

Supplementary Table 1. Odds of *dn*DSA Development by Tacrolimus Thresholds after Adjustment for HLA-DR/DQ Eplet Mismatch

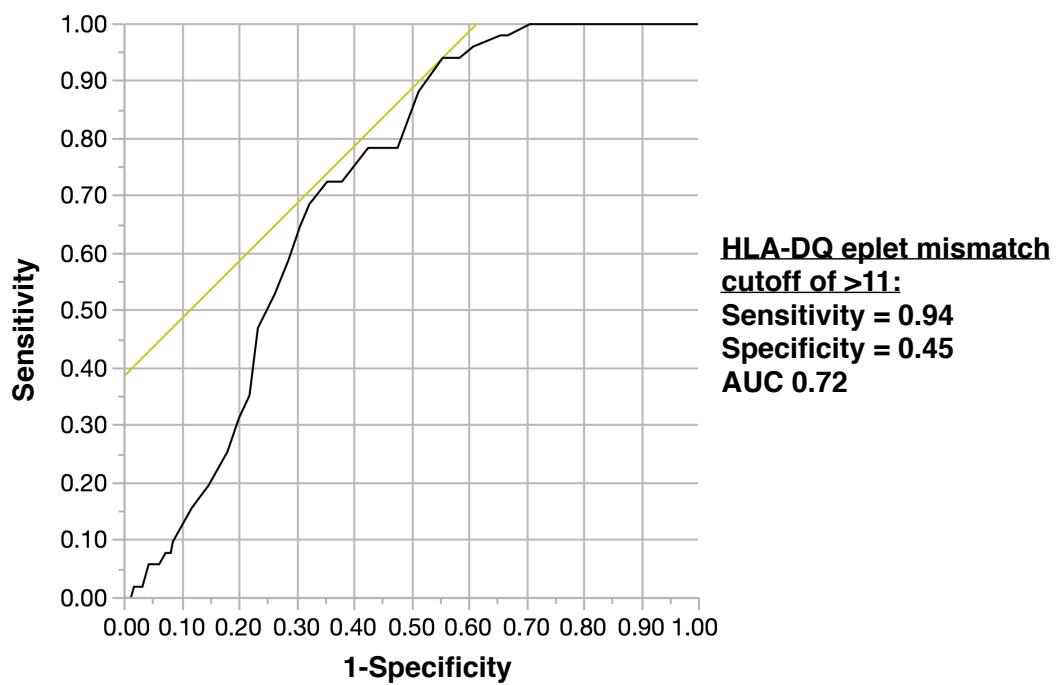
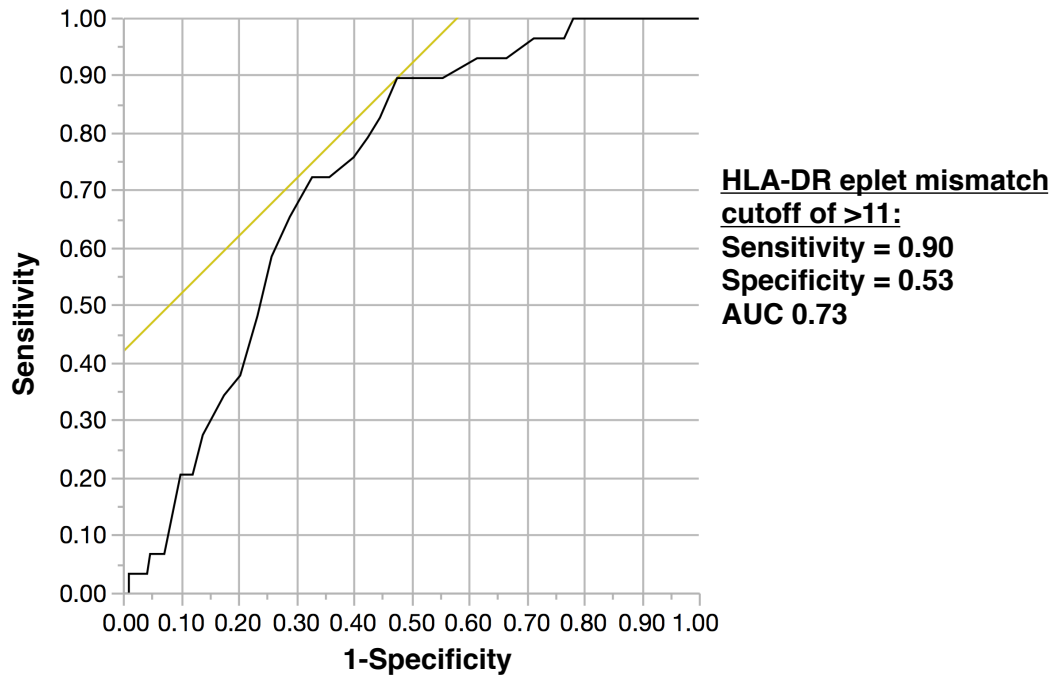
(n=492, n=44 events)		Percentage of Tacrolimus Trough Levels Below Threshold*		HLA-DR/DQ Eplet Mismatch (per 10 mismatches)*	
Tacrolimus Thresholds	Odds Ratio	p value	Odds Ratio	p value	
< 3.0 ng/ml	69.36 (1.07-1494.57)	0.0470	1.31 (1.12-1.54)	0.0010	
< 3.5 ng/ml	17.77 (1.04-149.14)	0.0474	1.32 (1.12-1.55)	0.0008	
< 4.0 ng/ml	9.40 (0.95-55.60)	0.0549	1.32 (1.13-1.55)	0.0006	
< 4.5 ng/ml	6.71 (0.94-33.91)	0.0566	1.33 (1.13-1.56)	0.0005	
< 5.0 ng/ml	3.00 (0.46-15.43)	0.2379	1.33 (1.13-1.57)	0.0006	
< 5.5 ng/ml	1.25 (0.21-6.34)	0.7964	1.33 (1.23-1.56)	0.0008	
< 6.0 ng/ml	0.68 (0.13-3.41)	0.6505	1.32 (1.12-1.56)	0.0010	

