

```
Call:
glm(formula = dy_payer ~ ., family = "binomial", data = dfTrainVal)
```

Deviance Residuals:

	Min	1Q	Median	3Q	Max
	-3.8296	-0.0708	-0.0708	-0.0428	3.8733

Coefficients:

	Estimate	Std. Error	z value	Pr(> z)
(Intercept)	-6.401382	0.083839	-76.353	< 2e-16 ***
tier	-0.504751	0.031423	-16.063	< 2e-16 ***
dx_pay_count	0.353008	0.056608	6.236	4.49e-10 ***
dx_payerTRUE	2.667605	0.119893	22.250	< 2e-16 ***
dx_active_days	0.959611	0.023421	40.972	< 2e-16 ***
d0_session_count	-0.079102	0.016260	-4.865	1.15e-06 ***
dx_session_count	0.039036	0.004743	8.230	< 2e-16 ***

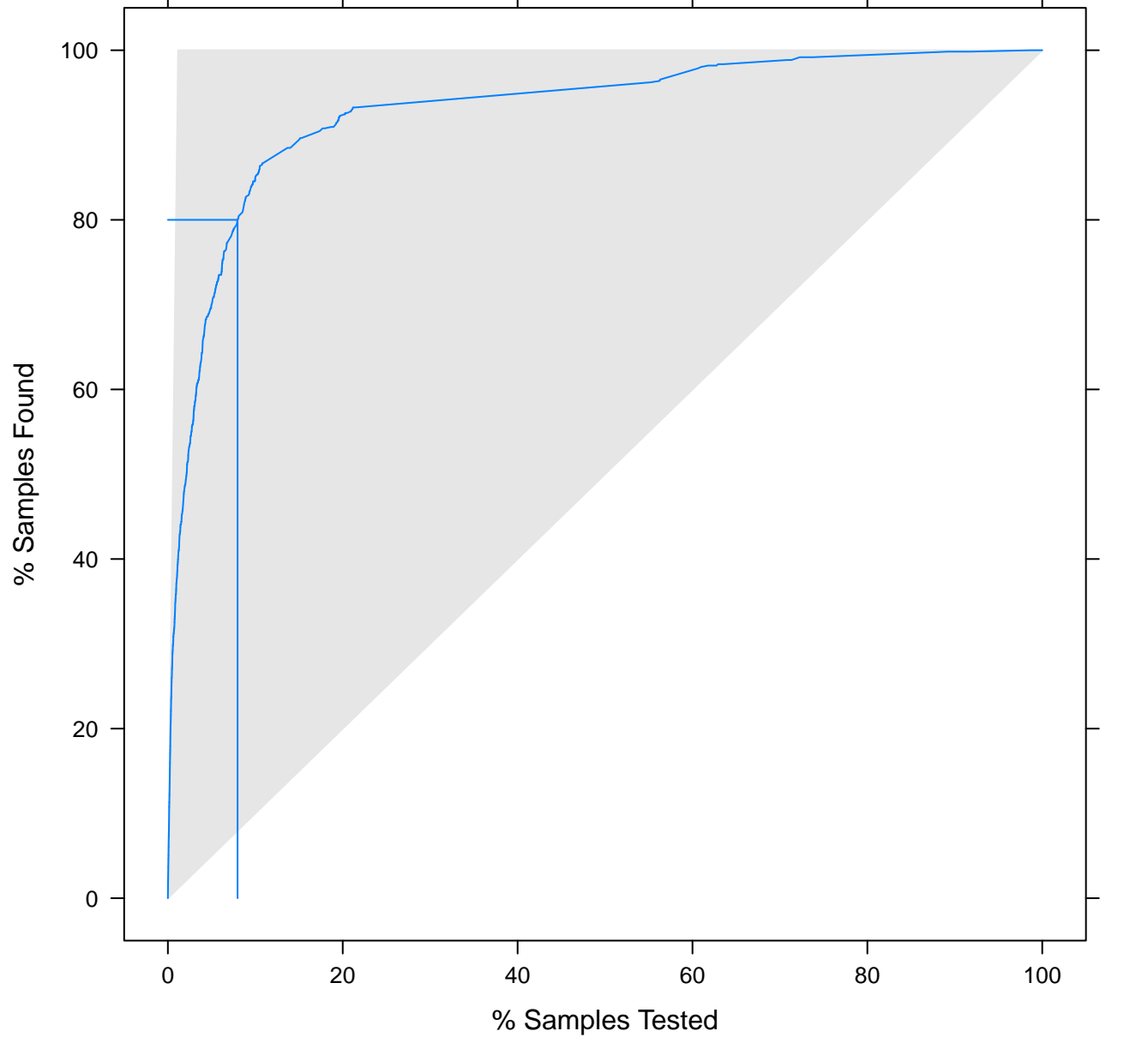
Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

