

L5/Iliac ATEs

Initial Patients: 372

Comparability constraints

```
data_ %<>%  
  .['Surgical Approach'=='Posterior'] %>%  
  .['Pelvic Tilt' < 35] %>%  
  .['Global Tilt' < 60] %>%  
  .['RLL' > -42]
```

```
      type  N  
1: Iliac 74  
2:    L5 34
```

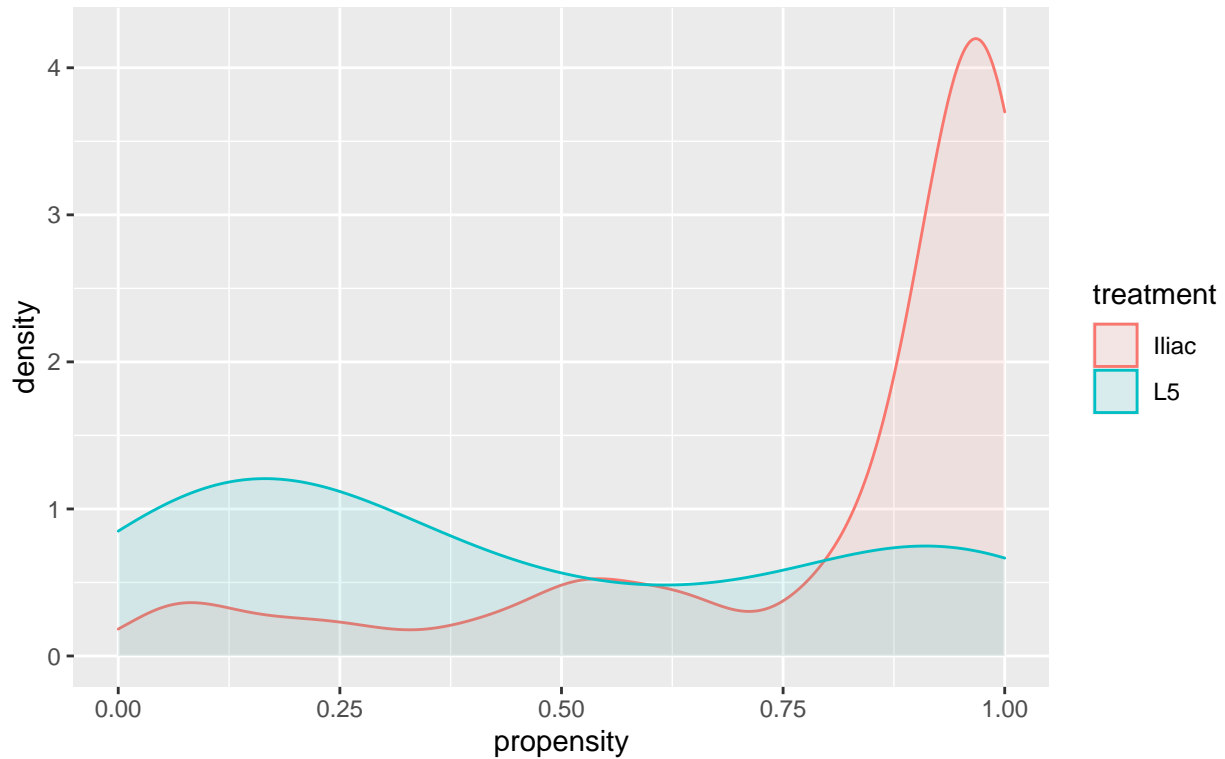
Confounding Variables

- Age
- BMI_First Visit
- ASA classification
- Prior Spine Surgery
- Pelvic Tilt
- Interbody Fusion
- essg_category
- Number of Posterior Instrumented Levels
- Decompression
- Osteotomy
- 3CO
- Global Tilt
- ODI - Score (%)
- Site
- RLL
- Thoracolumbar L2-T10

Propensity Score

Boosting

Propensity of being Iliac
AUC: 0.794232649071359



Propensity threshold 0

```
type N
1: Iliac 62
2: L5 33
```

Average Treatment Effects

Change Outcome: 2Y. ODI - Score (%)
RMSE: 1.87597008221879
Relative RMSE: 11 %
ATE (Iliac - L5): 2.28859206652256
ATE (std Error) 3.0163955335439
t.test p-value 0.4500721979047

Change Outcome: 2Y. SRS22 - SRS Subtotal score
RMSE: 0.0677572313730967
Relative RMSE: 10.5 %
ATE (Iliac - L5): -0.121269807651714

