library(survival)

library(survminer)

library(ggplot2)

head(data)

# event time group

# 1 1 310 Female

# 2 1 361 Female

# 3 1 654 Female

# 4 1 728 Female

# 5 1 61 Female

# 6 1 81 Female

fit <- survfit(Surv(time, event) ~ group, data = data)

print(fit)

# Call: survfit(formula = survival::Surv(time, event) ~ group, data = dat)

#

# n events median 0.95LCL 0.95UCL

# group=Female 90 53 426 348 550

# group=Male 138 112 270 212 310

# coxph

fit\_cox <- coxph(Surv(time, event) ~ group, data = data)

print(fit\_cox)

# Call:

# survival::coxph(formula = survival::Surv(time, event) ~ group,

# data = dat)

#

# n= 228, number of events= 165

#

# coef exp(coef) se(coef) z Pr(>|z|)

# groupMale 0.5310 1.7007 0.1672 3.176 0.00149 \*\*

# ---

# Signif. codes: 0 ‘\*\*\*’ 0.001 ‘\*\*’ 0.01 ‘\*’ 0.05 ‘.’ 0.1 ‘ ’ 1

#

# exp(coef) exp(-coef) lower .95 upper .95

# groupMale 1.701 0.588 1.226 2.36

#

# Concordance= 0.579 (se = 0.021 )

# Likelihood ratio test= 10.63 on 1 df, p=0.001

# Wald test = 10.09 on 1 df, p=0.001

# Score (logrank) test = 10.33 on 1 df, p=0.001

#

cox.zph(fit\_cox)

# chisq df p

# group 2.86 1 0.091

# GLOBAL 2.86 1 0.091

## plot

ggsurvplot(fit = fit, data = data, fun = "pct",

palette = c("#00468B", "#ED0000", "#42B540", "#0099B4", "#925E9F"),

linetype = 1, pval = TRUE,

censor = TRUE, censor.size = 7,

risk.table = FALSE, conf.int = FALSE)