(Dispersion parameter for binomial family taken to be 1)

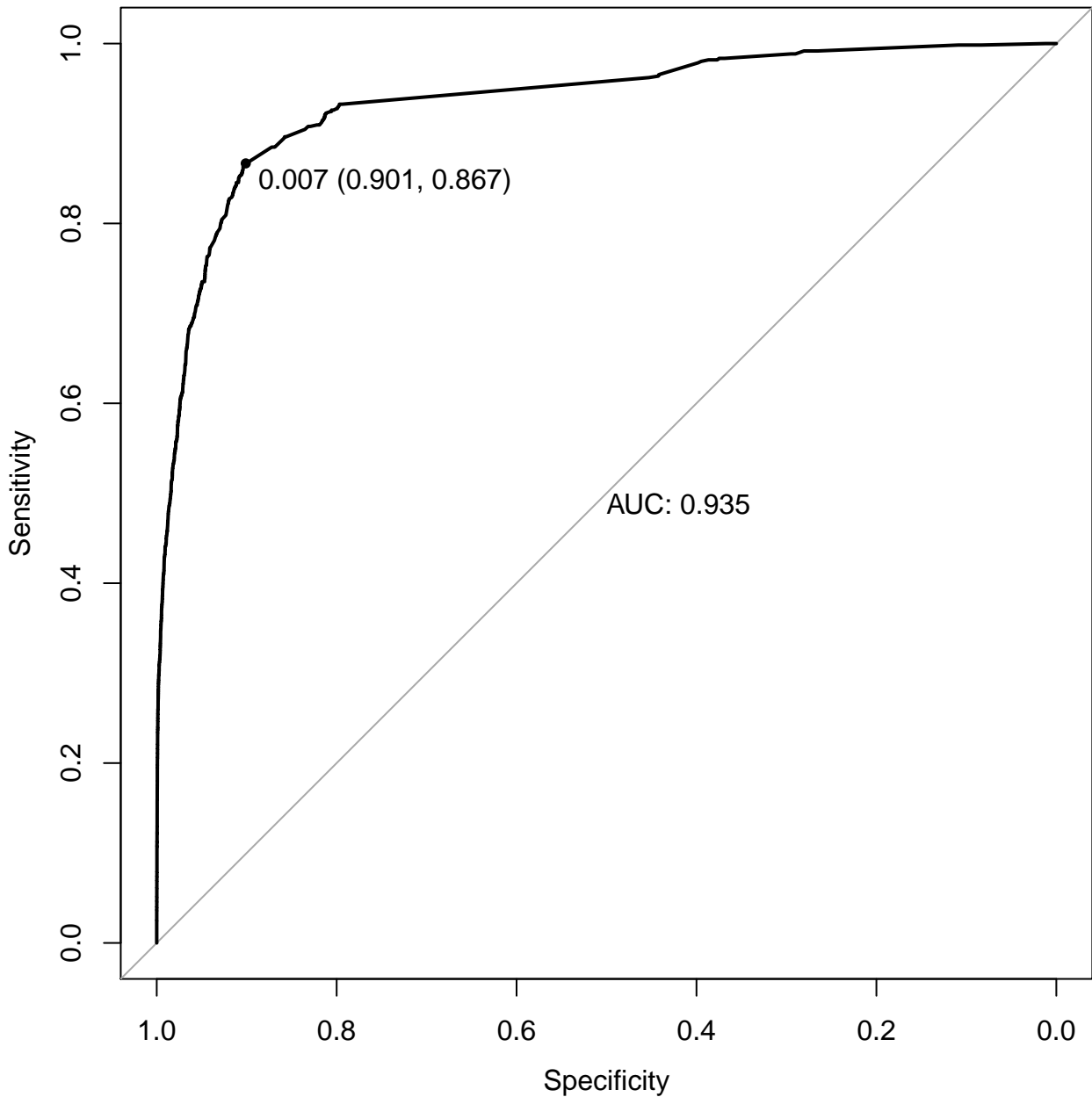
Null deviance: 26466 on 207255 degrees of freedom
Residual deviance: 15385 on 207249 degrees of freedom
AIC: 15399

