$$Nearest

Call

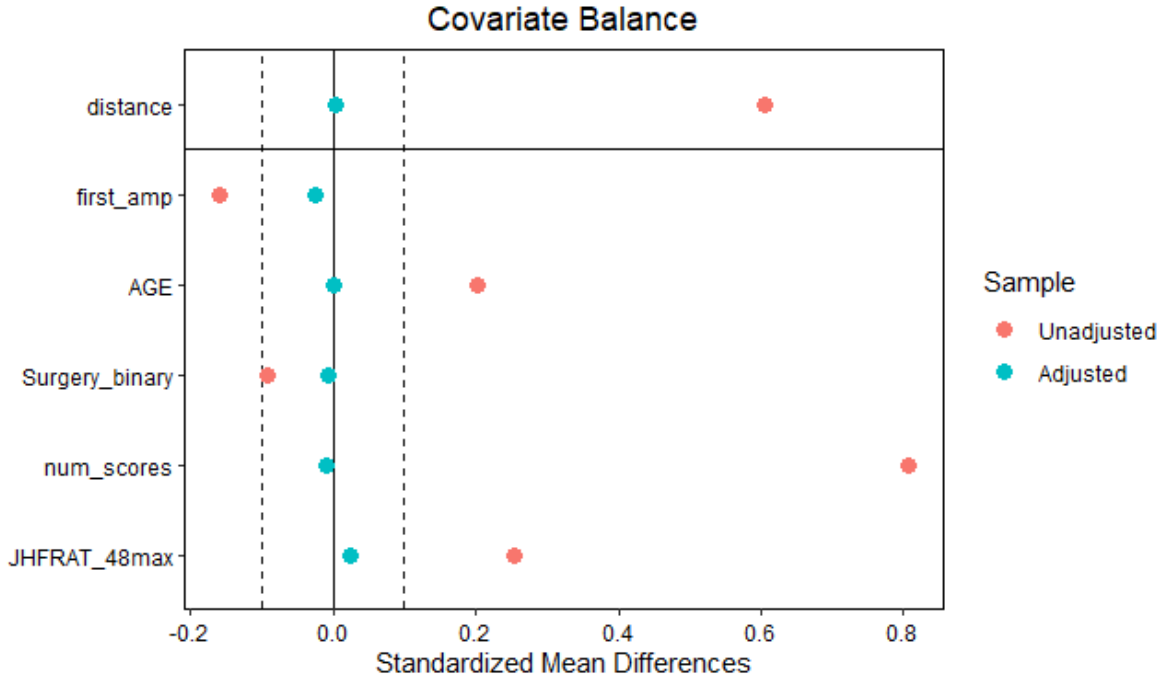
```
 matchit(formula = FallInjuryYN ~ first_amp + AGE + Surgery_binary +
    num_scores + JHFRAT_48max, data = by.ID, method = "nearest",
    distance = "glm", caliper = 1, std.caliper = TRUE, ratio = 100)
```

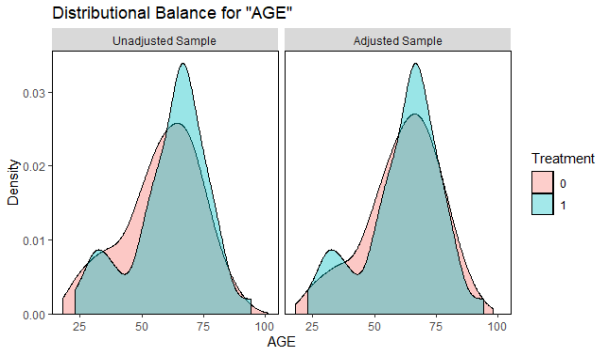
Balance Measures

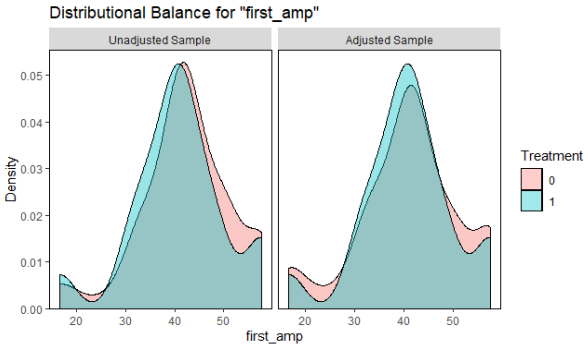
	Type	Diff.Adj
distance	Distance	0.0032
first_amp	Contin.	-0.0240
AGE	Contin.	0.0019
Surgery_binary	Binary	-0.0039
num_scores	Contin.	-0.0086
JHFRAT_48max	Contin.	0.0229

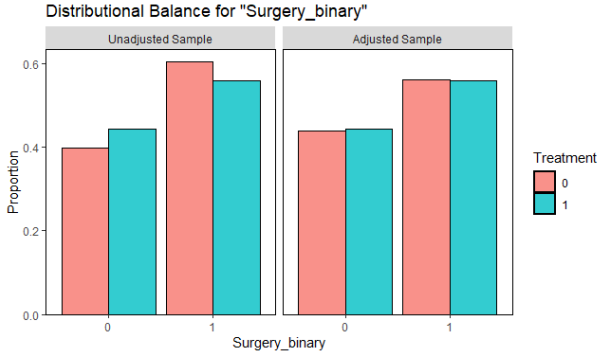
Sample sizes

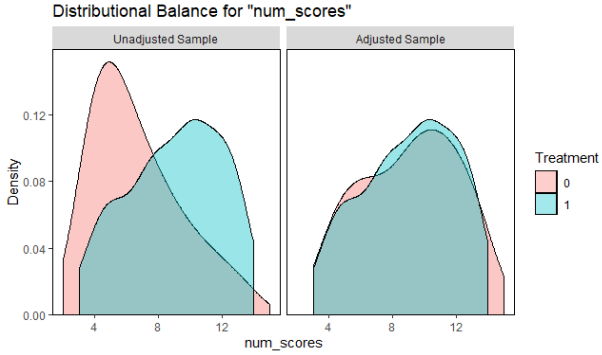
	Control	Treated
All	23401.	52
Matched (ESS)	5048.16	52
Matched (Unweighted)	5139.	52
Unmatched	18262.	0

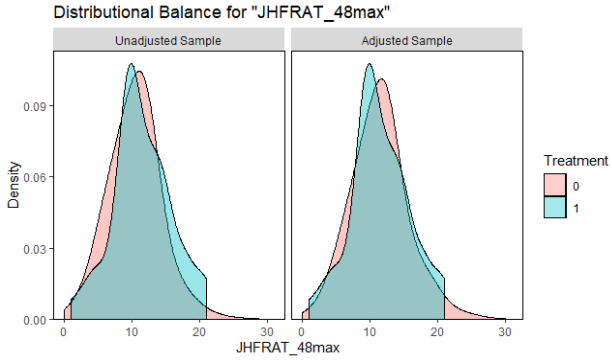



Distributional Balance for "AGE"
Unadjusted Sample
Adjusted Sample
Density
AGE
Treatment
0
1


Distributional Balance for "first_amp"
Unadjusted Sample
Adjusted Sample
Density
first_amp
Treatment
0
1

