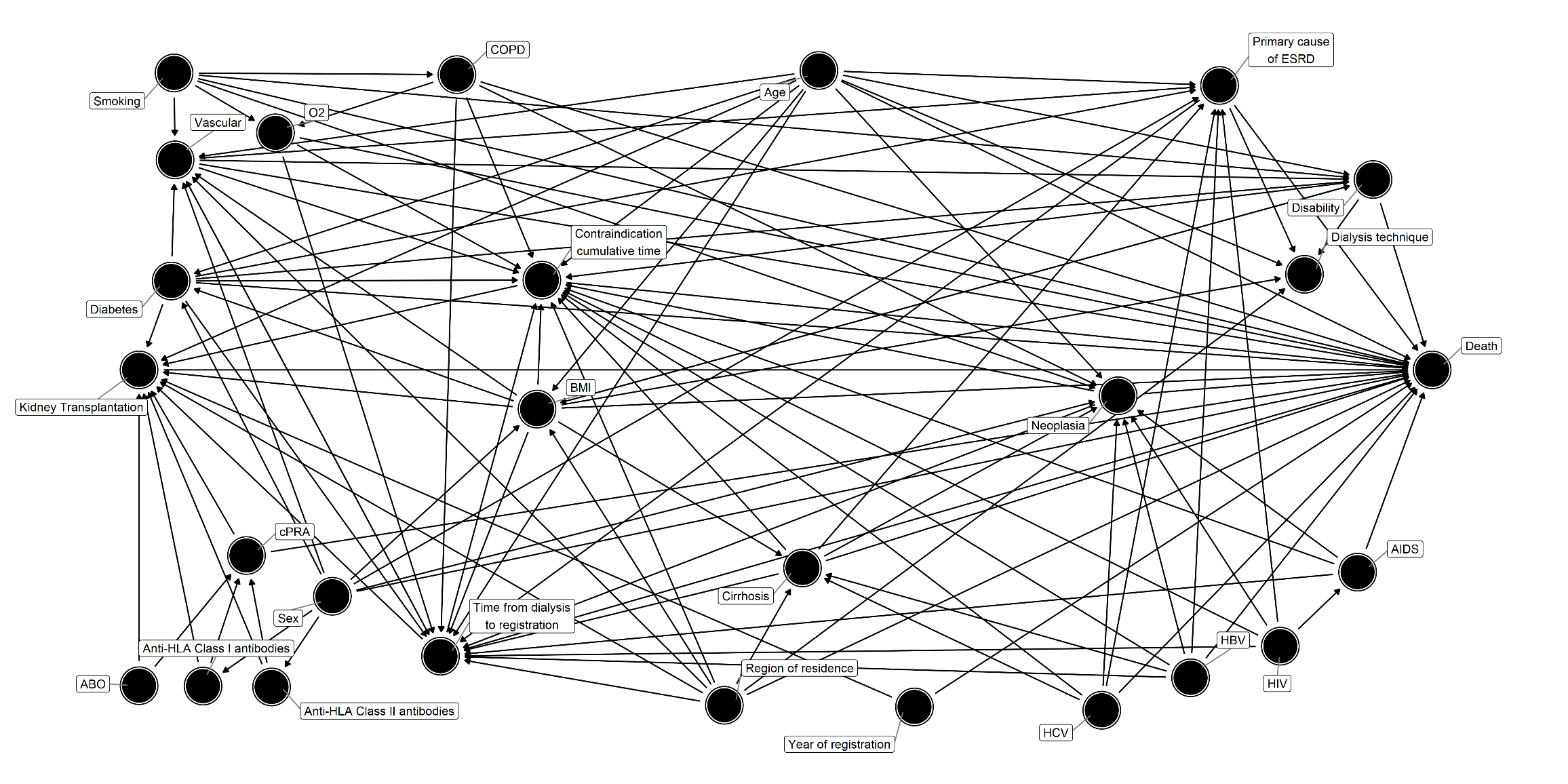
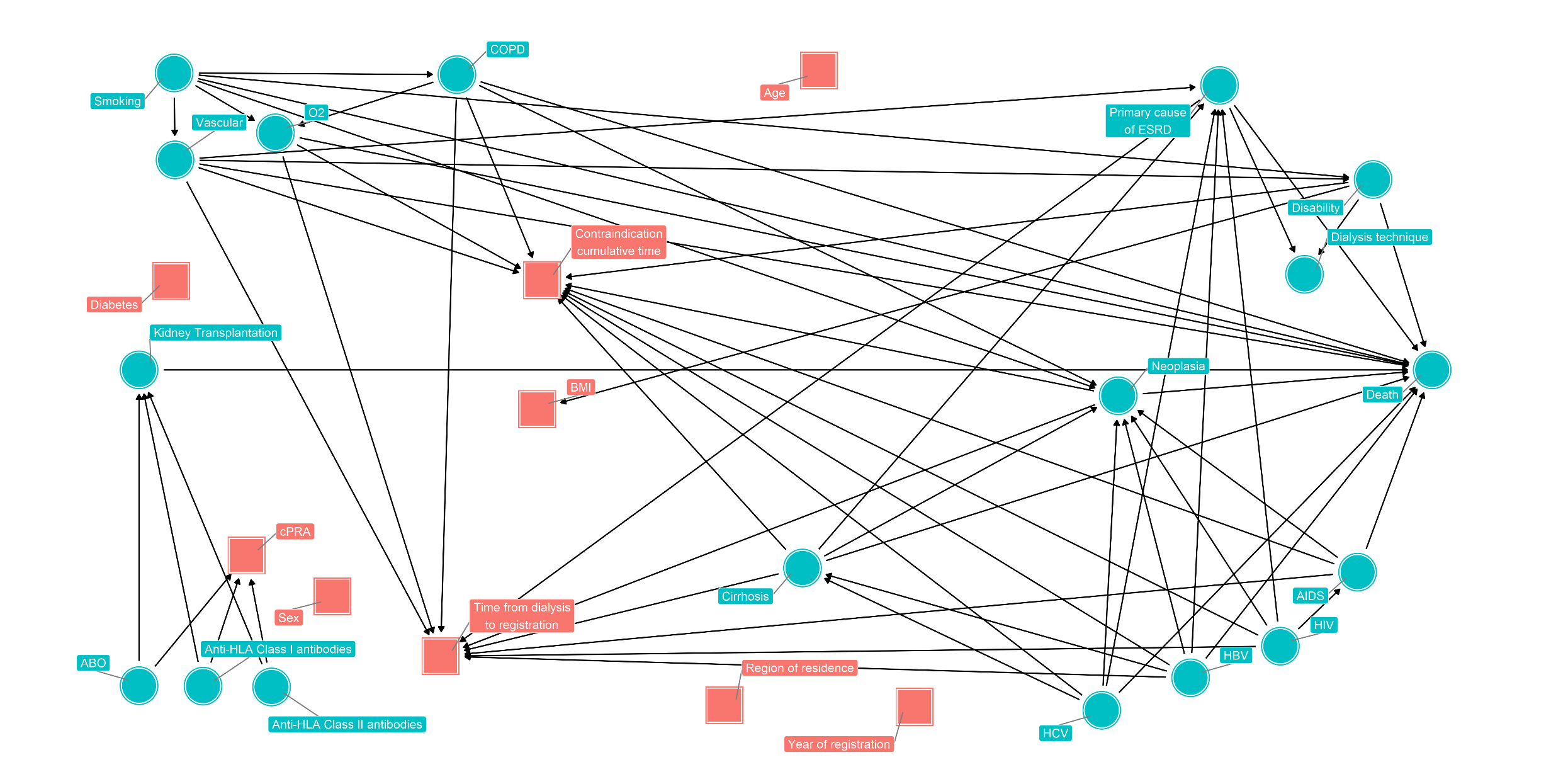
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| **eTable 1:** Description of time dependent characteristics at 6 months, 1 year and 2 years post first dialysis session after registration on the waiting list | | | | | | | | |
|  | **At 6 months** | | **At 1 year** | | **At 2 years** | | |
|  | **Percent.** | **95%CI** | **Percent.** | **95%CI** | | **Percent.** | **95%CI** | |
| Positive anti-HLA class I antibodies | 21.4% | [20.8%;22.1%] | 21.4% | [20.8%;22.1%] | | 21.5% | [20.8%;22.1%] | |
| Positive anti-HLA class II antibodies | 14.0% | [13.5%;14.5%] | 14.0% | [13.5%;14.5%] | | 14.0% | [13.5%;14.5%] | |
| History of diabetes | 22.3% | [21.6%;23.0%] | 22.5% | [21.8%;23.2%] | | 22.7% | [22.0%;23.4%] | |
| History of malignancy | 3.0% | [2.8%;3.2%] | 3.5% | [3.2%;3.7%] | | 4.5% | [4.2%;4.8%] | |
| History of liver cirrhosis | 0.6% | [0.5%;0.7%] | 0.6% | [0.5%;0.7%] | | 0.8% | [0.6%;0.9%] | |
| History of heart failure | 8.7% | [8.3%;9.1%] | 9.0% | [8.6%;9.4%] | | 9.8% | [9.3%;10.2%] | |
| History of coronary heart disease | 9.9% | [9.5%;10.3%] | 10.6% | [10.2%;11.1%] | | 11.8% | [11.3%;12.3%] | |
| History of acute coronary disease | 4.3% | [4.1%;4.6%] | 4.6% | [4.3%;4.8%] | | 4.9% | [4.6%;5.2%] | |
| History of abdominal aortic aneurysm | 1.0% | [0.9%;1.1%] | 1.1% | [1.0%;1.2%] | | 1.3% | [1.1%;1.5%] | |
| History of peripheral arterial disease | 7.4% | [7.1%;7.8%] | 8.0% | [7.6%;8.4%] | | 9.4% | [8.9%;9.8%] | |
| History of cerebrovascular disease | 4.9% | [4.6%;5.1%] | 5.2% | [4.9%;5.5%] | | 5.7% | [5.4%;6.0%] | |
| History of arrhythmia | 6.2% | [5.9%;6.5%] | 6.7% | [6.4%;7.1%] | | 7.8% | [7.4%;8.2%] | |
