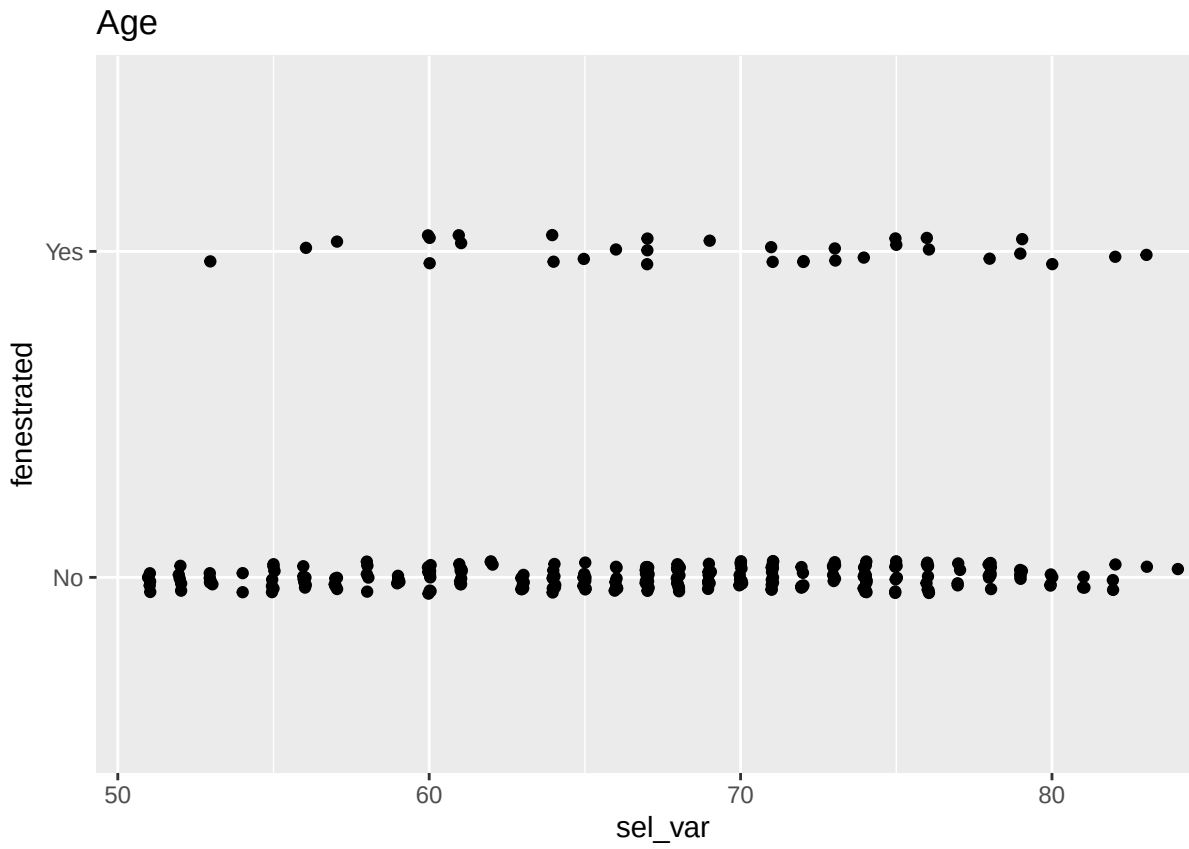
FENESTRATED SCREWS EXPLORATION

Selected Variables

```
covariates:
- Age
- Osteoporosis / osteopenia
- Global Tilt
- ODI - Score (%)_First Visit
- Pelvic Fixation
- CO3
- ASA classification
- fenestrated
```

