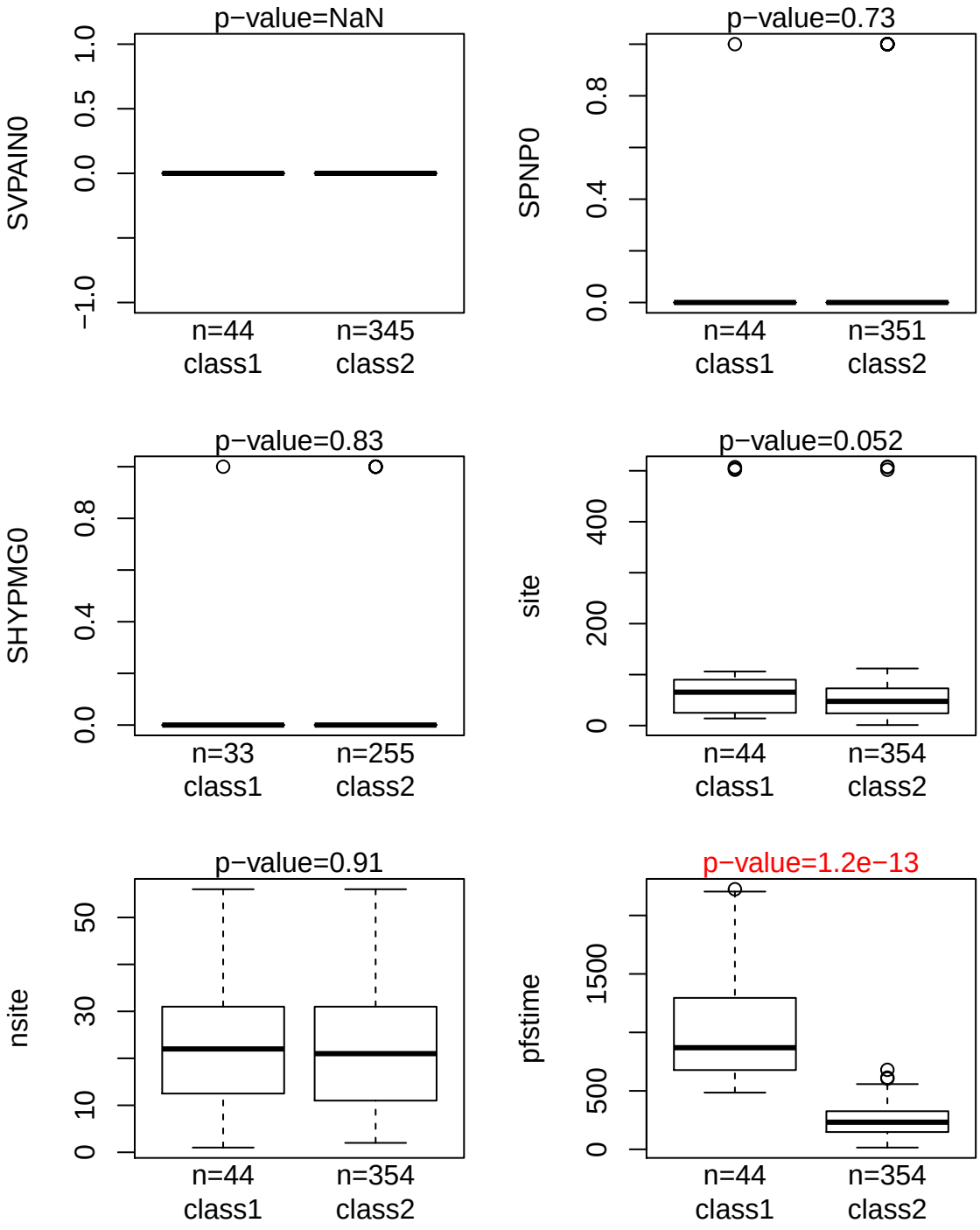

p−value=0.51
WT
40
80
120
160
n=44
class1
n=353
class2
p−value=0.076
WHO
0.0
0.5
1.0
1.5
2.0
n=44
class1
n=354
class2
p−value=0.042
SUMLES
0
100
300
n=44
class1
n=351
class2
p−value=0.017
NOLES
5
10
20
n=44
class1
n=351
class2
p−value=0.00057
metsites
0
1
2
3
4
5
n=44
class1
n=354
class2
p−value=0.89
diagtime
0
500
1500
n=44
class1
n=352
class2

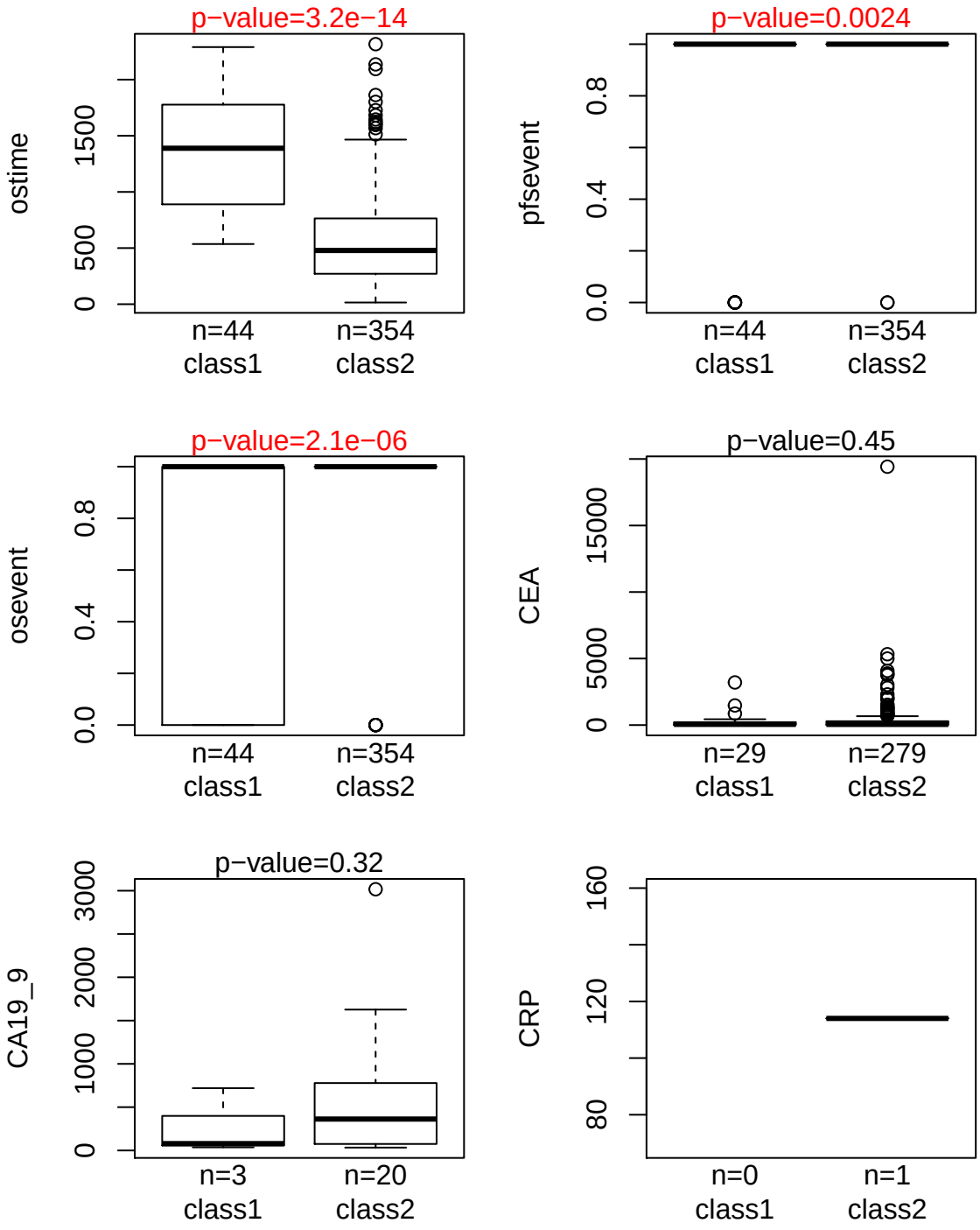

p−value=0.28
nEREG
0
−4
−8
−12
n=34
class1
n=307
class2
p−value=0.47
nAREG
0
−2
−4
−6
−8
n=34
class1
n=307
class2
p−value=0.0029
WBC
25
20
15
10
5
n=44
class1
n=353
class2
p−value=0.00023
NEUT
20
15
10
5
n=44
class1
n=353
class2
p−value=0.9
PLT
600
200
n=44
class1
n=353
class2
p−value=0.64
BIL
40
30
20
10
n=44
class1
n=353
class2

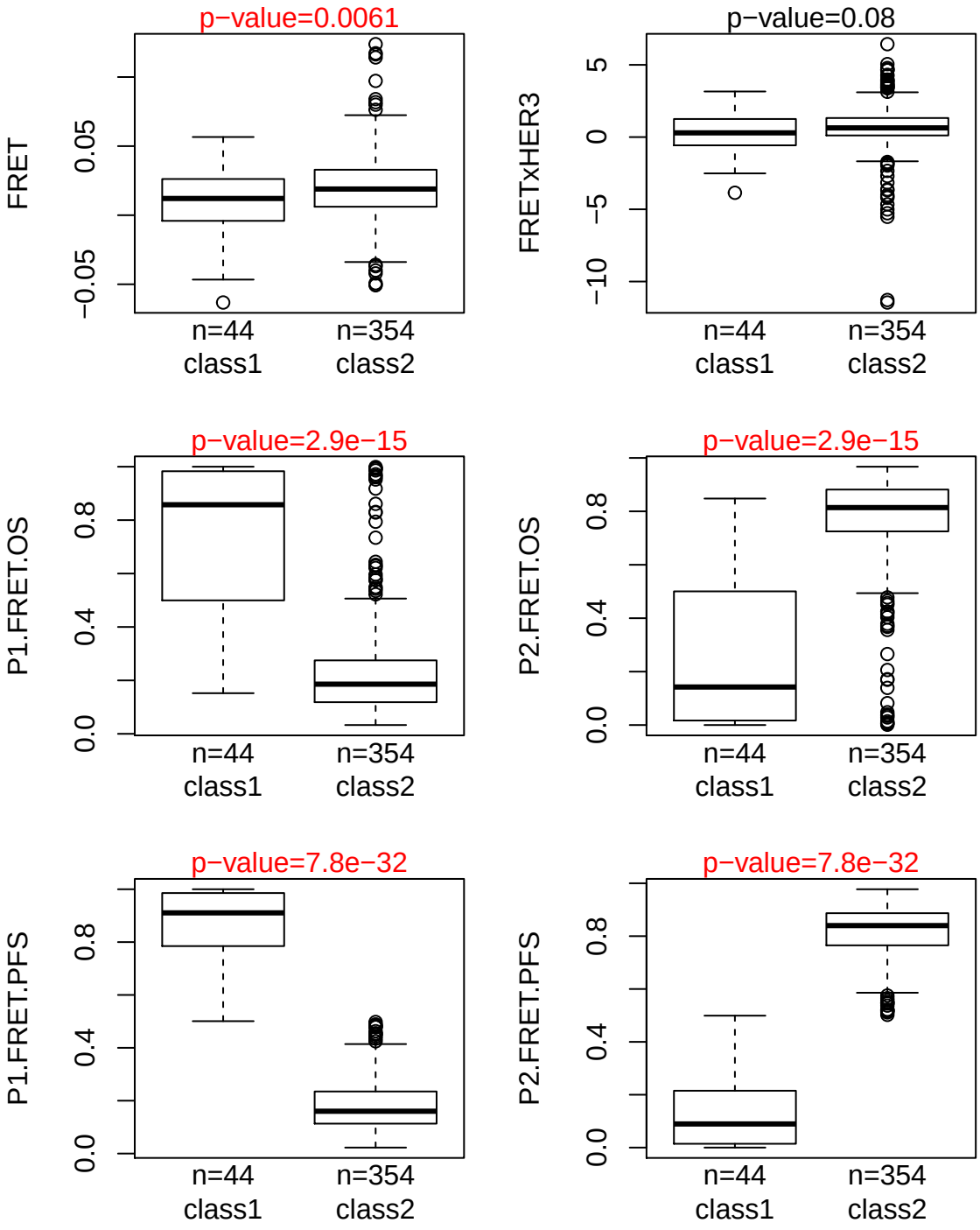

p−value=0.74
ALKP
0
400
800
1400
n=44
class1
n=353
class2
p−value=0.003
hepato
50
100
150
n=44
class1
n=353
class2
p−value=0.46
renal
50
100
150
n=44
class1
n=353
class2
p−value=6.4e−08
SNAUS0
0.0
1.0
2.0
3.0
n=44
class1
n=352
class2
p−value=0.0045
SVOM0
0.0
1.0
2.0
3.0
n=44
class1
n=352
class2
p−value=0.022
SANORX0
0.0
1.0
2.0
3.0
n=44
class1
n=350
class2

