```
../LassoSelect_UnivariateResponse.r


      Factors File: Telomere_Dev_SNPs_comorb.tsv
Responses Colname: telom_obslen_mean
  Covariates File: covariates.lst
 Targ. Var.  File: Telomere_SNPs.lst
      Output Root: results
```

```
Target Vars (172):
  [1] "chr1_11164270_G_A"
  [2] "chr1_20589745_G_A"
  [3] "chr1_27893147_C_G"
  [4] "chr1_31814028_G_A"
  [5] "chr1_39570256_G_T"
  [6] "chr1_44786343_T_A"
  [7] "chr1_92376810_A_C"
  [8] "chr1_110367775_G_T"
  [9] "chr1_147270300_A_C"
 [10] "chr1_151391723_G_A"
 [11] "chr1_226389605_C_T"
 [12] "chr2_17692910_C_G"
 [13] "chr2_28875677_T_A"
 [14] "chr2_54248777_G_A"
 [15] "chr2_58756974_C_T"
 [16] "chr2_215356147_G_T"
 [17] "chr3_24306309_T_C"
 [18] "chr3_47597167_A_G"
 [19] "chr3_72842396_A_C"
 [20] "chr3_101548541_T_C"
 [21] "chr3_128496978_G_A"
 [22] "chr3_128635107_C_A"
 [23] "chr3_160401737_G_A"
 [24] "chr3_169764547_T_C"
 [25] "chr3_169835282_C_A"
 [26] "chr4_7042653_C_T"
 [27] "chr4_9925343_T_G"
 [28] "chr4_48841355_A_G"
 [29] "chr4_121808258_CACTT_C"
 [30] "chr4_163099022_C_A"
 [31] "chr4_163144568_A_G"
 [32] "chr4_163181563_G_A"
 [33] "chr4_163227972_T_C"
 [34] "chr5_1271959_C_T"
 [35] "chr5_1285859_C_A"
 [36] "chr5_1285917_G_A"
 [37] "chr5_1287079_G_A"
 [38] "chr5_1289162_G_A"
 [39] "chr5_1293652_G_A"
 [40] "chr5_1294051_C_T"
 [41] "chr5_1296643_T_C"
 [42] "chr5_1319882_C_A"
 [43] "chr5_1349749_G_A"
 [44] "chr5_1611568_A_G"
 [45] "chr5_133108436_G_A"
 [46] "chr5_139555995_G_A"
 [47] "chr6_204031_G_A"
 [48] "chr6_32923162_C_A"
 [49] "chr6_109280351_A_G"
 [50] "chr7_69010_G_A"
 [51] "chr7_23890697_T_C"
 [52] "chr7_50218107_T_A"
 [53] "chr7_76681467_T_C"
 [54] "chr7_100182660_G_A"
 [55] "chr7_123782390_T_A"
 [56] "chr7_124819798_C_T"
 [57] "chr7_124929862_G_A"
 [58] "chr7_129038182_C_G"
 [59] "chr7_130023656_C_T"
 [60] "chr7_159286503_G_A"
 [61] "chr7_159326530_A_G"
 [62] "chr8_21989075_G_C"
 [63] "chr8_47972876_T_A"
 [64] "chr8_55754795_A_ATATAT"
 [65] "chr8_55754795_A_ATACATTATATATTTATATTATATATAAAATACATATAT"
 [66] "chr8_70052508_G_A"
 [67] "chr8_73046483_G_A"
 [68] "chr8_94518741_G_A"
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 [83] "chr11_128630320_A_G"
 [84] "chr12_11604809_G_A"
 [85] "chr12_24609175_T_C"
 [86] "chr12_54300776_C_A"
 [87] "chr12_88561692_G_A"
 [88] "chr12_111472415_A_G"
 [89] "chr12_120467092_T_C"
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 [91] "chr12_123148383_G_A"
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 [93] "chr13_72766039_G_A"
 [94] "chr14_20344792_G_A"
 [95] "chr14_21472989_C_T"
 [96] "chr14_64561153_C_T"
 [97] "chr14_65077649_C_A"
 [98] "chr14_72951387_G_A"
 [99] "chr14_72996771_G_A"
[100] "chr14_95715023_A_T"
[101] "chr15_41740185_C_G"
[102] "chr15_50087022_T_C"
[103] "chr15_56481820_A_C"
[104] "chr15_74044292_T_C"
[105] "chr16_3600969_G_A"
[106] "chr16_8979203_T_C"
[107] "chr16_14558363_T_C"
[108] "chr16_28402196_A_G"
[109] "chr16_48356601_G_T"
[110] "chr16_50055127_C_A"
[111] "chr16_50155018_G_A"
[112] "chr16_67583283_A_G"
[113] "chr16_67658960_T_C"
[114] "chr16_67660141_C_T"
[115] "chr16_69369109_A_AACTCCATCT"
[116] "chr16_69953861_C_T"
[117] "chr16_70356607_C_T"
[118] "chr16_73037482_C_T"
[119] "chr16_73037482_C_A"
[120] "chr16_74457341_G_A"
[121] "chr16_74620498_G_A"
[122] "chr16_74630845_T_C"
[123] "chr16_82170153_C_T"
[124] "chr16_88039423_C_A"
[125] "chr16_88069404_C_T"
[126] "chr16_90087407_T_C"
[127] "chr17_1790953_C_T"
[128] "chr17_1879658_A_G"
[129] "chr17_7857079_G_A"
[130] "chr17_8161461_C_G"
[131] "chr17_30925685_T_C"
[132] "chr17_43370860_A_G"
[133] "chr17_67744897_A_G"
[134] "chr17_76005025_A_G"
[135] "chr17_78182667_T_C"
[136] "chr17_78187152_C_T"
[137] "chr18_657458_A_G"
[138] "chr18_658423_A_G"
[139] "chr18_674579_C_T"
[140] "chr18_689437_C_T"
[141] "chr18_709396_G_A"
[142] "chr18_710980_G_A"
[143] "chr18_44402414_T_A"
[144] "chr18_44571296_C_T"
[145] "chr18_54271677_C_G"
[146] "chr18_76979269_A_G"
[147] "chr18_80227857_C_T"
[148] "chr19_4105091_G_T"
[149] "chr19_13109889_C_G"
[150] "chr19_22032639_A_G"
[151] "chr19_33262088_G_T"
[152] "chr19_44908684_T_C"
[153] "chr19_56197298_G_A"
[154] "chr19_56197298_G_T"
[155] "chr19_56858687_G_A"
[156] "chr20_36897237_A_C"
[157] "chr20_36921384_C_A"
[158] "chr20_36921384_C_CAGAG"
[159] "chr20_36956221_T_G"
[160] "chr20_63640895_T_C"
[161] "chr20_63661765_C_T"
[162] "chr20_63667021_A_T"
[163] "chr20_63679453_C_T"
[164] "chr20_63689775_G_A"
[165] "chr20_63694480_C_A"
[166] "chr20_63697127_C_T"
[167] "chr20_63711343_T_C"
[168] "chr20_63727517_A_C"
[169] "chr20_64046747_G_A"
[170] "chr22_16988159_C_A"
[171] "chr11_5225911_G_A"
[172] "chr11_5227002_T_A"


Covariates (4):
[1] "age"             "isMale"          "current_smoker"  "smoking_history"

Responses: telom_obslen_mean
```
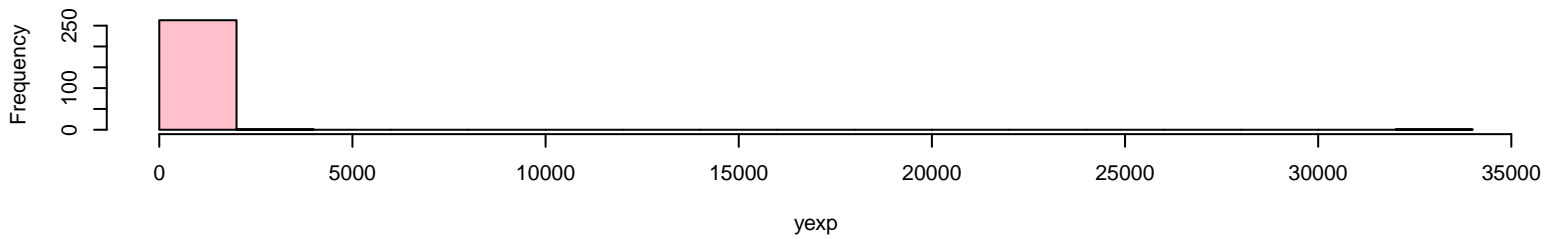
telom_obslen_mean