Age



Proportion of na: 0%

Osteoporosis / osteopenia

Proportion of na: 0%

No

Yes

No

177

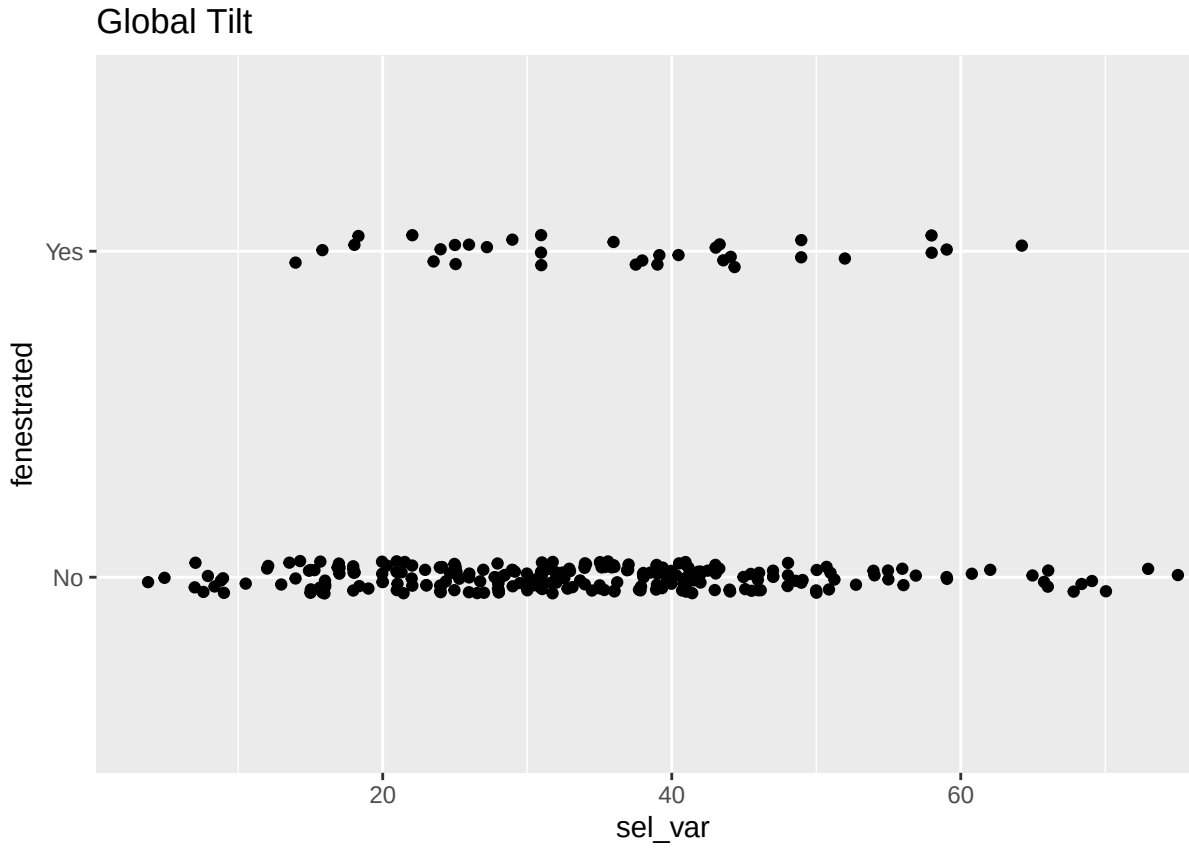
64

Yes

14

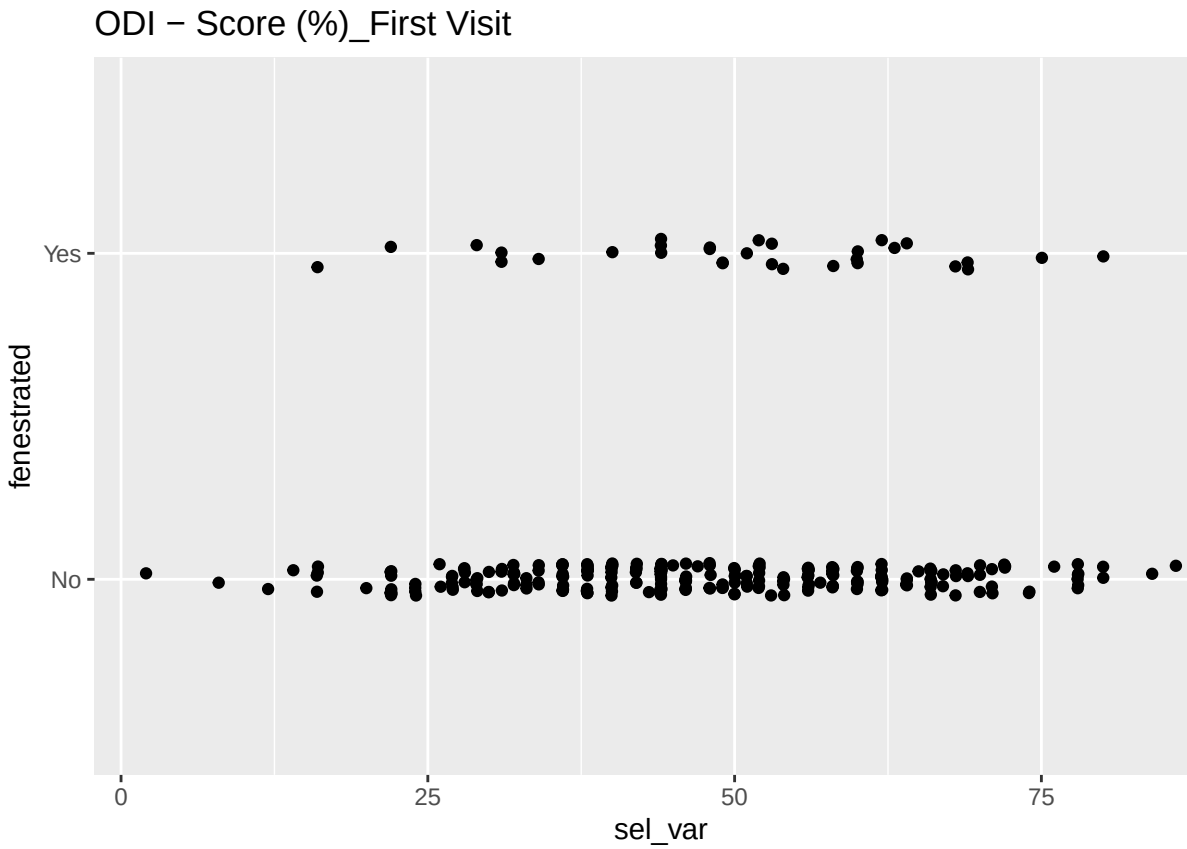
19

Global Tilt



Proportion of na: 0%

ODI - Score (%)_First Visit



Proportion of na: 4%

Pelvic Fixation

Proportion of na: 0%

No

Yes

No

145

96

Yes

17

16

CO3

Proportion of na: 0%

No

Yes

No

205

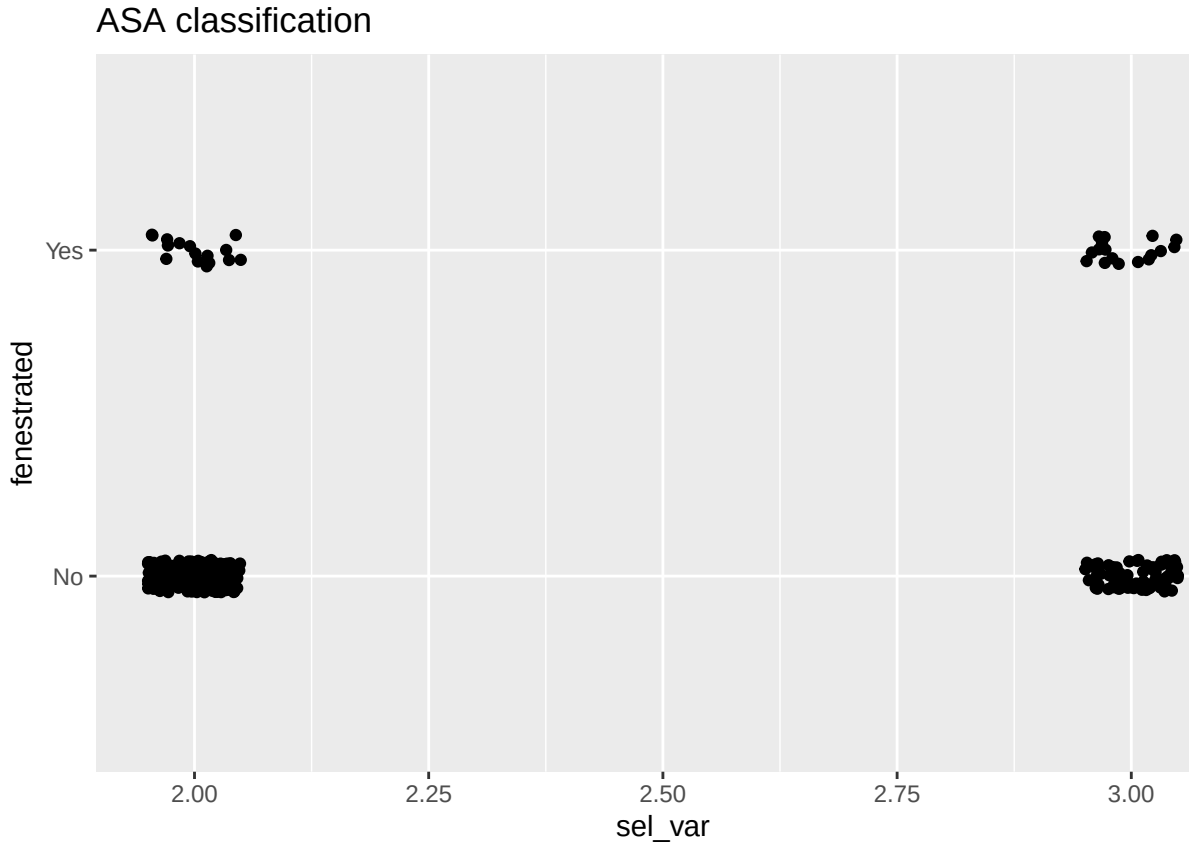
36

Yes

23

10

ASA classification

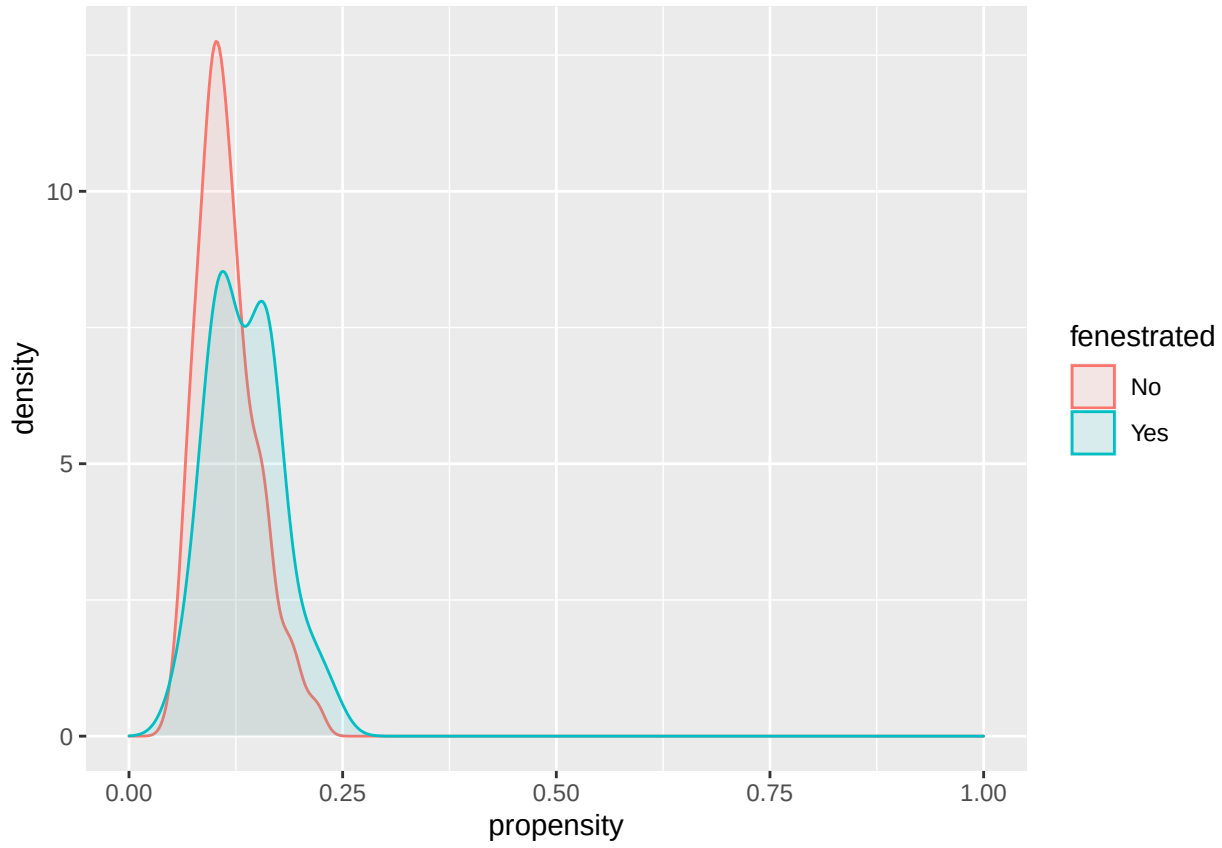


Proportion of na: 0%

