Survival-Analysis-textbook–with-finalfit-tables.R

KAsab

2024-02-29

library(tidyverse)

## ── Attaching core tidyverse packages ──────────────────────── tidyverse 2.0.0 ──  
## ✔ dplyr 1.1.4 ✔ readr 2.1.5  
## ✔ forcats 1.0.0 ✔ stringr 1.5.1  
## ✔ ggplot2 3.5.0 ✔ tibble 3.2.1  
## ✔ lubridate 1.9.3 ✔ tidyr 1.3.1  
## ✔ purrr 1.0.2   
## ── Conflicts ────────────────────────────────────────── tidyverse\_conflicts() ──  
## ✖ dplyr::filter() masks stats::filter()  
## ✖ dplyr::lag() masks stats::lag()  
## ℹ Use the conflicted package (<http://conflicted.r-lib.org/>) to force all conflicts to become errors

library(survival)  
library(ggsurvfit)  
library(broom)  
library(finalfit)  
  
SurvObj <- colon %$% Surv(time,status)  
  
  
  
  
  
lymphoma <- read\_csv("lymphoma.csv")

## Rows: 35 Columns: 4  
## ── Column specification ────────────────────────────────────────────────────────  
## Delimiter: ","  
## dbl (4): id, stage, days, died  
##   
## ℹ Use `spec()` to retrieve the full column specification for this data.  
## ℹ Specify the column types or set `show\_col\_types = FALSE` to quiet this message.

dependent <- "Surv(days,died)"  
explanatory <- "stage"  
  
  
  
  
 lymphoma |>   
 finalfit(dependent,explanatory,add\_dependent\_label = FALSE) |>   
 rename("Overall Survival"=label) |>   
 rename(" "=levels)

## Overall Survival all HR (univariable)  
## stage 0 19 (54.3) -  
## 1 16 (45.7) 2.60 (1.10-6.16, p=0.030)  
## HR (multivariable)  
## -  
## 2.60 (1.10-6.16, p=0.030)

colon.OS <- colon |>   
 filter(etype==1)  
   
   
 dependent= "Surv(time,status)"  
explanatory=c("rx","obstruct","differ","extent","surg","node4")   
colon.OS |>   
 finalfit(dependent,explanatory,add\_dependent\_label = FALSE) |>   
 rename("Overall Survival"= label) |>   
 rename(" "=levels)

## Overall Survival all HR (univariable)  
## rx Obs 315 (33.9) -  
## Lev 310 (33.4) 0.98 (0.80-1.21, p=0.888)  
## Lev+5FU 304 (32.7) 0.60 (0.47-0.76, p<0.001)  
## obstruct 0 749 (80.6) -  
## 1 180 (19.4) 1.27 (1.02-1.58, p=0.036)  
## differ 1 93 (10.3) -  
## 2 663 (73.2) 1.06 (0.77-1.45, p=0.724)  
## 3 150 (16.6) 1.64 (1.15-2.36, p=0.007)  
## extent 1 21 (2.3) -  
## 2 106 (11.4) 1.39 (0.54-3.55, p=0.494)  
## 3 759 (81.7) 2.72 (1.13-6.57, p=0.026)  
## 4 43 (4.6) 4.79 (1.85-12.39, p=0.001)  
## surg 0 682 (73.4) -  
## 1 247 (26.6) 1.29 (1.06-1.57, p=0.011)  
## node4 0 674 (72.6) -  
## 1 255 (27.4) 2.43 (2.01-2.92, p<0.001)  
## HR (multivariable)  
## -  
## 1.00 (0.80-1.24, p=0.983)  
## 0.61 (0.48-0.77, p<0.001)  
## -  
## 1.26 (1.00-1.58, p=0.050)  
## -  
## 0.97 (0.71-1.34, p=0.868)  
## 1.39 (0.96-2.01, p=0.079)  
## -  
## 1.04 (0.41-2.67, p=0.936)  
## 1.79 (0.74-4.34, p=0.200)  
## 2.80 (1.06-7.36, p=0.037)  
## -  
## 1.27 (1.04-1.56, p=0.018)  
## -  
## 2.31 (1.91-2.80, p<0.001)

table <- colon.OS |>   
 finalfit(dependent,explanatory,add\_dependent\_label = FALSE) |>   
 rename("Overall Survival"= label) |>   
 rename(" "=levels)   
  
library(knitr)  
t <- kable(table,align=c("c","c","c","c"),"simple")