

## SUPPLEMENTARY MATERIALS

### Related computerized programs for nomogram with R

```
library(rms)
library(Hmisc)
library(grid)
library(lattice)
library(Formula)
library(ggplot2)
library(foreign)
library(pROC)
library(ggDCA)
library(verification)
```

#### For nomogram

```
rawdata<- read.csv("nomo.csv")
Y <- rawdata$Y
Age <- rawdata$Age
Dyspnea <- rawdata$Dyspnea
LMPH <- rawdata$LMPH
IL6 <- rawdata$IL6
CRP <- rawdata$CRP
dev = rawdata[rawdata$category == 0,]
vad = rawdata[rawdata$category == 1,]
ddist <- datadist(rawdata)
options(datadist = 'ddist')
modelC2 <- lrm(Y ~ Age + Dyspnea + CRP+ IL6 + LMPH, data = rawdata, x = TRUE, y = TRUE)
nom <- nomogram(modelC2, fun= function(x)1/(1+exp(-x)),fun.at=c(0.01,0.03,0.1,0.25,0.5,0.7,0.9,0.99),lp = F,
funlabel = "Risk")
plot(nom)
```

#### For resampling validation of nomogram

```
Validate(modelC2, method = "boot", B = 1000, dxy = T)
```

#### For computing the C-Index

```
r <- rcorrcens(Surv(Y) ~ predict(modelC2), data = rawdata)
r
```

#### For calibration curve

```
cal <- calibrate(modelC2, method = 'boot', B=1000)
plot(cal,xlim = c(0,1.0), ylim = c(0,1.0))
```

#### For ROC curve

```
modelC2 <- lrm(Y ~ Age + Dyspnea + CRP+ IL6 + LMPH, data = rawdata, x = TRUE, y = TRUE)
predict <- predict(modelC2)
write.csv(predict, "predict1.csv")
rawdata<- read.csv("cal000.csv")
Y <- rawdata$Y
predict <- rawdata$predict
roc(rawdata$Y, rawdata$predict, plot = TRUE, print.thres = TRUE, print.auc = TRUE)
```

**For DCA curve**

```
d <- dca (modelC2)  
ggplot (d)
```