Propensity Scores Common Support

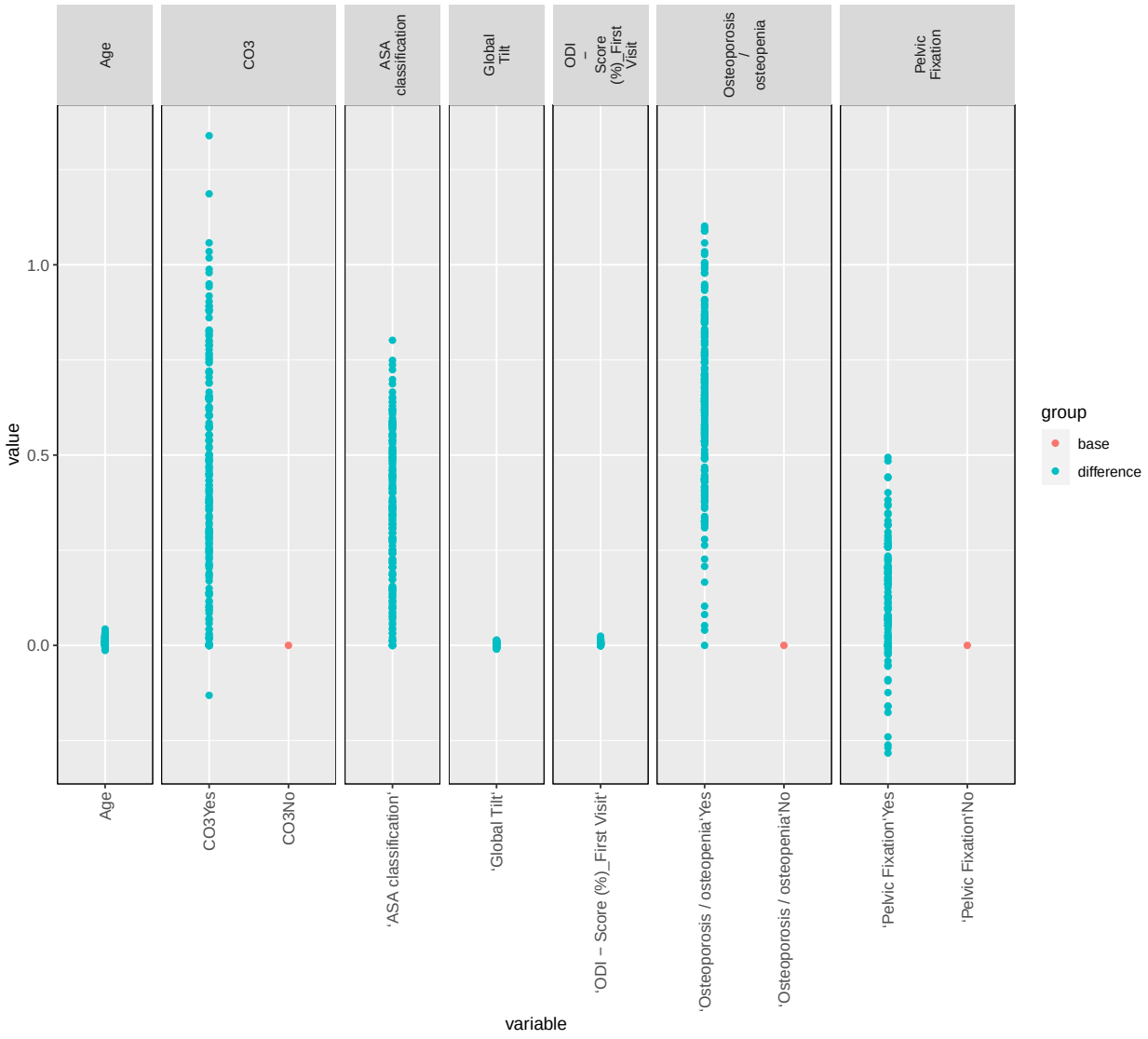
Model Stats

- Treatment proportion: 0.12
- Model Type: elastic_net
- Accuracy: 0.882148
- Params: alpha: 0.1 lambda: 0.0946697



Model Coefficients

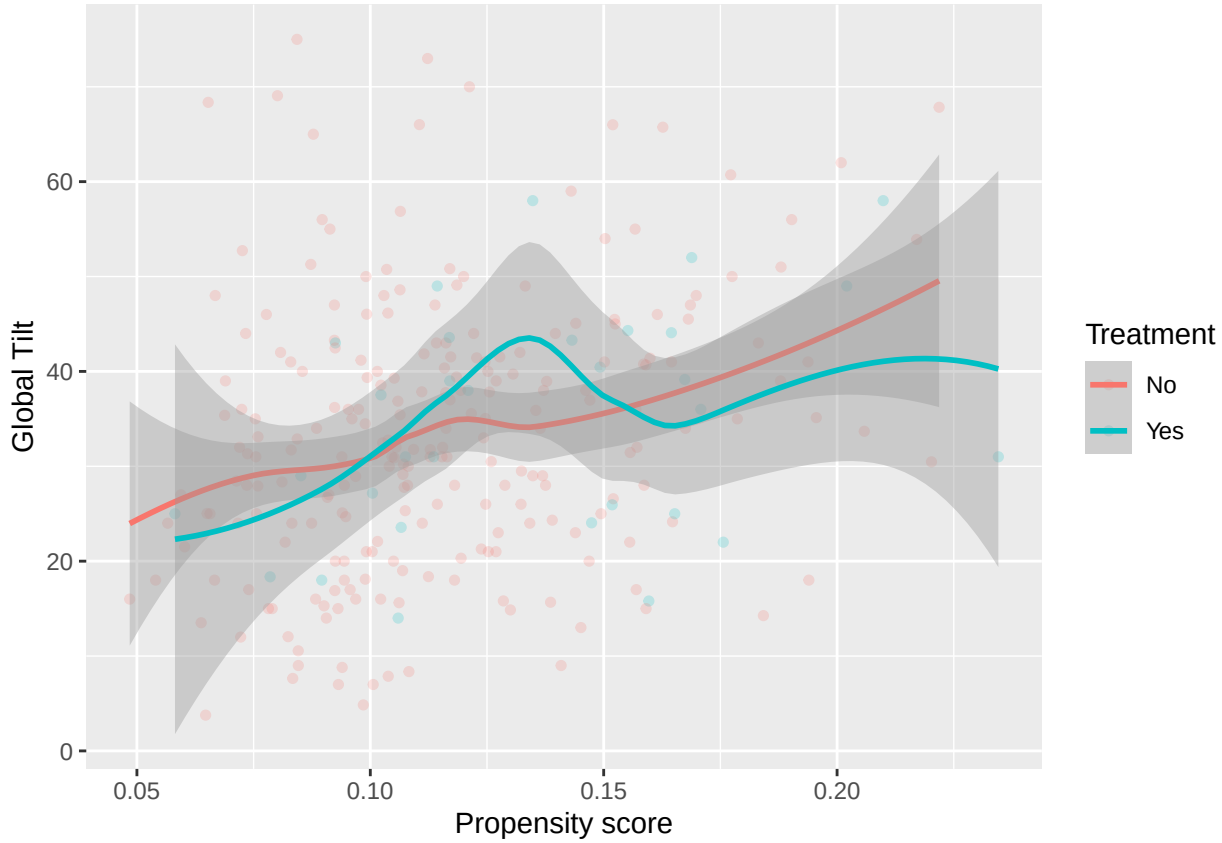
Bootstraping replicas: 200




```
##                          variable low_ci median  up_ci t_value selected
##  1:                     (Intercept) -5.898 -3.984 -2.572   4.634        *
##  2:                             Age -0.005  0.008  0.029   0.892
##  3:                           CO3No  0.000  0.000  0.000      NA
##  4:                          CO3Yes  0.000  0.405  0.989   1.462
##  5:            'ASA classification'  0.000  0.356  0.688   1.809
##  6:                  'Global Tilt' -0.006  0.000  0.011   0.234
##  7: 'ODI - Score (%)_First Visit'  0.000  0.004  0.017   1.112
##  8: 'Osteoporosis / osteopenia'No  0.000  0.000  0.000      NA
##  9: 'Osteoporosis / osteopenia'Yes  0.164  0.642  1.035   2.880        *
## 10:           'Pelvic Fixation'No  0.000  0.000  0.000      NA
## 11:          'Pelvic Fixation'Yes -0.161  0.025  0.383   0.609
```

