# KM vs PI3K

*P Barber*

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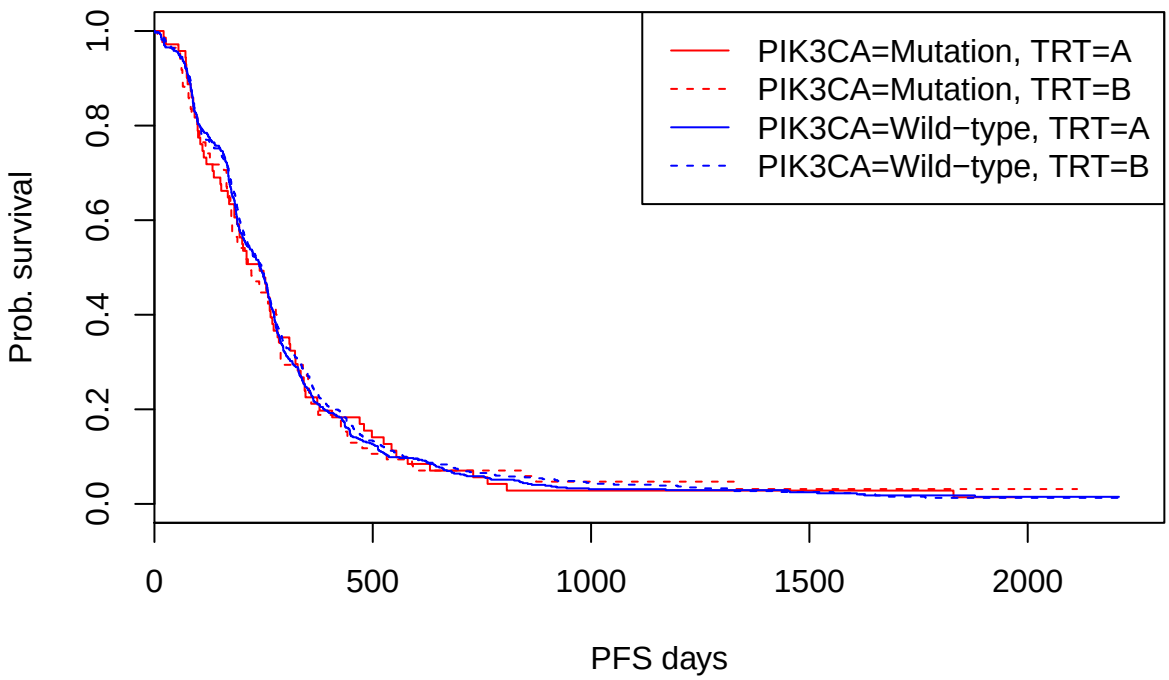
Load data.

