KM LCA Classes

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```r
load(file = "COIN_Final.Rdata")
```

```r
library(survival)

data <- patient_data

data$SurvObj.os <- with(data, Surv(ostime, osevent))
data$SurvObj.pfs <- with(data, Surv(pfstime, pfsevent))

col=c("red", "red", "blue", "blue", "magenta", "magenta")
lty=c(1,2,1,2,1,2)
```

OS

```r
# rename
data$OS.Class <- data$Class.OS

km <- survfit(SurvObj.os ~ OS.Class + TRT, data=data)
plot(km, col=col, lty=lty, xlab="OS days", ylab="Prob. survival")
legend("topright", col=col, legend = names(km$strata), lty=lty, cex=0.75)
```
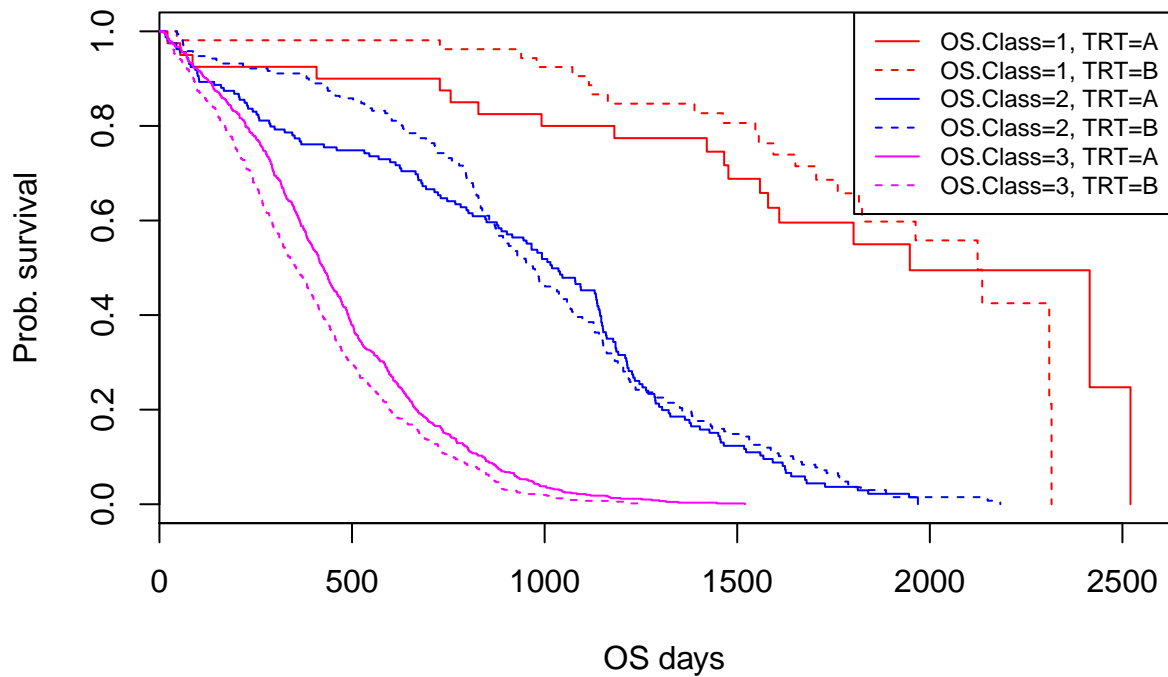
```r
print(km)
```

```
## Call: survfit(formula = SurvObj.os ~ OS.Class + TRT, data = data)
##
##                    n events median 0.95LCL 0.95UCL
## OS.Class=1, TRT=A  40     19   1948    1580      NA
## OS.Class=1, TRT=B  53     23   2124    1816      NA
## OS.Class=2, TRT=A 159    150   1019     902    1140
## OS.Class=2, TRT=B 191    183    970     892    1058
## OS.Class=3, TRT=A 616    608    425     402     448
## OS.Class=3, TRT=B 571    560    355     327     386
```

```r
survdiff(SurvObj.os ~ OS.Class, data=data)
```

```
## Call:
## survdiff(formula = SurvObj.os ~ OS.Class, data = data)
##
##                N Observed Expected (O-E)^2/E (O-E)^2/V
## OS.Class=1    93       42      258     180.9       263
## OS.Class=2   350      333      558      90.6       153
## OS.Class=3  1187     1168      727     267.2       653
##
##  Chisq= 728  on 2 degrees of freedom, p= <2e-16
```

```r
survdiff(SurvObj.os[OS.Class==1] ~ TRT[OS.Class==1], data=data)
```

```
## Call:
## survdiff(formula = SurvObj.os[OS.Class == 1] ~ TRT[OS.Class ==
```

```
##       1], data = data)
##
##                      N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[OS.Class == 1]=A 40       19     18.2    0.0325    0.0621
## TRT[OS.Class == 1]=B 53       23     23.8    0.0250    0.0621
##
##  Chisq= 0.1  on 1 degrees of freedom, p= 0.8
```

```r
survdiff(SurvObj.os[OS.Class==2] ~ TRT[OS.Class==2], data=data)
```

```
## Call:
## survdiff(formula = SurvObj.os[OS.Class == 2] ~ TRT[OS.Class ==
##       2], data = data)
##
##                      N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[OS.Class == 2]=A 159      150      146     0.134     0.241
## TRT[OS.Class == 2]=B 191      183      187     0.104     0.241
##
##  Chisq= 0.2  on 1 degrees of freedom, p= 0.6
```

```r
survdiff(SurvObj.os[OS.Class==3] ~ TRT[OS.Class==3], data=data)
```

```
## Call:
## survdiff(formula = SurvObj.os[OS.Class == 3] ~ TRT[OS.Class ==
##       3], data = data)
##
##                      N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[OS.Class == 3]=A 616      608      676      6.75      16.2
## TRT[OS.Class == 3]=B 571      560      492      9.25      16.2
##
##  Chisq= 16.2  on 1 degrees of freedom, p= 6e-05
```

Session Information

```r
sessionInfo()
```

```
## R version 3.5.1 (2018-07-02)
## Platform: x86_64-w64-mingw32/x64 (64-bit)
## Running under: Windows 10 x64 (build 17134)
##
## Matrix products: default
##
## locale:
## [1] LC_COLLATE=English_United Kingdom.1252
## [2] LC_CTYPE=English_United Kingdom.1252
## [3] LC_MONETARY=English_United Kingdom.1252
## [4] LC_NUMERIC=C
## [5] LC_TIME=English_United Kingdom.1252
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets  methods   base
##
## other attached packages:
## [1] survival_2.42-6
```

```
##
## loaded via a namespace (and not attached):
##  [1] Rcpp_1.0.1      lattice_0.20-35 digest_0.6.18  rprojroot_1.3-2
##  [5] grid_3.5.1      backports_1.1.2 magrittr_1.5    evaluate_0.12
##  [9] stringi_1.1.7   Matrix_1.2-14   rmarkdown_1.10  splines_3.5.1
## [13] tools_3.5.1     stringr_1.3.1   yaml_2.2.0      compiler_3.5.1
## [17] htmltools_0.3.6 knitr_1.20
```