Visual Inspection

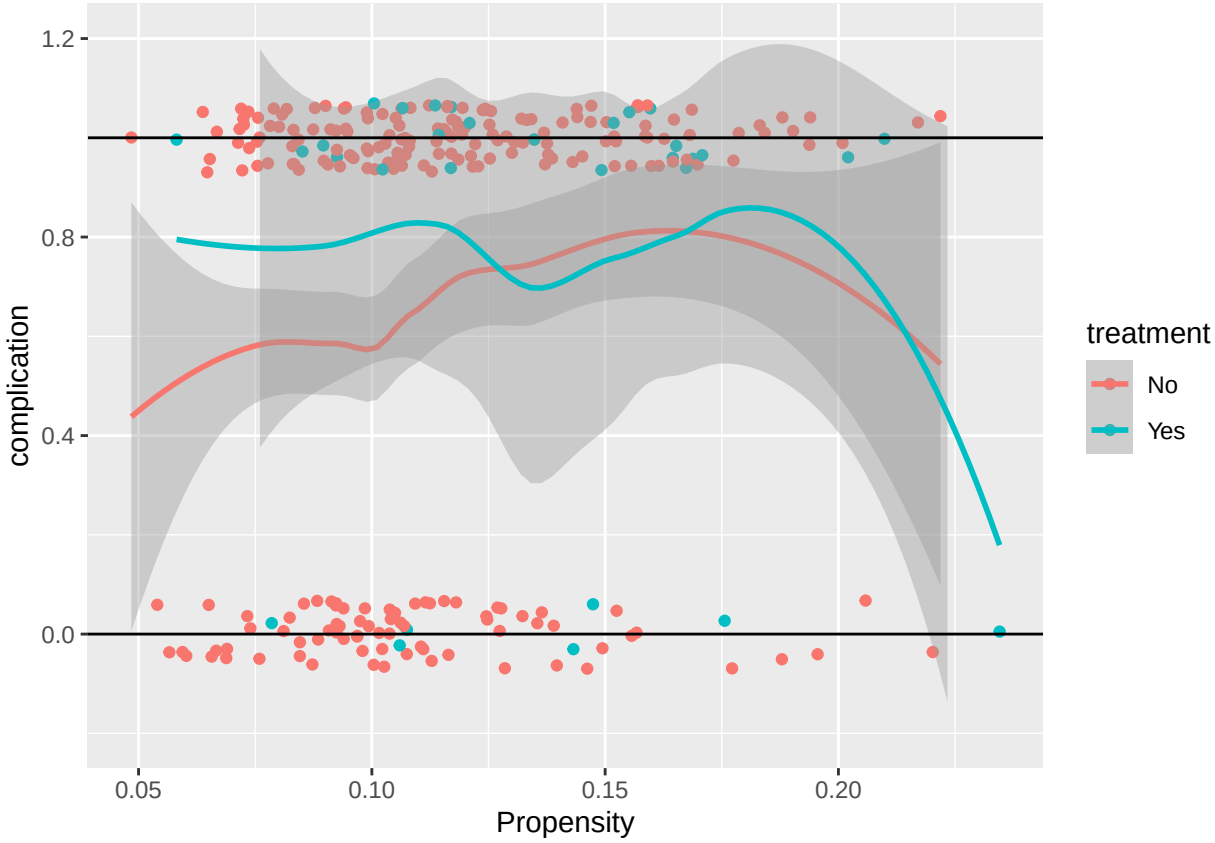
```
## 'geom_smooth()' using formula 'y ~ x'
```