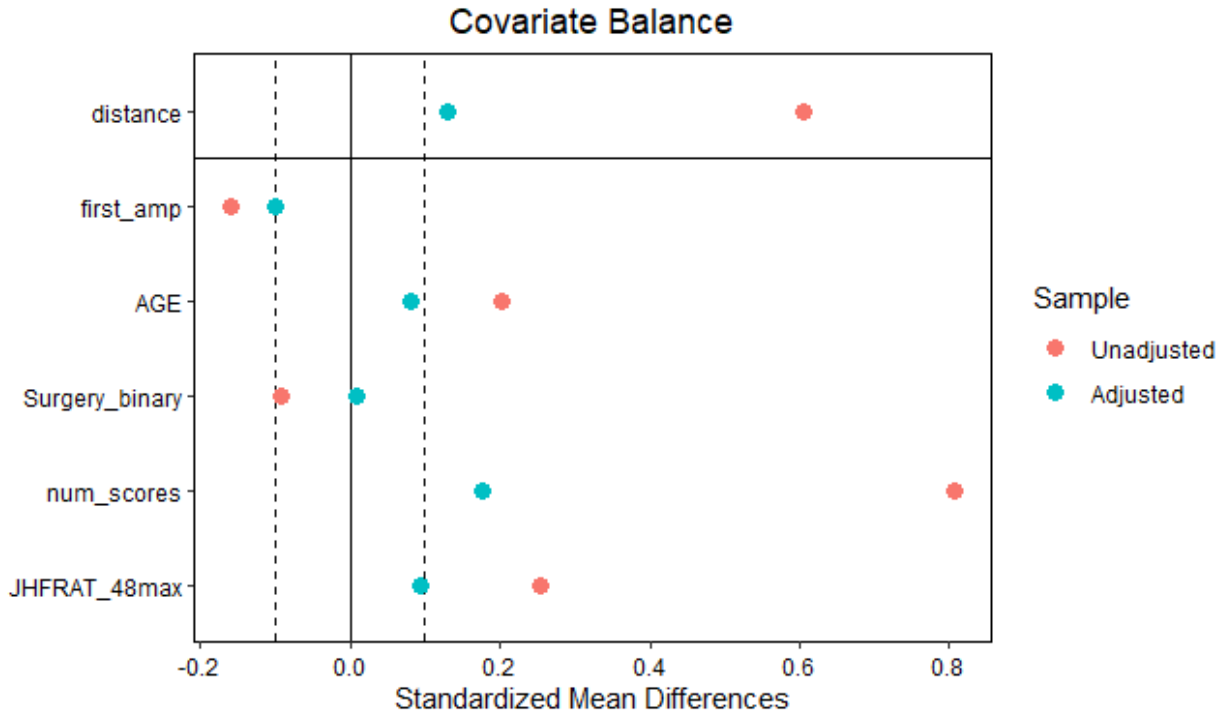

Distributional Balance for "Surgery_binary"
Unadjusted Sample
Adjusted Sample
Proportion
Surgery_binary
Treatment
0
1

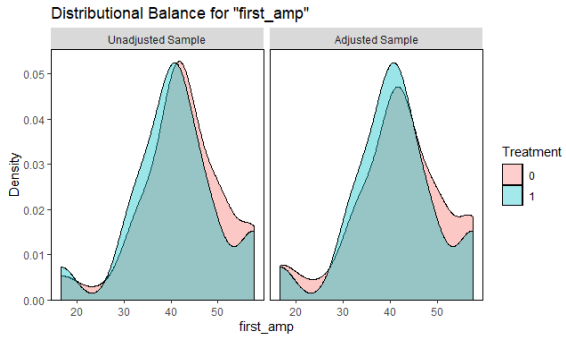

Distributional Balance for "num_scores"
Unadjusted Sample
Adjusted Sample
Density
num_scores
Treatment
0
1

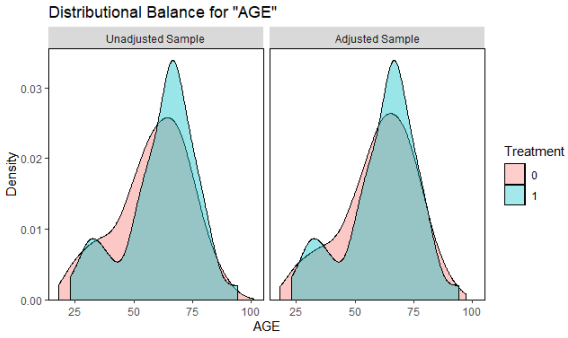

Distributional Balance for "JHFRAT_48max"
Unadjusted Sample
Adjusted Sample
Density
JHFRAT_48max
Treatment
0
1

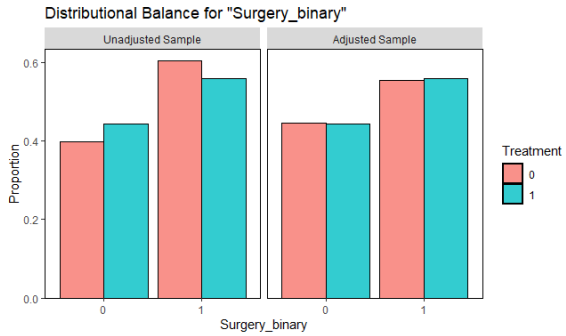
Optimal - Caliper Ignored

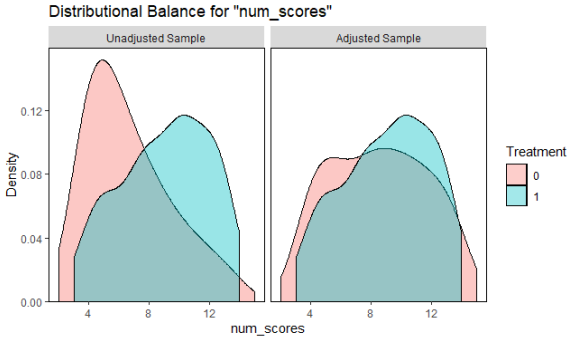
```
Call
 matchit(formula = FallInjuryYN ~ first_amp + AGE + Surgery_binary +
    num_scores + JHFRAT_48max, data = by.ID, method = "optimal",
    distance = "glm", caliper = 1, std.caliper = TRUE, ratio = 100)

Balance Measures
                     Type Diff.Adj
distance         Distance   0.1294
first_amp         Contin.  -0.0999
AGE               Contin.   0.0817
Surgery_binary     Binary   0.0038
num_scores        Contin.   0.1768
JHFRAT_48max      Contin.   0.0933

Sample sizes
           Control Treated
All          23401      52
Matched       5200      52
Unmatched    18201       0
```

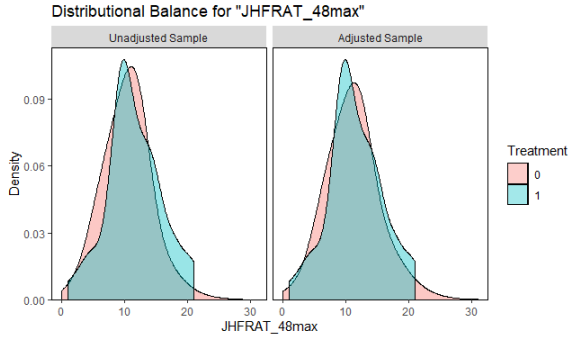



Distributional Balance for "first_amp"
Unadjusted Sample
Adjusted Sample
Density
first_amp
Treatment
0
1


Distributional Balance for "AGE"
Unadjusted Sample
Adjusted Sample
Density
AGE
Treatment
0
1