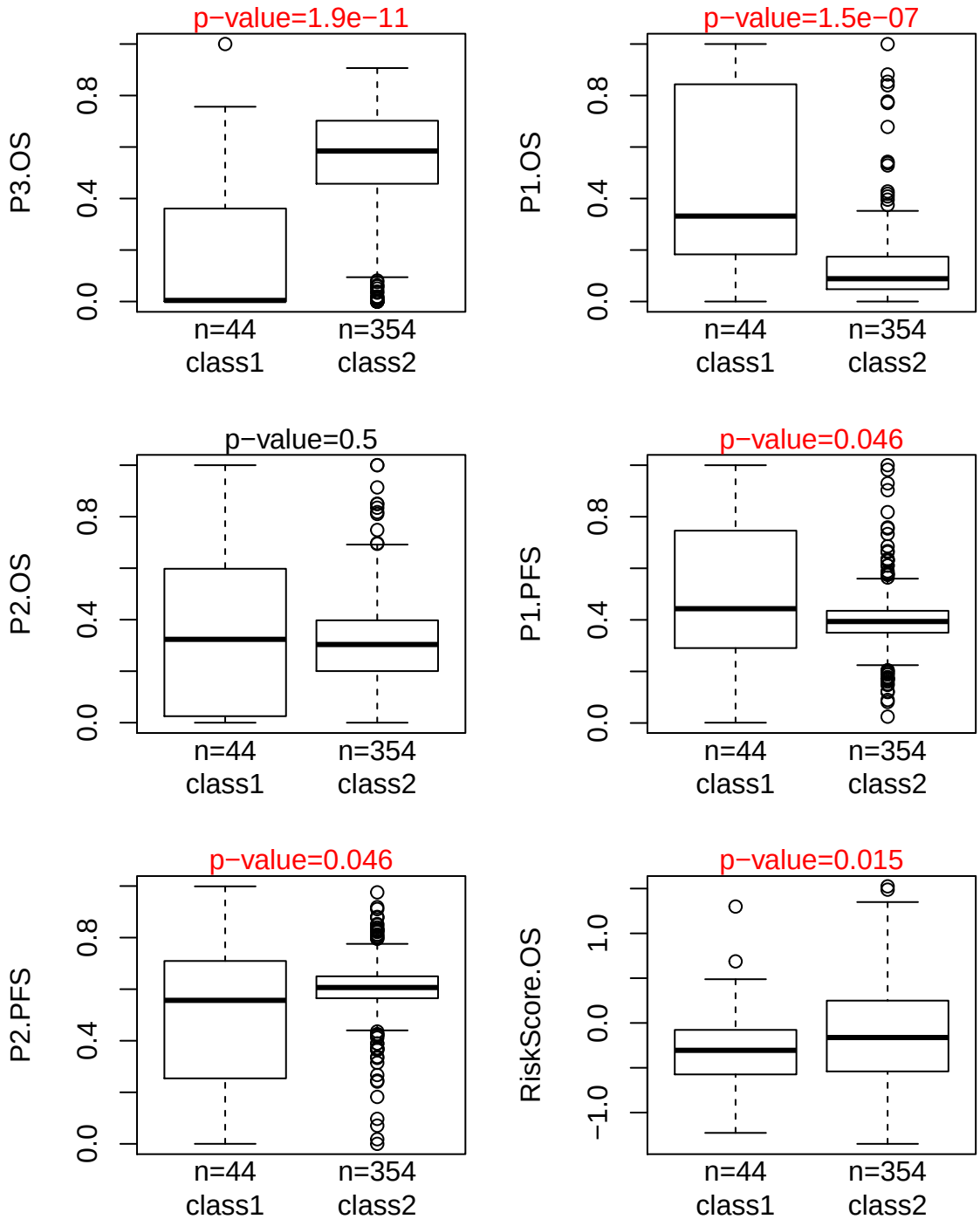

p−value=0.16
SALOPC0
0.0
0.4
0.8
n=44
class1
n=349
class2
p−value=0.053
SPAIN0
0
1
2
3
4
n=44
class1
n=351
class2
p−value=0.008
SSTOM0
0.0
0.4
0.8
n=44
class1
n=351
class2
p−value=0.0045
SNAILC0
0.0
0.4
0.8
n=44
class1
n=346
class2
p−value=0.04
SDIAR0
0.0
1.0
2.0
3.0
n=44
class1
n=352
class2
p−value=0.22
SLETH0
0.0
0.5
1.0
1.5
2.0
n=44
class1
n=352
class2

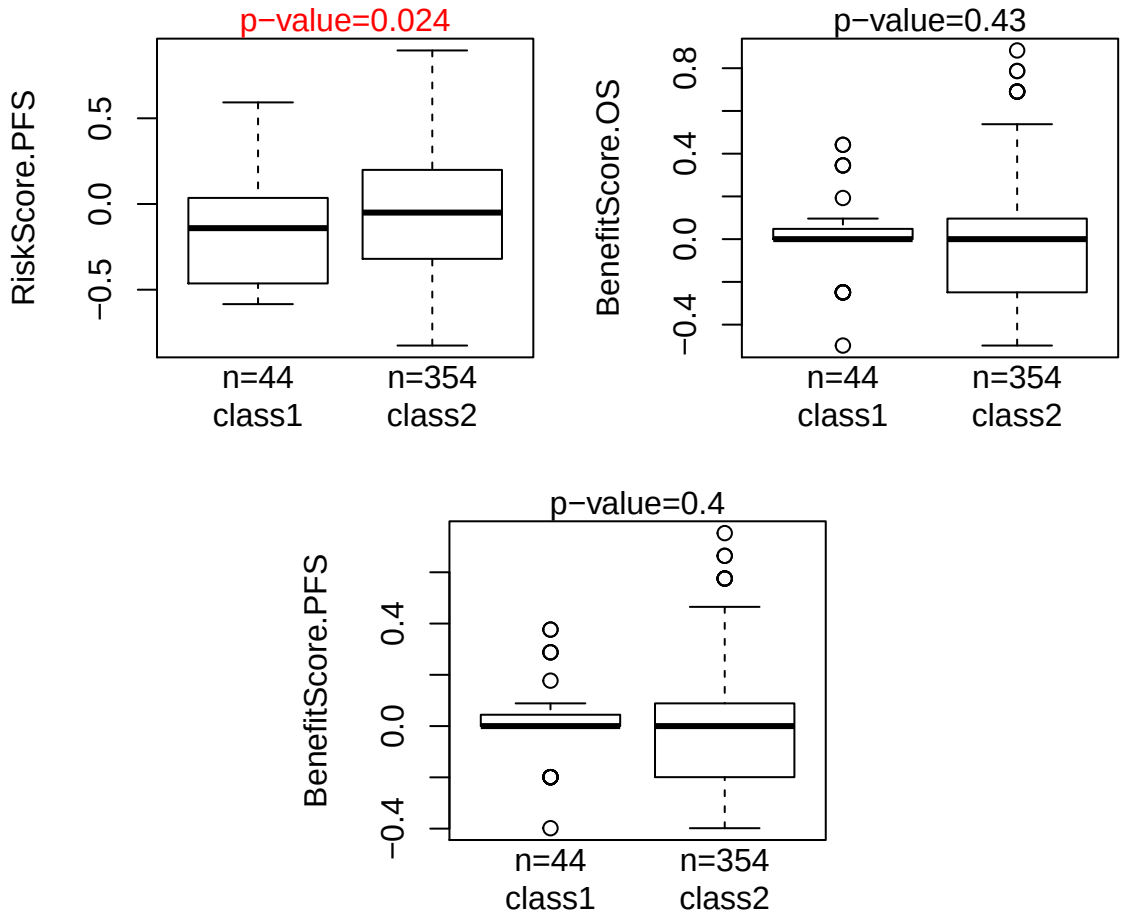

p−value=0.72
SPLT0
0.0
0.4
0.8
n=44
class1
n=352
class2
p−value=0.015
SHB0
0.0
0.5
1.0
1.5
2.0
n=44
class1
n=353
class2
p−value=0.083
SWBC0
0.0
0.4
0.8
n=44
class1
n=353
class2
p−value=0.16
SNEUT0
0.0
0.4
0.8
n=44
class1
n=353
class2
p−value=0.058
SRASH0
0.0
0.5
1.0
1.5
2.0
n=44
class1
n=351
class2
p−value=0.32
SHFS0
0.0
0.4
0.8
n=44
class1
n=350
class2


p−value=NaN
SVPAIN0
1.0
0.5
0.0
−1.0
n=44
class1
n=345
class2
p−value=0.73
SPNP0
0.8
0.4
0.0
n=44
class1
n=351
class2
p−value=0.83
SHYPMG0
0.8
0.4
0.0
n=33
class1
n=255
class2
p−value=0.052
site
400
200
0
n=44
class1
n=354
class2
p−value=0.91
nsite
50
30
10
0
n=44
class1
n=354
class2
p−value=1.2e−13
pfstime
1500
500
0
n=44
class1
n=354
class2


p−value=3.2e−14
ostime
0
500
1500
n=44
class1
n=354
class2
p−value=0.0024
pfsevent
0.0
0.4
0.8
n=44
class1
n=354
class2
p−value=2.1e−06
osevent
0.0
0.4
0.8
n=44
class1
n=354
class2
p−value=0.45
CEA
0
5000
15000
n=29
class1
n=279
class2
p−value=0.32
CA19_9
0
1000
2000
3000
n=3
class1
n=20
class2
CRP
80
120
160
n=0
class1
n=1
class2


p−value=0.0061
FRET
0.05
−0.05
n=44
class1
n=354
class2
p−value=0.08
FRETxHER3
5
0
−5
−10
n=44
class1
n=354
class2
p−value=2.9e−15
P1.FRET.OS
0.8
0.4
0.0
n=44
class1
n=354
class2
p−value=2.9e−15
P2.FRET.OS
0.8
0.4
0.0
n=44
class1
n=354
class2
p−value=7.8e−32
P1.FRET.PFS
0.8
0.4
0.0
n=44
class1
n=354
class2
p−value=7.8e−32
P2.FRET.PFS
0.8
0.4
0.0
n=44
class1
n=354
class2


p−value=1.9e−11
P3.OS
0.0
0.4
0.8
n=44
class1
n=354
class2
p−value=1.5e−07
P1.OS
0.0
0.4
0.8
n=44
class1
n=354
class2
p−value=0.5
P2.OS
0.0
0.4
0.8
n=44
class1
n=354
class2
p−value=0.046
P1.PFS
0.0
0.4
0.8
n=44
class1
n=354
class2
p−value=0.046
P2.PFS
0.0
0.4
0.8
n=44
class1
n=354
class2
p−value=0.015
RiskScore.OS
−1.0
0.0
1.0
n=44
class1
n=354
class2