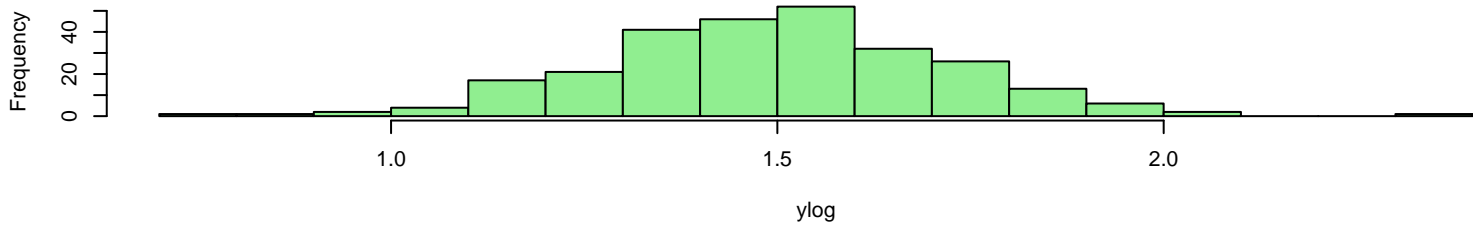*Shapiro–Wilks P-value: 0.0000*
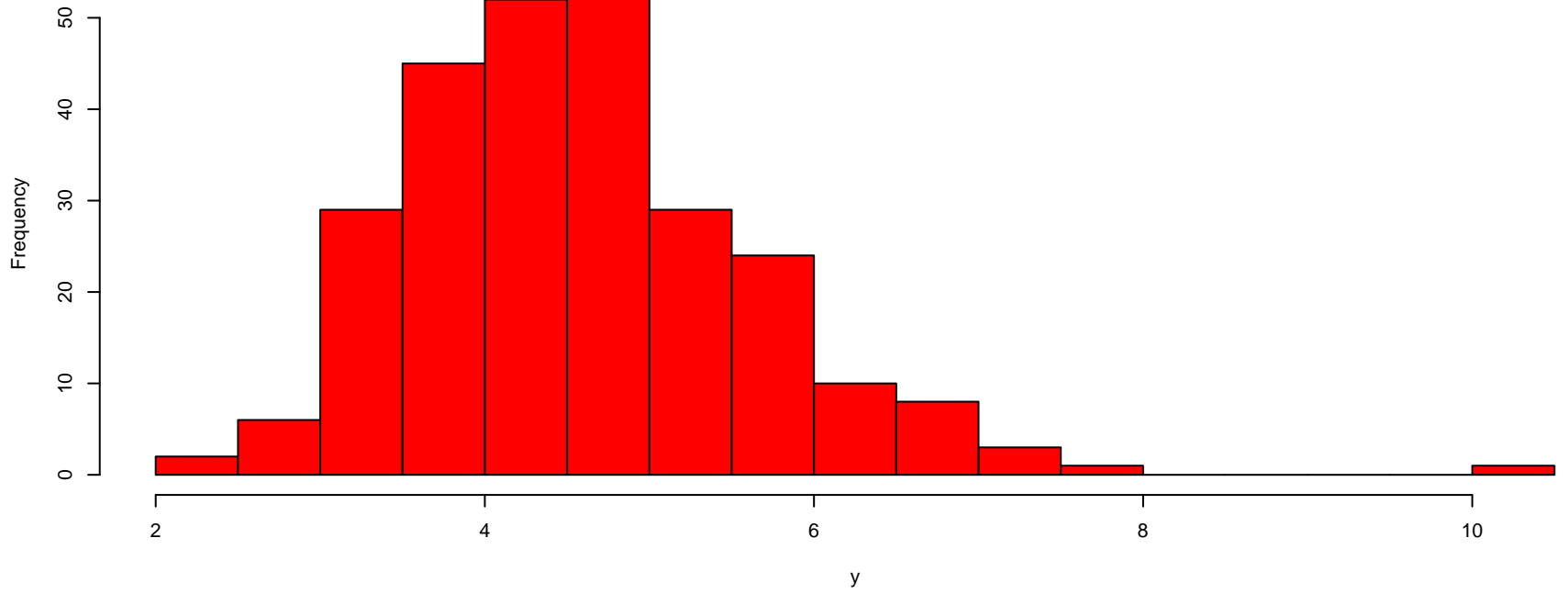
exp(telom_obslen_mean)

