1. **Comparison of competing models**
2. **Goodness of fit**
3. **Regression diagnostics**
4. **Bootstrapped model**
5. **Model excluding haemodialysis patients**

1 .**Comparison of competing models**.

	Table 1. Comparison between competing models.					
					-2 Log - likelihood	AIC
fT>MIC > 60%	AKI	Modified APACHE II ≥ 14	AKI * Modified APACHE II ≥ 14	Immunosuppression	53.87	65.87
fT>MIC > 60%	AKI	Modified APACHE II ≥ 14	AKI * Modified APACHE II ≥ 14	WBC	54.96	66.96
fT>MIC > 60%	AKI	Modified APACHE II ≥ 14	AKI * Modified APACHE II ≥ 14		55.07	65.06
fT>MIC > 60%	AKI	Modified APACHE II ≥ 14			58.9	66.9
fT>MIC > 60%	Modified APACHE II ≥ 14				64.81	70.81
fT>MIC > 60%	AKI				61.27	67.27

2.Goodness of fit

The goodness of fit of the final model (Table 4 in the manuscript) was tested using Hosmer and Lemeshow test. The Chi-square of Hosmer and Lemeshow

test was 3.975 on 4 degrees of freedom and P=0.409, suggesting that the model fits the data. (Table 2)

Table 2: Contingency Table for Hosmer and Lemeshow Test

	in-hospital survival=0		in-hospital survival = 1		
	Observed	Expected	Observed	Expected	Total
1	4	4.304	3	2.696	7
2	4	2.981	2	3.019	6
3	3	2.696	6	6.304	9
4	0	1.019	9	7.981	9
5	2	2.715	25	24.285	27
6	1	.285	19	19.715	20

3. Regression diagnostics: Diagnostic tests were produced using the "car" p ackage in R. Outlier test showed no Studentized residuals with Bonferroni $p < 0.05$.

Influential points analysis suggested two influential points (Table 3, subjects 2 and 60)

Table 3 – Influential points analysis			
	Studentized residuals	Hat value	Cook Distance
1	-2.215	0.033	0.065
2*	-3.085	0.014	0.204

7	-1.3113	0.25	0.088
10	-1.3113	0.25	0.088
60**	1.886	0.161	0.151

Table 4 shows the refitted logistic regression model coefficients after the exclusion of influential points.

Table 4- Comparison of coefficients (log domain) between original model and two models with subtracted potentially influential points

	Original model		*Model subtracting first influential point (subject 2)		**Model subtracting second influential point (subject 60)	
	Coefficient	S.E	Coefficient	S.E	Coefficient	S.E
fT>MIC > 60%	2.046	0.901	2.781	1.168	3.004	1.172
AKI	-4.24	1.42	-4.92	1.61	-5.57	1.68
Modified APACHE II ≥ 14	-2.178	0.918	-2.368	0.963	-2.86	1.053
AKI * Modified APACHE II ≥ 14	3.03	1.55	2.96	1.56	3.89	1.65

S.E, standard error.

4.Bootstrap analysis

Table 5. Logistic regression model with 20000 bootstrap replicates (log domain) method = percentile			
	Coefficient	95% Confidence	
fT>MIC > 60%	2.2337 *	0.322	21.708
AKI	-4.6199	-42.148	13.499
Modified APACHE II ≥ 14	-2.318 *	-21.178	-0.030
AKI * Modified APACHE II ≥ 14	3.3108	-15.649	24.166
*p<0.05			

Table 6. Bootstrapped logistic regression model for survival (20000 repetitions) method=percentile				
	OR	95% CI		BootBias
fT>MIC > 60%	9.33*	1.379	2.68E+09	18.77075
AKI	0.01	4.96E-19	728687.3	0.021344
Modified APACHE II ≥ 14	0.97*	2.81E-10	0.970446	0.352748

AKI * Modified APACHE II ≥ 14	27.39	1.6E-07	6.35E-10	4.504154

The mean OR for fT>MIC > 60% was 28, the median OR was 9.33, p<0.05

5. Model excluding haemodialysis patients

Table 7 shows the refitted logistic regression model coefficients after excluding hemodialysis patients (5 patients)

Table 7- Original logistic regression model coefficients (log domain) and refitted logistic regression model coefficients (log domain)

	Original model		Model excluding hemodialysis patients			
	Coefficient	S.E	Coefficient	S.E		
fT>MIC > 60%	2.046 *	0.901	2.213 *	0.934		
AKI	-4.24 **	1.42	-4.302**	1.45		
Modified APACHE II ≥ 14	-2.178 *	0.918	-2.479 *	0.969		
AKI * Modified APACHE II ≥ 14	3.03	1.55	3.348 *	1.591		

S.E, standard error. * p < 0.05 , ** p < 0.01, *** p<0.001