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

## Survival Curves split by PIK3CA value and TRT in full data set



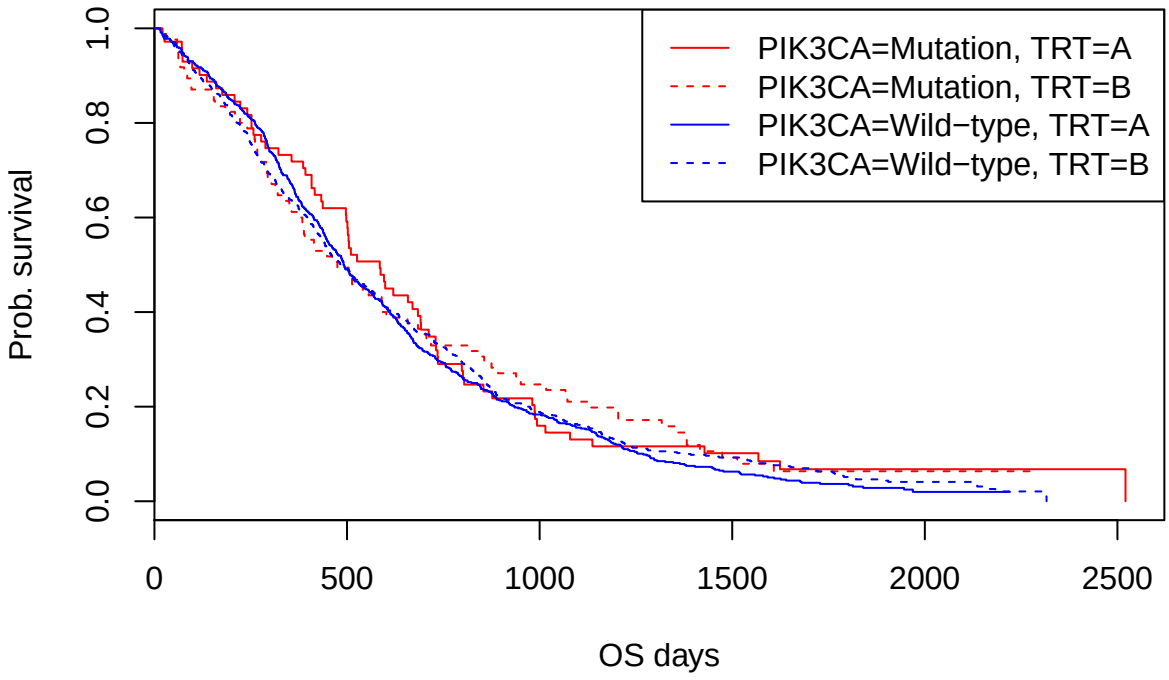

```
## Call: survfit(formula = SurvObj.pfs ~ PIK3CA + TRT, data = data)
##
##    367 observations deleted due to missingness
##                            n events median 0.95LCL 0.95UCL
## PIK3CA=Mutation, TRT=A    71     70    241     189     273
## PIK3CA=Mutation, TRT=B    85     82    216     178     280
## PIK3CA=Wild-type, TRT=A 549    537    242     218     259
## PIK3CA=Wild-type, TRT=B 558    545    246     219     257
```

```
## Call:
## survdiff(formula = SurvObj.pfs ~ PIK3CA, data = data)
##
```

```
## n=1263, 367 observations deleted due to missingness.
##
##                      N Observed Expected (O-E)^2/E (O-E)^2/V
## PIK3CA=Mutation    156      152      149    0.0805     0.092
## PIK3CA=Wild-type  1107     1082     1085    0.0110     0.092
##
##  Chisq= 0.1  on 1 degrees of freedom, p= 0.8
```

```
## Call:
## survdiff(formula = SurvObj.pfs[PIK3CA == "Wild-type"] ~ TRT[PIK3CA ==
##     "Wild-type"], data = data)
##
## n=1107, 367 observations deleted due to missingness.
##
##                                 N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[PIK3CA == "Wild-type"]=A 549      537      527     0.189     0.371
## TRT[PIK3CA == "Wild-type"]=B 558      545      555     0.180     0.371
##
##  Chisq= 0.4  on 1 degrees of freedom, p= 0.5
```

```
## Call:
## survdiff(formula = SurvObj.pfs[PIK3CA == "Mutation"] ~ TRT[PIK3CA ==
##     "Mutation"], data = data)
##
## n=156, 367 observations deleted due to missingness.
##
##                               N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[PIK3CA == "Mutation"]=A 71       70     69.9  0.000248  0.000464
## TRT[PIK3CA == "Mutation"]=B 85       82     82.1  0.000211  0.000464
##
##  Chisq= 0  on 1 degrees of freedom, p= 1
```




```
## Call: survfit(formula = SurvObj.os ~ PIK3CA + TRT, data = data)
##
##    367 observations deleted due to missingness
##                             n events median 0.95LCL 0.95UCL
## PIK3CA=Mutation, TRT=A     71     66    585     498     692
## PIK3CA=Mutation, TRT=B     85     78    475     384     657
## PIK3CA=Wild-type, TRT=A   549    526    491     459     536
## PIK3CA=Wild-type, TRT=B   558    530    487     444     544
```