Shapiro–Wilks P-value: 0.0000

log(telom_obslen_mean)

Shapiro–Wilks P-value: 0.6852

sqrt(telom_obslen_mean)

Shapiro–Wilks P-value: 0.0097
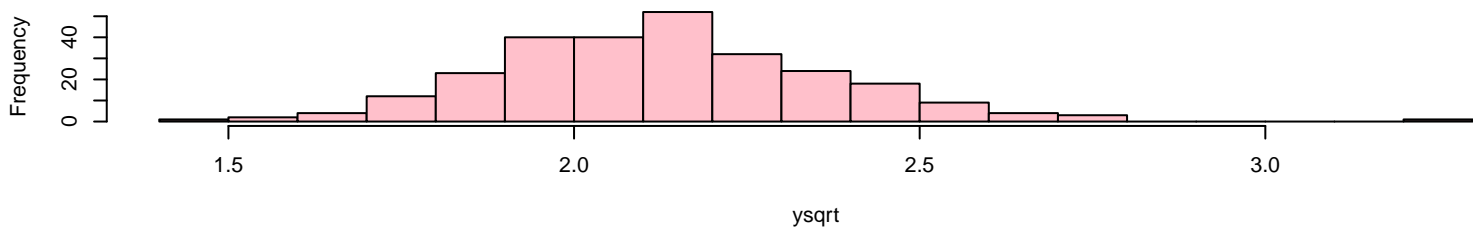
Min Deviation Lambda: 0.09184012 Log():-2.387706

Stricter Deviation Lambda: 0.2121626 Log():-1.550402

Looser Deviation Lambda: 0.03975539 Log():-3.22501

Response: telom_obslen_mean

Num Variables Selected (including 4 required covariates)
167   168   167   167   163   156   151   140   118   98   75   51   20   9   4