| History of chronic lung disease | 4.7% | [4.4%;5.0%] | 5.0% | [4.7%;5.3%] | | 5.5% | [5.2%;5.8%] | |
| History of oxygen inhalation therapies | 1.5% | [1.4%;1.7%] | 1.7% | [1.5%;1.8%] | | 2.0% | [1.8%;2.2%] | |
| History of smoking | 34.0% | [33.1%;35.0%] | 35.0% | [34.1%;36.0%] | | 36.1% | [35.1%;37.1%] | |
| History of hepatitis B infection | 1.3% | [1.2%;1.5%] | 1.4% | [1.2%;1.5%] | | 1.5% | [1.3%;1.7%] | |
| History of hepatitis C infection | 1.4% | [1.2%;1.5%] | 1.4% | [1.3%;1.6%] | | 1.6% | [1.4%;1.7%] | |
| History of HIV infection | 1.2% | [1.1%;1.4%] | 1.3% | [1.1%;1.4%] | | 1.3% | [1.1%;1.4%] | |
| History of AIDS | 0.5% | [0.4%;0.6%] | 0.5% | [0.4%;0.6%] | | 0.5% | [0.4%;0.6%] | |
| History of psychiatric disorder | 1.1% | [1.0%;1.2%] | 1.2% | [1.1%;1.4%] | | 1.5% | [1.3%;1.6%] | |
| History of amputation of lower limbs | 0.6% | [0.5%;0.7%] | 0.6% | [0.5%;0.8%] | | 0.9% | [0.8%;1.1%] | |
| History of paralysis | 0.7% | [0.6%;0.8%] | 0.7% | [0.6%;0.9%] | | 0.9% | [0.7%;1.0%] | |
| History of blindness | 1.8% | [1.7%;2.0%] | 2.1% | [1.9%;2.3%] | | 2.3% | [2.1%;2.5%] | |
| History of walking difficulties | 2.3% | [2.1%;2.5%] | 2.5% | [2.3%;2.7%] | | 3.2% | [2.9%;3.5%] | |
| *Acronyms: HLA = Human Leucocyte Antigen, HIV = Human Immunodeficiency Virus, AIDS = Acquired Immune Deficiency Syndrome.* | | | | | | | | |

**eFigure 1:** Directed acyclic graph without adjustment (Panel A). Panel B depicts the same directed acyclic graph after adjustment on orange squared variables. *Acronyms: O2 = Oxygen inhalation therapies, COPD = Chronic lung disease, ESRD = End-Stage Renal Disease, BMI = Body Mass Index, cPRA = Calculated Panel Reactive Antibody, HLA = Human Leucocyte Antigen, ABO = Blood group, HCV = Hepatitis C, HVB = Hepatitis B, HIV = Human Immunodeficiency Virus, AIDS = Acquired Human Immunodeficiency Syndrome*

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**A**