T.tests

T.tests for interesting covariates (p-value<0.05).

```
## SUMLES
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.0792, df = 57.012, p-value = 0.04211
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -49.092546  -0.922605
## sample estimates:
## mean of x mean of y
##  81.65909 106.66667
##
## NOLES
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
```

```
## t = -2.4503, df = 65.761, p-value = 0.01694
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.149637 -0.117263
## sample estimates:
## mean of x mean of y
##  2.340909  2.974359
##
## metsites
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.6283, df = 63.4, p-value = 0.0005706
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6218290 -0.1801741
## sample estimates:
## mean of x mean of y
##  1.522727  1.923729
##
## WBC
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.0935, df = 68.243, p-value = 0.002866
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.8551499 -0.4003484
## sample estimates:
## mean of x mean of y
##  7.504545  8.632295
##
## NEUT
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.8776, df = 74.326, p-value = 0.0002259
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.7159661 -0.5510955
## sample estimates:
## mean of x mean of y
##  4.763636  5.897167
##
## hepato
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.0429, df = 100.87, p-value = 0.002987
## alternative hypothesis: true difference in means is not equal to 0
```

```
## 95 percent confidence interval:
##  -8.932994 -1.882226
## sample estimates:
## mean of x mean of y
##  25.11364  30.52125
##
## SNAUS0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -5.5261, df = 351, p-value = 6.392e-08
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.13867150 -0.06587395
## sample estimates:
## mean of x mean of y
## 0.0000000 0.1022727
##
## SVOM0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.8571, df = 351, p-value = 0.004531
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.05755844 -0.01062338
## sample estimates:
##  mean of x  mean of y
## 0.00000000 0.03409091
##
## SANORX0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.3289, df = 81.923, p-value = 0.02233
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.22346774 -0.01757122
## sample estimates:
##  mean of x  mean of y
## 0.09090909 0.21142857
##
## SSTOM0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.6687, df = 350, p-value = 0.007968
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.034640388 -0.005245652
```

```
## sample estimates:
##  mean of x  mean of y
## 0.00000000 0.01994302
##
## SNAILC0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.8576, df = 345, p-value = 0.004528
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.039035851 -0.007206924
## sample estimates:
##  mean of x  mean of y
## 0.00000000 0.02312139
##
## SDIAR0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.0889, df = 86.782, p-value = 0.03965
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.155237740 -0.003853169
## sample estimates:
##  mean of x  mean of y
## 0.04545455 0.12500000
##
## SHB0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.4952, df = 77.492, p-value = 0.01472
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.22873823 -0.02570421
## sample estimates:
##  mean of x  mean of y
## 0.09090909 0.21813031
##
## pfstime
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 10.593, df = 43.77, p-value = 1.172e-13
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  635.0819 933.5786
## sample estimates:
## mean of x mean of y
```

```
## 1024.4545  240.1243
##
## ostime
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 10.516, df = 49.547, p-value = 3.219e-14
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##   681.1226 1002.8309
## sample estimates:
## mean of x mean of y
## 1399.8864  557.9096
##
## pfsevent
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.2266, df = 43.362, p-value = 0.002386
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.32317951 -0.07461197
## sample estimates:
## mean of x mean of y
## 0.7954545 0.9943503
##
## osevent
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -5.4697, df = 43.714, p-value = 2.053e-06
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5677605 -0.2619775
## sample estimates:
## mean of x mean of y
## 0.5681818 0.9830508
##
## FRET
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.853, df = 54.992, p-value = 0.006093
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.018845390 -0.003293852
## sample estimates:
##   mean of x   mean of y
## 0.009383636 0.020453257
##
```

```
## P1.FRET.OS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 11.44, df = 47.627, p-value = 2.889e-15
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.4194413 0.5983553
## sample estimates:
## mean of x mean of y
## 0.7443615 0.2354632
##
## P2.FRET.OS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -11.44, df = 47.627, p-value = 2.889e-15
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5983553 -0.4194413
## sample estimates:
## mean of x mean of y
## 0.2556385 0.7645368
##
## P1.FRET.PFS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 29.005, df = 47.433, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.6306980 0.7246826
## sample estimates:
## mean of x mean of y
## 0.8583676 0.1806773
##
## P2.FRET.PFS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -29.005, df = 47.433, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.7246826 -0.6306980
## sample estimates:
## mean of x mean of y
## 0.1416324 0.8193227
##
## P3.OS
##
```

```
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -8.6032, df = 50.35, p-value = 1.861e-11
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4541841 -0.2822747
## sample estimates:
## mean of x mean of y
## 0.1813692 0.5495986
##
## P1.OS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 6.2219, df = 44.568, p-value = 1.516e-07
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.2283667 0.4470706
## sample estimates:
## mean of x mean of y
## 0.4690307 0.1313121
##
## P1.PFS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 2.0559, df = 44.772, p-value = 0.04565
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.001878738 0.184138143
## sample estimates:
## mean of x mean of y
## 0.4905124 0.3975040
##
## P2.PFS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.0559, df = 44.772, p-value = 0.04565
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.184138143 -0.001878738
## sample estimates:
## mean of x mean of y
## 0.5094876 0.6024960
##
## RiskScore.OS
##
##  Welch Two Sample t-test
##
```

```
## data:  class1[, name] and class2[, name]
## t = -2.5052, df = 55.833, p-value = 0.01518
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.35749773 -0.03979425
## sample estimates:
##  mean of x  mean of y
## -0.3067499 -0.1081039
##
## RiskScore.PFS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.3203, df = 56.142, p-value = 0.02398
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.22099121 -0.01621261
## sample estimates:
##   mean of x   mean of y
## -0.16560877 -0.04700686
```

Tables

Number and percentage tables for covariates where this is possible.

```
## TRT (number)
##
##       A   B
##   1  13  31
##   2 176 178
##
## TRT (%)
##
##      A  B
##   1 30 70
##   2 50 50
##
##
## CHEMO (number)
##
##     OxMdG XELOX
##   1    24    20
##   2   151   203
##
## CHEMO (%)
##
##     OxMdG XELOX
##   1    55    45
##   2    43    57
##
##
## SEX (number)
##
```

```
##     Female Male
##   1     15   29
##   2    105  249
##
## SEX (%)
##
##     Female Male
##   1     34   66
##   2     30   70
##
##
## PRT (number)
##
##      No Yes
##   1  44   0
##   2 342  11
##
## PRT (%)
##
##        No   Yes
##   1 100.0   0.0
##   2  97.0   3.1
##
##
## PSURG (number)
##
##      No Yes
##   1  37   7
##   2 275  78
##
## PSURG (%)
##
##     No Yes
##   1 84  16
##   2 78  22
##
##
## ADJCH (number)
##
##     >1m and <6m ago >6 months ago  No Yes (unspecified)
##   1               3            10  27                 4
##   2              21            72 242                19
##
## ADJCH (%)
##
##     >1m and <6m ago >6 months ago   No Yes (unspecified)
##   1             6.8          23.0 61.0               9.1
##   2             5.9          20.0 68.0               5.4
##
##
## TSTAT (number)
##
##     Local recurrence Resected Unresected/unresectable
##   1                7       34                       3
```

```
##   2               17      281                      56
##
## TSTAT (%)
##
##     Local recurrence Resected Unresected/unresectable
##   1             16.0     77.0                     6.8
##   2              4.8     79.0                    16.0
##
##
## left (number)
##
##     Left-sided Right-sided
##   1         35           9
##   2        239         108
##
## left (%)
##
##     Left-sided Right-sided
##   1         80          20
##   2         69          31
##
##
## MLIV (number)
##
##      No Yes
##   1  14  30
##   2  92 262
##
## MLIV (%)
##
##     No Yes
##   1 32  68
##   2 26  74
##
##
## MLNG (number)
##
##      No Yes
##   1  32  12
##   2 205 149
##
## MLNG (%)
##
##     No Yes
##   1 73  27
##   2 58  42
##
##
## MNODE (number)
##
##      No Yes
##   1  26  18
##   2 200 154
##
```

```
## MNODE (%)
##
##     No Yes
##   1 59  41
##   2 56  44
##
##
## MOTH (number)
##
##      No Yes
##   1  42   2
##   2 295  59
##
## MOTH (%)
##
##       No  Yes
##   1 95.0  4.5
##   2 83.0 17.0
##
##
## MPERI (number)
##
##      No Yes
##   1  39   5
##   2 297  57
##
## MPERI (%)
##
##     No Yes
##   1 89  11
##   2 84  16
##
##
## mlivonly (number)
##
##      No Yes
##   1  27  17
##   2 273  81
##
## mlivonly (%)
##
##     No Yes
##   1 61  39
##   2 77  23
##
##
## metscat (number)
##
##     Metachronous Synchronous
##   1           18          26
##   2          141         211
##
## metscat (%)
##
```

```
##     Metachronous Synchronous
##   1           41          59
##   2           40          60
##
##
## RAS (number)
##
##     Mutation Wild-type
##   1       15        28
##   2      163       184
##
## RAS (%)
##
##     Mutation Wild-type
##   1       35        65
##   2       47        53
##
##
## BRAF (number)
##
##     Mutation Wild-type
##   1        5        38
##   2       24       322
##
## BRAF (%)
##
##     Mutation Wild-type
##   1     12.0      88.0
##   2      6.9      93.0
##
##
## MSI (number)
##
##     MSI Stable
##   1   2     37
##   2  13    277
##
## MSI (%)
##
##      MSI Stable
##   1  5.1   95.0
##   2  4.5   96.0
##
##
## PIK3CA (number)
##
##     Mutation Wild-type
##   1        6        38
##   2       43       296
##
## PIK3CA (%)
##
##     Mutation Wild-type
##   1       14        86
```

```
##   2       13        87
##
##
## HEPFNC (number)
##
##     ALT AST
##   1  27  17
##   2 237 116
##
## HEPFNC (%)
##
##     ALT AST
##   1  61  39
##   2  67  33
##
##
## M_RENAL (number)
##
##     Creatinine clearance Glomerular filtration rate
##   1                   41                          3
##   2                  304                         49
##
## M_RENAL (%)
##
##     Creatinine clearance Glomerular filtration rate
##   1                 93.0                        6.8
##   2                 86.0                       14.0
##
##
## RMARK (number)
##
##      No Yes
##   1  11  32
##   2  47 291
##
## RMARK (%)
##
##     No Yes
##   1 26  74
##   2 14  86
##
##
## KRAS (number)
##
##     Mutation Wild-type
##   1       14        29
##   2      151       196
##
## KRAS (%)
##
##     Mutation Wild-type
##   1       33        67
##   2       44        56
##
```

```
##
## NRAS (number)
##
##     Mutation Wild-type
##   1        1        43
##   2       16       331
##
## NRAS (%)
##
##     Mutation Wild-type
##   1      2.3      98.0
##   2      4.6      95.0
##
##
## KRAS_MUT (number)
##
##     G12A G12C G12D G12D and G13C G12D and G13D G12R G12S G12V G13C G13D
##   1    0    0    2             0             0    1    1    4    0    5
##   2   11    9   43             0             0    2   10   42    0   26
##
##     G13D and Q61H G13S G13V Q61H Q61L Q61R uncharacterised mutant
##   1             0    0    0    1    0    0                     0
##   2             0    0    1    5    0    0                     1
##
##     uncharacterised Mutant Uncharacterised Mutant  WT
##   1                      0                     0  29
##   2                      0                     1 195
##
## KRAS_MUT (%)
##
##      G12A  G12C  G12D G12D and G13C G12D and G13D  G12R  G12S  G12V  G13C
##   1  0.00  0.00  4.70          0.00          0.00  2.30  2.30  9.30  0.00
##   2  3.20  2.60 12.00          0.00          0.00  0.58  2.90 12.00  0.00
##
##      G13D G13D and Q61H  G13S  G13V  Q61H  Q61L  Q61R
##   1 12.00          0.00  0.00  0.00  2.30  0.00  0.00
##   2  7.50          0.00  0.00  0.29  1.40  0.00  0.00
##
##     uncharacterised mutant uncharacterised Mutant Uncharacterised Mutant
##   1                   0.00                   0.00                   0.00
##   2                   0.29                   0.00                   0.29
##
##        WT
##   1 67.00
##   2 56.00
##
##
## BRAF_MUT (number)
##
##     D594G V600E  WT
##   1     1     4  38
##   2     4    20 322
##
## BRAF_MUT (%)
```

```
##
##     D594G V600E   WT
##   1   2.3   9.3 88.0
##   2   1.2   5.8 93.0
##
##
## NRAS_MUT (number)
##
##     G12C Q61K Q61L Q61R Uncharacterised Mutant  WT
##   1    0    0    1    0                     0  43
##   2    3    9    1    3                     0 330
##
## NRAS_MUT (%)
##
##      G12C  Q61K  Q61L  Q61R Uncharacterised Mutant    WT
##   1  0.00  0.00  2.30  0.00                  0.00 98.00
##   2  0.87  2.60  0.29  0.87                  0.00 95.00
##
##
## PIK3CA_MUT (number)
##
##     E542K E542K AND E545K E542K AND Q546K E545K E545K AND Q546K H1047L
##   1     0               0               0     3               0      0
##   2    14               1               0    17               0      2
##
##     H1047R H1047R AND E545K Q546K  WT
##   1      3                0     0  38
##   2      6                1     2 296
##
## PIK3CA_MUT (%)
##
##     E542K E542K AND E545K E542K AND Q546K E545K E545K AND Q546K H1047L
##   1  0.00            0.00            0.00  6.80            0.00   0.00
##   2  4.10            0.29            0.00  5.00            0.00   0.59
##
##     H1047R H1047R AND E545K Q546K    WT
##   1   6.80             0.00  0.00 86.00
##   2   1.80             0.29  0.59 87.00
##
##
## FRET.cohort (number)
##
##       0   1
##   1   0  44
##   2   0 354
##
## FRET.cohort (%)
##
##       0   1
##   1   0 100
##   2   0 100
##
##
## Class.FRET.OS (number)
```