Looser   MinDev   Stricter

Mean−Squared Error

Log(λ)
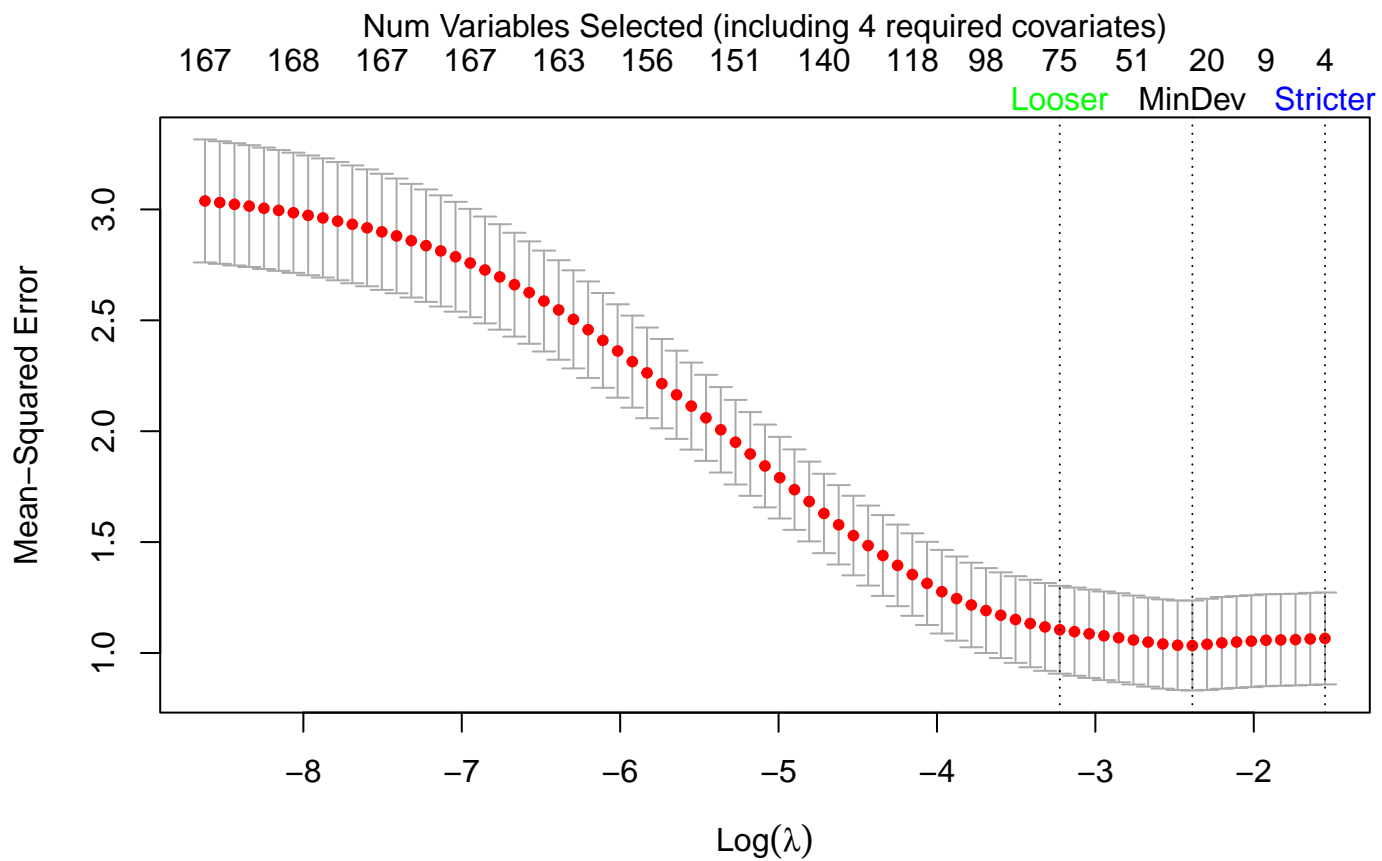
Response: telom_obslen_mean

Targets: 172

75 (43.6 %)

20 (11.6 %)

0 (0.0 %)