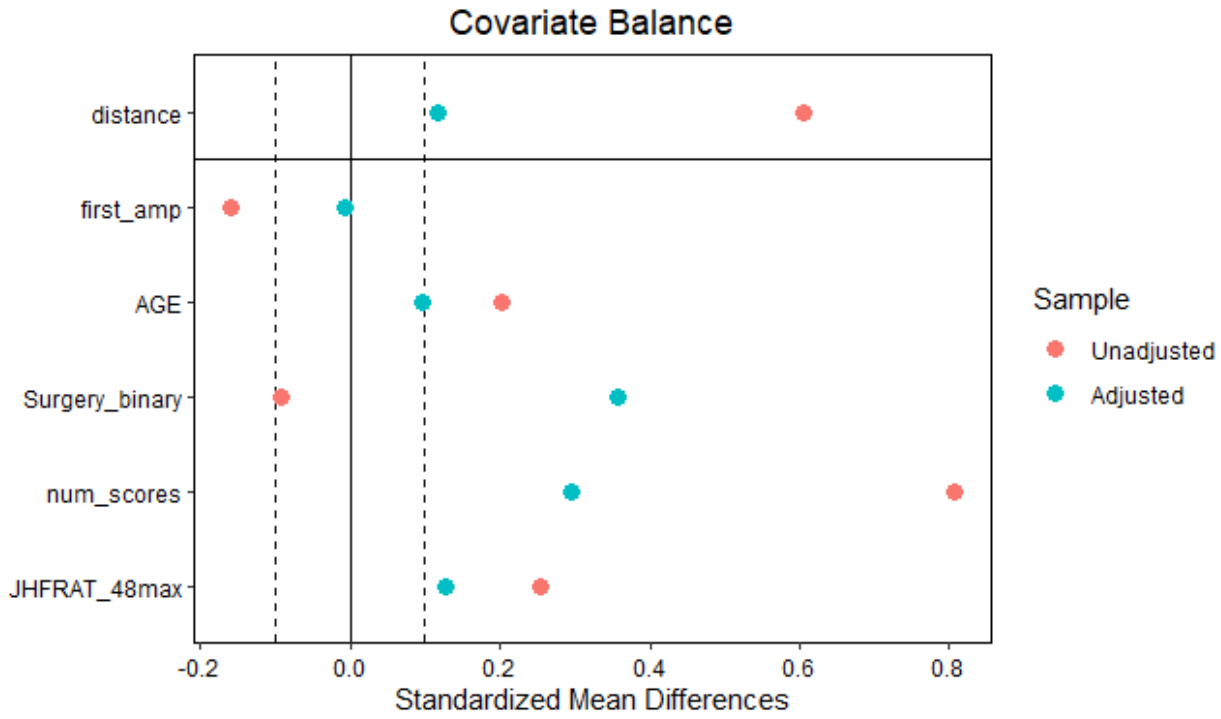

Distributional Balance for "Surgery_binary"
Unadjusted Sample
Adjusted Sample
Proportion
Surgery_binary
Treatment
0
1

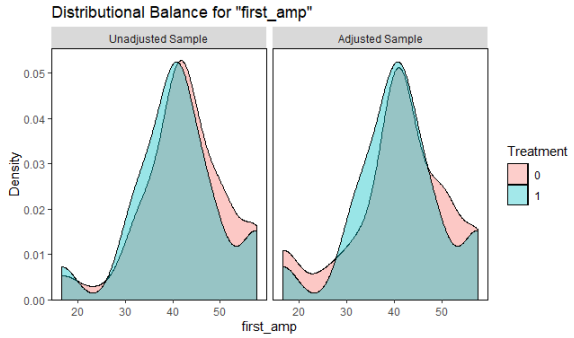

Distributional Balance for "num_scores"
Unadjusted Sample
Adjusted Sample
Density
num_scores
Treatment
0
1

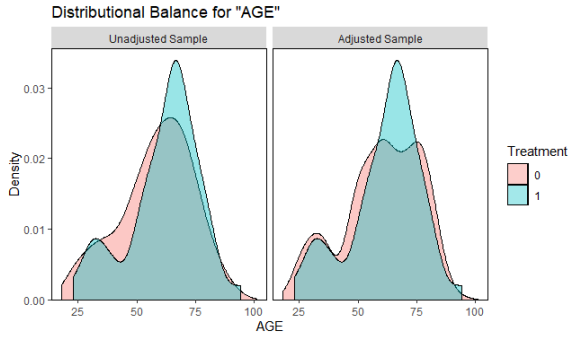

Distributional Balance for "JHFRAT_48max"
Unadjusted Sample
Adjusted Sample
Density
JHFRAT_48max
Treatment
0
1

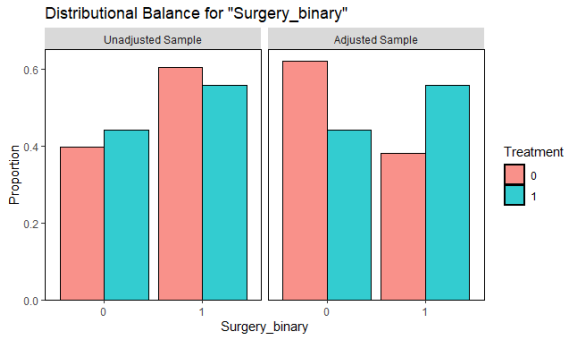
Full - Ratio Ignored

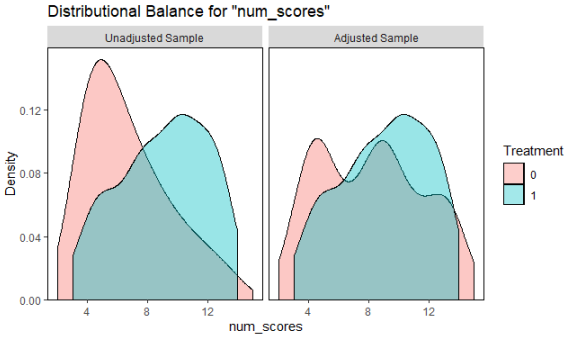
```
Call
 matchit(formula = FallInjuryYN ~ first_amp + AGE + Surgery_binary +
    num_scores + JHFRAT_48max, data = by.ID, method = "full",
    distance = "glm", caliper = 1, std.caliper = TRUE, ratio = 100)

Balance Measures
                     Type Diff.Adj
distance         Distance   0.1168
first_amp         Contin.  -0.0075
AGE               Contin.   0.0963
Surgery_binary     Binary   0.1776
num_scores        Contin.   0.2960
JHFRAT_48max      Contin.   0.1282

Sample sizes
                      Control Treated
All                  23401.        52
Matched (ESS)           74.26      52
Matched (Unweighted) 23385.        52
Unmatched               16.         0
```

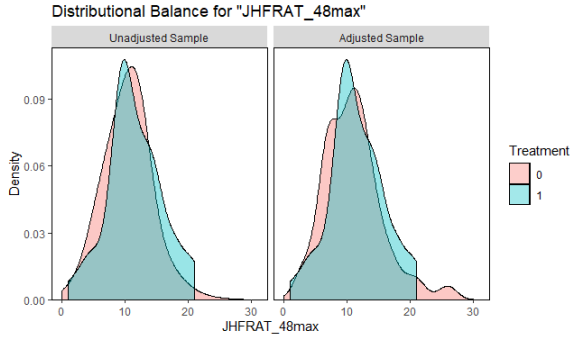



Distributional Balance for "first_amp"
Unadjusted Sample
Adjusted Sample
Density
first_amp
Treatment
0
1


Distributional Balance for "AGE"
Unadjusted Sample
Adjusted Sample
Density
AGE
Treatment
0
1

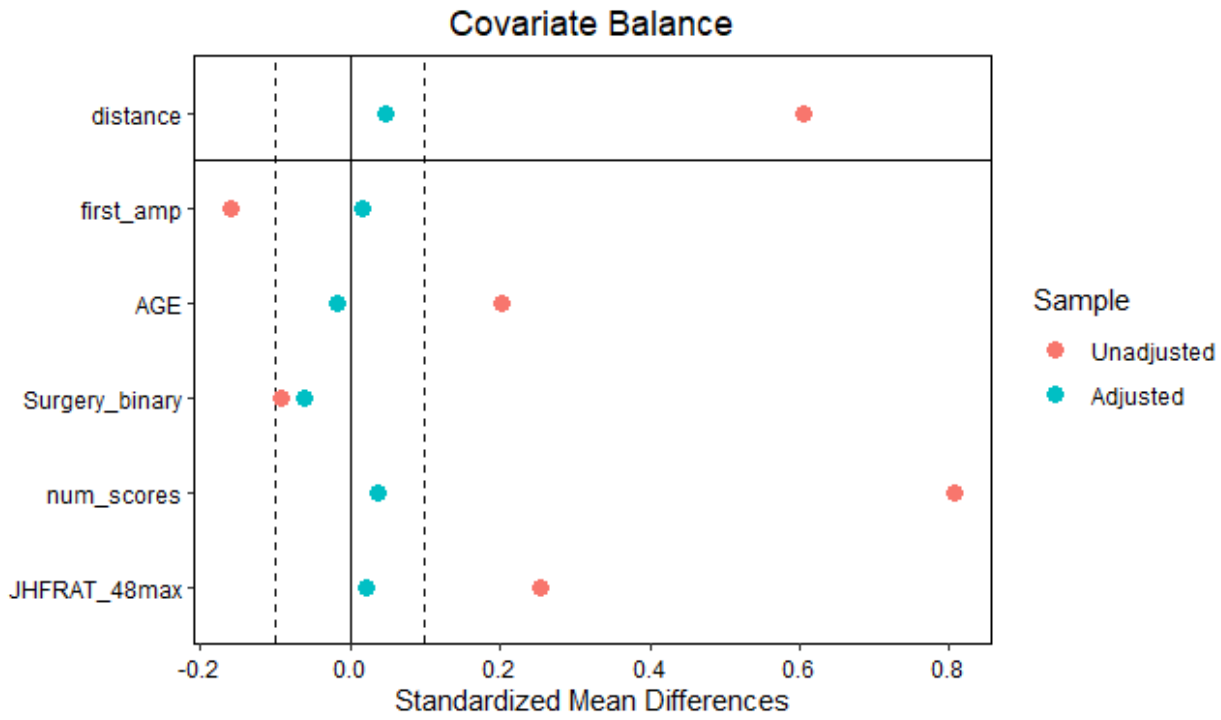

Distributional Balance for "Surgery_binary"
Unadjusted Sample
Adjusted Sample
Proportion
Surgery_binary
Treatment
0
1