ATE (std Error) 0.0963355893791713
t.test p-value 0.211499343397105

Change Outcome: 2Y. SF36 - MCS
RMSE: 1.18542606011678
Relative RMSE: 10.6 %
ATE (Iliac - L5): -8.53424591638825
ATE (std Error) 2.10433619593006
t.test p-value 0.000108685015626566

Change Outcome: 2Y. SF36 - PCS
RMSE: 1.00281113744506
Relative RMSE: 11.4 %
ATE (Iliac - L5): 3.7254071619404
ATE (std Error) 1.39632477271231
t.test p-value 0.00910004974766004

Change Outcome: 2Y. Static Major curve Cobb angle
RMSE: 1.79730755473613
Relative RMSE: 10.7 %
ATE (Iliac - L5): -3.77493753339697
ATE (std Error) 2.62283844166339
t.test p-value 0.154078967443753

Change Outcome: 2Y. Lordosis (top of L1-S1)
RMSE: 1.43144214950921
Relative RMSE: 10.2 %
ATE (Iliac - L5): -2.82656381900987
ATE (std Error) 2.11606510029105
t.test p-value 0.185367526299193

Change Outcome: 2Y. Global Tilt
RMSE: 1.26797202855974
Relative RMSE: 11.2 %
ATE (Iliac - L5): -2.10605030930881
ATE (std Error) 1.77835848129565
t.test p-value 0.239903835024382

Change Outcome: 2Y. Sagittal Balance
RMSE: 5.48069081400331
Relative RMSE: 12.3 %
ATE (Iliac - L5): -31.4239462013874
ATE (std Error) 6.17069571404714
t.test p-value 2.7925194514364e-06

Change Outcome: 2Y. Pelvic Tilt
RMSE: 0.686370000774106

Relative RMSE: 10.7 %
ATE (Iliac - L5): -1.23643427112795
ATE (std Error) 1.06037621463388
t.test p-value 0.247065396831419

Change Outcome: 5Y. ODI - Score (%)
RMSE: 2.14989902715853
Relative RMSE: 11.8 %
ATE (Iliac - L5): 4.37692980597417
ATE (std Error) 2.89262416621149
t.test p-value 0.134504868202367

Change Outcome: 5Y. SRS22 - SRS Subtotal score
RMSE: 0.0890291888703972
Relative RMSE: 12.1 %
ATE (Iliac - L5): -0.141362373960299
ATE (std Error) 0.112791506670361
t.test p-value 0.213987150005

Change Outcome: 5Y. SF36 - MCS
RMSE: 1.23998742773052
Relative RMSE: 11.1 %
ATE (Iliac - L5): -1.23943371494611
ATE (std Error) 2.129777638801
t.test p-value 0.562366110266767

Change Outcome: 5Y. SF36 - PCS
RMSE: 1.28108934164723
Relative RMSE: 12.3 %
ATE (Iliac - L5): -0.741132228970528
ATE (std Error) 1.79381872838274
t.test p-value 0.680684955688572

Change Outcome: 5Y. Static Major curve Cobb angle
RMSE: 2.24537282332346
Relative RMSE: 13.5 %
ATE (Iliac - L5): -14.3338200818409
ATE (std Error) 2.88613908279963
t.test p-value 7.21809546572264e-06

Change Outcome: 5Y. Lordosis (top of L1-S1)
RMSE: 1.74080956513496
Relative RMSE: 11.5 %
ATE (Iliac - L5): -7.50128152221441
ATE (std Error) 2.79712118641821
t.test p-value 0.00964902387602563

Change Outcome: 5Y. Global Tilt
RMSE: 1.86731890972435
Relative RMSE: 14 %
ATE (Iliac - L5): -5.7355126443186
ATE (std Error) 2.01370486022807
t.test p-value 0.00617163836381443

Change Outcome: 5Y. Sagittal Balance
RMSE: 8.68464053243286
Relative RMSE: 15.3 %
ATE (Iliac - L5): -26.431733392179
ATE (std Error) 10.6626164840166
t.test p-value 0.0165258703606279

Change Outcome: 5Y. Pelvic Tilt
RMSE: 0.98904692508419
Relative RMSE: 13.1 %
ATE (Iliac - L5): -3.46296255303813
ATE (std Error) 1.22730810296541
t.test p-value 0.00663638740939602

Outcome: major_complications
RMSE: 0.240688353150007
Relative RMSE: 12.5 %
ATE (Iliac - L5): 0.199063587332646
ATE (std Error) 0.332494465440839
t.test p-value 0.551555854198408

Outcome: reiqs
RMSE: 0.236907858643153
Relative RMSE: 13.1 %
ATE (Iliac - L5): -0.438903406646887
ATE (std Error) 0.252027272783311
t.test p-value 0.08647850326874