Loose

Mindev

Strict
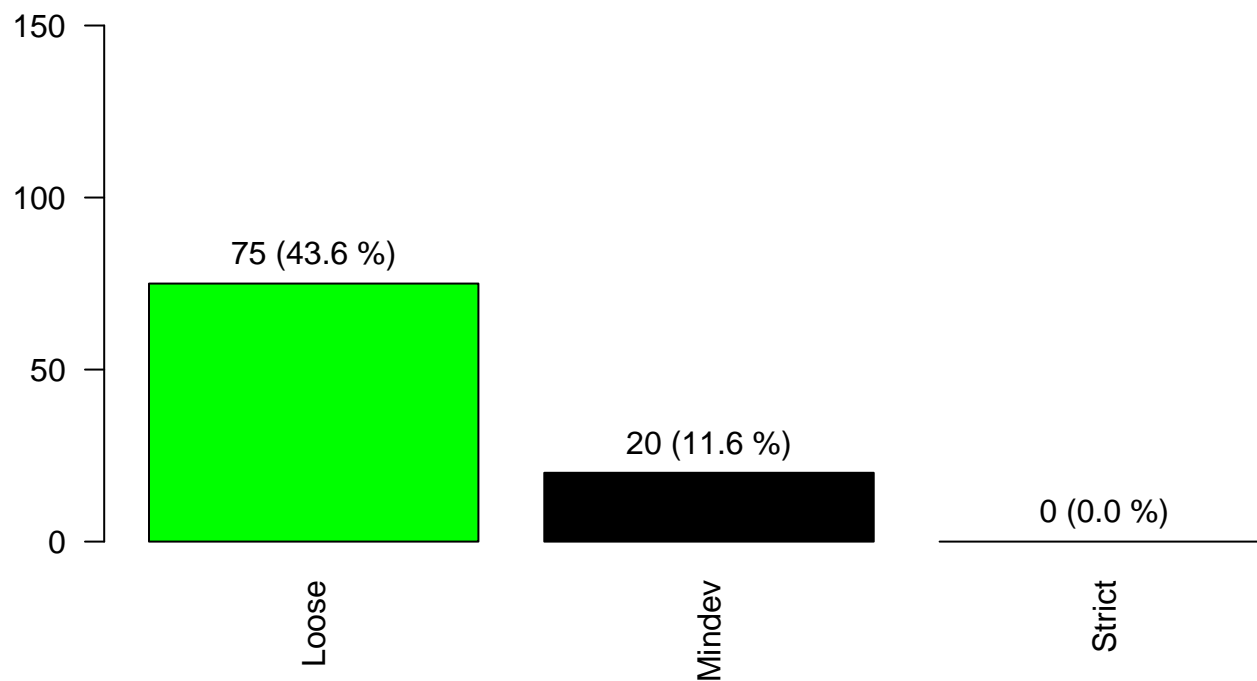
```
Cutoff: Loose

Call:
lm(formula = as.formula(model_str), data = as.data.frame(cbind(y,
    x)))

Residuals:
     Min       1Q   Median       3Q      Max
-1.57252 -0.49840 -0.01112  0.44255  2.32479

Coefficients:
                              Estimate Std. Error t value Pr(>|t|)
(Intercept)                   4.075720   0.719373   5.666 5.53e-08 ***
age                          -0.020772   0.003854  -5.390 2.13e-07 ***
chr17_1790953_C_T             0.958928   0.191752   5.001 1.32e-06 ***
chr3_169764547_T_C           -0.718294   0.182554  -3.935 0.000118 ***
chr19_44908684_T_C            0.836166   0.216200   3.868 0.000152 ***
chr5_1293652_G_A              4.315336   1.321143   3.266 0.001298 **
chr18_44402414_T_A           -0.733783   0.231348  -3.172 0.001774 **
current_smoker               -0.511705   0.179040  -2.858 0.004751 **
chr8_55754795_A_ATATAT        0.474851   0.173342   2.739 0.006758 **
chr8_70052508_G_A            -0.647652   0.240715  -2.691 0.007787 **
chr17_78182667_T_C            0.387797   0.146979   2.638 0.009038 **
chr16_69369109_A_AACTCCATCT   0.424490   0.171872   2.470 0.014425 *
chr16_69953861_C_T            0.404960   0.164173   2.467 0.014548 *
chr5_1349749_G_A             -1.295139   0.541683  -2.391 0.017808 *
chr18_44571296_C_T            0.446624   0.196930   2.268 0.024489 *
chr16_67583283_A_G           -0.536170   0.236953  -2.263 0.024812 *
chr6_109280351_A_G           -0.361696   0.160675  -2.251 0.025556 *
chr14_65077649_C_A            0.361801   0.164049   2.205 0.028655 *
chr2_54248777_G_A             0.460244   0.210388   2.188 0.029953 *
chr19_56197298_G_T            3.707130   1.740072   2.130 0.034456 *
chr13_41120964_A_G            0.445328   0.212855   2.092 0.037788 *
chr15_74044292_T_C            0.306979   0.152635   2.011 0.045757 *
chr7_23890697_T_C            -0.345669   0.172669  -2.002 0.046755 *
chr20_36956221_T_G           -0.400720   0.206989  -1.936 0.054399 .
chr4_48841355_A_G            -0.317228   0.166634  -1.904 0.058497 .
chr16_8979203_T_C             0.286281   0.156243   1.832 0.068517 .
chr14_72951387_G_A            0.424554   0.235953   1.799 0.073599 .
chr7_50218107_T_A             0.495201   0.279810   1.770 0.078412 .
chr3_128496978_G_A            0.282732   0.160441   1.762 0.079683 .
chr20_63667021_A_T           -1.758353   1.043077  -1.686 0.093532 .
chr18_689437_C_T             -0.493090   0.293253  -1.681 0.094363 .
chr10_102135182_C_A           0.419347   0.251525   1.667 0.097163 .
chr11_128630320_A_G          -0.260193   0.157235  -1.655 0.099659 .
chr17_43370860_A_G           -0.328859   0.200449  -1.641 0.102577
chr1_31814028_G_A             0.246027   0.149983   1.640 0.102629
chr9_826585_C_G               0.260340   0.158813   1.639 0.102853
chr16_74457341_G_A           -2.897398   1.780547  -1.627 0.105386
chr9_34107507_C_T            -0.389534   0.240600  -1.619 0.107148
chr12_120467092_T_C           0.440193   0.272693   1.614 0.108179