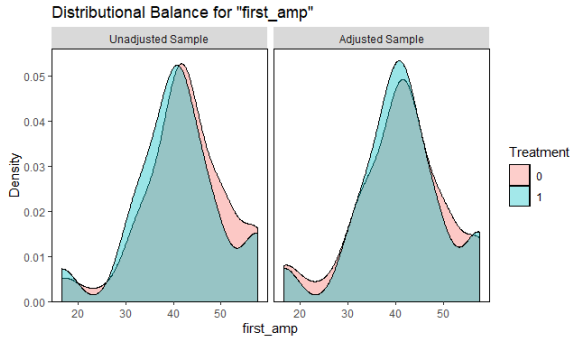

Distributional Balance for "num_scores"
Unadjusted Sample
Adjusted Sample
Density
num_scores
Treatment
0
1

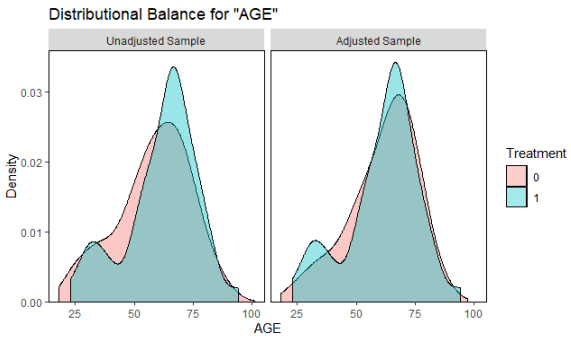

Distributional Balance for "JHFRAT_48max"
Unadjusted Sample
Adjusted Sample
Density
JHFRAT_48max
Treatment
0
1

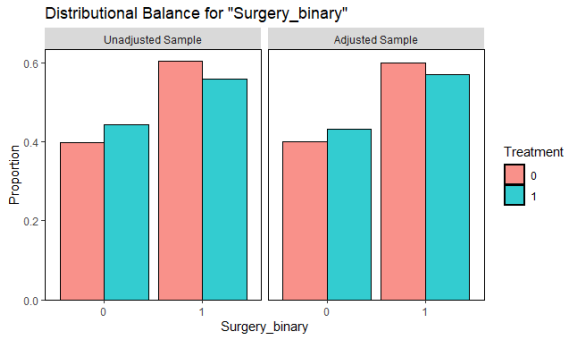
Genetic

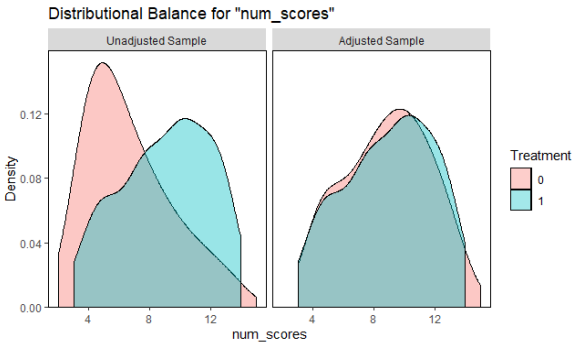
```
Call
 matchit(formula = FallInjuryYN ~ first_amp + AGE + Surgery_binary +
    num_scores + JHFRAT_48max, data = by.ID, method = "genetic",
    distance = "glm", caliper = 1, std.caliper = TRUE, ratio = 100)

Balance Measures
                    Type Diff.Adj
distance        Distance   0.0478
first_amp        Contin.   0.0165
AGE              Contin.  -0.0181
Surgery_binary    Binary  -0.0304
num_scores       Contin.   0.0373
JHFRAT_48max     Contin.   0.0209

Sample sizes
           Control Treated
All          23401      52
Matched       5100      51
Unmatched    18301       1
```

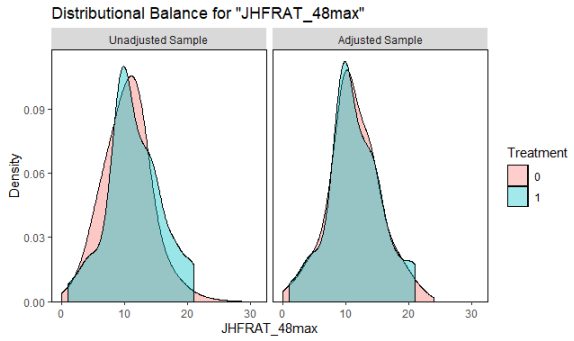



Distributional Balance for "first_amp"
Unadjusted Sample
Adjusted Sample
Density
first_amp
Treatment
0
1


Distributional Balance for "AGE"
Unadjusted Sample
Adjusted Sample
Density
AGE
Treatment
0
1

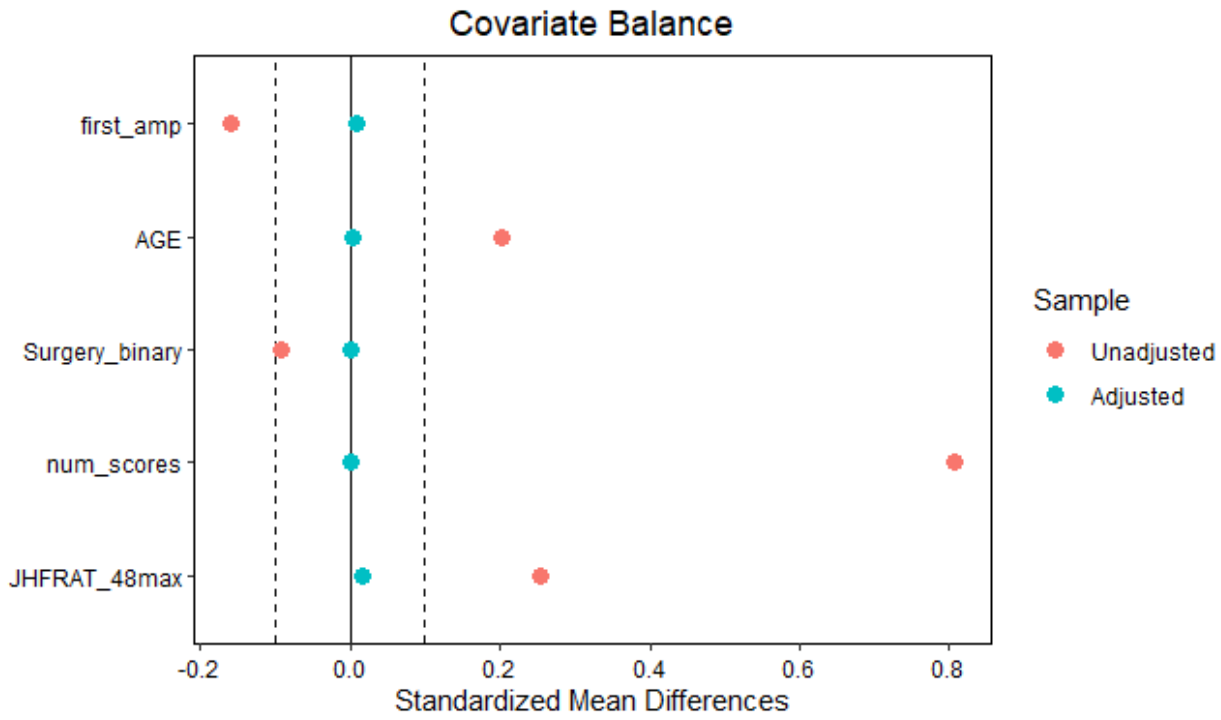

Distributional Balance for "Surgery_binary"
Unadjusted Sample
Adjusted Sample
Proportion
Surgery_binary
Treatment
0
1

