

Supplementary Table S3A. Multivariable landmark analysis measuring the association between low Baseline DLCO_{cor} and CLAD at 2-year landmark time point. Analysis includes: 1. Without adjustment for spirometric decline, 2. Adjustment for low baseline FEV₁ and 3. Adjustment for low baseline FVC.

| Variable | Multivariable without FEV or FVC, HR (95%CI) | P value | Multivariable with FEV ₁ , HR (95%CI) | P value | Multivariable with FVC, HR (95%CI) | P value |
|-----------------------------------|--|---------|--|---------|------------------------------------|---------|
| Low Baseline DLCO _{cor} | 1.44 (1.12-1.84) | 0.004 | 1.28 (0.98-1.66) | 0.07 | 1.23 (0.94-1.61) | 0.13 |
| Recipient Age (5-units) | 0.97 (0.91-1.03) | 0.29 | 0.99 (0.93-1.05) | 0.76 | 0.98 (0.92-1.04) | 0.53 |
| Donor Age (5-units) | 1.02 (0.98-1.06) | 0.35 | 1.01 (0.98-1.05) | 0.48 | 1.02 (0.99-1.06) | 0.23 |
| Native Lung Disease | | | | | | |
| - COPD | 1.23 (0.85-1.79) | 0.27 | 1.28 (0.88-1.86) | 0.20 | 1.35 (0.92-1.97) | 0.13 |
| - Cystic Fibrosis | 1.01 (0.68-1.49) | 0.97 | 1.11 (0.75-1.65) | 0.60 | 1.13 (0.76-1.68) | 0.55 |
| - ILD | 0.78 (0.54-1.13) | 0.19 | 0.75 (0.52-1.09) | 0.13 | 0.80 (0.55-1.16) | 0.24 |
| - Other | Reference | | | | | |
| Sex-Matching (Recipient/Donor) | | | | | | |
| - F/M | 1.10 (0.74-1.63) | 0.63 | 1.06 (0.72-1.58) | 0.76 | 1.11 (0.75-1.64) | 0.61 |
| - M/F | 1.25 (0.88-1.78) | 0.21 | 1.20 (0.84-1.70) | 0.32 | 1.23 (0.86-1.75) | 0.25 |
| - M/M | 1.41 (1.08-1.85) | 0.01 | 1.35 (1.03-1.78) | 0.03 | 1.41 (1.08-1.85) | 0.01 |
| - F/F | Reference | | | | | |
| CMV Sero-Status (Donor/Recipient) | | | | | | |
| - D+/R- | 1.63 (1.16-2.27) | 0.005 | 1.59 (1.13-2.22) | 0.007 | 1.59 (1.14-2.23) | 0.007 |
| - D+ | 1.47 (1.10-1.97) | 0.009 | 1.44 (1.08-1.93) | 0.01 | 1.49 (1.12-2.00) | 0.007 |
| - D-/R- | Reference | | | | | |
| Transplant Era | | | | | | |
| - 2010-2018 | 0.83 (0.65-1.06) | 0.13 | 0.84 (0.66-1.07) | 0.15 | 0.83 (0.66-1.06) | 0.14 |
| - 1998-2009 | Reference | | | | | |
| A Score | 1.26 (0.87-1.83) | 0.23 | 1.33 (0.91-1.94) | 0.14 | 1.37 (0.94-2.00) | 0.11 |
| B Score | 1.01 (0.66-1.55) | 0.97 | 1.03 (0.67-1.59) | 0.88 | 1.00 (0.65-1.54) | 0.99 |
| Low baseline FEV ₁ | | | 1.41 (1.07-1.85) | 0.01 | | |
| Low baseline FVC | | | | | 1.51 (1.15-1.98) | 0.003 |

Abbreviations: CLAD = chronic lung allograft dysfunction; COPD = chronic obstructive pulmonary disease; CMV = cytomegalovirus; D+/R- = donor CMV seropositive, recipient seronegative; F = female, M = male.