*isolated to those treated with a tacrolimus regime with ≥ 5 tacrolimus levels ≥ 6 month post-transplant

Supplementary Table 3. Multivariate Correlates of Graft Survival

Risk Factors	Full Cohort (n=596, 57 events)				Cohort with tacrolimus regime in first year (n=492, 43 events)				Cohort with histology in first year (n=439, 50 events)	
	Univariate HR (95% CI)	p value	Model 1 (AIC 572.9)	Model 2 (AIC 574.5)	Model 5 (AIC 435.7)	Model 6 (AIC 434.7)	Model 7 (AIC 460.6)	Model 3 (AIC 473.7)	Model 4 (AIC 473.7)	p value
First Transplant	0.84 (0.25-5.12)	0.8101								
Recipient Age at Transplant (years)	0.98 (0.96-0.99)	0.0028								
Donor Age (years)	1.00 (0.98-1.02)	0.9667								
Living Donor	0.61 (0.35-1.03)	0.0637								
Recipient Ethnicity (Caucasian vs. other)	0.65 (0.38-1.15)	0.1330								
Cold Ischemic Time (hours)	1.06 (1.02-1.11)	0.0032		1.06 (1.01-1.11)				1.06 (1.01-1.11)		0.0097
Delayed Graft Function	2.82 (1.51-4.97)	0.0017	2.32 (1.24-4.13)	0.0099	1.87 (0.95-3.54)	0.0700				
Duration on waitlist (years)	0.97 (0.86-1.07)	0.5484								
Calculated panel reactive antibody	1.00 (0.98-1.01)	0.7307								
Non-Adherence vs. Tacrolimus regime	5.67 (3.35-9.55)	<0.0001	3.61 (2.04-6.36)	<0.0001	3.19 (1.77-5.71)	0.0001				4.44 (2.42-8.16)
Cyclosporin vs. Tacrolimus regime	1.53 (0.86-2.79)	0.1335				2.62 (1.30-5.22)	0.0076			<0.0001
Calcineurin inhibitor coefficient of variation ≥ 6 months	1.01 (0.99-1.03)	0.1814								
Tacrolimus coefficient of variation ≥ 6 months	1.04 (1.01-1.05)	0.0008			1.03 (1.01-1.05)	0.0134				0.0085
HLA-A Mismatch	1.04 (0.73-1.49)	0.8252								
HLA-B Mismatch	1.53 (1.04-2.28)	0.0301								
HLA-C Mismatch	0.85 (0.46-1.56)	0.6092								
HLA-DRB1 Mismatch	1.59 (1.09-2.38)	0.0170								
HLA-DQB1 Mismatch	1.24 (1.01-1.54)	0.0378								
HLA-DQA1 Mismatch	1.24 (0.85-1.81)	0.2650								
HLA-DRB1/3/4/5 Eplet Mismatch (per 10 mismatches)	1.18 (0.96-1.44)	0.1094								
HLA-DQA1/B1 Eplet Mismatch (per 10 mismatches)	1.35 (1.01-1.81)	0.0455								1.45 (1.04-2.02)
HLA-DQA1/B1 Eplet Mismatch (per 10 mismatches)	1.29 (1.01-1.67)	0.0455								0.0300
gHDSA Development	4.53 (2.66-7.66)	<0.0001	2.94 (1.66-5.15)	0.0003	2.66 (1.50-4.68)	0.0009				2.39 (1.29-4.44)
Episodes of TCMR \geq Borderline in 0-12 months	1.41 (1.20-1.66)	<0.0001				4.86 (2.43-9.62)	<0.0001			1.21 (1.00-1.45)
Episodes of TCMR \geq 1A in 0-12 months	2.03 (1.46-2.76)	<0.0001								1.45 (0.99-2.07)

Supplemental Figure 1. Eplet Mismatch Cutoffs



Supplementary Figure 2. Tacrolimus Trough Levels