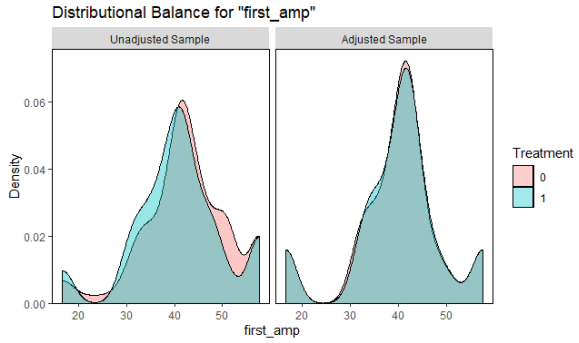

Distributional Balance for "num_scores"
Unadjusted Sample
Adjusted Sample
Density
num_scores
Treatment
0
1

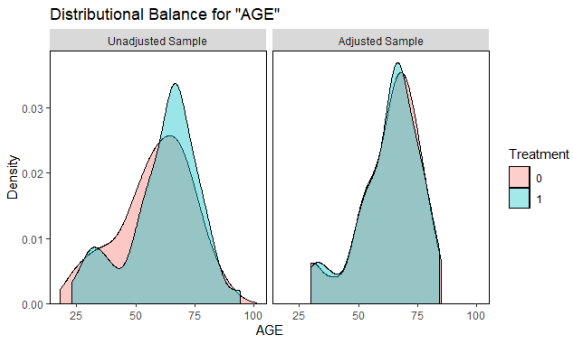

Distributional Balance for "JHFRAT_48max"
Unadjusted Sample
Adjusted Sample
Density
JHFRAT_48max
Treatment
0
1

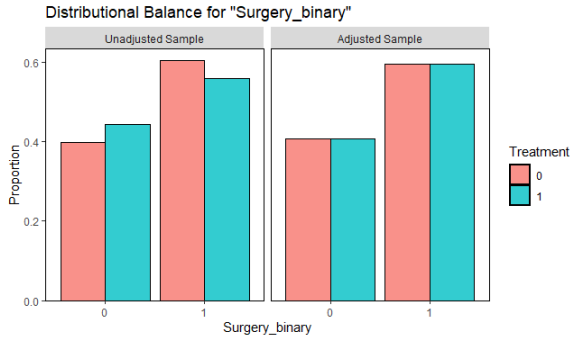
Coarsened exact matching - Distance, Caliper, Ratio ignored

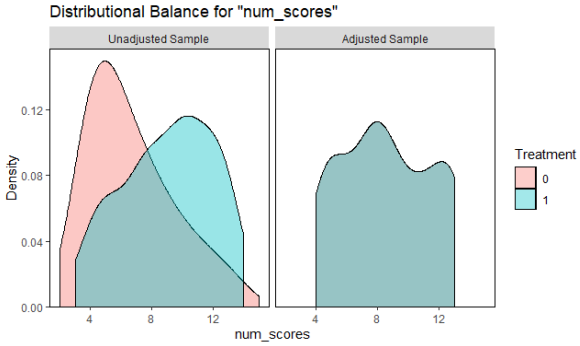
```
Call
 matchit(formula = FallInjuryYN ~ first_amp + AGE + Surgery_binary +
    num_scores + JHFRAT_48max, data = by.ID, method = "cem",
    distance = "glm", caliper = 1, std.caliper = TRUE, ratio = 100)

Balance Measures
                  Type Diff.Adj
first_amp      Contin.   0.0097
AGE            Contin.   0.0030
Surgery_binary  Binary   0.0000
num_scores     Contin.   0.0000
JHFRAT_48max   Contin.   0.0152

Sample sizes
                     Control Treated
All                  23401.      52
Matched (ESS)           47.97    32
Matched (Unweighted)    96.      32
Unmatched            23305.      20
```

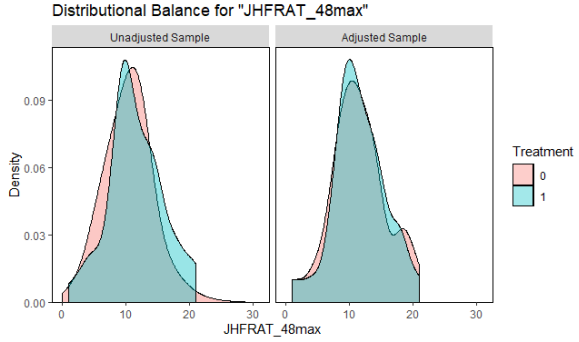



Distributional Balance for "first_amp"
Unadjusted Sample
Adjusted Sample
Density
first_amp
Treatment
0
1


Distributional Balance for "AGE"
Unadjusted Sample
Adjusted Sample
Density
AGE
Treatment
0
1

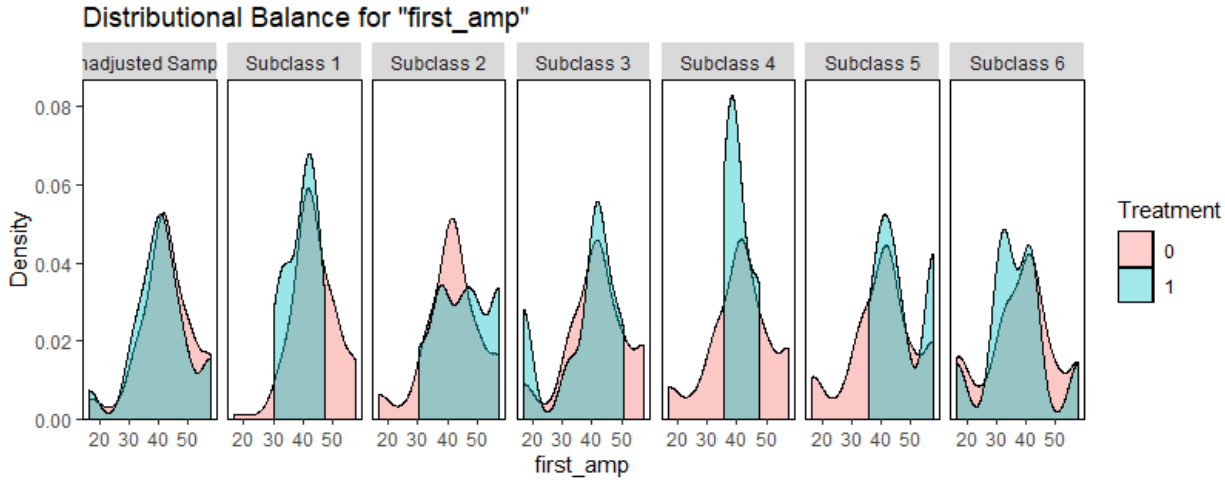

Distributional Balance for "Surgery_binary"
Unadjusted Sample
Adjusted Sample
Proportion
Surgery_binary
Treatment
0
1

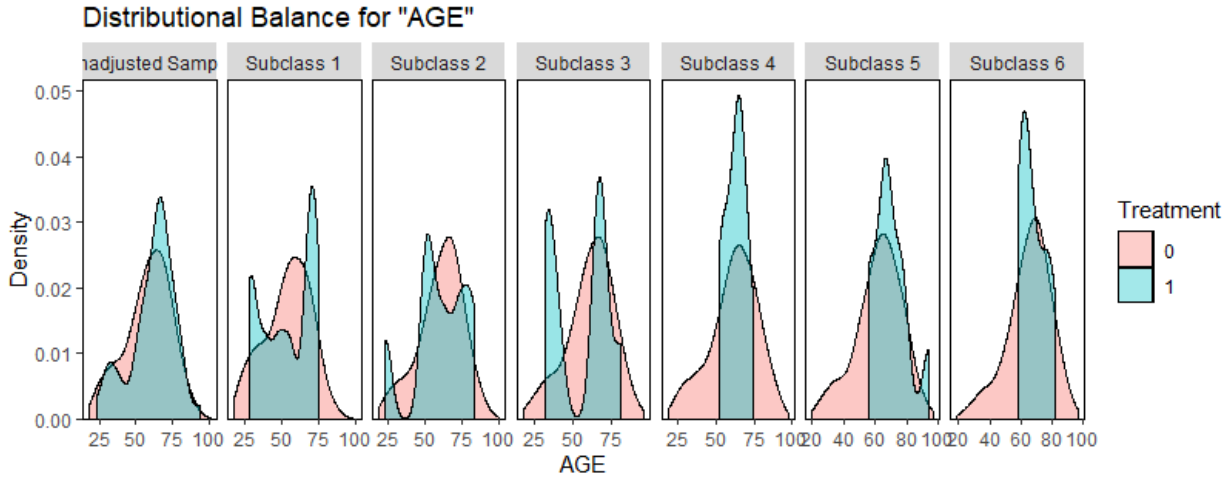

Distributional Balance for "num_scores"
Unadjusted Sample
Adjusted Sample
Density
num_scores
Treatment
0
1