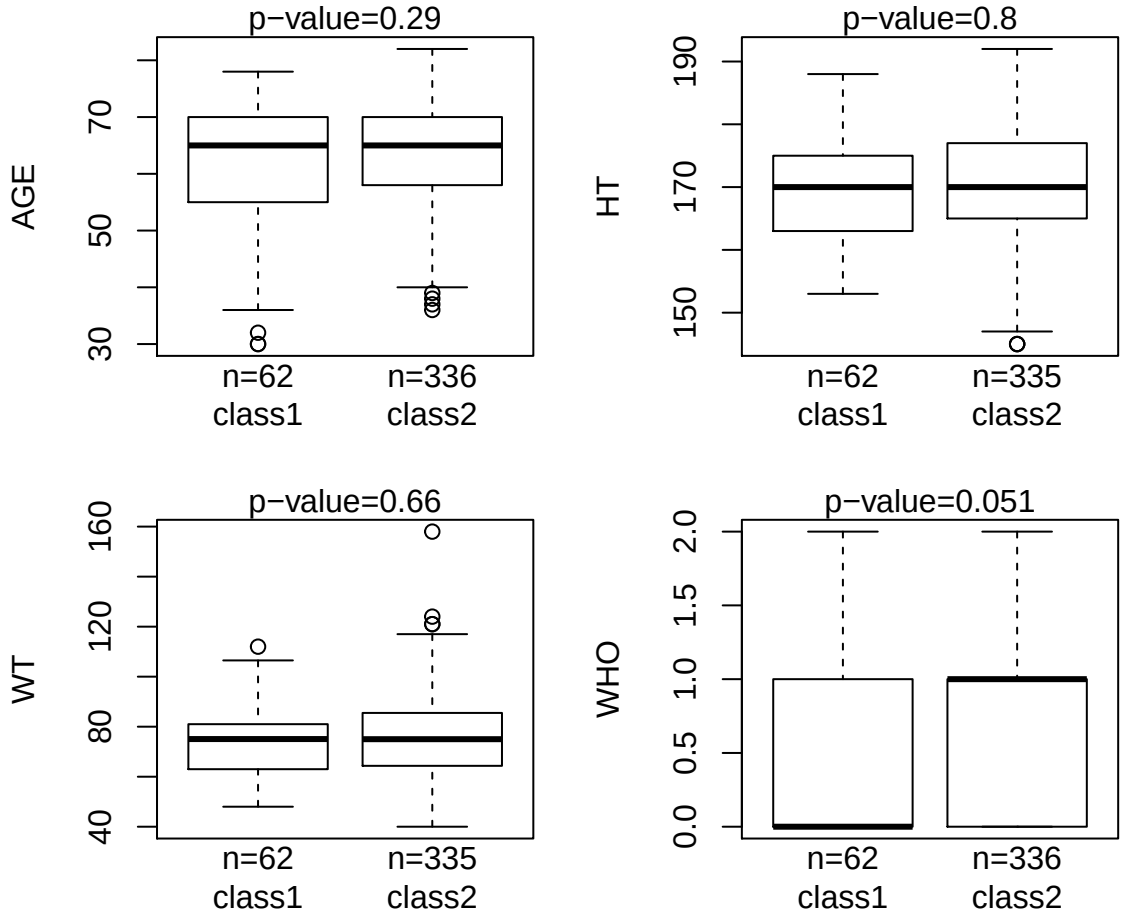
```
##
##       1   2
##   1  33  11
##   2  29 325
##
## Class.FRET.OS (%)
##
##        1    2
##   1 75.0 25.0
##   2  8.2 92.0
##
##
## Class.FRET.PFS (number)
##
##       1   2
##   1  44   0
##   2   0 354
##
## Class.FRET.PFS (%)
##
##       1   2
##   1 100   0
##   2   0 100
##
##
## Class.OS (number)
##
##       1   2   3
##   1  17  17  10
##   2  10  69 275
##
## Class.OS (%)
##
##        1    2    3
##   1 39.0 39.0 23.0
##   2  2.8 19.0 78.0
##
##
## Class.PFS (number)
##
##       1   2
##   1  17  27
##   2  42 312
##
## Class.PFS (%)
##
##      1  2
##   1 39 61
##   2 12 88
```

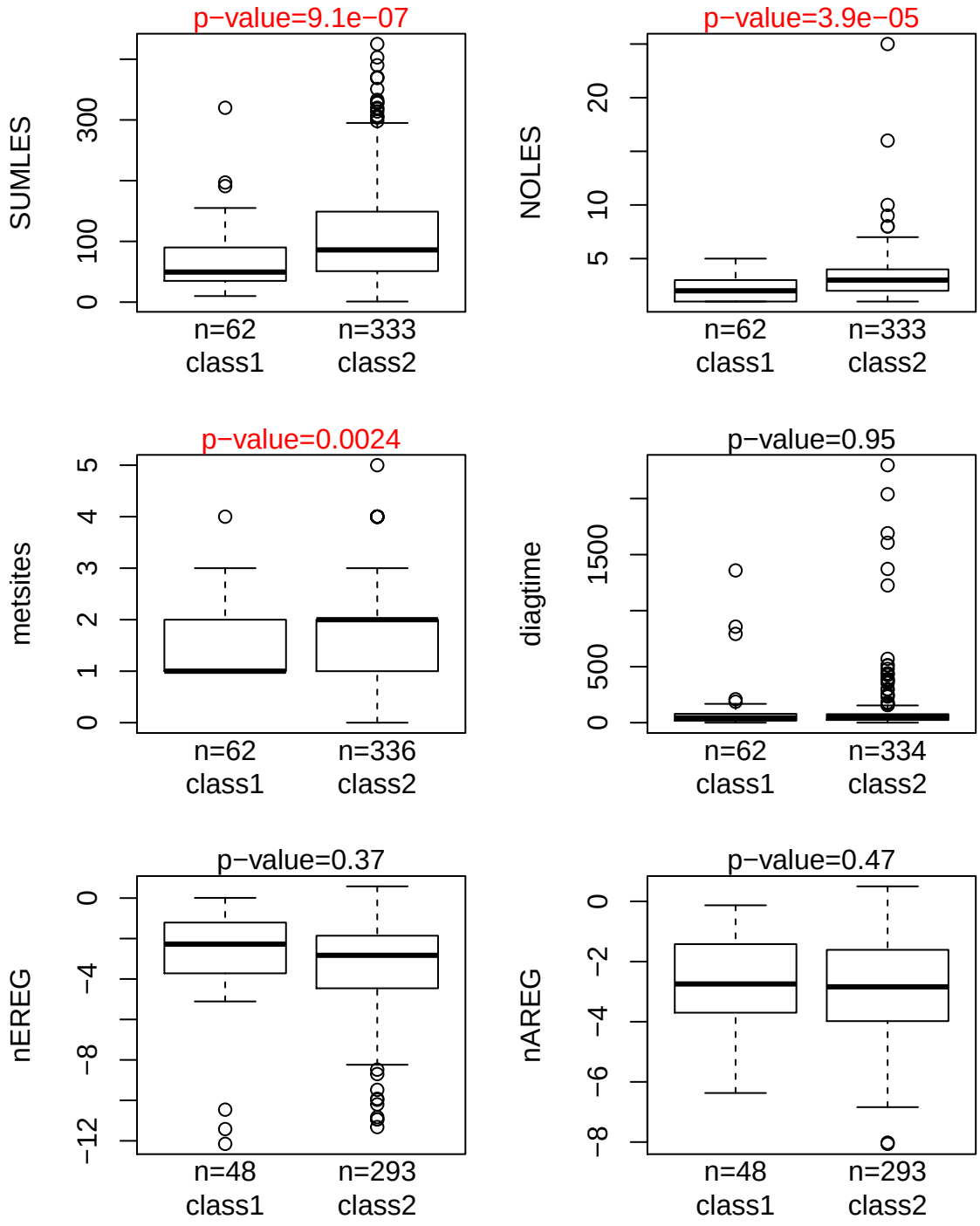
OS Classes

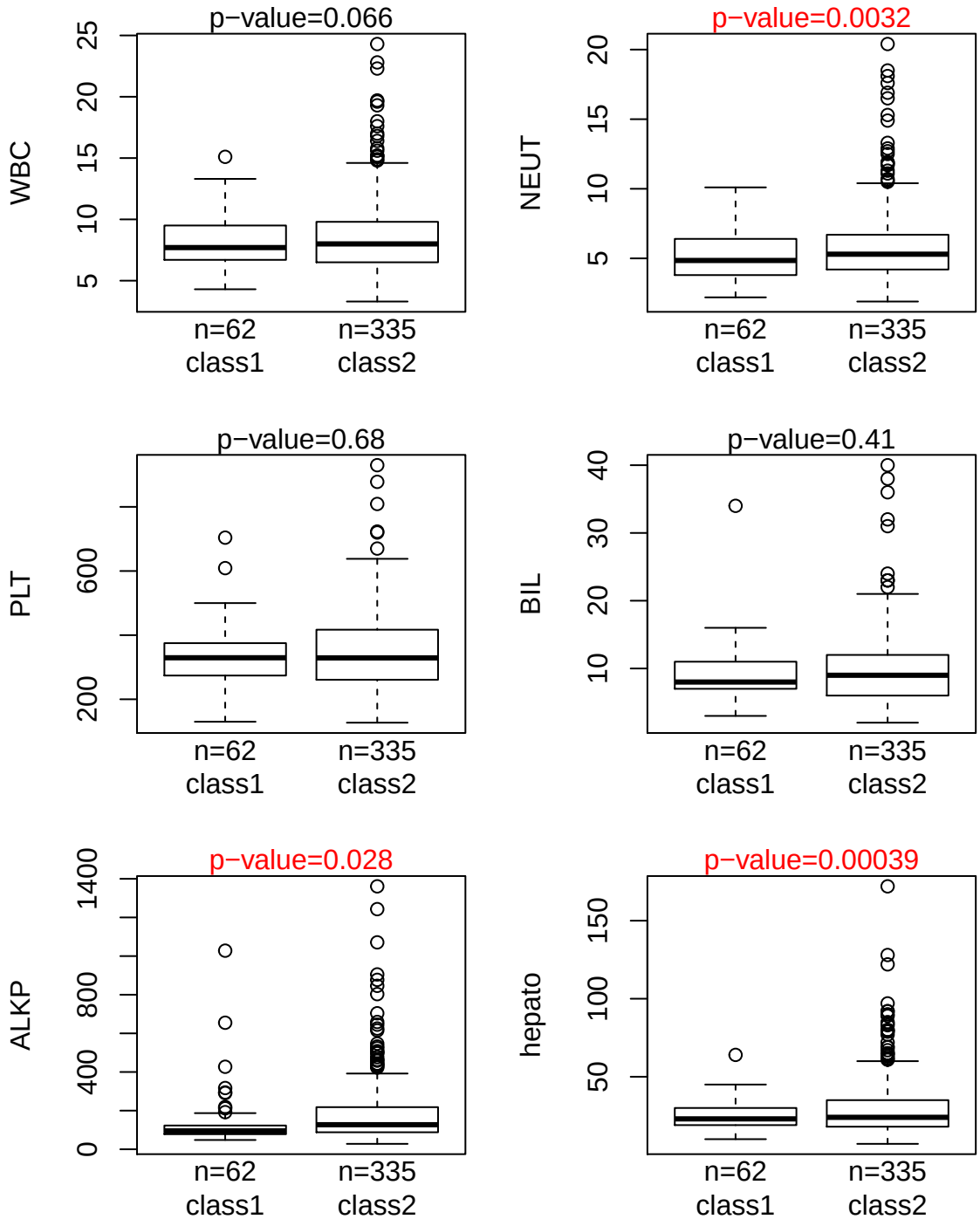
```
class1 <- fret_cohort[fret_cohort$Class.FRET.OS == 1,]
class2 <- fret_cohort[fret_cohort$Class.FRET.OS == 2,]
```

