

Supporting Information

Some executable STATA codes are available as a separate file of this Supporting Information.

Without loss of generality, we let Y be an indicator variable denoting outcome status and T denotes the time to event of interest, whereas X_1 , X_2 and X_3 represent the baseline predictive covariates.

1. Fitting a Cox PH model

```
stset T, failure(Y)  
stcox X1 X2 X3
```

(Alternatively, we can use backward stepwise model selection by AIC)

```
swaic, model back
```

2. Testing the PH assumption

```
stcox X1 X2 X3  
estat phtest, detail
```

3. Estimating ROC curves for time-dependent outcomes and finding an optimal cutpoint for a diagnostic test

```
stset T, failure(Y)  
stcox X1 X2 X3  
predict LP, xb  
stroccurve LP, timepoint(5) youden
```

4. Calculating the concordance probability

```
stcox X1 X2 X3  
estat concordance
```

5. Testing the overall goodness of fit

stcox X1 X2 X3, mgale(m)

stcoxgof