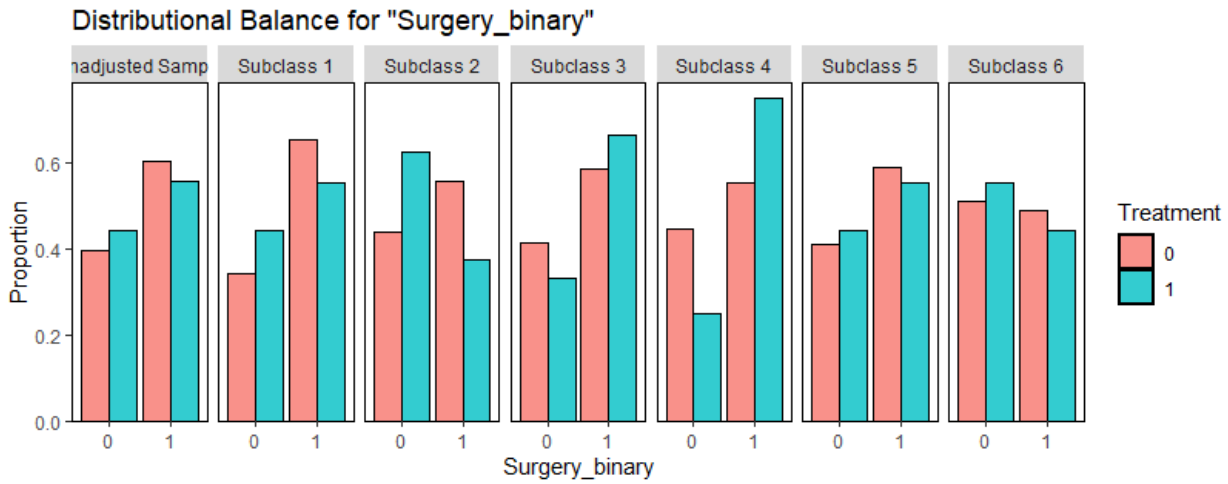

Distributional Balance for "JHFRAT_48max"
Unadjusted Sample
Adjusted Sample
Density
JHFRAT_48max
Treatment
0
1

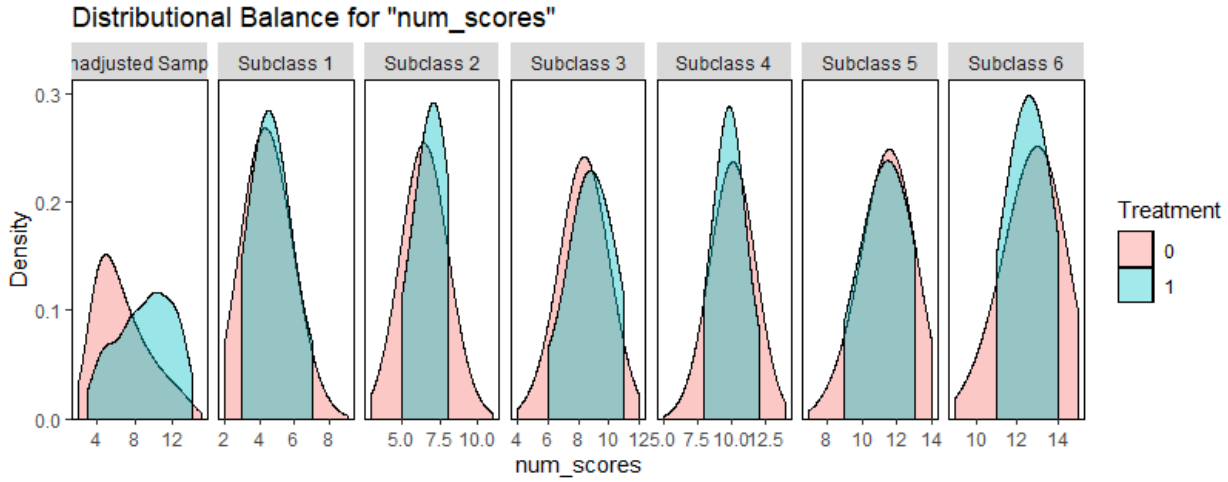
Subclass - Caliper and Ratio ignored

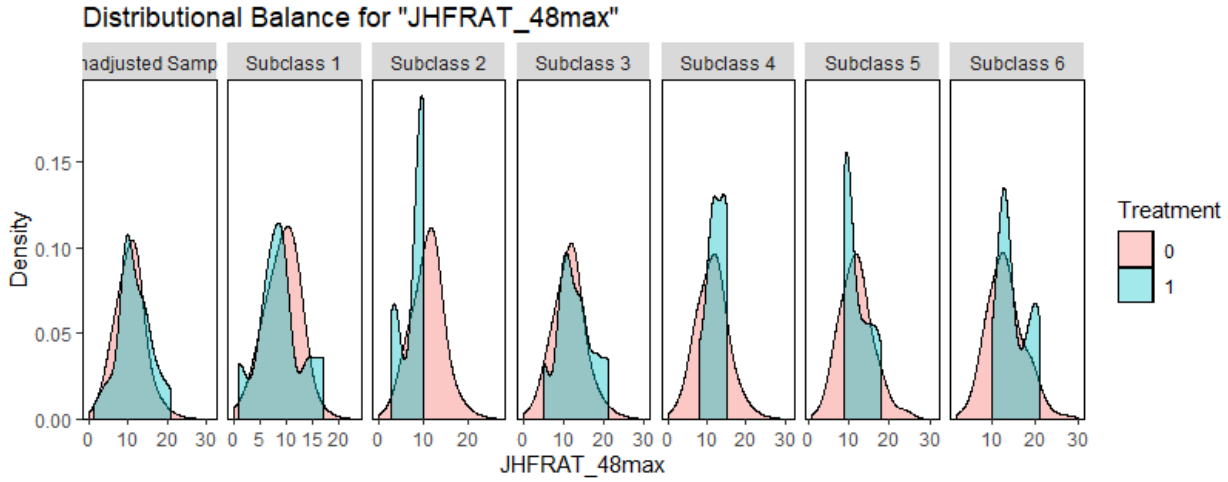
```
Call
 matchit(formula = FallInjuryYN ~ first_amp + AGE + Surgery_binary +
    num_scores + JHFRAT_48max, data = by.ID, method = "subclass",
    distance = "glm", caliper = 1, std.caliper = TRUE, ratio = 100)

Balance measures across subclasses
                    Type Diff.Adj
distance        Distance   0.0475
first_amp        Contin.  -0.0302
AGE              Contin.   0.0359
Surgery_binary    Binary  -0.0152
num_scores       Contin.   0.0288
JHFRAT_48max     Contin.   0.0431

Sample sizes by subclass
             1    2    3    4   5    6   All
Control  10534 5370 3393 1898 935 1271 23401
Treated      9    8    9    8   9    9    52
Total    10543 5378 3402 1906 944 1280 23453
```






Distributional Balance for "Surgery_binary"
nadjusted Samp
Subclass 1
Subclass 2
Subclass 3
Subclass 4
Subclass 5
Subclass 6
Proportion
0.0
0.2
0.4
0.6
0
1
Surgery_binary
Treatment
0
1