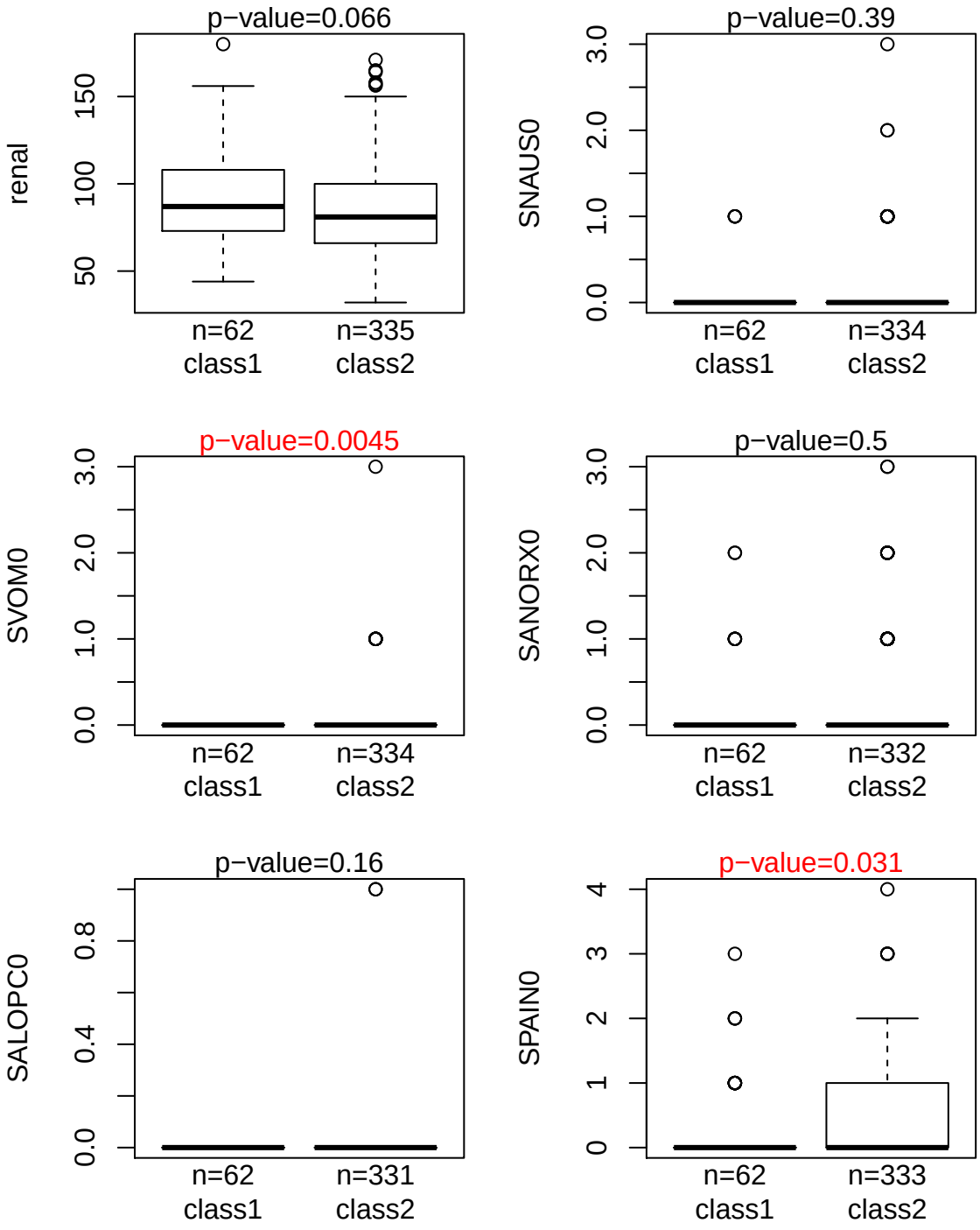
Boxplots

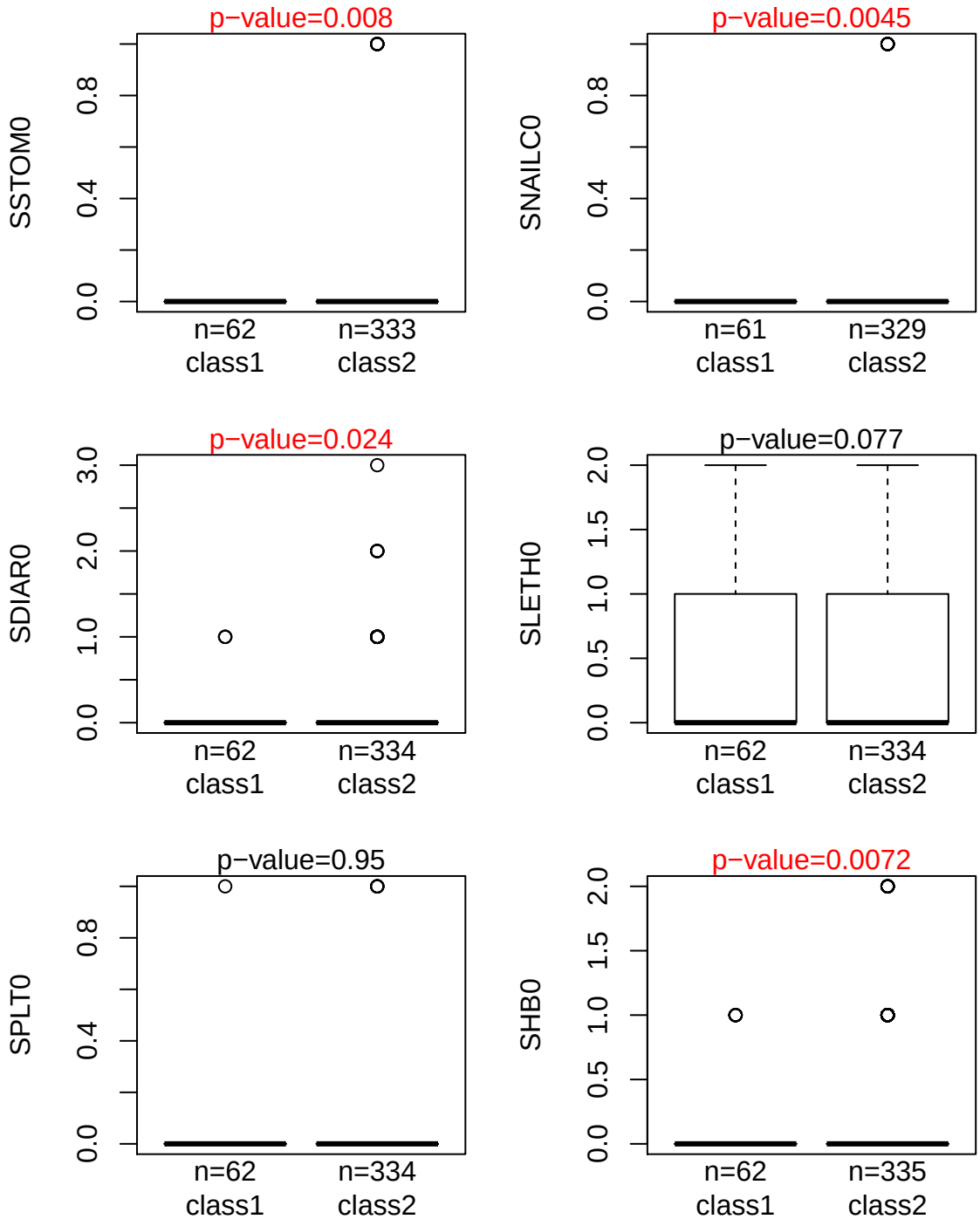
Boxplots for covariates where this is possible.

