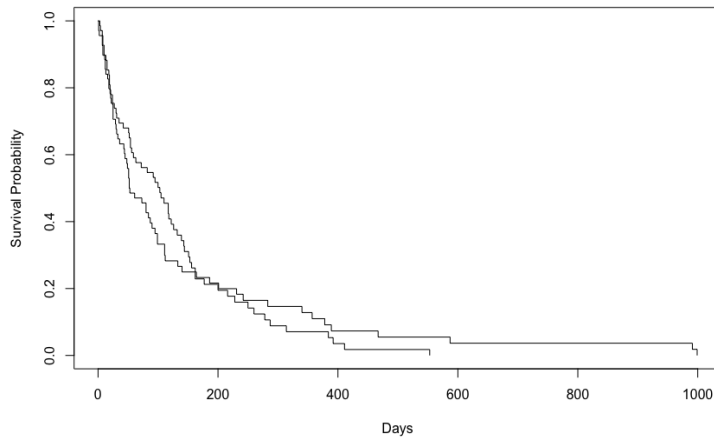


1. We would like to see Kaplan-Meier survival graphs for patients with the test vs standard treatment. Use this data to assess:



My survminer library is not working. The farthest left line is patients that are on standard treatment and additional meds. **Standard treatment and meds perform worse than patients receiving just the treatment before the 200-day mark. After 200-days the patients who take meds with their treatment have a higher probability of survival.**

The probability that a patient will survive for 6 months (183 days) and 1 year (365 days) on the standard treatment vs medication **for 6 months with treatment no meds is 21% and within a range of 15%-36% with treatment and meds survival is approximately 23% a range of 13%-34%.** One year with **treatment with no meds is 7% and within a range of 2.8%-18% with treatment and meds survival is approximately 10% and within a range of 5.3%-22.7%.**

The **median number of days** where a **patient** can be expected to **survive** if they are on the **standard treatment is 100 days vs standard treatment with meds is 52 days. This shows that standard treatment is almost twice as effective as the standard treatment plus meds.**

Predictor Table for A5. Big Mart Sales		
predictor	effect	rationale
Target (y)		
survival	dv	The period a patient survives
Predictors		
prior_chemo	-	They already have a weakened body.
cell_type created cancer_type	-	After reading there are two types of lung cancers,

		small cell and non-small cell. (this goes the cell above.)
age	-	The older a person is, their body can recover from the treatments.
status	+/-	Will be combined with survival.
diagnosis_period	+	The longer longer the patient knows about the cancer the better treatment options they have.
karnofsky	??	A standard way of measuring the ability of cancer patients to perform ordinary tasks. The Karnofsky Performance Status scores range from 0 to 100.

6. Lung Cancer

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Dependent variable:

Survival Weibull exponential Cox

prop. hazards

(1) (2) (3)

treatment	0.234	0.298	-0.084
	(1.364)	(1.266)	(1.231)
age	0.002	0.002	-0.002
	(0.033)	(0.030)	(0.030)
cancer_typesclc	-0.698***	-0.689***	0.610***
	(0.223)	(0.205)	(0.207)
prior_chemoYes	0.229	0.248	-0.170
	(0.253)	(0.231)	(0.232)
diagnosis_period	-0.010	-0.011	0.009
	(0.010)	(0.009)	(0.009)
treatment:age	-0.006	-0.007	0.004
	(0.023)	(0.021)	(0.021)
Constant	5.123***	5.119***	

(1.904) (1.751)

Observations	137	137	137
R2		0.079	
Max. Possible R2		0.999	
Log Likelihood	-741.405	-742.476	-500.229
chi2 (df = 6)	13.373**	17.490***	
Wald Test		12.020* (df = 6)	
LR Test		11.310* (df = 6)	
Score (Logrank) Test		12.329* (df = 6)	
=====			
Note:	*p<0.1; **p<0.05; ***p<0.01		

I selected the COX model over other models. Overall the COX, Weibull, and exponential models have similar results.

- The COX model shows meds does not significantly affect survival with less than 1% influence. There may be something going on as the model results do not line up with other presented information.
- Age does not significantly affect survival with less than 1% influence.
- Prior Chemo treatment does significantly affect survival with a positive influence of 17%.
- Length of diagnosis period does not significantly affect survival with less than 1% influence.
- Small cell lung cancer does significantly affect survival with a negative influence of 61%.