Survival Analysis of OV with Taxol, Taxotere, Carboplatin and Cisplatin

This is for survival analysis of OV data from TCGA.

Date: 04/21/2015

583 patients to start with. Remove patients with incomplete date, no drug use information, etc. Final set has 527 patients.

Time measured by month.

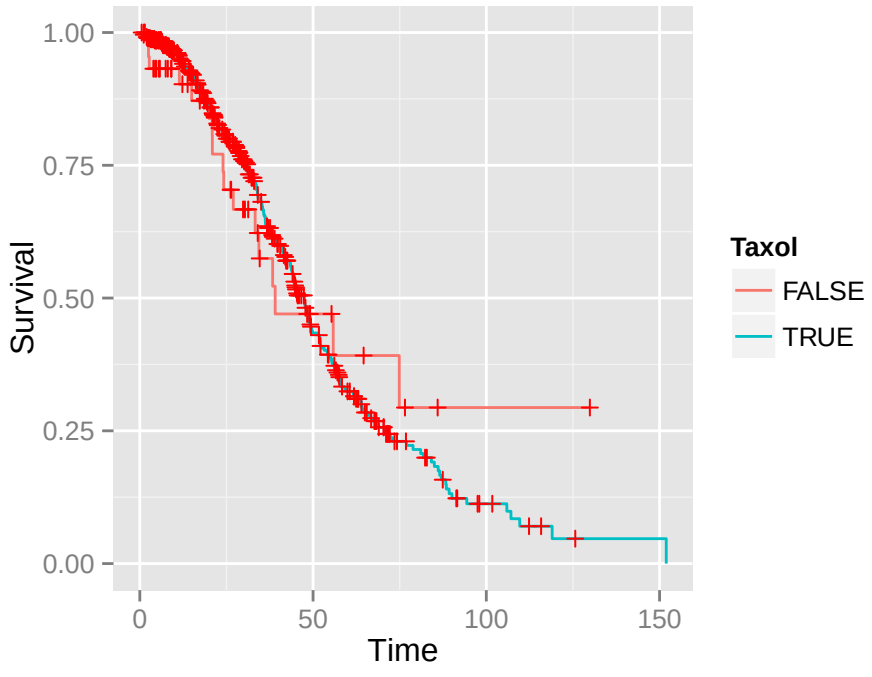
1. KM Curve and Survial test by Taxol:

```
cat("Proportion of patients with Taxol treatment: ", sum(surv$Taxol, na.rm=T)/(527-sum(is.na(surv$Taxol)
```

```
## Proportion of patients with Taxol treatment:  0.9125475
```

```
surv.data = with(surv, Surv(months,death) ~ Taxol)
ggsurv(survfit(surv.data))
```

```
## Loading required package: scales
```




```
survdiff(surv.data)
```

```
## Call:
## survdiff(formula = surv.data)
##
## n=526, 1 observation deleted due to missingness.
##
##                N Observed Expected (O-E)^2/E (O-E)^2/V
## Taxol=FALSE   46       17     17.8   0.03742    0.0404
## Taxol=TRUE   480      246    245.2   0.00272    0.0404
##
##  Chisq= 0  on 1 degrees of freedom, p= 0.841
```