chr1_92376810_A_C            -1.473870   0.916925  -1.607 0.109671
chr8_47972876_T_A            -0.342682   0.216852  -1.580 0.115756
chr7_100182660_G_A           -0.314085   0.203324  -1.545 0.124115
chr18_54271677_C_G            0.258377   0.175718   1.470 0.143150
chr1_226389605_C_T           -0.311657   0.213256  -1.461 0.145596
isMale                        0.166845   0.115593   1.443 0.150604
chr5_1611568_A_G              0.316192   0.224506   1.408 0.160694
chr10_94355078_G_A           -0.313938   0.233085  -1.347 0.179667
chr8_21989075_G_C             0.179931   0.139998   1.285 0.200315
chr17_7857079_G_A             0.277792   0.217397   1.278 0.202917
chr4_9925343_T_G              0.211551   0.167165   1.266 0.207275
chr11_108306370_T_A          -0.215369   0.171102  -1.259 0.209718
chr7_129038182_C_G            0.207003   0.164759   1.256 0.210555
chr11_5225911_G_A             0.254120   0.209355   1.214 0.226363
chr5_1285859_C_A              0.213877   0.183446   1.166 0.245161
chr5_1296643_T_C             -0.616507   0.555753  -1.109 0.268733
chr18_674579_C_T             -0.271810   0.250570  -1.085 0.279438
chr16_88069404_C_T           -0.471163   0.440885  -1.069 0.286609
chr7_124929862_G_A            1.340524   1.286374   1.042 0.298728
chr16_88039423_C_A           -0.145789   0.142561  -1.023 0.307810
chr8_73046439_G_A             0.158849   0.156579   1.014 0.311670
chr2_58756974_C_T            -0.252077   0.255056  -0.988 0.324286
chr5_1287079_G_A             -0.145058   0.180920  -0.802 0.423709
chr1_110367775_G_T           -0.120722   0.152258  -0.793 0.428866
chr4_121808258_CACTT_C       -0.125343   0.159462  -0.786 0.432851
chr3_47597167_A_G             0.443878   0.578090   0.768 0.443563
chr3_72842396_A_C             0.513001   0.678845   0.756 0.450792
chr14_64561153_C_T           -0.120053   0.160200  -0.749 0.454569
chr12_122459368_A_C           0.122103   0.169640   0.720 0.472571
chr17_8161461_C_G            -0.124671   0.177647  -0.702 0.483690
chr5_1289162_G_A              0.735958   1.053415   0.699 0.485654
chr16_48356601_G_T           -0.103731   0.154088  -0.673 0.501666
chr19_56858687_G_A            0.101311   0.156069   0.649 0.517050
chr14_21472989_C_T           -0.179166   0.278478  -0.643 0.520776
chr19_13109889_C_G           -0.108809   0.170281  -0.639 0.523617
smoking_history               0.061394   0.124868   0.492 0.623538
chr20_64046747_G_A           -0.075691   0.251054  -0.301 0.763377
chr7_69010_G_A               -0.113962   0.453228  -0.251 0.801750
chr19_4105091_G_T            -0.246765   1.081990  -0.228 0.819847
chr18_657458_A_G             -0.067953   0.359154  -0.189 0.850142
chr16_50155018_G_A            0.032394   0.335137   0.097 0.923101
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.7556 on 185 degrees of freedom
Multiple R-squared:  0.6439,Adjusted R-squared:  0.4918
F-statistic: 4.234 on 79 and 185 DF,  p-value: 4.079e-16
```
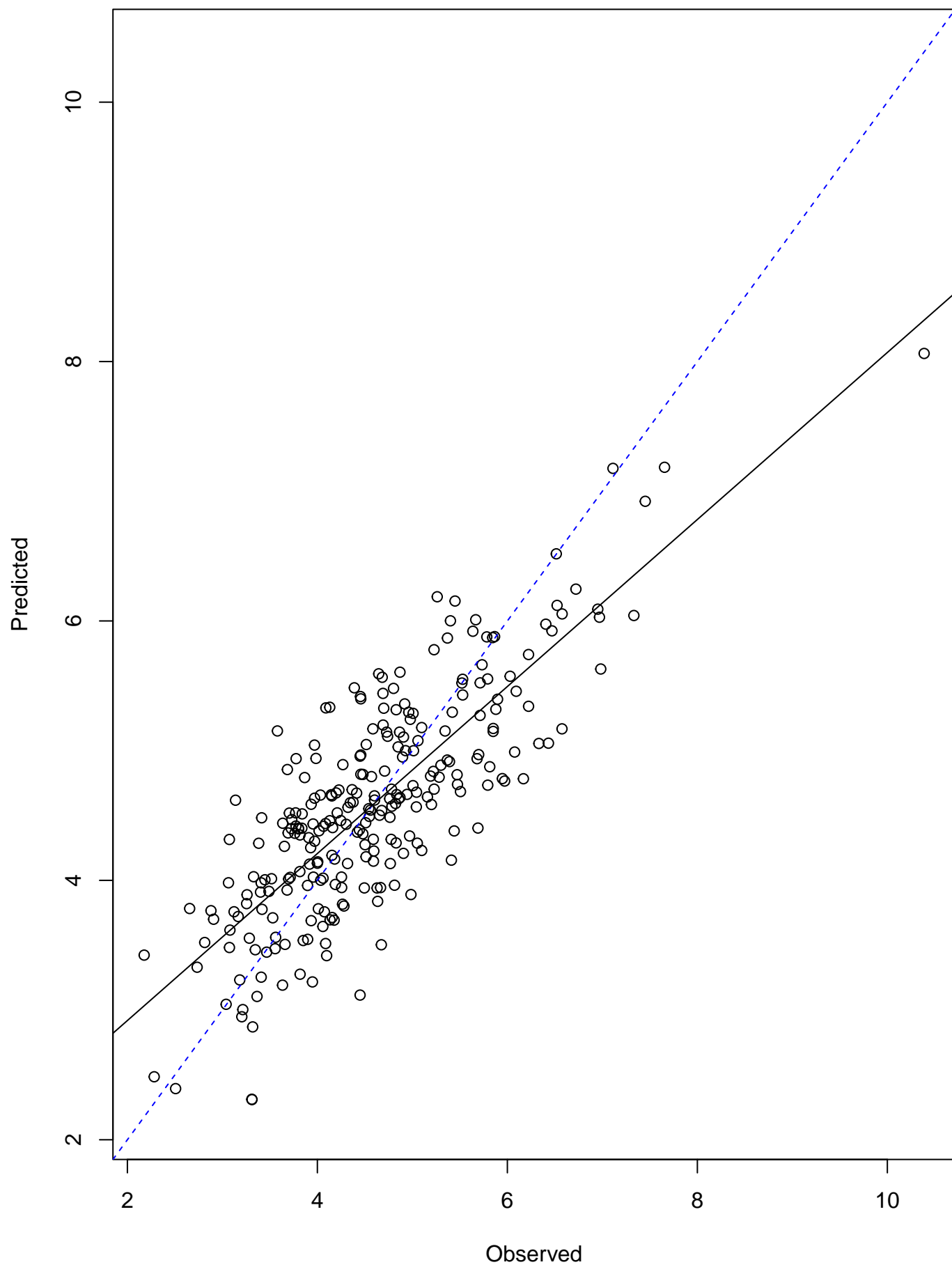
Loose