Supplementary Table S3B. Multivariable landmark analysis measuring the association between low Baseline DLCO_{cor} and death at 2-year landmark time point. Analysis includes: 1. Without adjustment for spirometric decline, 2. Adjustment for low baseline FEV₁ and 3. Adjustment for low baseline FVC.

| Variable | Multivariable without FEV or FVC, HR (95%CI) | P value | Multivariable with FEV ₁ , HR (95%CI) | P value | Multivariable with FVC, HR (95%CI) | P value |
|-----------------------------------|--|---------|--|---------|------------------------------------|---------|
| Low Baseline DLCO _{cor} | 2.06 (1.60-2.66) | <0.001 | 1.68 (1.27-2.20) | <0.001 | 1.68 (1.27-2.20) | <0.001 |
| Recipient Age (5-units) | 1.01 (0.95-1.08) | 0.68 | 1.05 (0.98-1.12) | 0.17 | 1.03 (0.96-1.09) | 0.45 |
| Donor Age (5-units) | 0.99 (0.95-1.03) | 0.61 | 0.98 (0.94-1.02) | 0.30 | 1.00 (0.96-1.03) | 0.82 |
| Native Lung Disease | | | | | | |
| - COPD | 1.11 (0.74-1.65) | 0.62 | 1.19 (0.80-1.78) | 0.39 | 1.23 (0.82-1.85) | 0.31 |
| - Cystic Fibrosis | 0.94 (0.61-1.43) | 0.76 | 1.07 (0.70-1.64) | 0.76 | 1.06 (0.69-1.63) | 0.79 |
| - ILD | 0.95 (0.65-1.40) | 0.81 | 0.91 (0.62-1.34) | 0.63 | 1.01 (0.69-1.49) | 0.96 |
| - Other | Reference | | Reference | | Reference | |
| Sex-Matching (Recipient/Donor) | | | | | | |
| - F/M | 1.09 (0.71-1.65) | 0.70 | 0.99 (0.65-1.52) | 0.98 | 1.11 (0.73-1.69) | 0.64 |
| - M/F | 1.15 (0.79-1.66) | 0.46 | 1.04 (0.72-1.51) | 0.83 | 1.11 (0.77-1.61) | 0.58 |
| - M/M | 1.56 (1.17-2.08) | 0.003 | 1.43 (1.07-1.92) | 0.01 | 1.56 (1.17-2.08) | 0.003 |
| - F/F | Reference | | Reference | | Reference | |
| CMV Sero-Status (Donor/Recipient) | | | | | | |
| - D+/R- | 2.14 (1.53-3.01) | <0.001 | 2.10 (1.49-2.94) | <0.001 | 2.09 (1.49-2.93) | <0.001 |
| - D+ | 1.26 (0.92-1.73) | 0.15 | 1.23 (0.90-1.69) | 0.20 | 1.29 (0.94-1.77) | 0.11 |
| - D-/R- | Reference | | Reference | | Reference | |
| Transplant Era | | | | | | |
| - 2010-2018 | 0.82 (0.63-1.07) | 0.14 | 0.83 (0.64-1.08) | 0.16 | 0.81 (0.62-1.06) | 0.12 |
| - 1998-2009 | Reference | | Reference | | Reference | |
| A Score | 0.88 (0.59-1.31) | 0.53 | 0.93 (0.62-1.39) | 0.72 | 0.95 (0.63-1.42) | 0.80 |
| B Score | 1.02 (0.64-1.63) | 0.93 | 1.09 (0.69-1.72) | 0.72 | 0.98 (0.61-1.58) | 0.95 |
| Low baseline FEV ₁ | | | 1.77 (1.34-2.35) | <0.001 | | |
| Low baseline FVC | | | | | 1.70 (1.30-2.22) | <0.001 |

Abbreviations: COPD = chronic obstructive pulmonary disease; CMV = cytomegalovirus; D+/R- = donor CMV seropositive, recipient seronegative; F = female, M = male; A Score = Sum of all A-grade cellular rejection components up time divided by the total number of biopsies up until the 2-year landmark time; B Score = Sum of all B-grade cellular rejection components up time divided by the total number of biopsies up until the 2-year landmark time.