

Total cost and time to treatment initiation for suspected TB patients

Nathan Green

07/02/2020

Introduction

Model

Independent Bayesian linear regressions on cost and time to starting treatment with covariates of sputum smear results ('Not taken', 'Negative', 'Positive') and TB status (missing, 'E;PTB', 'PTB').

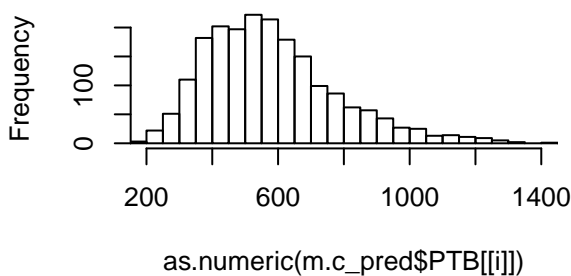
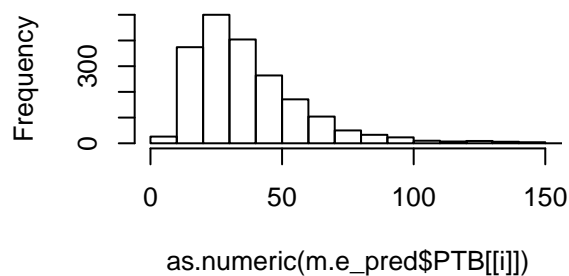
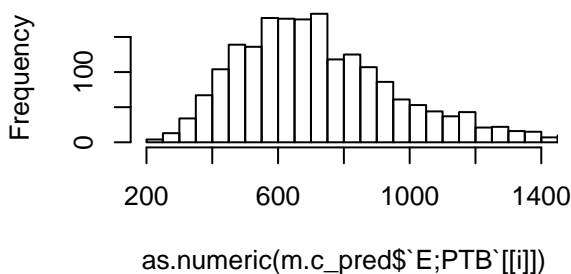
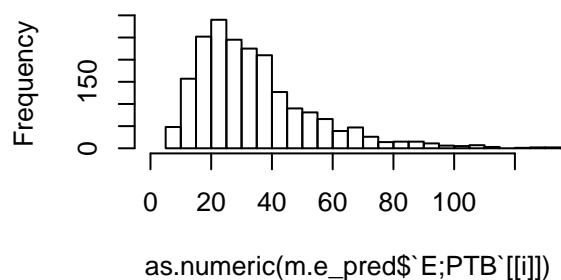
Data

The IDEA dataset for Dosanjh category 1 and 2 patients only.

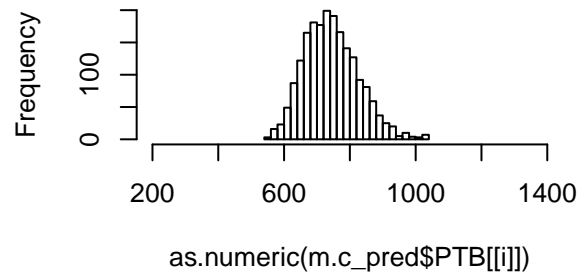
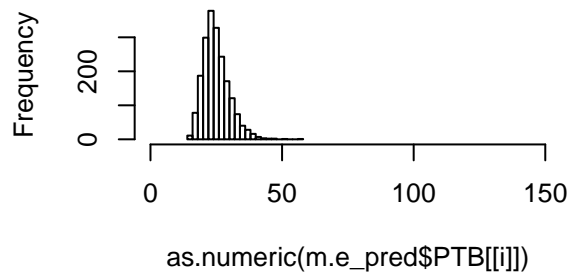
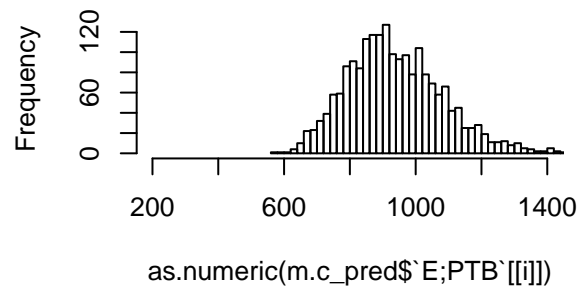
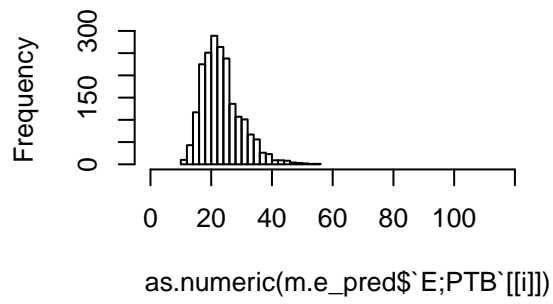
Output

Posterior distributions and summary statistics for mean cost and time to starting treatment.