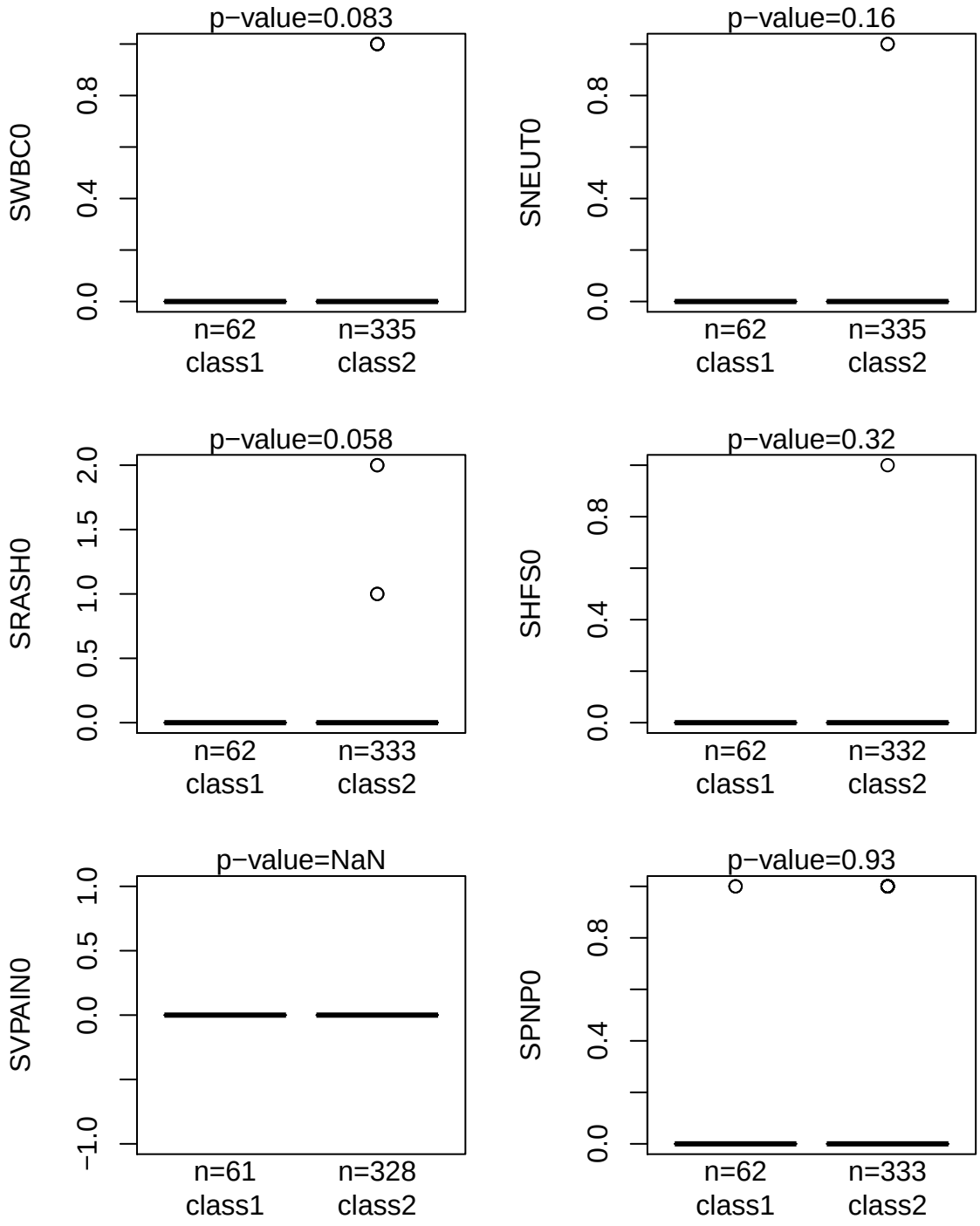


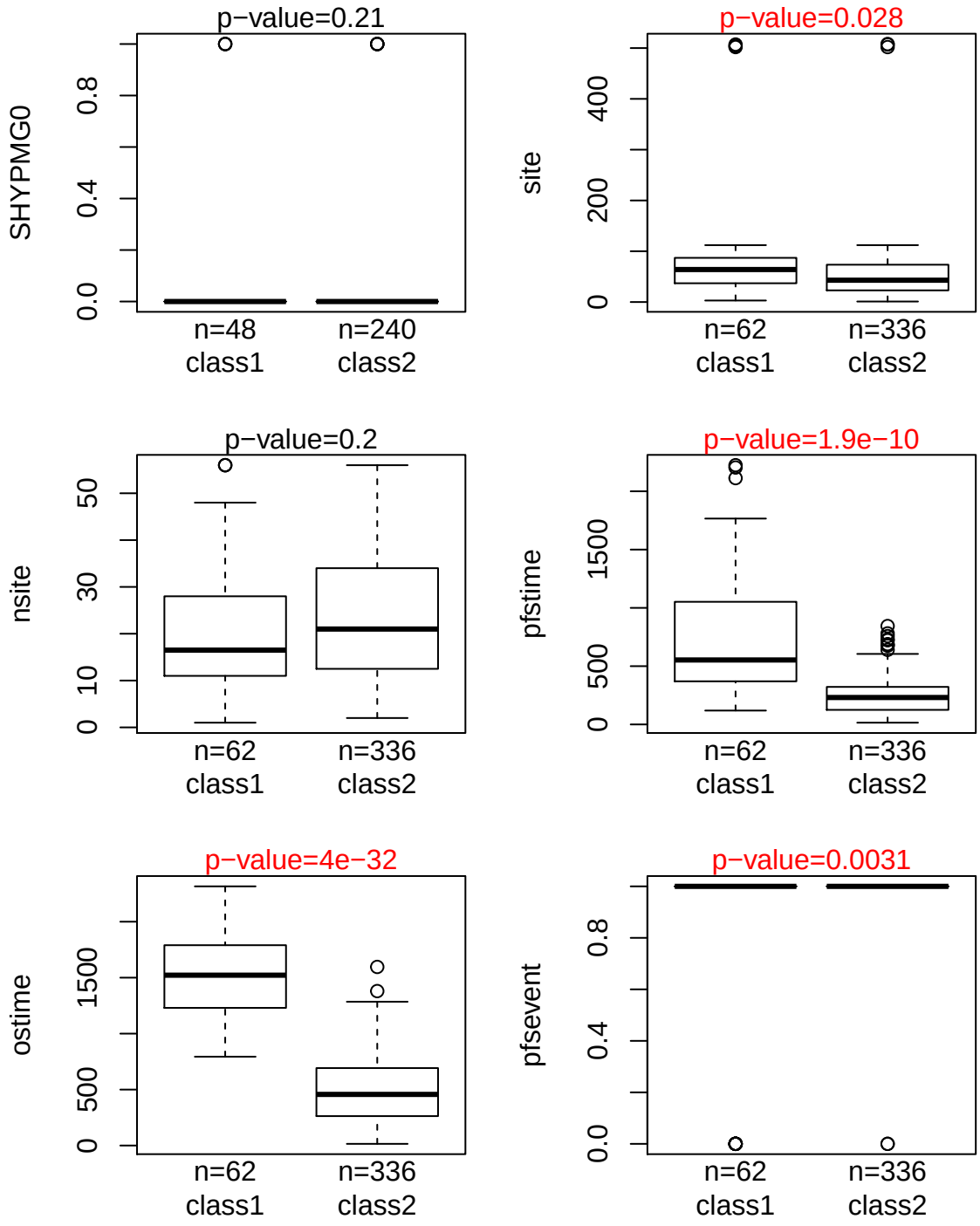

p−value=9.1e−07
SUMLES
0
100
300
n=62
class1
n=333
class2
p−value=3.9e−05
NOLES
5
10
20
n=62
class1
n=333
class2
p−value=0.0024
metsites
0
1
2
3
4
5
n=62
class1
n=336
class2
p−value=0.95
diagtime
0
500
1500
n=62
class1
n=334
class2
p−value=0.37
nEREG
−12
−8
−4
0
n=48
class1
n=293
class2
p−value=0.47
nAREG
−8
−6
−4
−2
0
n=48
class1
n=293
class2

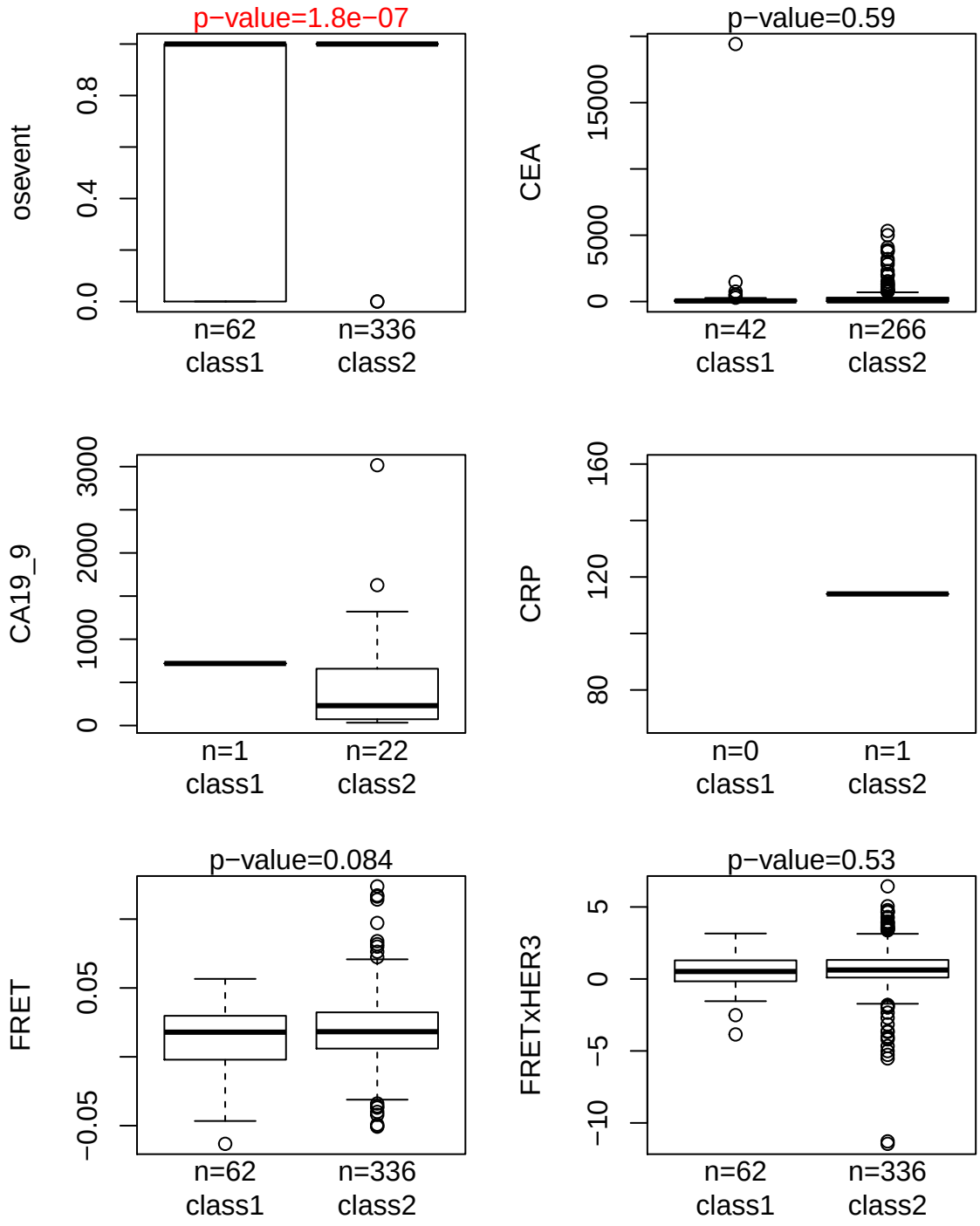

p−value=0.066
WBC
5
10
15
20
25
n=62
class1
n=335
class2
p−value=0.0032
NEUT
5
10
15
20
p−value=0.68
PLT
200
600
p−value=0.41
BIL
10
20
30
40
p−value=0.028
ALKP
0
400
800
1400
p−value=0.00039
hepato
50
100
150

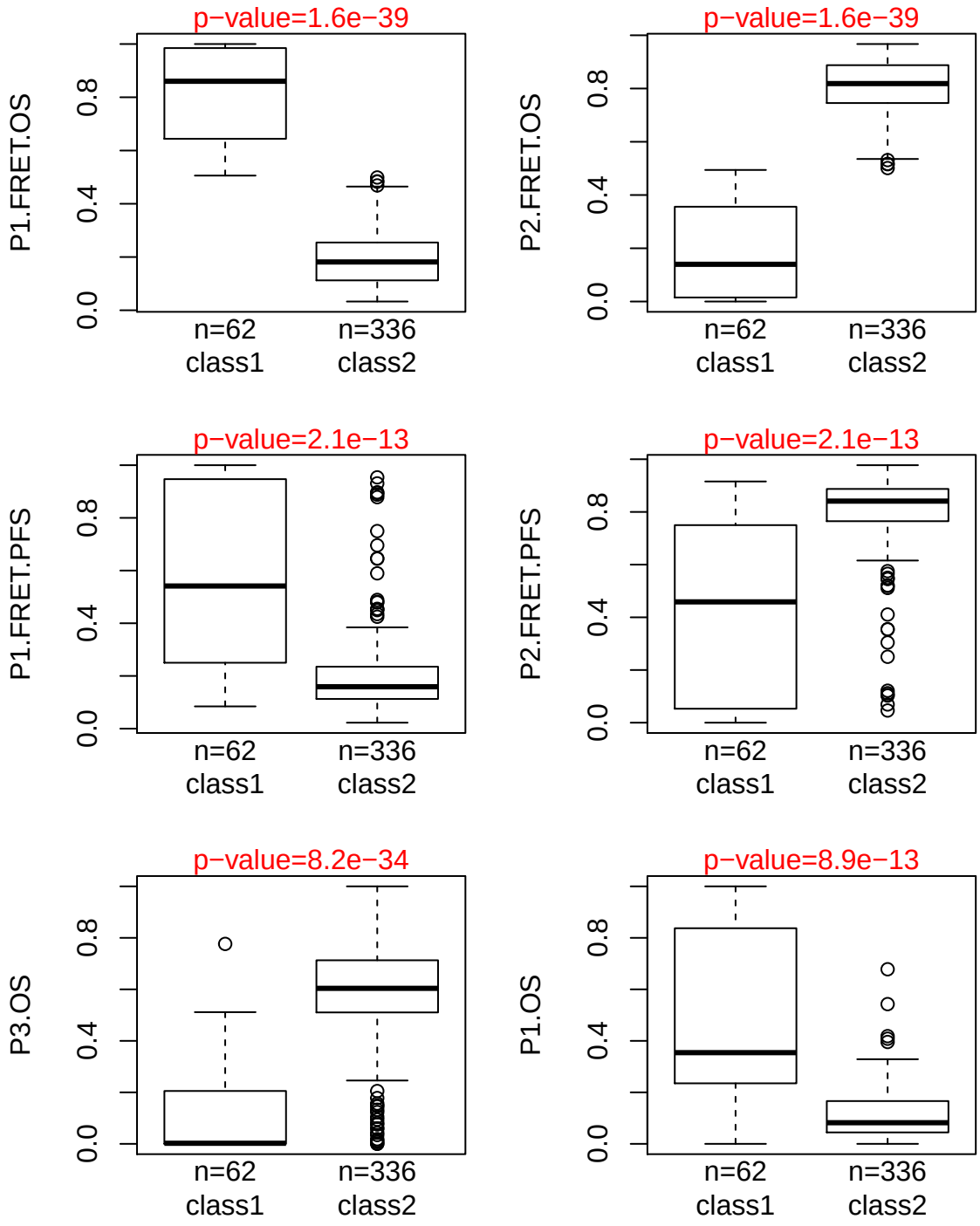

p−value=0.066
renal
50
100
150
n=62
class1
n=335
class2
p−value=0.39
SNAUS0
0.0
1.0
2.0
3.0
n=62
class1
n=334
class2
p−value=0.0045
SVOM0
0.0
1.0
2.0
3.0
n=62
class1
n=334
class2
p−value=0.5
SANORX0
0.0
1.0
2.0
3.0
n=62
class1
n=332
class2
p−value=0.16
SALOPC0
0.0
0.4
0.8
n=62
class1
n=331
class2
p−value=0.031
SPAIN0
0
1
2
3
4
n=62
class1
n=333
class2

