# Evaluate testing data (survival) - rfsrc

#### EVE W.

#### 2020-06-11

### Contents

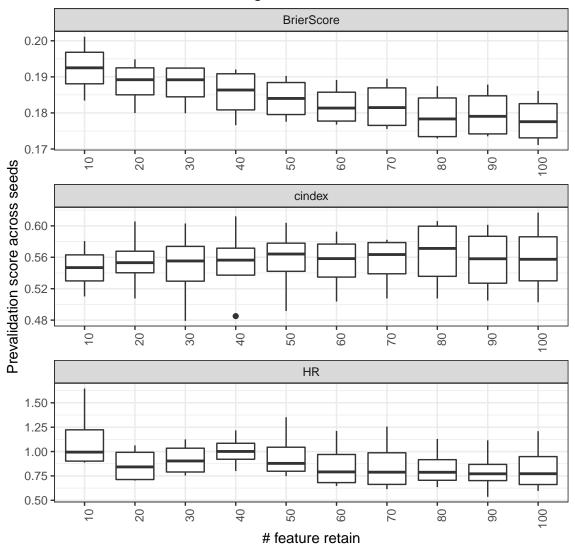
0. Load Data
1. Scores
2. Important Features
marginal effects
Label: os_time
## user input
<pre>project_home &lt;- "~/EVE/examples"</pre>
<pre>project_name &lt;- "rfsrc_outCV_test"</pre>

#### 0. Load Data

```
276 of samples were used
100 of full features
4 runs, each run contains 3 CVs.
run with rfeSRCC.r.
```

#### 1. Scores

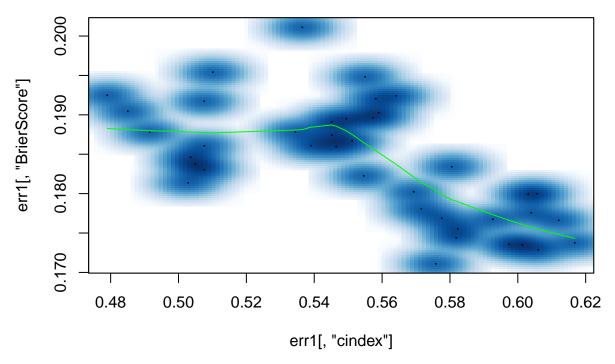
## Prevalidation scores during RFE



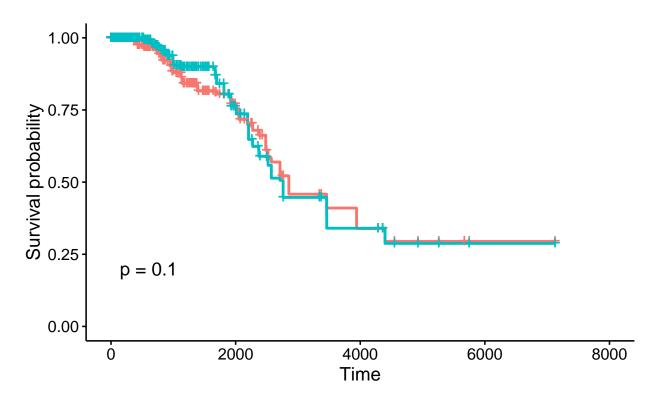
Note for the **HR plot**: A HR value (per seed) is calculated by comparing the survival time between 'long' and 'short' survivors. These two group is defined by splitting samples based on *median* predicted risk score; group\_0 is predicted risk scores > median, which can be viewed as 'short survivors'. On the other hand, group\_1 can be viewed as 'long survivors'. If the prediction is reasonable, the hazard ratio of group\_1/group\_0 should be < 1. The actual function used in calculating HR is coxph(Surv(time, status) ~ group.binary, df).

metrics	size.max	median.max	size.min	median.min
BrierScore	10	0.193	100	0.178
cindex	80	0.571	10	0.547
$_{ m HR}$	40	1.001	90	0.772

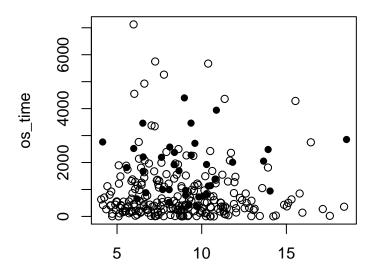
pearson corr: -0.65



The following plot is to quickly see how well the prediction can separate long and short survivor. Strata  $\stackrel{\longleftarrow}{\longleftarrow}$  pred.binary=1



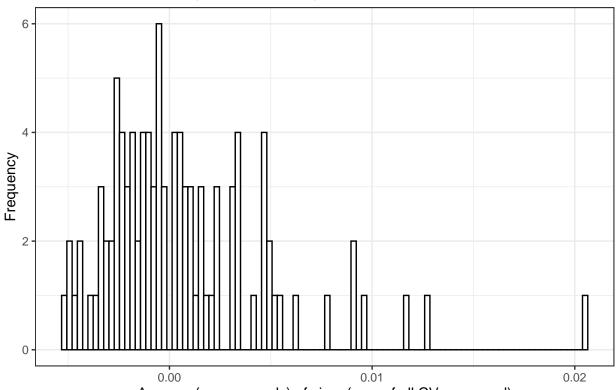
## prediction under seed 1001 at full feature s



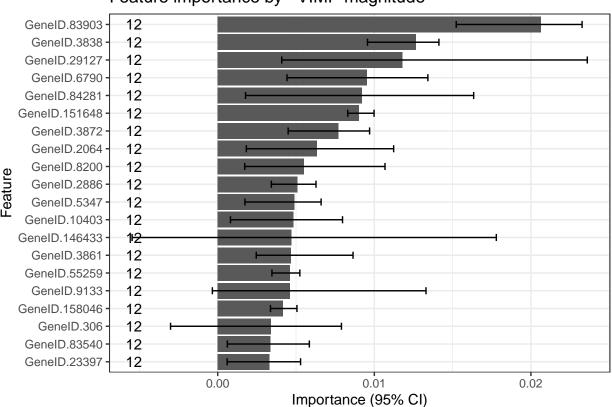
prediction for 276 subjects

### 2. Important Features

## From 100 feature step based on vimp



Average (across seeds) of vimp (sum of all CVs per seed) Feature importance by VIMP magnitude



## marginal effects