**B**

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| **eTable 2:** Multivariate Cox models of the time-to-death and the time-to-transplantation (the corresponding linear predictor represents the propensity score of the main analyses). | | | | | | | |
|  | **Transplantation** | | | | **Death** | | |
|  | **HR** | **95%CI** | | **p-value** | **HR** | **95%CI** | **p-value** |
| Recipient age (per 10 years) | 1.04 | [1.03 - 1.06] | | < 0.01 | 1.75 | [1.68 - 1.81] | < 0.01 |
| Male recipient | 0.96 | [0.93 - 0.99] | | 0.01 | 1.28 | [1.18 - 1.39] | < 0.01 |
| Recipient BMI (per 5 kg/m²) | 0.94 | [0.92 - 0.95] | | < 0.01 | 0.74 | [0.71 - 0.78] | < 0.01 |
| Year of inscription on waiting list |  | |  | < 0.01 |  |  | < 0.01 |
| * 2005-2007 | Ref. | - | |  | Ref. | - |  |
| * 2008-2010 | 0.98 | [0.93 - 1.03] | |  | 1.07 | [0.95 - 1.20] |  |
| * 2011-2013 | 1.00 | [0.95 - 1.05] | |  | 1.28 | [1.12 - 1.46] |  |
| * 2014-2016 | 1.28 | [1.21 - 1.34] | |  | 1.60 | [1.35 - 1.89] |  |
| Time from dialysis to inscription (year) | 1.01 | [1.00 - 1.03] | | 0.02 | 1.19 | [1.15 - 1.22] | < 0.01 |
| Contraindication cumulative time (year) | 0.85 | [0.83 - 0.86] | | < 0.01 | 1.16 | [1.13 - 1.19] | < 0.01 |
| Calculated Panel Reactive Antibody > 0% | 0.53 | [0.51 - 0.55] | | < 0.01 | 0.93 | [0.85 - 1.01] | 0.08 |
| Diabetes | 0.87 | [0.84 - 0.91] | | < 0.01 | 2.16 | [1.98 - 2.34] | < 0.01 |
| *Recipient region of residence was a covariate included in this model (not shown). N=103 patients were excluded because of missing data in at least one variable retained in the model. Acronyms: BMI = Body Mass Index* | | | | | | | |