Distributional Balance for "num_scores"
nadjusted Samp
Subclass 1
Subclass 2
Subclass 3
Subclass 4
Subclass 5
Subclass 6
Density
0.0
0.1
0.2
0.3
num_scores
Treatment
0
1

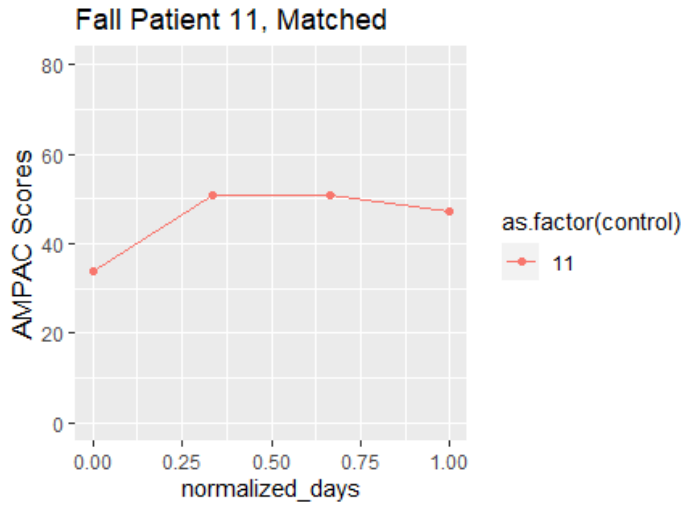

Distributional Balance for "JHFRAT_48max"
nadjusted Samp
Subclass 1
Subclass 2
Subclass 3
Subclass 4
Subclass 5
Subclass 6
Density
0.00
0.05
0.10
0.15
JHFRAT_48max
Treatment
0
1

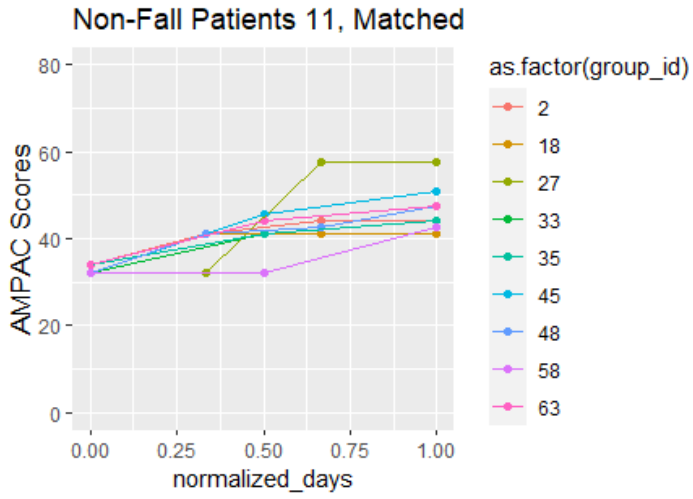
Example Patients - Method - “Coerced Exact Matching”

- 23/52 Fall Patients
- 67 Non-Fall Patients

9 Matches

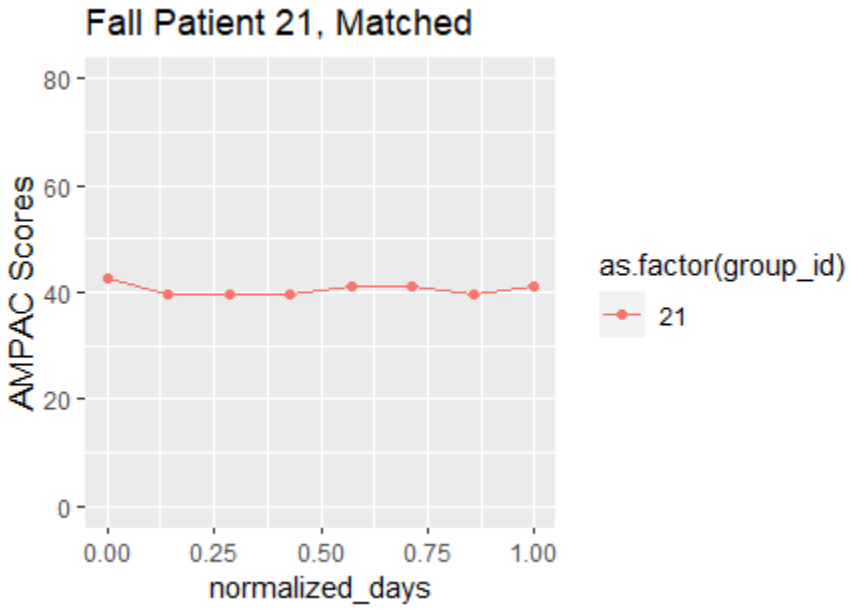
	First AMPAC	Age	Surgery	LOS	JHFRAT_48max
Faller	33.99	48	Y	3.117361	10
Median Values Matched Non-Fallers	32.23	48	Y	3.308	10

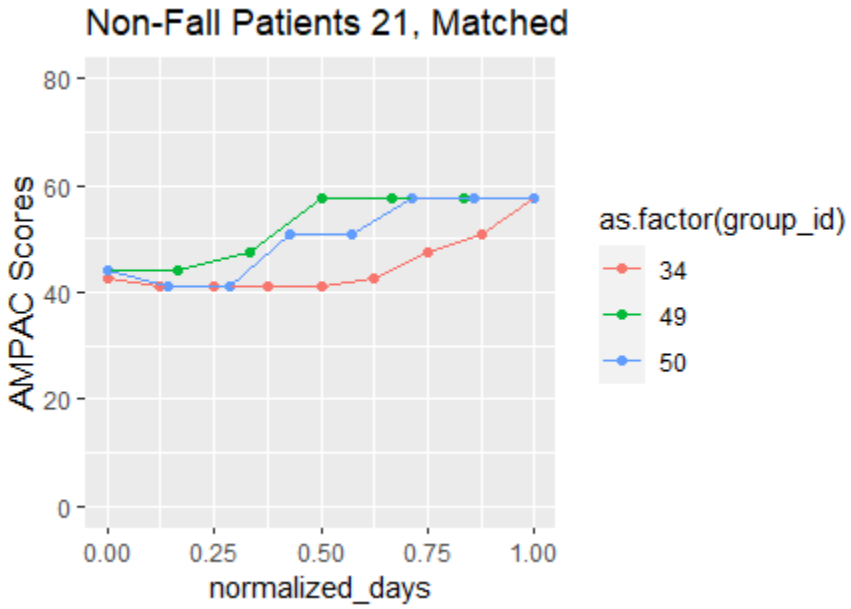




3 Matches

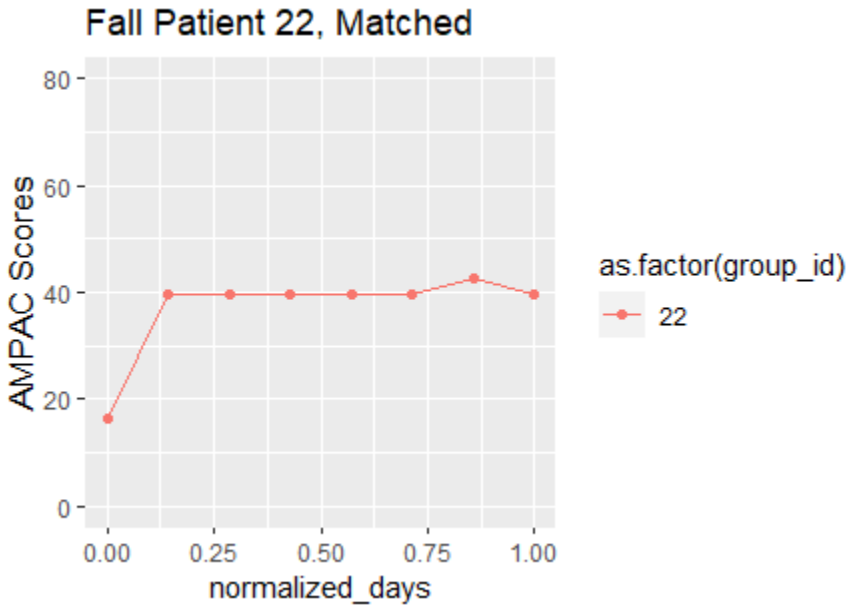
	First AMPAC	Age	Surgery	LOS	JHFRAT_48max
Faller	42.48	66	Y	7.918750	11
Median Values Matched Non-Fallers	43.99	67	Y	8.240	11