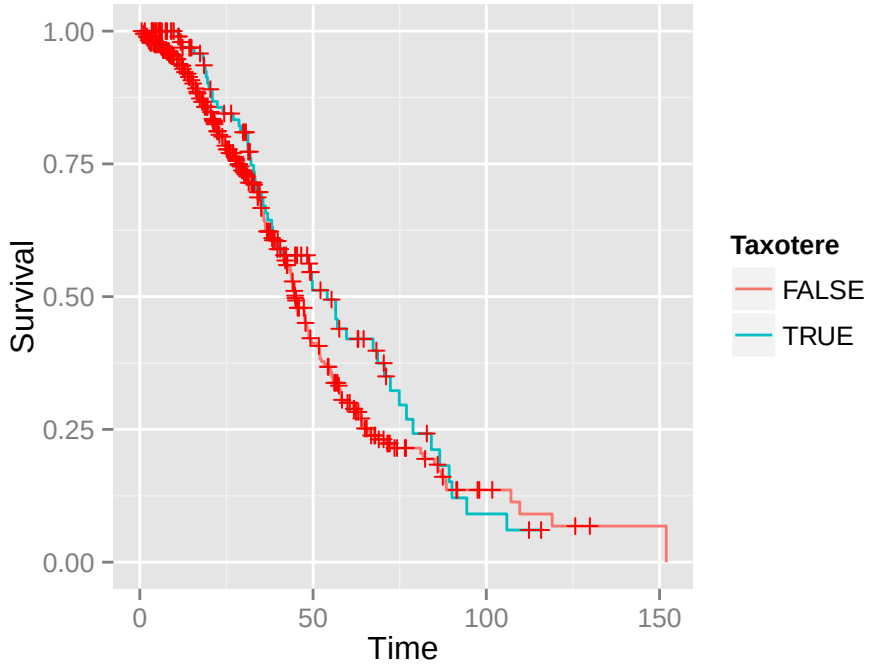
---

2. KM Curve and Survial test by Taxotere:

```
cat("Proportion of patients with Taxotere treatment: ", sum(surv$Taxotere, na.rm=T)/(527-sum(is.na(surv$
```

```
## Proportion of patients with Taxotere treatment:  0.2205323
```

```
surv.data = with(surv, Surv(months,death) ~ Taxotere)
ggsurv(survfit(surv.data))
```




```
survdiff(surv.data)
```

```
## Call:
## survdiff(formula = surv.data)
##
```

```
## n=526, 1 observation deleted due to missingness.
##
##                   N Observed Expected (O-E)^2/E (O-E)^2/V
## Taxotere=FALSE 410      206    195.8      0.53      2.09
## Taxotere=TRUE  116       57     67.2      1.55      2.09
##
##  Chisq= 2.1  on 1 degrees of freedom, p= 0.148
```