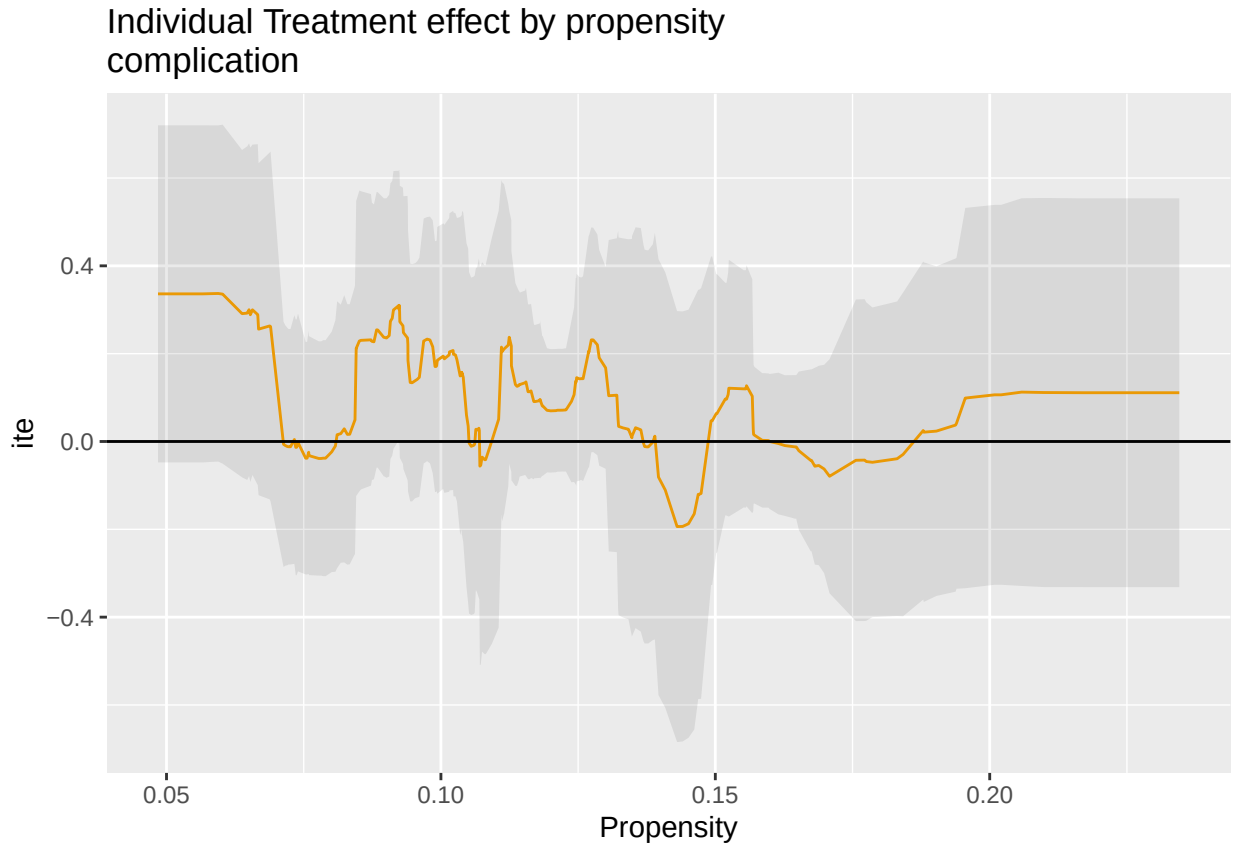


Average Treatment Effects - Complications

```
Outcome: complication
Distribution:
Proportion
 0.6844106
Model Type Y: boosting
Accuracy: 0.779047619047619
Params: nrounds: 50.0
max_depth: 1
eta: 0.4
gamma: 0.0
colsample_bytree: 0.8
min_child_weight: 1.0
subsample: 0.5

Model Type No: boosting
Accuracy: 0.676595744680851
Params: nrounds: 50.0
max_depth: 1
eta: 0.4
gamma: 0.0
colsample_bytree: 0.6
min_child_weight: 1.0
```

```
subsample: 0.6111111

ATE (Yes-No): 0.094 (Std.Error: 0.05)
Observational differences in treatment 0.102 (Yes-No)

   treatment   outcome
1:        No 0.6724138
2:       Yes 0.7741935

`geom_smooth()` using method = 'loess' and formula 'y ~ x'
```