Number of Fisher Scoring iterations: 9

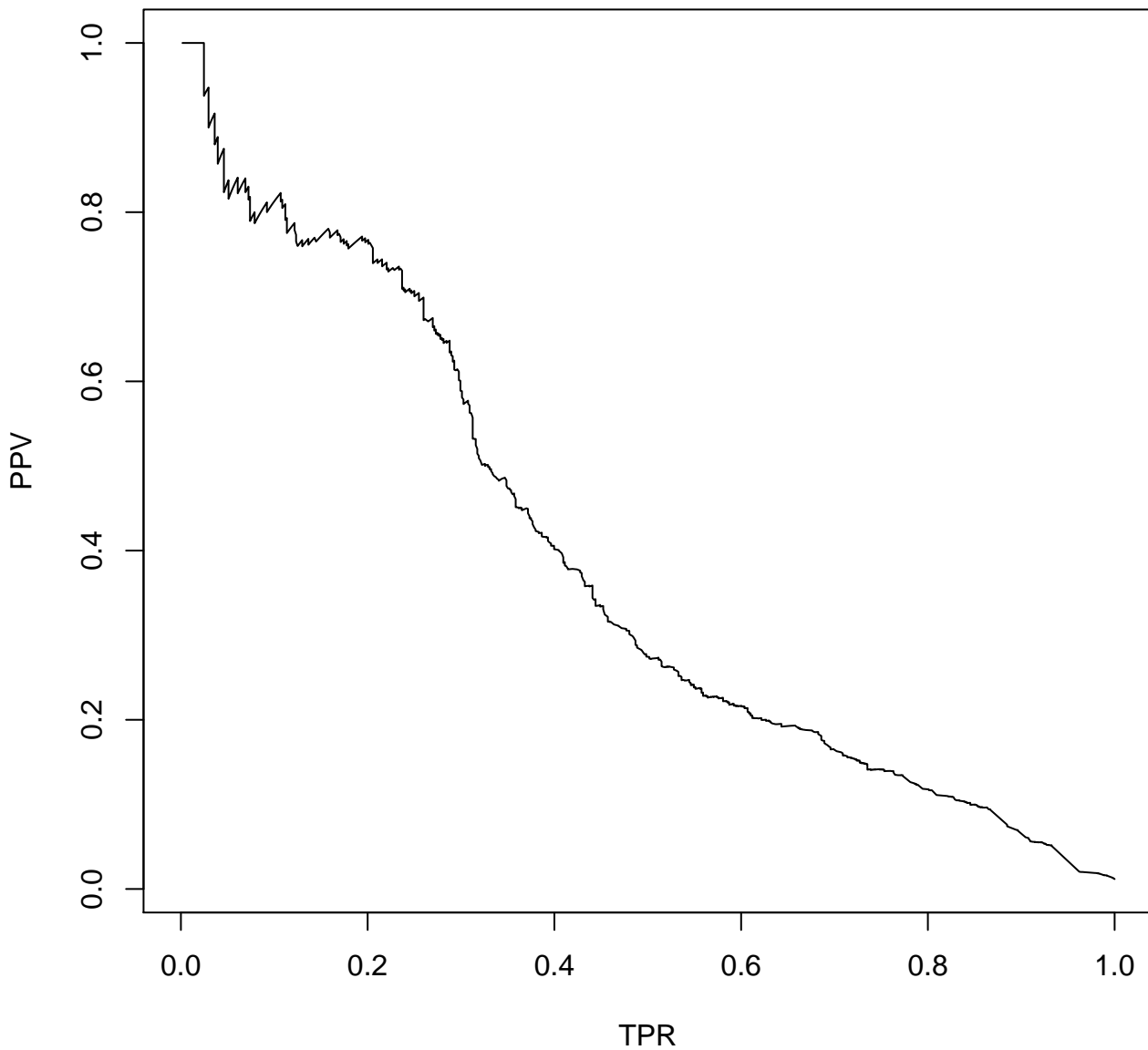
Lift chart



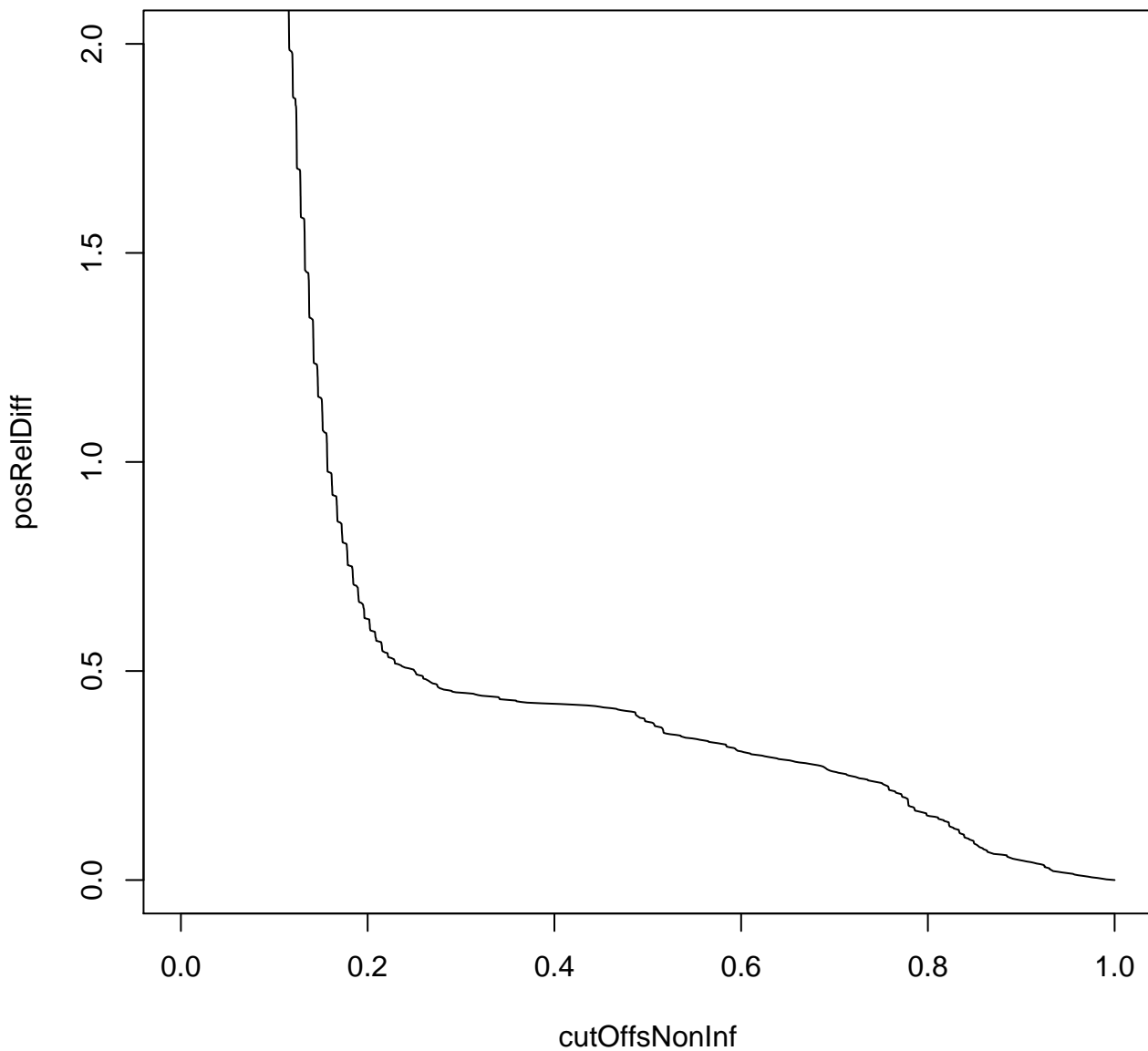
ROC curve



Sensitivity vs. Precision



predicted positives / actual positives



```
[1] "1st matrix - threshold based on the ROC curve"  
[2] "0.00703044731668181"  
[3] "2nd matrix - threshold based on the predicted vs. actual count of positives"  
[4] "0.156792781476642"
```

Confusion Matrix and Statistics

	Reference	
Prediction	FALSE	TRUE
FALSE	46137	81
TRUE	5068	527

Accuracy : 0.9006

95% CI : (0.898, 0.9032)

No Information Rate : 0.9883

P-Value [Acc > NIR] : 1

Kappa : 0.152

Mcnemar's Test P-Value : <2e-16

Sensitivity : 0.86678

Specificity : 0.90103

Pos Pred Value : 0.09419

Neg Pred Value : 0.99825

Prevalence : 0.01173

Detection Rate : 0.01017

Detection Prevalence : 0.10798

Balanced Accuracy : 0.88390

'Positive' Class : TRUE

Confusion Matrix and Statistics

	Reference	
Prediction	FALSE	TRUE
FALSE	50843	365
TRUE	362	243

Accuracy : 0.986

95% CI : (0.9849, 0.987)

No Information Rate : 0.9883

P-Value [Acc > NIR] : 1.0000

Kappa : 0.3936

Mcnemar's Test P-Value : 0.9409

Sensitivity : 0.39967

Specificity : 0.99293

Pos Pred Value : 0.40165

Neg Pred Value : 0.99287

Prevalence : 0.01173

Detection Rate : 0.00469

Detection Prevalence : 0.01168

Balanced Accuracy : 0.69630

'Positive' Class : TRUE