KM Plot

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#Calling libraries

```
library(survival)
library(survminer)
```

```
## Loading required package: ggplot2
```

```
## Loading required package: ggpubr
```

```
##
## Attaching package: 'survminer'
```

```
## The following object is masked from 'package:survival':
##
##     myeloma
```

```
library(dplyr)
```

```
##
## Attaching package: 'dplyr'
```

```
## The following objects are masked from 'package:stats':
##
##     filter, lag
```

```
## The following objects are masked from 'package:base':
##
##     intersect, setdiff, setequal, union
```

```
library(tidyverse)
```

```
## -- Attaching packages --------------------------------------- tidyverse 1.3.1 --
```

```
## v tibble  3.2.1     v purrr   1.0.1
## v tidyr   1.3.0     v stringr 1.5.0
## v readr   2.1.2     v forcats 0.5.1
```

```
## -- Conflicts ---------------------------------------- tidyverse_conflicts() --
## x dplyr::filter() masks stats::filter()
## x dplyr::lag()    masks stats::lag()
```

#Set d. and import data

```
setwd('E:/R-Programming-Practices/Data Visualization/KM Plot')
data<- data.frame(read.csv('PSMC2.csv'))
```

#Lets get the Survival period in the Month format

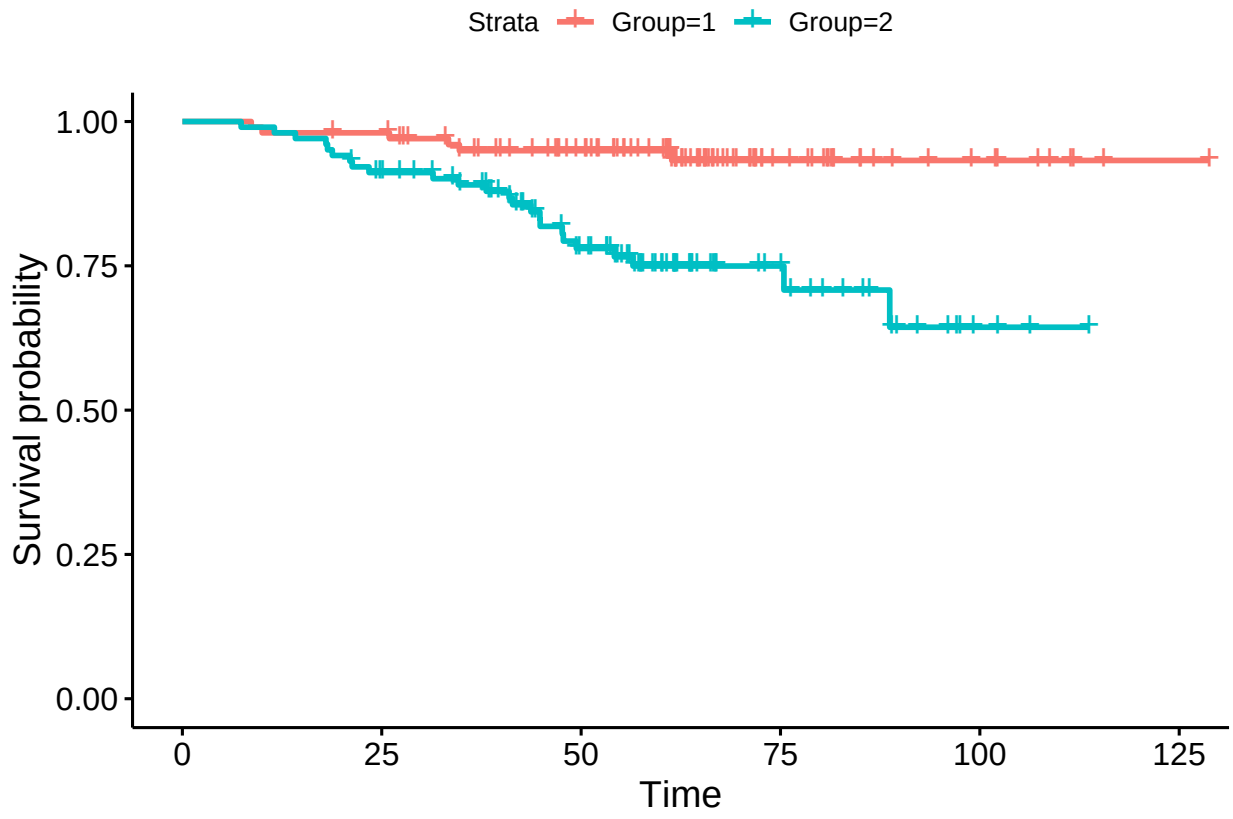
```
data$Time<- data$Days/30
```

#Let's make two groups based on average expression

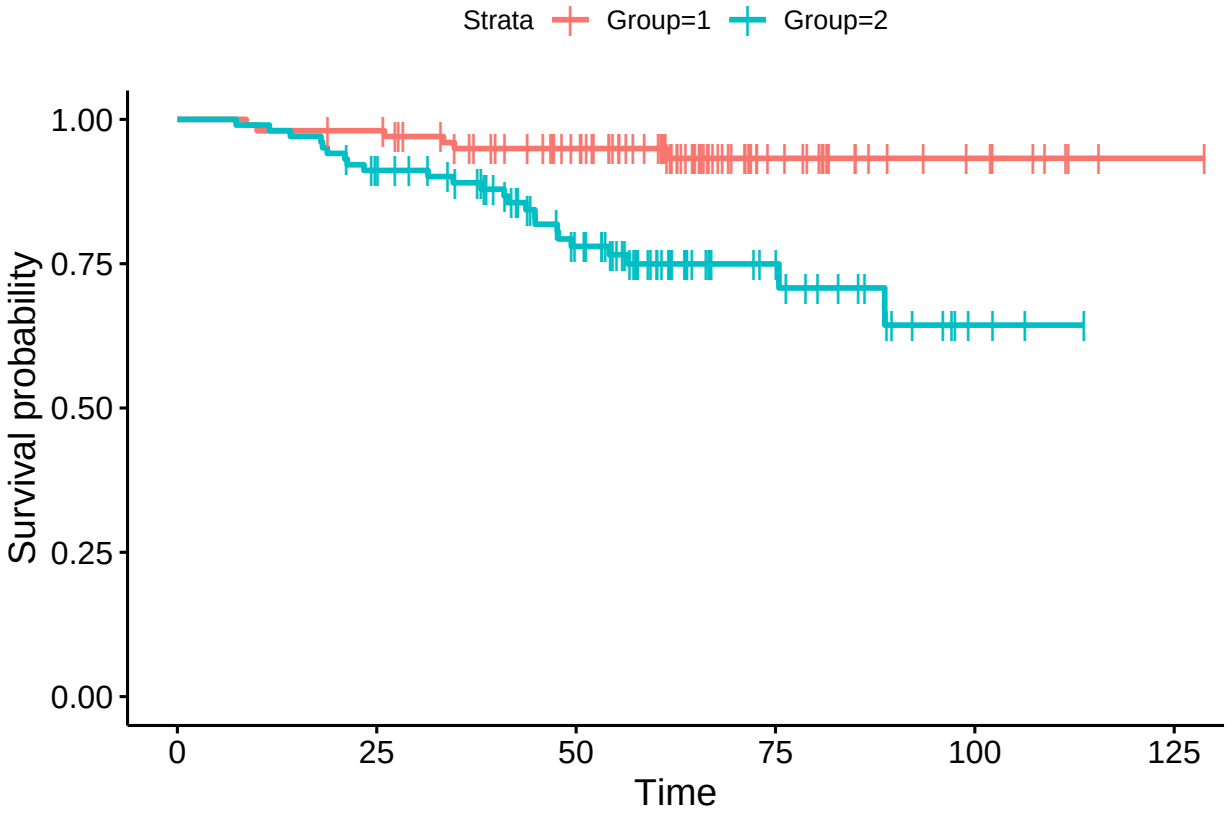
```
x=median(unlist(data$EXPRESSION))
data$Group<- ifelse(data$EXPRESSION >=x, "2", "1")
#Attach data
attach(data)
```

#Fit model and prepare basic KM plot

```
kmcurve<- survfit(Surv(Time, Event)~Group, data=data)
ggsurvplot(kmcurve, data=data)
```