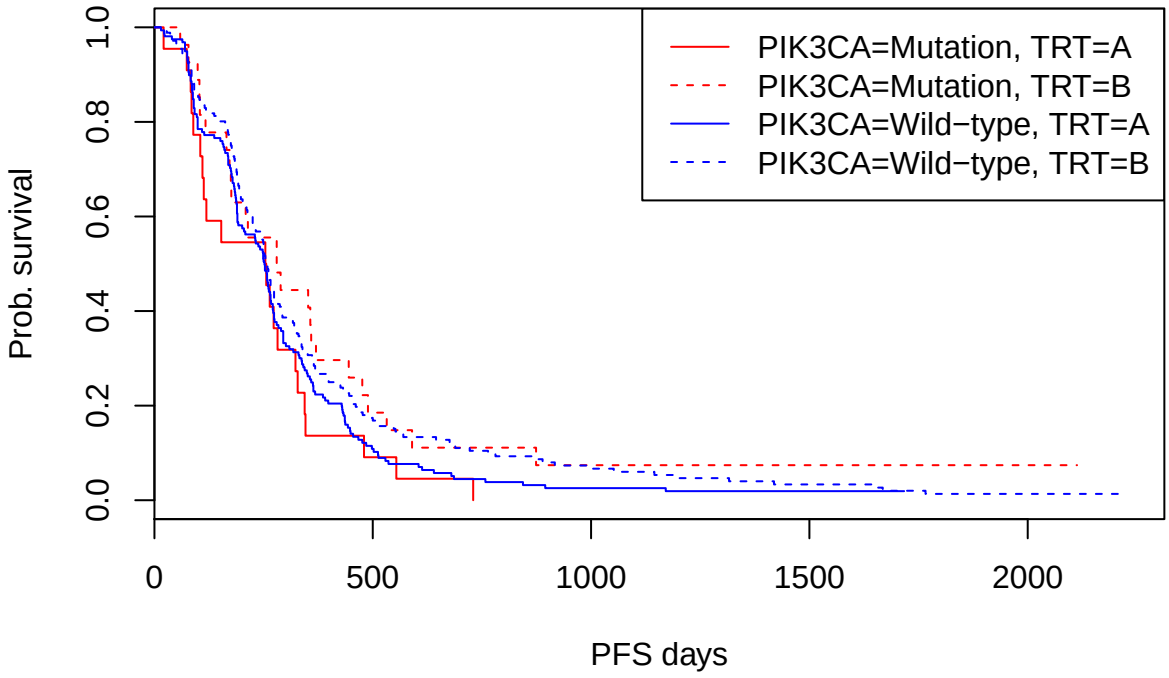
```
## Call:
## survdiff(formula = SurvObj.os ~ PIK3CA, data = data)
##
## n=1263, 367 observations deleted due to missingness.
##
##                      N Observed Expected (O-E)^2/E (O-E)^2/V
## PIK3CA=Mutation    156      144      158     1.239      1.44
## PIK3CA=Wild-type  1107     1056     1042     0.188      1.44
##
##  Chisq= 1.4  on 1 degrees of freedom, p= 0.2
```

```
## Call:
## survdiff(formula = SurvObj.os[PIK3CA == "Wild-type"] ~ TRT[PIK3CA ==
##     "Wild-type"], data = data)
##
## n=1107, 367 observations deleted due to missingness.
##
##                                N Observed Expected (O-E)^2/E (O-E)^2/V
```

```
## TRT[PIK3CA == "Wild-type"]=A 549      526      515     0.247     0.486
## TRT[PIK3CA == "Wild-type"]=B 558      530      541     0.235     0.486
##
##  Chisq= 0.5  on 1 degrees of freedom, p= 0.5
```

```
## Call:
## survdiff(formula = SurvObj.os[PIK3CA == "Mutation"] ~ TRT[PIK3CA ==
##     "Mutation"], data = data)
##
## n=156, 367 observations deleted due to missingness.
##
##                               N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[PIK3CA == "Mutation"]=A 71       66     66.5   0.00425   0.00804
## TRT[PIK3CA == "Mutation"]=B 85       78     77.5   0.00365   0.00804
##
##  Chisq= 0  on 1 degrees of freedom, p= 0.9
```