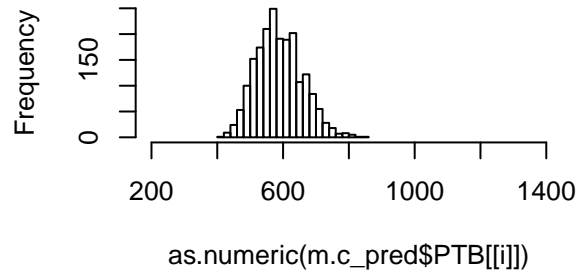
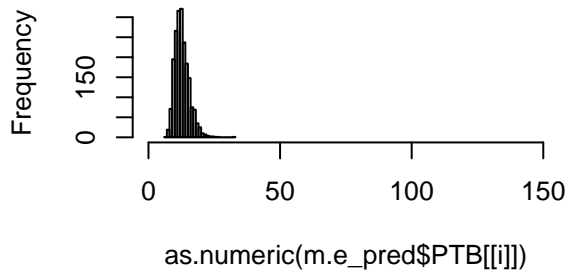
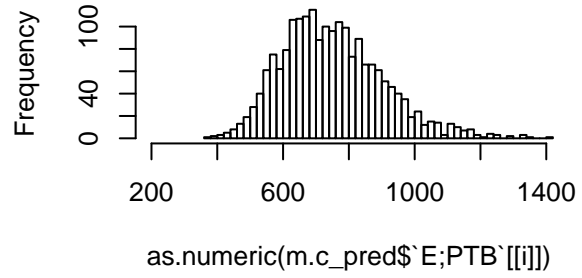
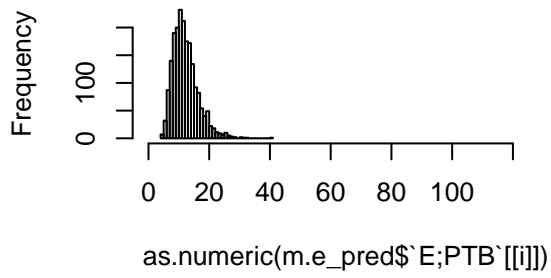
Not taken



Negative

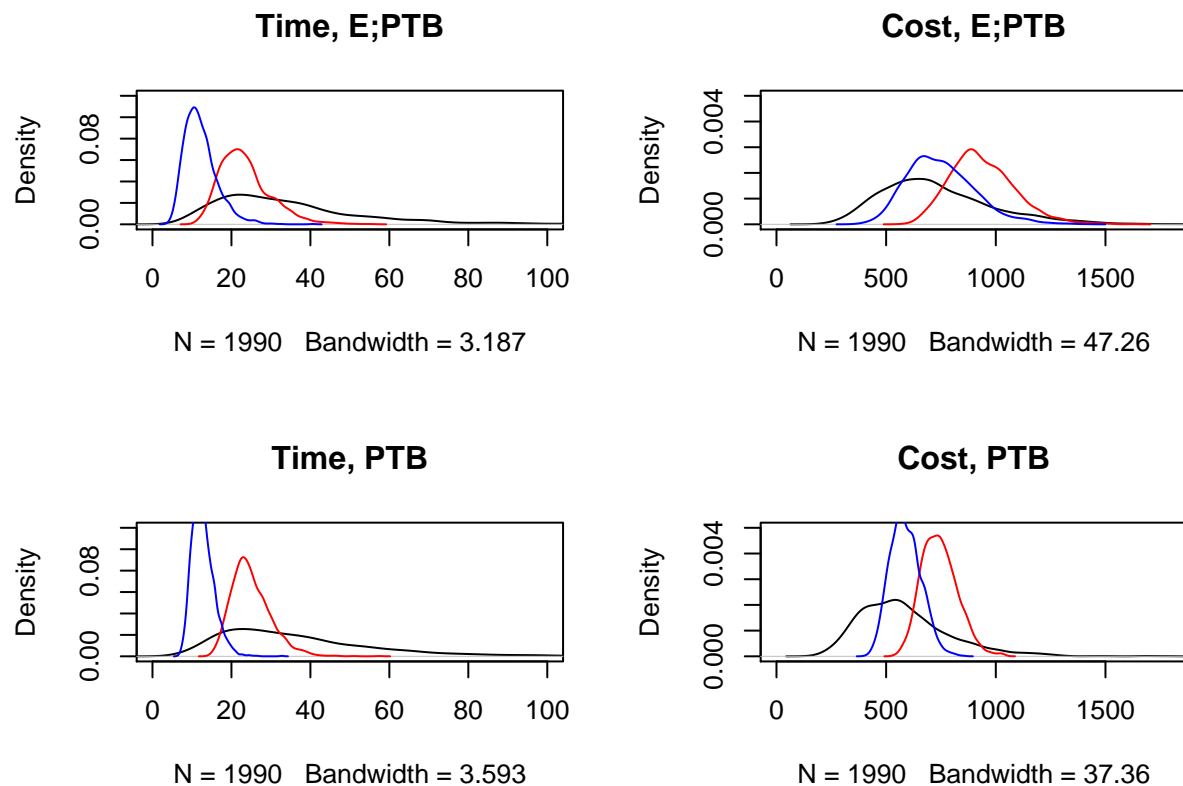


Positive



All smear results on same plot.

Black - Not taken, Red - Negative, Blue - Positive.



```
load("data/out.ls_pathprobs.RData")
probs <- out_pathprobs$sims.list$prob
```

ssm	tb status	mean prob	sd prob	mean cost	sd cost	mean time	sd time
Not taken	E;PTB	0.04	0.01	731.76	261.20	34.61	20.29
Not taken	PTB	0.04	0.02	581.95	206.12	37.59	23.00
Negative	E;PTB	0.18	0.03	939.68	147.53	23.48	6.47
Negative	PTB	0.44	0.04	743.43	81.75	24.97	4.95
Positive	E;PTB	0.02	0.01	749.46	153.40	12.18	4.15
Positive	PTB	0.29	0.03	588.51	69.60	12.76	2.76

References