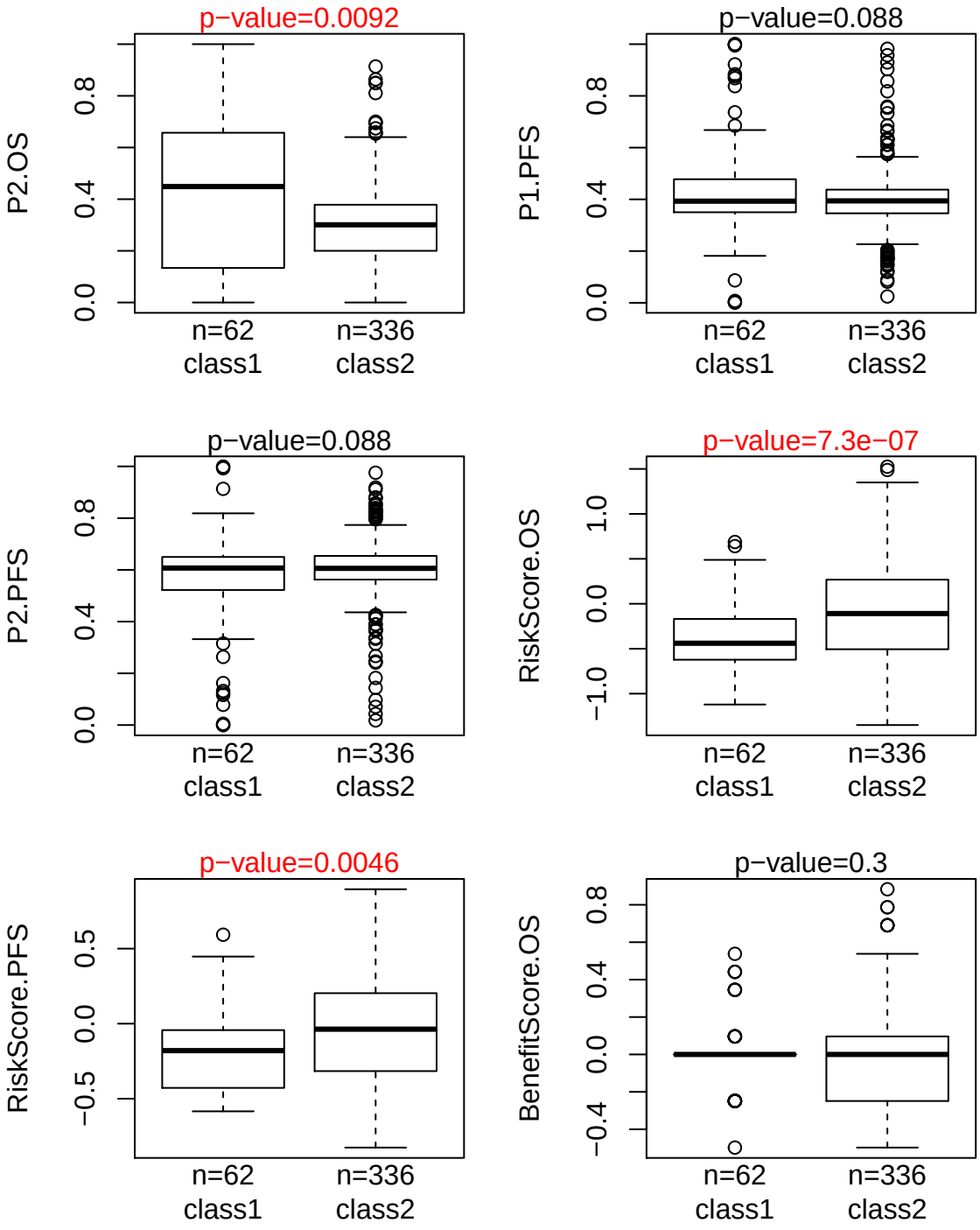

p−value=0.008
SSTOM0
0.0
0.4
0.8
n=62
class1
n=333
class2
p−value=0.0045
SNAILC0
0.0
0.4
0.8
n=61
class1
n=329
class2
p−value=0.024
SDIAR0
0.0
1.0
2.0
3.0
n=62
class1
n=334
class2
p−value=0.077
SLETH0
0.0
0.5
1.0
1.5
2.0
n=62
class1
n=334
class2
p−value=0.95
SPLT0
0.0
0.4
0.8
n=62
class1
n=334
class2
p−value=0.0072
SHB0
0.0
0.5
1.0
1.5
2.0
n=62
class1
n=335
class2

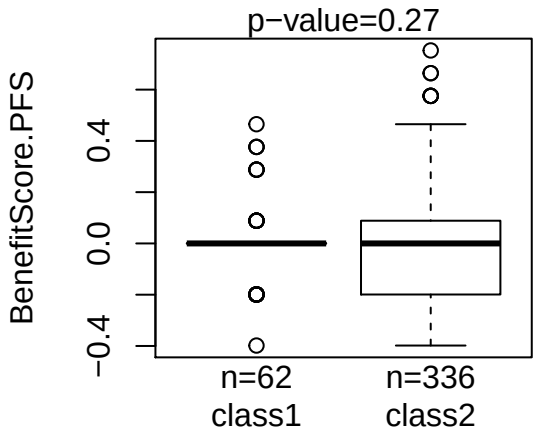

p−value=0.083
SWBC0
0.0
0.4
0.8
n=62
class1
n=335
class2
p−value=0.16
SNEUT0
0.0
0.4
0.8
n=62
class1
n=335
class2
p−value=0.058
SRASH0
0.0
0.5
1.0
1.5
2.0
n=62
class1
n=333
class2
p−value=0.32
SHFS0
0.0
0.4
0.8
n=62
class1
n=332
class2
p−value=NaN
SVPAIN0
−1.0
0.0
0.5
1.0
n=61
class1
n=328
class2
p−value=0.93
SPNP0
0.0
0.4
0.8
n=62
class1
n=333
class2


p−value=0.21
SHYPMG0
0.0
0.4
0.8
n=48
class1
n=240
class2
p−value=0.028
site
0
200
400
n=62
class1
n=336
class2
p−value=0.2
nsite
0
10
30
50
n=62
class1
n=336
class2
p−value=1.9e−10
pfstime
0
500
1500
n=62
class1
n=336
class2
p−value=4e−32
ostime
0
500
1500
n=62
class1
n=336
class2
p−value=0.0031
pfsevent
0.0
0.4
0.8
n=62
class1
n=336
class2


p−value=1.8e−07
osevent
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=0.59
CEA
0
5000
15000
n=42
class1
n=266
class2
CA19_9
0
1000
2000
3000
n=1
class1
n=22
class2
CRP
80
120
160
n=0
class1
n=1
class2
p−value=0.084
FRET
−0.05
0.05
n=62
class1
n=336
class2
p−value=0.53
FRETxHER3
−10
−5
0
5
n=62
class1
n=336
class2


p−value=1.6e−39
P1.FRET.OS
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=1.6e−39
P2.FRET.OS
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=2.1e−13
P1.FRET.PFS
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=2.1e−13
P2.FRET.PFS
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=8.2e−34
P3.OS
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=8.9e−13
P1.OS
0.0
0.4
0.8
n=62
class1
n=336
class2


p−value=0.0092
P2.OS
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=0.088
P1.PFS
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=0.088
P2.PFS
0.0
0.4
0.8
n=62
class1
n=336
class2
p−value=7.3e−07
RiskScore.OS
−1.0
0.0
1.0
n=62
class1
n=336
class2
p−value=0.0046
RiskScore.PFS
−0.5
0.0
0.5
n=62
class1
n=336
class2
p−value=0.3
BenefitScore.OS
−0.4
0.0
0.4
0.8
n=62
class1
n=336
class2