## Survival Curves split by PIK3CA value and TRT in FRET data set



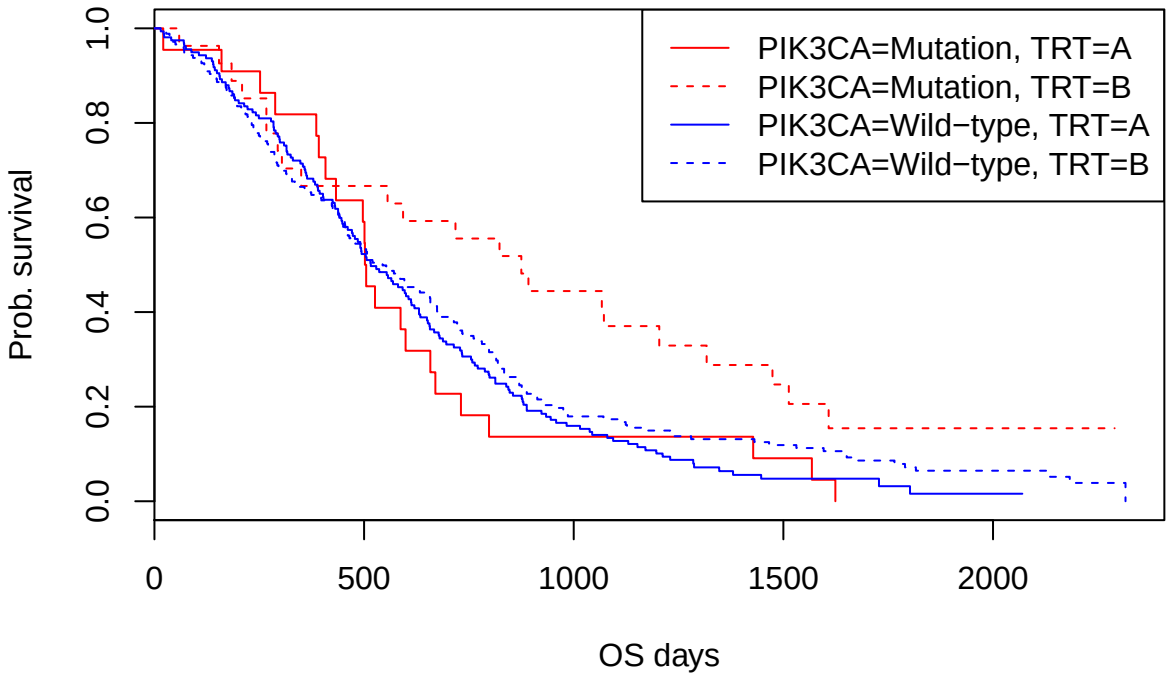

```
## Call: survfit(formula = SurvObj.pfs ~ PIK3CA + TRT, data = data)
##
##    15 observations deleted due to missingness
##                             n events median 0.95LCL 0.95UCL
## PIK3CA=Mutation, TRT=A   22     22    255     113     328
## PIK3CA=Mutation, TRT=B   27     25    280     176     445
```

```
## PIK3CA=Wild-type, TRT=A 158    154    252     205     267
## PIK3CA=Wild-type, TRT=B 176    171    258     232     283
```

```
## Call:
## survdiff(formula = SurvObj.pfs ~ PIK3CA, data = data)
##
## n=383, 15 observations deleted due to missingness.
##
##                     N Observed Expected (O-E)^2/E (O-E)^2/V
## PIK3CA=Mutation    49       47       48   0.02253     0.026
## PIK3CA=Wild-type 334      325      324   0.00334     0.026
##
##  Chisq= 0  on 1 degrees of freedom, p= 0.9
```

```
## Call:
## survdiff(formula = SurvObj.pfs[PIK3CA == "Wild-type"] ~ TRT[PIK3CA ==
##     "Wild-type"], data = data)
##
## n=334, 15 observations deleted due to missingness.
##
##                                 N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[PIK3CA == "Wild-type"]=A 158      154      139      1.66      2.96
## TRT[PIK3CA == "Wild-type"]=B 176      171      186      1.24      2.96
##
##  Chisq= 3  on 1 degrees of freedom, p= 0.09
```

```
## Call:
## survdiff(formula = SurvObj.pfs[PIK3CA == "Mutation"] ~ TRT[PIK3CA ==
##     "Mutation"], data = data)
##
## n=49, 15 observations deleted due to missingness.
##
##                                N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[PIK3CA == "Mutation"]=A 22       22     16.5     1.799      2.88
## TRT[PIK3CA == "Mutation"]=B 27       25     30.5     0.977      2.88
##
##  Chisq= 2.9  on 1 degrees of freedom, p= 0.09
```




```
## Call: survfit(formula = SurvObj.os ~ PIK3CA + TRT, data = data)
##
##    15 observations deleted due to missingness
##                             n events median 0.95LCL 0.95UCL
## PIK3CA=Mutation, TRT=A     22     22    504     433     670
## PIK3CA=Mutation, TRT=B     27     22    875     556    1474
## PIK3CA=Wild-type, TRT=A   158    150    516     471     613
## PIK3CA=Wild-type, TRT=B   176    164    544     458     658
```

```
## Call:
## survdiff(formula = SurvObj.os ~ PIK3CA, data = data)
##
## n=383, 15 observations deleted due to missingness.
##
##                     N Observed Expected (O-E)^2/E (O-E)^2/V
## PIK3CA=Mutation    49       44       55     2.216      2.64
## PIK3CA=Wild-type  334      314      303     0.403      2.64
##
##  Chisq= 2.6  on 1 degrees of freedom, p= 0.1
```

```
## Call:
## survdiff(formula = SurvObj.os[PIK3CA == "Wild-type"] ~ TRT[PIK3CA ==
##     "Wild-type"], data = data)
##
## n=334, 15 observations deleted due to missingness.
##
##                                N Observed Expected (O-E)^2/E (O-E)^2/V
```

```
## TRT[PIK3CA == "Wild-type"]=A 158      150      140     0.761       1.4
## TRT[PIK3CA == "Wild-type"]=B 176      164      174     0.610       1.4
##
##  Chisq= 1.4  on 1 degrees of freedom, p= 0.2
```

```
## Call:
## survdiff(formula = SurvObj.os[PIK3CA == "Mutation"] ~ TRT[PIK3CA ==
##     "Mutation"], data = data)
##
## n=49, 15 observations deleted due to missingness.
##
##                              N Observed Expected (O-E)^2/E (O-E)^2/V
## TRT[PIK3CA == "Mutation"]=A 22       22     15.4      2.78      4.52
## TRT[PIK3CA == "Mutation"]=B 27       22     28.6      1.51      4.52
##
##  Chisq= 4.5  on 1 degrees of freedom, p= 0.03
```

# Session Information

```
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
```