

Supplementary Data

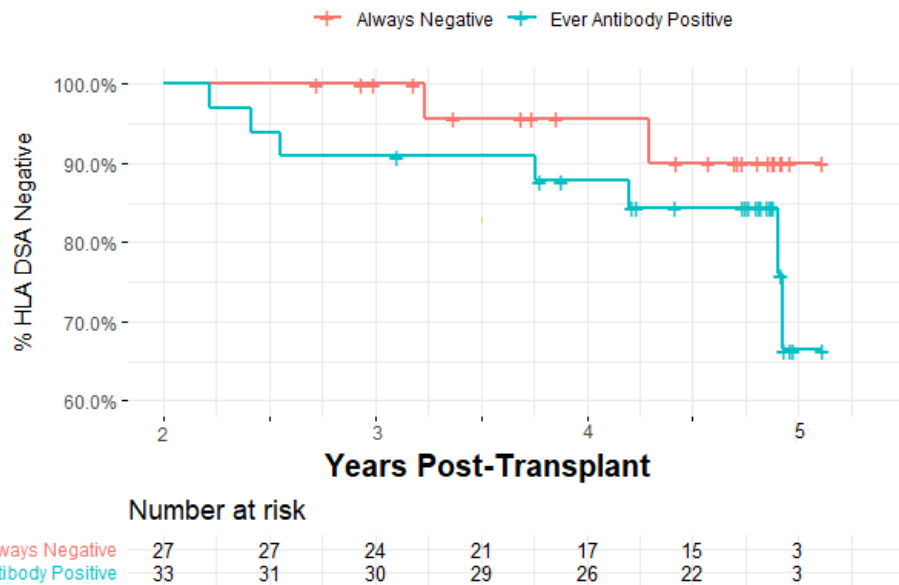
| | AT1R-Ab and ETAR-Ab Negative N=40* | AT1R-Ab and/or ETAR-Ab Positive N=56* | P-Value | AT1R-Ab and ETAR-Ab Negative N=34* | De Novo AT1R-Ab and/or ETAR-Ab N=21* | Preformed AT1R-Ab and/or ETAR-Ab N=27* | P-Value |
|---|---------------------------------------|--|---------|---------------------------------------|---|---|--------------|
| IF/TA | | | 0.753 | | | | 0.472 |
| None | 19 (47.5%) | 24 (42.1%) | | 16 (47.1%) | 11 (52.4%) | 11 (39.3%) | |
| Mild | 12 (30.0%) | 23 (40.4%) | | 10 (29.4%) | 8 (38.1%) | 10 (35.7%) | |
| Moderate | 7 (17.5%) | 8 (14.0%) | | 6 (17.6%) | 1 (4.8%) | 7 (25.0%) | |
| Severe | 2 (5.0%) | 2 (3.5%) | | 2 (5.9%) | 1 (4.8%) | 0 (0.0%) | |
| Glomerulitis (g) | 2 (5.0%) | 10 (17.9%) | 0.118 | 1 (2.9%) | 6 (28.6%) | 4 (14.8%) | 0.025 |
| Tubulitis (t) | 15 (37.5%) | 30 (53.6%) | 0.178 | 12 (35.3%) | 11 (52.4%) | 15 (55.6%) | 0.235 |
| Interstitial Inflammation (i) | 15 (37.5%) | 29 (51.8%) | 0.239 | 12 (35.3%) | 10 (47.6%) | 14 (51.9%) | 0.400 |
| Intimal Arteritis (v) | 0 (0.0%) | 5 (8.9%) | 0.073 | 0 (0.0%) | 2 (9.5%) | 3 (11.1%) | 0.102 |
| Peritubular Capillaritis (ptc) | 6 (15.0%) | 15 (26.8%) | 0.26 | 6 (17.6%) | 5 (23.8%) | 9 (33.3%) | 0.365 |
| Chronic Glomerulopathy (cg) | 0 (0.0%) | 2 (3.6%) | 0.509 | 0 (0.0%) | 2 (9.5%) | 0 (0.0%) | 0.064 |
| Mesangial Matrix Expansion (mm) | 1 (2.5%) | 2 (3.6%) | 1 | 1 (2.9%) | 2 (9.5%) | 0 (0.0%) | 0.262 |
| Tubular Atrophy (ct) | 16 (40.0%) | 31 (55.4%) | 0.202 | 13 (38.2%) | 10 (47.6%) | 15 (55.6%) | 0.400 |
| Interstitial Fibrosis (ci) | 16 (40.0%) | 29 (51.8%) | 0.351 | 13 (38.2%) | 10 (47.6%) | 15 (55.6%) | 0.400 |
| Arterial Fibrous Intimal Thickening (cv) | 6 (15.0%) | 10 (17.9%) | 0.926 | 6 (17.6%) | 2 (9.5%) | 6 (22.2%) | 0.572 |
| Arteriolar Hyalinosis Thickening (ah) | 4 (10.0%) | 6 (10.7%) | 1 | 4 (11.8%) | 2 (9.5%) | 3 (11.1%) | 1.000 |

*1 antibody negative and 3 antibody positive patients missing biopsy scores.

