P8108 Survival Analysis Presentation (Title TBD)

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Presentation Outline

- ▶ Background / Research question of interest
- ▶ Exploratory Analysis
- ▶ Methods
    - ▶ Cox Proportional Hazard with Elastic Net
    - ▶ Survival Random Forest
    - ▶ Conformalized Analysis
- ▶ Results
- ▶ Discussion

Background

- We analyzed the Rotterdam data set from the `survival` package in R. This data includes 2982 breast cancer patients from the Rotterdam tumor bank.
- Notable measurements include age, menopausal status, tumor size, number of effected lymph nodes, and other baseline variables.
- Interventions were hormone treatment and chemotherapy.
- Subjects were followed until death or loss to follow up with occurrences of remission and death being recorded.

| year	age	meno	size	grade	nodes	pgr	er	hormon	chemo	rtime	recur	dtime	death
1992	74	1	<=20	3	0	35	291	0	0	1799	0	1799	0
1984	79	1	20-50	3	0	36	611	0	0	2828	0	2828	0
1983	44	0	<=20	2	0	138	0	0	0	6012	0	6012	0
1985	70	1	20-50	3	0	0	12	0	0	2624	0	2624	0
1983	75	1	<=20	3	0	260	409	0	0	4915	0	4915	0

Exploratory Analysis

- Example: You can add arrows ">-"

	Overall (N=2982)
age	
Mean (SD)	55.058 (12.953)
Range	24.000 - 90.000
meno	
Mean (SD)	0.560 (0.496)
Range	0.000 - 1.000
size	
<=20	1387 (46.5%)
20-50	1291 (43.3%)
>50	304 (10.2%)
grade	
Mean (SD)	2.734 (0.442)
Range	2.000 - 3.000
nodes	
Mean (SD)	2.712 (4.384)

Methods

▶ We can use code chunks to illustrate plots
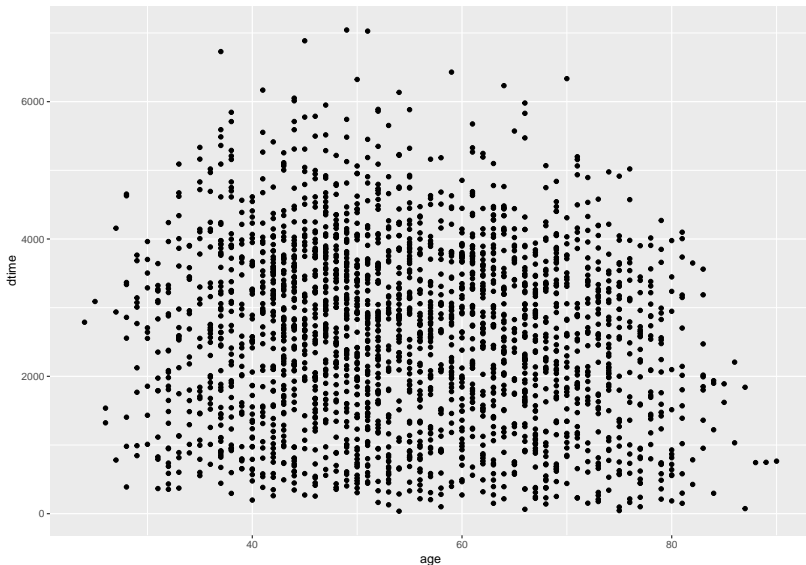
Methods

- ▶ Or you can also insert images like this (but the image dimensions have to be correct):