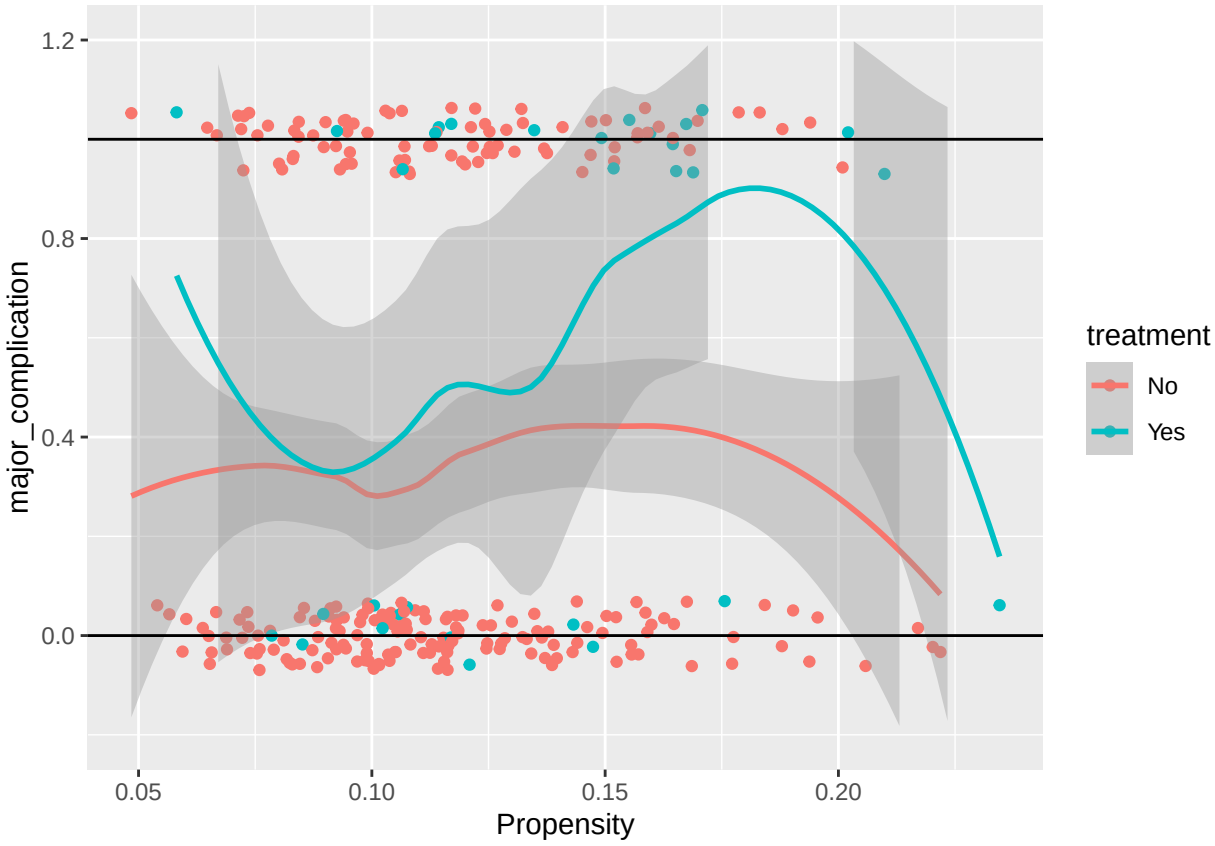


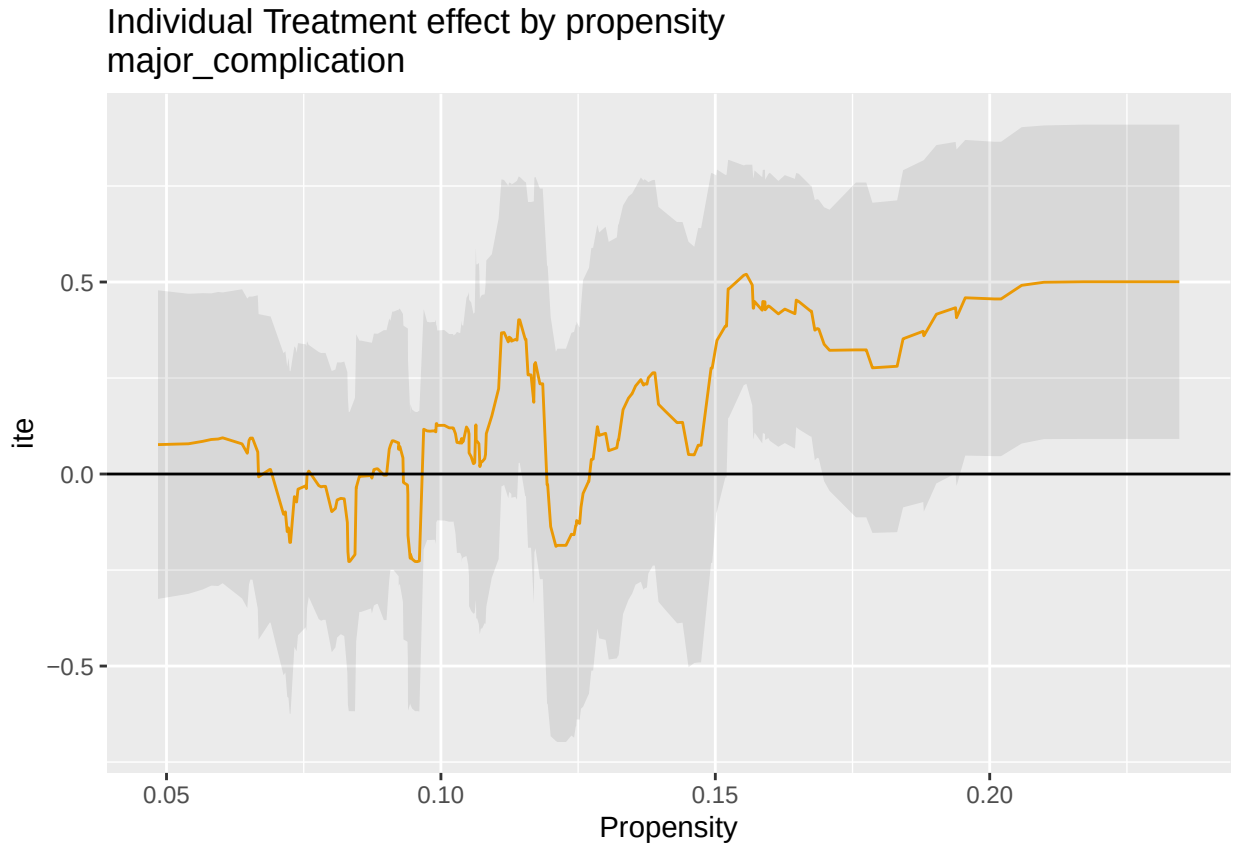



```
Outcome: major_complication
Distribution:
Proportion
 0.3802281
Model Type Y: boosting
Accuracy: 0.680952380952381
Params: nrounds: 50.0
max_depth: 6
eta: 0.3
gamma: 0.0
colsample_bytree: 0.6
min_child_weight: 1.0
subsample: 0.5

Model Type No: boosting
Accuracy: 0.629694727104533
Params: nrounds: 300.0
max_depth: 1
eta: 0.3
gamma: 0.0
colsample_bytree: 0.6
min_child_weight: 1.0
subsample: 1.0

ATE (Yes-No): 0.136 (Std.Error: 0.063)
Observational differences in treatment 0.227 (Yes-No)
```

```
   treatment   outcome
1:        No 0.3534483
2:       Yes 0.5806452
```

```
`geom_smooth()` using method = 'loess' and formula 'y ~ x'
```