Cutoff: Mindev

Call:
lm(formula = as.formula(model_str), data = as.data.frame(cbind(y,
    x)))

Residuals:
    Min   1Q Median   3Q   Max
-2.3726 -0.5397 0.0085 0.5210 4.2552

Coefficients:
	Estimate	Std. Error	t value	Pr(>|t|)	
(Intercept)	4.899907	0.440037	11.135	< 2e-16	***
age	-0.020724	0.003874	-5.349	2.06e-07	***
chr17_1790953_C_T	0.674080	0.183445	3.675	0.000294	***
chr19_44908684_T_C	0.742344	0.213866	3.471	0.000615	***
chr17_78182667_T_C	0.512300	0.149377	3.430	0.000711	***
chr3_169764547_T_C	-0.627479	0.187027	-3.355	0.000922	***
chr8_55754795_A_ATATAT	0.537807	0.164292	3.273	0.001219	**
current_smoker	-0.497920	0.182619	-2.727	0.006872	**
chr15_74044292_T_C	0.409952	0.156532	2.619	0.009381	**
chr5_1293652_G_A	3.106507	1.262394	2.461	0.014568	*
chr7_23890697_T_C	-0.425054	0.173151	-2.455	0.014807	*
chr2_54248777_G_A	0.534410	0.218362	2.447	0.015109	*
chr8_70052508_G_A	-0.594754	0.245422	-2.423	0.016117	*
chr16_8979203_T_C	0.378180	0.158533	2.385	0.017833	*
chr18_44402414_T_A	-0.447312	0.224157	-1.996	0.047116	*
chr9_826585_C_G	0.289301	0.159650	1.812	0.071221	.
chr11_5225911_G_A	0.352701	0.210581	1.675	0.095257	.
isMale	0.176074	0.115145	1.529	0.127545	
chr20_36956221_T_G	-0.315919	0.207963	-1.519	0.130051	
chr11_108306370_T_A	-0.253908	0.167664	-1.514	0.131245	
chr16_67583283_A_G	-0.315731	0.225090	-1.403	0.162002	
chr5_1287079_G_A	-0.227173	0.163344	-1.391	0.165585	
chr18_657458_A_G	0.370342	0.352211	1.051	0.294096	
chr9_34107507_C_T	-0.225073	0.229955	-0.979	0.328678	
smoking_history	0.014968	0.126442	0.118	0.905869	

