Adjustment Analysis for the VQI FBVAR Dataset

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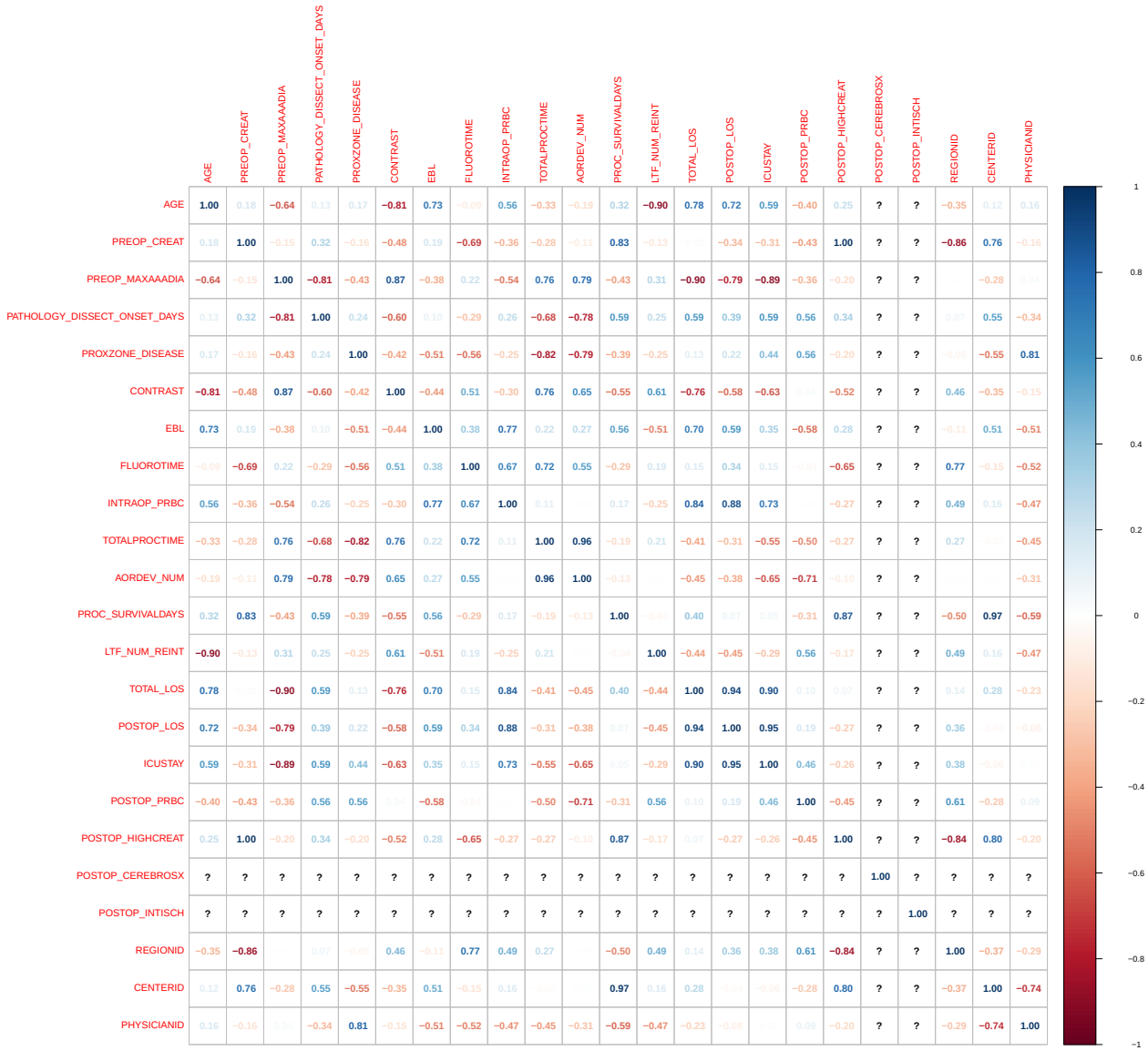
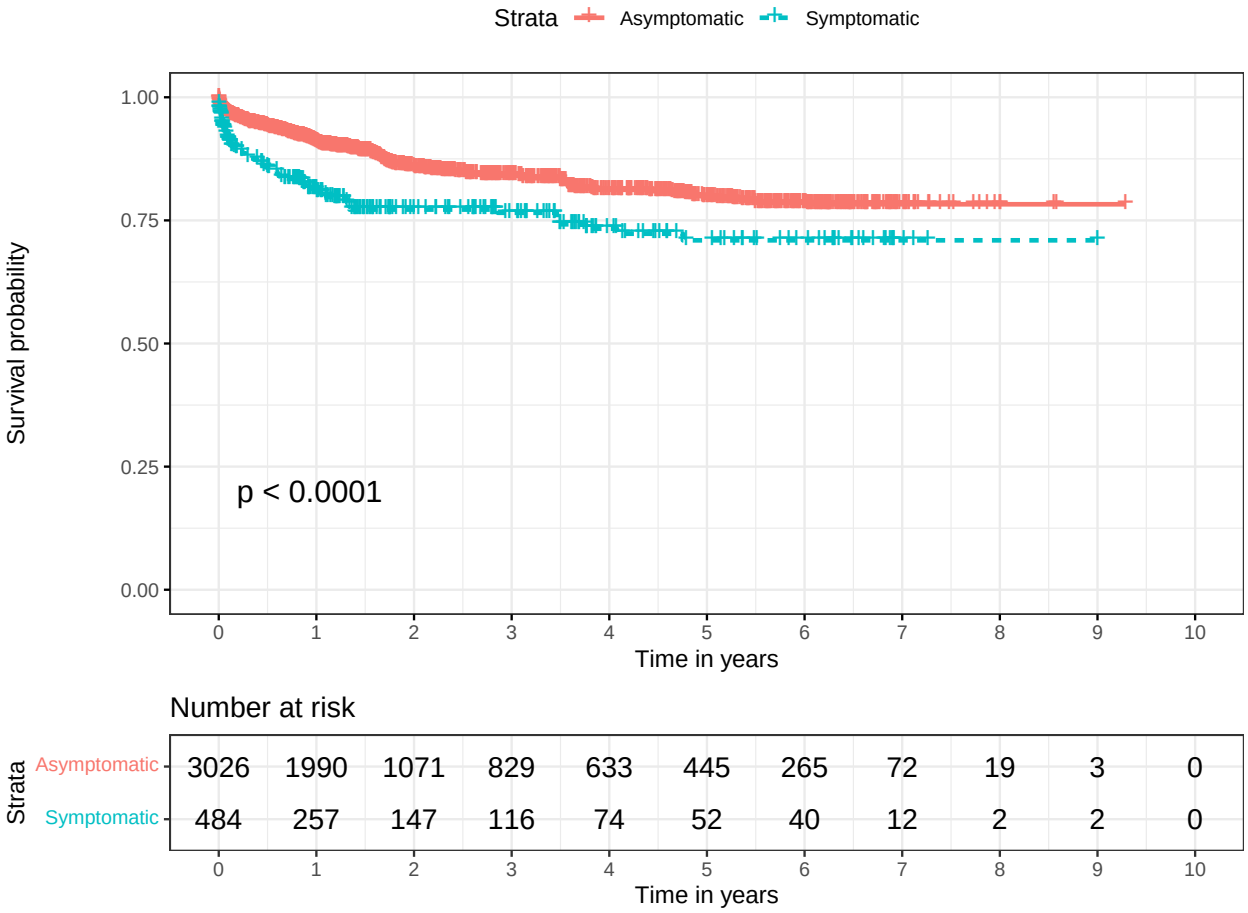
Correlation matrix