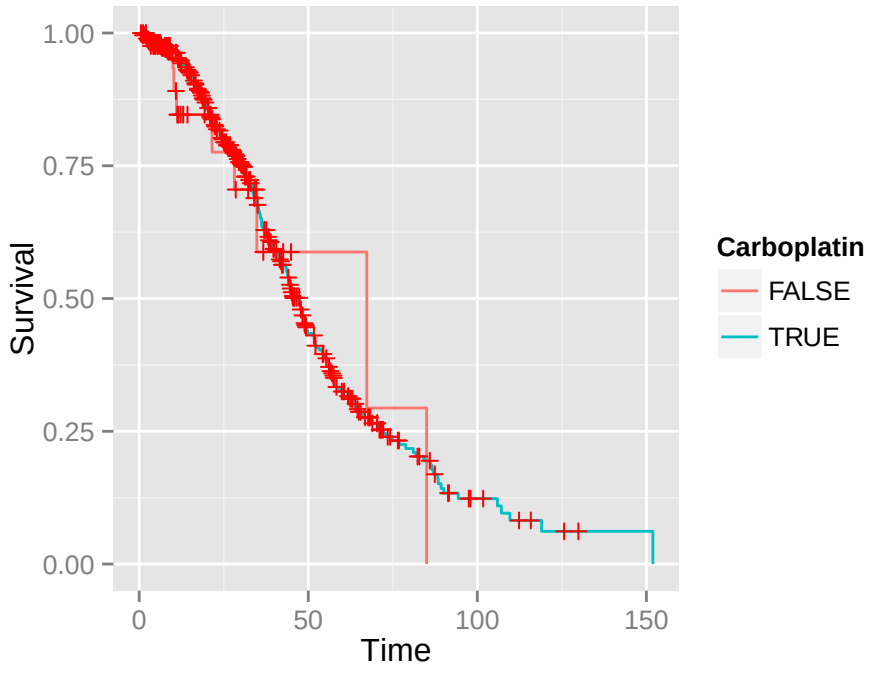
---

3. KM Curve and Survial test by Carboplatin:

```
cat("Proportion of patients with Carboplatin treatment: ", sum(surv$Carboplatin, na.rm=T)/(527-sum(is.na
```

```
## Proportion of patients with Carboplatin treatment:  0.9184061
```

```
surv.data = with(surv, Surv(months,death) ~ Carboplatin)
ggsurv(survfit(surv.data))
```




```
survdiff(surv.data)
```

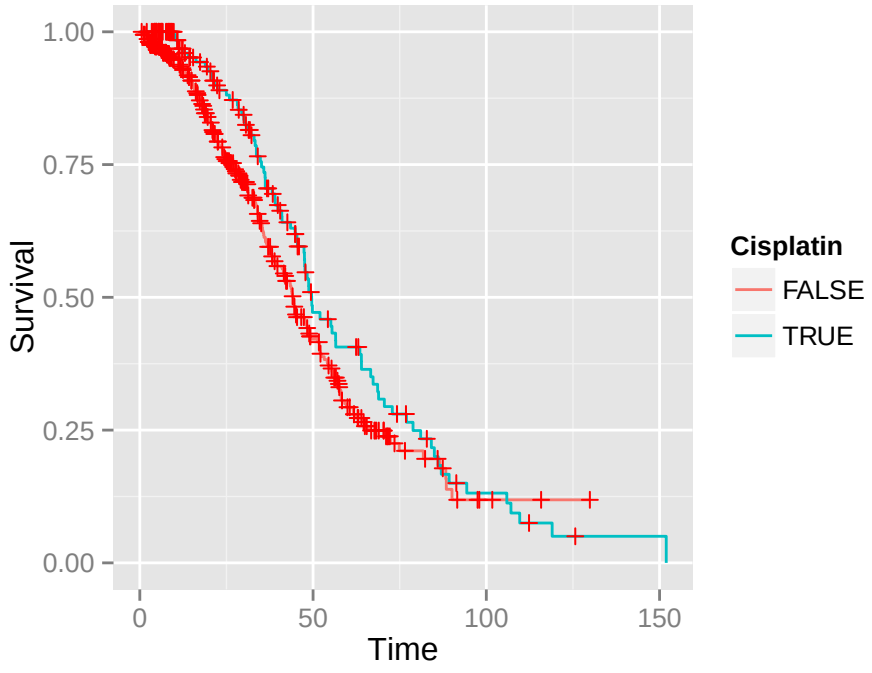
```
## Call:
## survdiff(formula = surv.data)
##
##                     N Observed Expected (O-E)^2/E (O-E)^2/V
## Carboplatin=FALSE  43        9     8.06   0.10981     0.114
## Carboplatin=TRUE  484      254   254.94   0.00347     0.114
##
##  Chisq= 0.1  on 1 degrees of freedom, p= 0.735
```

4. KM Curve and Survial test by Cisplatin:

```
cat("Proportion of patients with Cisplatin treatment: ", sum(surv$Cisplatin, na.rm=T)/(527-sum(is.na(su
```

```
## Proportion of patients with Cisplatin treatment:  0.2998102
```

```
surv.data = with(surv, Surv(months,death) ~ Cisplatin)
ggsurv(survfit(surv.data))
```




```
survdiff(surv.data)
```

```
## Call:
## survdiff(formula = surv.data)
##
##                    N Observed Expected (O-E)^2/E (O-E)^2/V
## Cisplatin=FALSE 369      183    168.9      1.17       3.4
## Cisplatin=TRUE  158       80     94.1      2.11       3.4
##
##  Chisq= 3.4  on 1 degrees of freedom, p= 0.0651
```