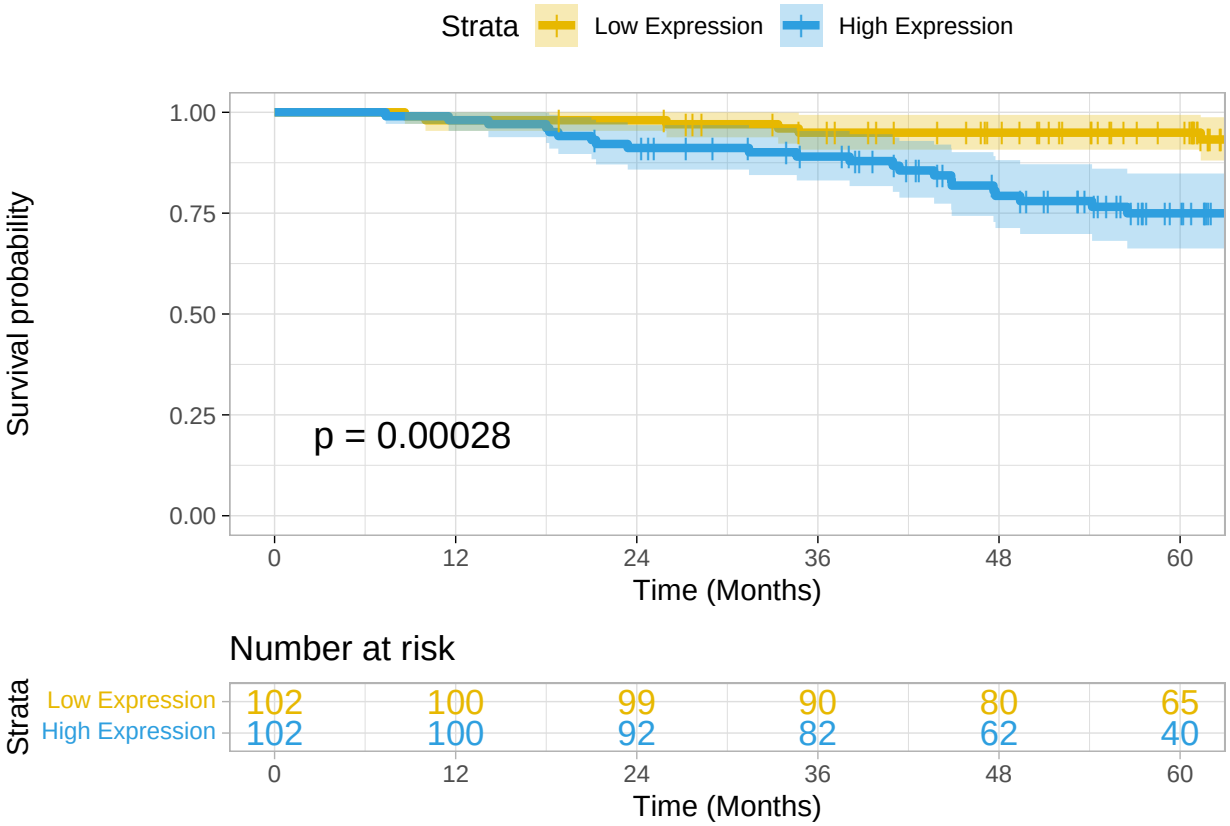


```
ggsurvplot(kmcurve, data=data, censor.shape="|", censor.size = 4)
```



#Customize plot

```
ggsurvplot(
  kmcurve,
  data = data,
  size = 1.5,  xlim=c(0, 60),break.x.by = 12,xlab="Time (Months)",
  censor.shape="|", censor.size = 3, # change line size
  palette =
    c("#E7B800", "#2E9FDF"),# custom color palettes
  conf.int = TRUE,          # Add confidence interval
  pval = TRUE,              # Add p-value which will perform log-rank T test
  risk.table = TRUE,        # Add risk table
  risk.table.col = "strata",# Risk table color by groups
  legend.labs =
    c("Low Expression", "High Expression"),    # Change legend labels
  risk.table.height = 0.25, # Useful to change when you have multiple groups
  ggtheme = theme_light()      # Change ggplot2 theme
)
```


Strata
Low Expression
High Expression
Survival probability
1.00
0.75
0.50
0.25
0.00
p = 0.00028
0
12
24
36
48
60
Time (Months)
Number at risk
Strata
Low Expression
High Expression
102
100
99
90
80
65
102
100
92
82
62
40
0
12
24
36
48
60
Time (Months)