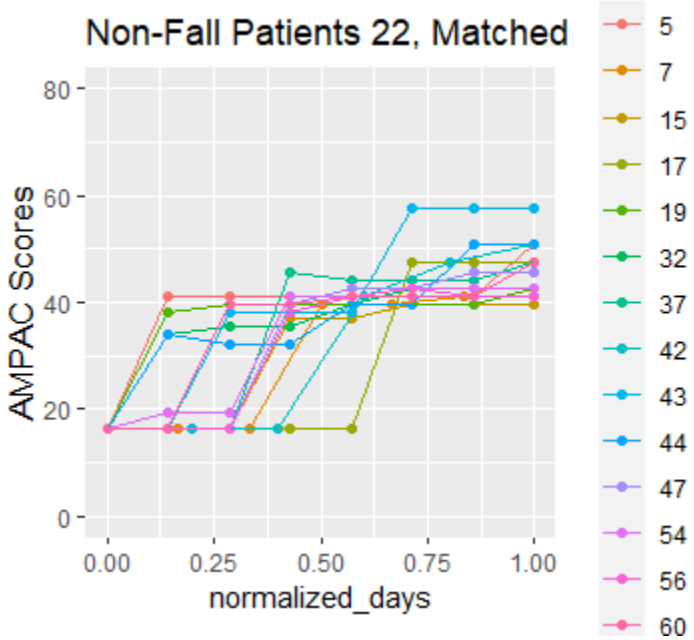


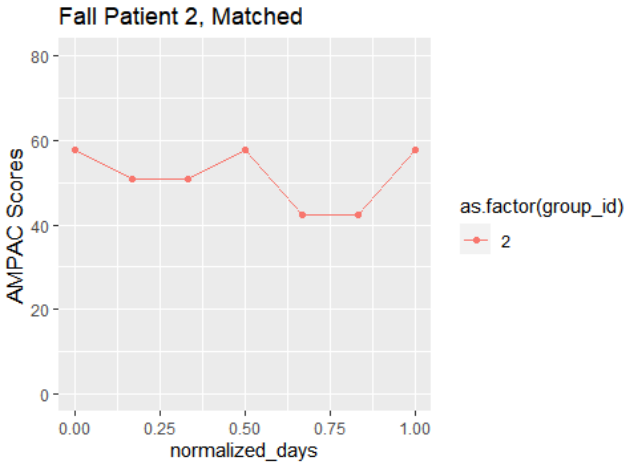


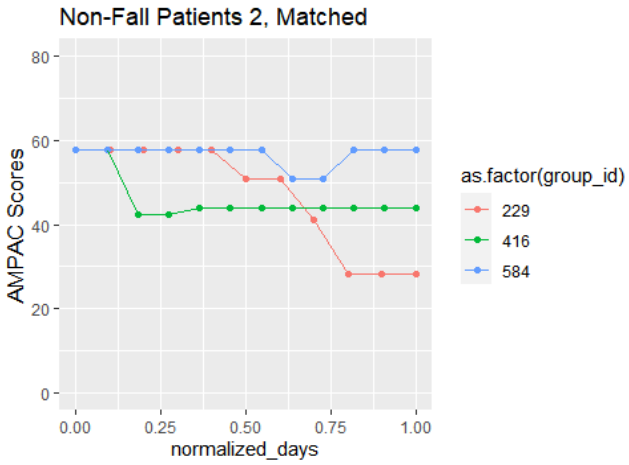
14 Matches

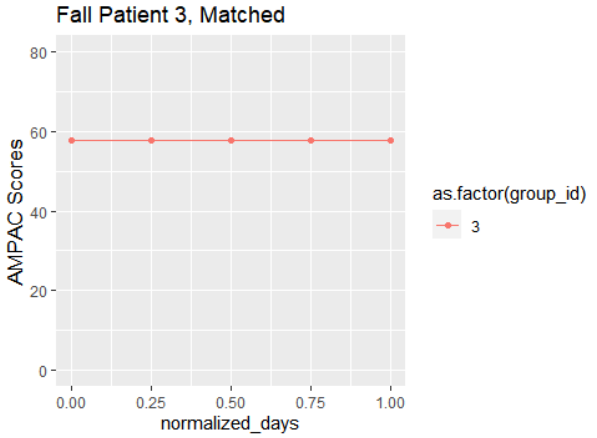
	First AMPAC	Age	Surgery	LOS	JHFRAT_48max
Faller	16.59	71	Y	7.411111	15
Median Values Matched Non-Fallers	16.59	72.50	Y	7.348	14

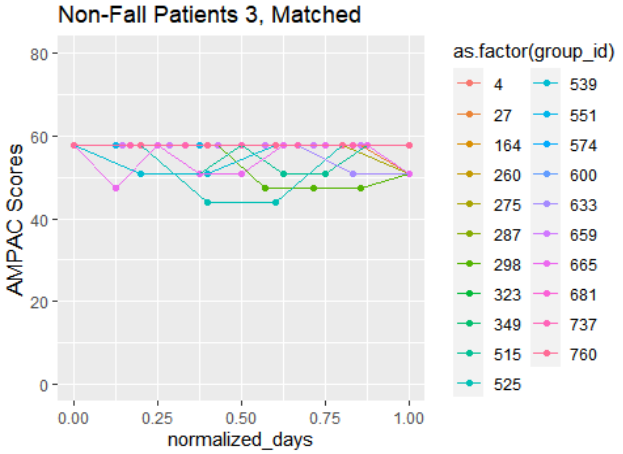


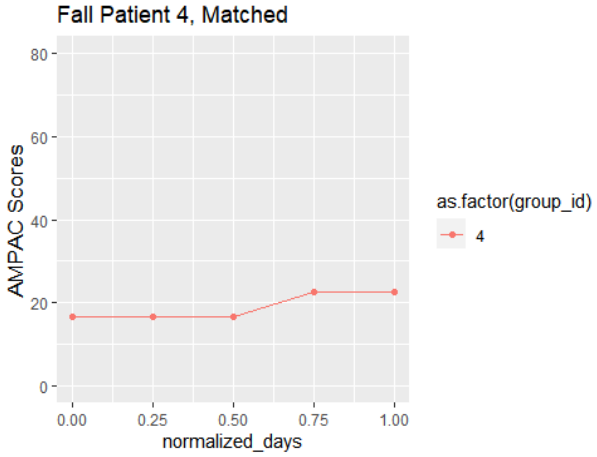


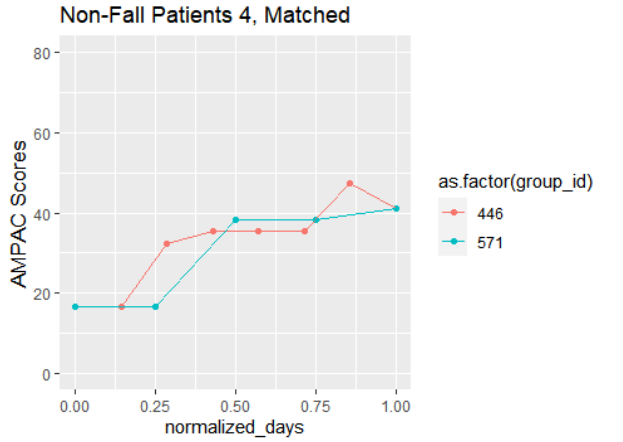

Fall Patient 2, Matched
AMPAC Scores
normalized_days
as.factor(group_id)
2


Non-Fall Patients 2, Matched
AMPAC Scores
normalized_days
as.factor(group_id)
229
416
584


Fall Patient 3, Matched
AMPAC Scores
normalized_days
as.factor(group_id)
3


Non-Fall Patients 3, Matched
AMPAC Scores
normalized_days
as.factor(group_id)
4
27
164
260
275
287
298
323
349
515
525
539
551
574
600
633
659
665
681
737
760


Fall Patient 4, Matched
AMPAC Scores
normalized_days
as.factor(group_id)
4


Non-Fall Patients 4, Matched
AMPAC Scores
normalized_days
as.factor(group_id)
446
571