if (!requireNamespace("survminer", quietly = TRUE))

install.packages("survminer")

library(survival)

library(survminer)

# data <- lung

# colnames(data)[5] <- "variable"

fit <- survfit(Surv(time, status) ~ variable, data = data)

print(fit)

# Call: survfit(formula = Surv(time, status) ~ variable, data = data)

#

# n events median 0.95LCL 0.95UCL

# variable=1 138 112 270 212 310

# variable=2 90 53 426 348 550

survdiff(Surv(time, status) ~ variable, data = data)

# survdiff(formula = Surv(time, status) ~ variable, data = data)

#

# N Observed Expected (O-E)^2/E (O-E)^2/V

# variable=1 138 112 91.6 4.55 10.3

# variable=2 90 53 73.4 5.68 10.3

#

# Chisq= 10.3 on 1 degrees of freedom, p= 0.001

fit2 <- coxph(Surv(time, status) ~ variable, data = data)

summary(fit2)

# Call:

# coxph(formula = Surv(time, status) ~ variable, data = data)

#

# n= 228, number of events= 165

#

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

# variable -0.5310 0.5880 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

# variable 0.588 1.701 0.4237 0.816

#

# 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

# plot

ggsurvplot(fit = fit, data = data, pval = T)