Survival analysis

Unadjusted survival curves. Time scale changed from calendar days to calendar years. Used log rank test to produce p-value. Median survival never reached.

Any changes needed? (e.g, time scale, colors, change to at risk table, add number of censored and/or uncensored events, etc.)



Code Appendix

```
knitr::opts_chunk$set(echo = FALSE,message = FALSE,warning = FALSE)
knitr::opts_chunk$set(fig.width=20, fig.height=20)

library(tidyverse)
library(table1)
library(survival)
library(Hmisc)
library(ggplot2)
library(ggpubr)
library(corrplot)
library(caret)
library(survminer)

## ------------- working directories for Lily ----------
# wd_lily = '/Users/hanyiwang/Desktop/Comparative-analysis-of-treatments-of-CAA'
# path_lily = c("../data/FBVAR.csv")


## ------------- working directories for Jenn ----------
# wd_jenn =
# path_jenn =

## ------------- working directories for Thu ----------
wd_thu = '/Users/thuvu/Desktop/Comparative-analysis-of-treatments-of-CAA'
path_thu = c("FBVAR.csv")

## ------------- read data ----------
# setwd(wd_lily)
# FBVAR = read.csv(path_lily)

# setwd(wd_jenn)
# FBVAR = read.csv(path_jenn)

setwd(wd_thu)
FBVAR = read.csv(path_thu)

## Correlation matrix
matrix <- FBVAR %>%
    select_if(is.numeric) %>% subset(., select = -1)%>%
    cor(.,use = "complete")

corrplot(matrix, method="number")

## Survival analysis
# event = 1 for uncensored (Dead), event = 0 for censored (Alive)
FBVAR$event <- ifelse(FBVAR$DEAD=="Yes", 1, 0)

tte <- FBVAR %>% with(Surv(PROC_SURVIVALDAYS/365, event))

# compute survival curves
fit <- survfit(tte ~ PRESENTATION, data=FBVAR)
```

```r
# plotting Kaplan-Meier Curves
ggsurvplot(fit,
           pval = TRUE,
           risk.table = TRUE,
           linetype = "strata",
           surv.median.line = "hv",
           ggtheme = theme_bw(),
           xlab = "Time in years",
           legend.labs = c("Asymptomatic", "Symptomatic"),
           break.time.by=1)
```