T.tests

T.tests for interesting covariates (p-value<0.05).

```
## SUMLES
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -5.1639, df = 127.06, p-value = 9.084e-07
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -58.23591 -25.96887
## sample estimates:
## mean of x mean of y
##   68.3871  110.4895
##
## NOLES
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -4.2573, df = 130.23, p-value = 3.93e-05
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.2900357 -0.4714678
## sample estimates:
## mean of x mean of y
##  2.161290  3.042042
##
## metsites
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.1191, df = 93.913, p-value = 0.002409
## alternative hypothesis: true difference in means is not equal to 0
```

```
## 95 percent confidence interval:
##  -0.5478852 -0.1216617
## sample estimates:
## mean of x mean of y
##  1.596774  1.931548
##
## NEUT
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.0054, df = 127.44, p-value = 0.003195
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -1.326135 -0.273152
## sample estimates:
## mean of x mean of y
##  5.096774  5.896418
##
## ALKP
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.239, df = 94.028, p-value = 0.02752
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -90.015277  -5.400226
## sample estimates:
## mean of x mean of y
##  140.5161  188.2239
##
## hepato
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.612, df = 179.85, p-value = 0.000394
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -9.255770 -2.715728
## sample estimates:
## mean of x mean of y
##  24.87097  30.85672
##
## SVOM0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.8586, df = 333, p-value = 0.004523
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.06065141 -0.01120488
```

```
## sample estimates:
##  mean of x  mean of y
## 0.00000000 0.03592814
##
## SPAIN0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.1848, df = 92.781, p-value = 0.03142
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.38167911 -0.01820465
## sample estimates:
## mean of x mean of y
## 0.3225806 0.5225225
##
## SSTOM0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.67, df = 332, p-value = 0.007959
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.036508428 -0.005533614
## sample estimates:
##  mean of x  mean of y
## 0.00000000 0.02102102
##
## SNAILC0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.8591, df = 328, p-value = 0.00452
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.04104697 -0.00758525
## sample estimates:
##  mean of x  mean of y
## 0.00000000 0.02431611
##
## SDIAR0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.2861, df = 152.13, p-value = 0.02363
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.14980125 -0.01090959
## sample estimates:
## mean of x mean of y
```

```
## 0.0483871 0.1287425
##
## SHB0
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.7301, df = 133.2, p-value = 0.007189
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.21919542 -0.03501738
## sample estimates:
##  mean of x  mean of y
## 0.09677419 0.22388060
##
## site
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 2.2395, df = 67.168, p-value = 0.02844
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##   3.177641 55.249394
## sample estimates:
## mean of x mean of y
##  81.45161  52.23810
##
## pfstime
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 7.5904, df = 62.65, p-value = 1.918e-10
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  391.5935 671.5083
## sample estimates:
## mean of x mean of y
##  775.5806  244.0298
##
## ostime
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 20.473, df = 73.673, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##   949.9698 1154.8322
## sample estimates:
## mean of x mean of y
## 1539.4516  487.0506
##
```

```
## pfsevent
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -3.0732, df = 62.063, p-value = 0.003145
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.22975666 -0.04866116
## sample estimates:
## mean of x mean of y
## 0.8548387 0.9940476
##
## osevent
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -5.888, df = 61.564, p-value = 1.755e-07
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4889543 -0.2410765
## sample estimates:
## mean of x mean of y
## 0.6290323 0.9940476
##
## P1.FRET.OS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 28.348, df = 68.336, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.5905012 0.6799223
## sample estimates:
## mean of x mean of y
## 0.8279825 0.1927707
##
## P2.FRET.OS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -28.348, df = 68.336, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.6799223 -0.5905012
## sample estimates:
## mean of x mean of y
## 0.1720175 0.8072293
##
## P1.FRET.PFS
##
```

```
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 9.2082, df = 65.05, p-value = 2.118e-13
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.3147321 0.4890616
## sample estimates:
## mean of x mean of y
## 0.5948877 0.1929908
##
## P2.FRET.PFS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -9.2082, df = 65.05, p-value = 2.118e-13
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4890616 -0.3147321
## sample estimates:
## mean of x mean of y
## 0.4051123 0.8070092
##
## P3.OS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -19.416, df = 89.327, p-value < 2.2e-16
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.5272939 -0.4293959
## sample estimates:
## mean of x mean of y
## 0.1050610 0.5834059
##
## P1.OS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = 8.9315, df = 62.633, p-value = 8.939e-13
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.2905140 0.4580084
## sample estimates:
## mean of x mean of y
## 0.4846070 0.1103458
##
## P2.OS
##
##  Welch Two Sample t-test
##
```

```
## data:  class1[, name] and class2[, name]
## t = 2.6797, df = 67.737, p-value = 0.009243
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  0.02657119 0.18159616
## sample estimates:
## mean of x mean of y
## 0.4103320 0.3062483
##
## RiskScore.OS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -5.2554, df = 109.8, p-value = 7.329e-07
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.4106231 -0.1857366
## sample estimates:
##  mean of x  mean of y
## -0.3817945 -0.0836146
##
## RiskScore.PFS
##
##  Welch Two Sample t-test
##
## data:  class1[, name] and class2[, name]
## t = -2.908, df = 91.136, p-value = 0.004568
## alternative hypothesis: true difference in means is not equal to 0
## 95 percent confidence interval:
##  -0.21236765 -0.03999218
## sample estimates:
##   mean of x   mean of y
## -0.16664238 -0.04046246
```

Tables

Number and percentage tables for covariates where this is possible.

```
## TRT (number)
##
##       A   B
##   1  22  40
##   2 167 169
##
## TRT (%)
##
##      A  B
##   1 35 65
##   2 50 50
##
##
## CHEMO (number)
##
```

```
##     OxMdG XELOX
##   1    29    33
##   2   146   190
##
## CHEMO (%)
##
##     OxMdG XELOX
##   1    47    53
##   2    43    57
##
##
## SEX (number)
##
##     Female Male
##   1     21   41
##   2     99  237
##
## SEX (%)
##
##     Female Male
##   1     34   66
##   2     29   71
##
##
## PRT (number)
##
##      No Yes
##   1  61   1
##   2 325  10
##
## PRT (%)
##
##       No  Yes
##   1 98.0  1.6
##   2 97.0  3.0
##
##
## PSURG (number)
##
##      No Yes
##   1  52  10
##   2 260  75
##
## PSURG (%)
##
##     No Yes
##   1 84  16
##   2 78  22
##
##
## ADJCH (number)
##
##     >1m and <6m ago >6 months ago  No Yes (unspecified)
##   1               4            13  43                 2
```

```
##   2              20            69 226                21
##
## ADJCH (%)
##
##     >1m and <6m ago >6 months ago   No Yes (unspecified)
##   1             6.5          21.0 69.0                3.2
##   2             6.0          21.0 67.0                6.2
##
##
## TSTAT (number)
##
##     Local recurrence Resected Unresected/unresectable
##   1                6       54                       2
##   2               18      261                      57
##
## TSTAT (%)
##
##     Local recurrence Resected Unresected/unresectable
##   1              9.7     87.0                     3.2
##   2              5.4     78.0                    17.0
##
##
## left (number)
##
##     Left-sided Right-sided
##   1         44          17
##   2        230         100
##
## left (%)
##
##     Left-sided Right-sided
##   1         72          28
##   2         70          30
##
##
## MLIV (number)
##
##      No Yes
##   1  19  43
##   2  87 249
##
## MLIV (%)
##
##     No Yes
##   1 31  69
##   2 26  74
##
##
## MLNG (number)
##
##      No Yes
##   1  46  16
##   2 191 145
##
```

```
## MLNG (%)
##
##     No Yes
##   1 74  26
##   2 57  43
##
##
## MNODE (number)
##
##      No Yes
##   1  38  24
##   2 188 148
##
## MNODE (%)
##
##     No Yes
##   1 61  39
##   2 56  44
##
##
## MOTH (number)
##
##      No Yes
##   1  55   7
##   2 282  54
##
## MOTH (%)
##
##     No Yes
##   1 89  11
##   2 84  16
##
##
## MPERI (number)
##
##      No Yes
##   1  53   9
##   2 283  53
##
## MPERI (%)
##
##     No Yes
##   1 85  15
##   2 84  16
##
##
## mlivonly (number)
##
##      No Yes
##   1  38  24
##   2 262  74
##
## mlivonly (%)
##
```

```
##     No Yes
##   1 61  39
##   2 78  22
##
##
## metscat (number)
##
##     Metachronous Synchronous
##   1           27          35
##   2          132         202
##
## metscat (%)
##
##     Metachronous Synchronous
##   1           44          56
##   2           40          60
##
##
## RAS (number)
##
##     Mutation Wild-type
##   1       23        38
##   2      155       174
##
## RAS (%)
##
##     Mutation Wild-type
##   1       38        62
##   2       47        53
##
##
## BRAF (number)
##
##     Mutation Wild-type
##   1        4        57
##   2       25       303
##
## BRAF (%)
##
##     Mutation Wild-type
##   1      6.6      93.0
##   2      7.6      92.0
##
##
## MSI (number)
##
##     MSI Stable
##   1   2     51
##   2  13    263
##
## MSI (%)
##
##      MSI Stable
##   1  3.8   96.0
```

```
##   2  4.7   95.0
##
##
## PIK3CA (number)
##
##     Mutation Wild-type
##   1       14        48
##   2       35       286
##
## PIK3CA (%)
##
##     Mutation Wild-type
##   1       23        77
##   2       11        89
##
##
## HEPFNC (number)
##
##     ALT AST
##   1  41  21
##   2 223 112
##
## HEPFNC (%)
##
##     ALT AST
##   1  66  34
##   2  67  33
##
##
## M_RENAL (number)
##
##     Creatinine clearance Glomerular filtration rate
##   1                   58                          4
##   2                  287                         48
##
## M_RENAL (%)
##
##     Creatinine clearance Glomerular filtration rate
##   1                 94.0                        6.5
##   2                 86.0                       14.0
##
##
## RMARK (number)
##
##      No Yes
##   1  16  43
##   2  42 280
##
## RMARK (%)
##
##     No Yes
##   1 27  73
##   2 13  87
##
```

```
##
## KRAS (number)
##
##     Mutation Wild-type
##   1       22        39
##   2      143       186
##
## KRAS (%)
##
##     Mutation Wild-type
##   1       36        64
##   2       43        57
##
##
## NRAS (number)
##
##     Mutation Wild-type
##   1        2        60
##   2       15       314
##
## NRAS (%)
##
##     Mutation Wild-type
##   1      3.2      97.0
##   2      4.6      95.0
##
##
## KRAS_MUT (number)
##
##     G12A G12C G12D G12D and G13C G12D and G13D G12R G12S G12V G13C G13D
##   1    0    3    4             0             0    1    1    8    0    4
##   2   11    6   41             0             0    2   10   38    0   27
##
##     G13D and Q61H G13S G13V Q61H Q61L Q61R uncharacterised mutant
##   1             0    0    0    1    0    0                      0
##   2             0    0    1    5    0    0                      1
##
##     uncharacterised Mutant Uncharacterised Mutant  WT
##   1                      0                     0  39
##   2                      0                     1 185
##
## KRAS_MUT (%)
##
##      G12A  G12C  G12D G12D and G13C G12D and G13D  G12R  G12S  G12V  G13C
##   1  0.00  4.90  6.60          0.00          0.00  1.60  1.60 13.00  0.00
##   2  3.40  1.80 12.00          0.00          0.00  0.61  3.00 12.00  0.00
##
##      G13D G13D and Q61H  G13S  G13V  Q61H  Q61L  Q61R
##   1  6.60          0.00  0.00  0.00  1.60  0.00  0.00
##   2  8.20          0.00  0.00  0.30  1.50  0.00  0.00
##
##     uncharacterised mutant uncharacterised Mutant Uncharacterised Mutant
##   1                   0.00                   0.00                   0.00
##   2                   0.30                   0.00                   0.30
```

```
##
##        WT
##   1 64.00
##   2 56.00
##
##
## BRAF_MUT (number)
##
##     D594G V600E  WT
##   1     1     3  57
##   2     4    21 303
##
## BRAF_MUT (%)
##
##     D594G V600E   WT
##   1   1.6   4.9 93.0
##   2   1.2   6.4 92.0
##
##
## NRAS_MUT (number)
##
##     G12C Q61K Q61L Q61R Uncharacterised Mutant  WT
##   1    0    2    0    0                      0  60
##   2    3    7    2    3                      0 313
##
## NRAS_MUT (%)
##
##      G12C  Q61K  Q61L  Q61R Uncharacterised Mutant    WT
##   1  0.00  3.20  0.00  0.00                  0.00 97.00
##   2  0.91  2.10  0.61  0.91                  0.00 95.00
##
##
## PIK3CA_MUT (number)
##
##     E542K E542K AND E545K E542K AND Q546K E545K E545K AND Q546K H1047L
##   1     4               0               0     6               0      0
##   2    10               1               0    14               0      2
##
##     H1047R H1047R AND E545K Q546K  WT
##   1      3               0     1  48
##   2      6               1     1 286
##
## PIK3CA_MUT (%)
##
##     E542K E542K AND E545K E542K AND Q546K E545K E545K AND Q546K H1047L
##   1  6.50            0.00            0.00  9.70            0.00   0.00
##   2  3.10            0.31            0.00  4.40            0.00   0.62
##
##     H1047R H1047R AND E545K Q546K    WT
##   1   4.80             0.00  1.60 77.00
##   2   1.90             0.31  0.31 89.00
##
##
## FRET.cohort (number)
```

```
##
##       0   1
##   1   0  62
##   2   0 336
##
## FRET.cohort (%)
##
##       0   1
##   1   0 100
##   2   0 100
##
##
## Class.FRET.OS (number)
##
##       1   2
##   1  62   0
##   2   0 336
##
## Class.FRET.OS (%)
##
##       1   2
##   1 100   0
##   2   0 100
##
##
## Class.FRET.PFS (number)
##
##       1   2
##   1  33  29
##   2  11 325
##
## Class.FRET.PFS (%)
##
##        1    2
##   1 53.0 47.0
##   2  3.3 97.0
##
##
## Class.OS (number)
##
##       1   2   3
##   1  25  32   5
##   2   2  54 280
##
## Class.OS (%)
##
##        1    2    3
##   1 40.0 52.0  8.1
##   2  0.6 16.0 83.0
##
##
## Class.PFS (number)
##
##       1   2
```

```
##   1  14  48
##   2  45 291
##
## Class.PFS (%)
##
##      1  2
##   1 23 77
##   2 13 87
```