S1: Biopsy Scores by AT1R-Ab and/or ETAR-Ab Status

| Predictor | Estimate | 95% CI Lower | 95% CI Upper | P-value | Estimate | 95% CI Lower | 95% CI Upper | P-value |
|---|------------------------------|--------------|--------------|------------------|------------------------------|--------------|--------------|------------------|
| Model 1: | 2 Years Post-Transplantation | | | | 5 Years Post-Transplantation | | | |
| Months Post Transplant | 0.13 | -0.34 | 0.59 | 0.593 | -0.16 | -0.34 | 0.01 | 0.072 |
| Ever AT1R-Ab and/or ETAR-Ab Positive | 7.98 | -1.13 | 17.09 | 0.086 | 4.08 | -4.22 | 12.39 | 0.335 |
| Ever AT1R-Ab and/or ETAR-Ab Positive* | | | | | | | | |
| Months Post-Transplant | -0.71 | -1.31 | -0.11 | 0.020 | -0.08 | -0.31 | 0.15 | 0.488 |
| Age (+1 Year) | -1.43 | -2.24 | -0.61 | 0.001 | -1.18 | -1.97 | -0.40 | 0.003 |
| Female | 0.40 | -7.90 | 8.71 | 0.924 | -0.52 | -8.49 | 7.45 | 0.898 |
| IL-2 Inhibitor vs. ATG | -7.62 | -20.10 | 4.86 | 0.232 | -5.62 | -17.79 | 6.56 | 0.366 |
| Steroids at Baseline | 0.53 | -7.92 | 8.98 | 0.902 | 2.89 | -5.19 | 10.96 | 0.483 |
| HLA Mismatches Out of 8 | -0.29 | -2.37 | 1.79 | 0.784 | -0.29 | -2.30 | 1.72 | 0.779 |
| Model 2: | | | | | | | | |
| Months Post Transplant | 0.17 | -0.22 | 0.56 | 0.382 | -0.18 | -0.36 | 0.00 | 0.055 |
| De Novo AT1R-Ab and/or ETAR-Ab vs. Negative | 7.02 | -4.10 | 18.14 | 0.216 | 2.75 | -7.23 | 12.73 | 0.59 |
| Preformed AT1R-Ab and/or ETAR-Ab vs. Negative | 5.73 | -4.96 | 16.43 | 0.293 | 1.11 | -8.58 | 10.80 | 0.822 |
| De Novo AT1R-Ab and/or ETAR-Ab * | | | | | | | | |
| Months Post-Transplant | -0.69 | -1.31 | -0.07 | 0.029 | -0.15 | -0.43 | 0.14 | 0.311 |
| Preformed AT1R-Ab and/or ETAR-Ab * | | | | | | | | |
| Months Post-Transplant | -0.54 | -1.11 | 0.02 | 0.06 | 0.04 | -0.21 | 0.30 | 0.741 |
| Age (+1 Year) | -1.82 | -2.73 | -0.91 | <0.001 | -1.68 | -2.55 | -0.80 | <0.001 |
| Female | 0.76 | -7.43 | 8.95 | 0.855 | 0.34 | -7.61 | 8.29 | 0.934 |
| IL-2 Inhibitor vs. ATG | -15.19 | -29.38 | -1.00 | 0.036 | -13.86 | -27.78 | 0.05 | 0.051 |
| Steroids at Baseline | -0.73 | -9.57 | 8.11 | 0.871 | 1.26 | -7.15 | 9.68 | 0.769 |
| HLA Mismatches Out of 8 | 1.77 | -0.40 | 3.93 | 0.11 | 1.80 | -0.30 | 3.91 | 0.093 |

Table S2: eGFR Models for Slope of eGFR (variable *time in months post-transplant) at 2- and 5-Years Post-Transplantation



| Predictor | HR | 95% CI Lower | 95% CI Upper | P-value |
|--------------------------------------|------|--------------|--------------|---------|
| Ever AT1R-Ab and/or ETAR-Ab Positive | 3.28 | 0.64 | 16.82 | 0.155 |
| Age (+1 year) | 1.07 | 0.88 | 1.31 | 0.477 |
| Female | 1.40 | 0.32 | 6.11 | 0.654 |
| Steroids at Baseline | 1.11 | 0.26 | 4.82 | 0.889 |
| HLA Mismatch (out of 8) | 1.10 | 0.78 | 1.55 | 0.593 |

Figure S1: Survival Analysis for Development of HLA DSA between 2-5 Years Post-Transplantation. Patients who were HLA DSA negative at 2 years post-transplant were analyzed for likelihood of developing HLA DSA between 2 and 5 years post-transplant based on AT1R-Ab and/or ETAR-Ab status in the first 2 years post-transplant (indexed at 26.5 months based on timing of study samples). This relationship was not statistically significant ($p=0.23$ in unadjusted model and 0.155 in model adjusted for Age, Sex, Steroid Use, and HLA Mismatch).