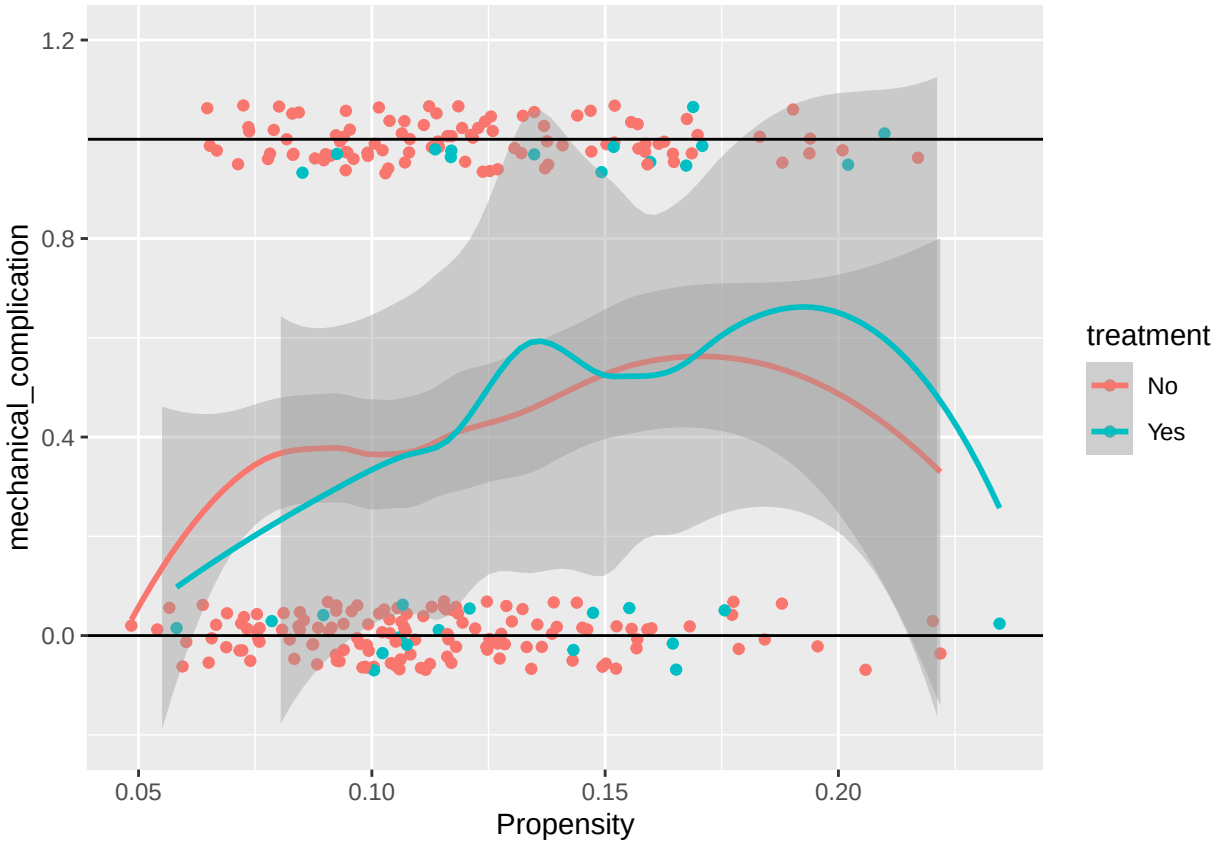


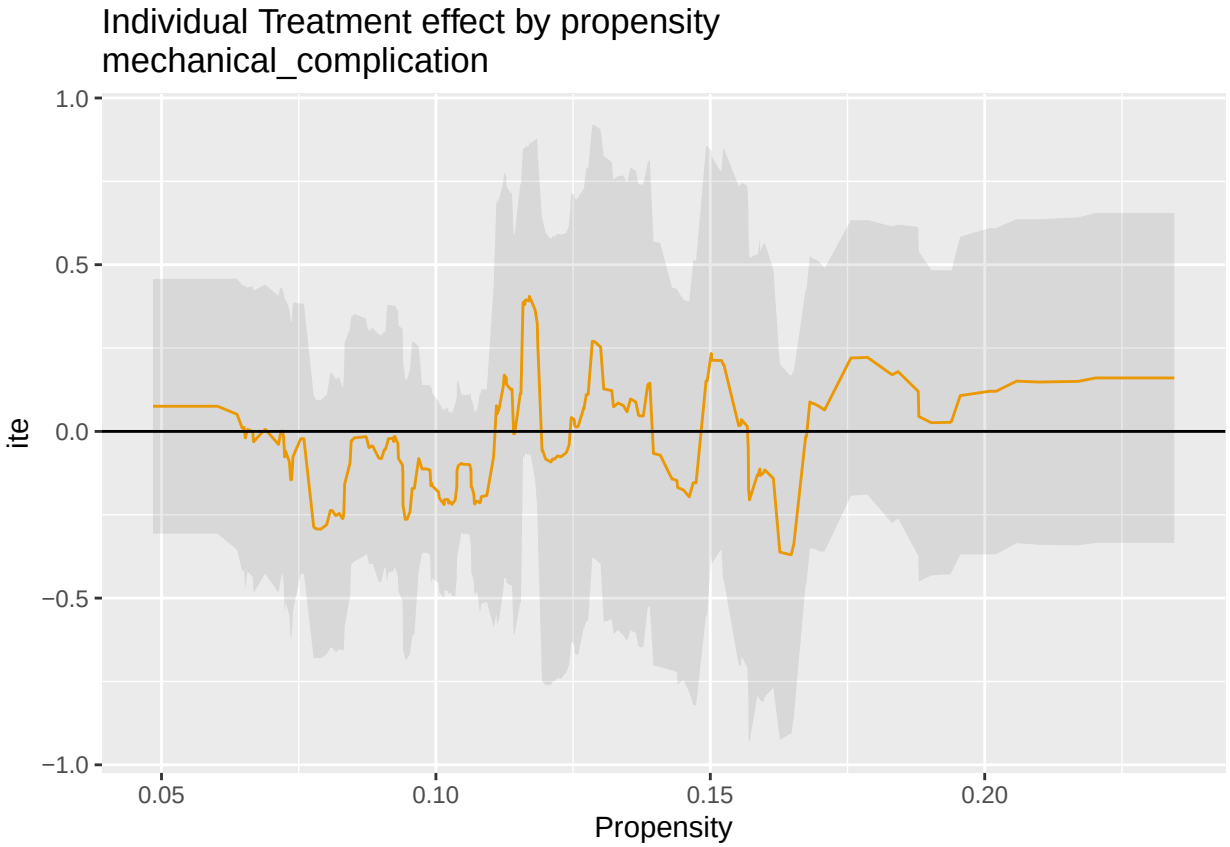



```
Outcome: mechanical_complication
Distribution:
Proportion
 0.4220532
Model Type Y: boosting
Accuracy: 0.717142857142857
Params: nrounds: 150.0
max_depth: 10
eta: 0.3
gamma: 0.0
colsample_bytree: 0.6
min_child_weight: 1.0
subsample: 0.5

Model Type No: boosting
Accuracy: 0.595467160037003
Params: nrounds: 100.0
max_depth: 1
eta: 0.4
gamma: 0.0
colsample_bytree: 0.8
min_child_weight: 1.0
subsample: 0.7777778

ATE (Yes-No): -0.022 (Std.Error: 0.066)
Observational differences in treatment 0.034 (Yes-No)
```

```
   treatment   outcome
1:        No 0.4181034
2:       Yes 0.4516129
```

```
`geom_smooth()` using method = 'loess' and formula 'y ~ x'
```




Individual Treatment effect by propensity
mechanical_complication
1.0
0.5
0.0
−0.5
−1.0
ite
0.05
0.10
0.15
0.20
Propensity