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.8575 on 240 degrees of freedom
Multiple R-squared: 0.4049, Adjusted R-squared: 0.3454
F-statistic: 6.805 on 24 and 240 DF, p-value: < 2.2e-16

Mindev
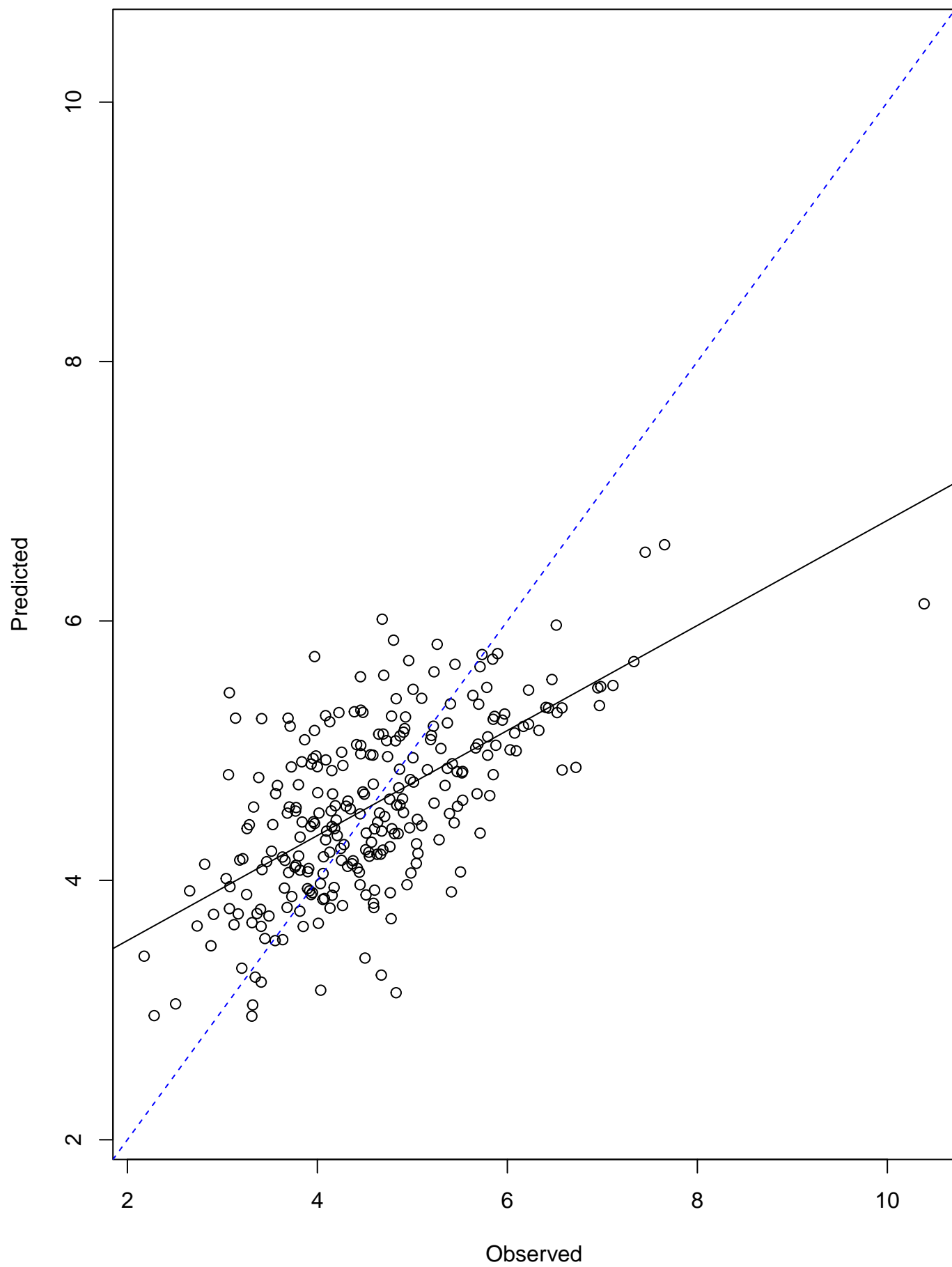
Cutoff: Strict

Call:
lm(formula = as.formula(model_str), data = as.data.frame(cbind(y,
    x)))

Residuals:
    Min   1Q Median   3Q   Max
-2.3783 -0.7394 -0.0799 0.5442 5.9628

Coefficients:
                 Estimate Std. Error t value Pr(>|t|)
(Intercept)   5.697302   0.254175 22.415 < 2e-16 ***
age   -0.018084   0.004453 -4.061 6.46e-05 ***
current_smoker -0.404786   0.210327 -1.925   0.0554 .
smoking_history -0.036207   0.144971 -0.250   0.8030
isMale   0.017993   0.130506   0.138   0.8904

Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 1.02 on 260 degrees of freedom
Multiple R-squared: 0.08828,	Adjusted R-squared: 0.07425
F-statistic: 6.294 on 4 and 260 DF, p-value: 7.555e-05

Strict