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| **eTable 3:** Description of the 103 excluded patients for missing data on variables included in the propensity score | | | |
| Median [interquartile range]  Effective (%) | **Characteristics** | **Missing data** |
| Recipient age (years) | 54.4 [42.9;61.9] | 0 (0%) |
| Male recipient | 64 (62%) | 0 (0%) |
| Recipient BMI (kg/m²) | 26.0 [24.4;27.6] | 90 (87%) |
| Year of inscription on waiting list |  | 0 (0%) |
| * 2005-2007 | 47 (46%) |  |
| * 2008-2010 | 32 (31%) |  |
| * 2011-2013 | 16 (16%) |  |
| * 2014-2016 | 8 (7.8%) |  |
| Primary cause of end stage renal disease |  | 0 (0%) |
| * Diabetic nephropathy | 14 (14%) |  |
| * Hypertension | 21 (20%) |  |
| * Other | 12 (12%) |  |
| * Polycystic Kidney Disease | 16 (16%) |  |
| * Primary glomerulopathy | 28 (27%) |  |
| * Pyelonephritis | 3 (2.9%) |  |
| * Unknown | 9 (8.7%) |  |
| Recipient blood group |  | 0 (0%) |
| * A | 47 (46%) |  |
| * AB | 10 (9.7%) |  |
| * B | 12 (12%) |  |
| * O | 34 (33%) |  |
| Dialysis technique |  | 0 (0%) |
| * Hemodialysis | 89 (86%) |  |
| * Peritoneal dialysis | 14 (14%) |  |
| Time from dialysis to inscription (days) | 100.0 [-78.0;246.5] | 0 (0%) |
| Calculated Panel Reactive Antibody (%) | 0.0 [0.0;31.8] | 0 (0%) |
| Potential matched donors | 275.0 [104.5;505.0] | 0 (0%) |
| Positive anti-HLA class I antibodies | 13 (13%) | 0 (0%) |
| Positive anti-HLA class II antibodies | 13 (13%) | 0 (0%) |
| History of diabetes | 16 (16%) | 0 (0%) |
| History of malignancy | 1 (1.0%) | 0 (0%) |
| History of liver cirrhosis | 0 (0.0%) | 0 (0%) |
| History of heart failure | 8 (7.8%) | 0 (0%) |
| History of coronary heart disease | 7 (6.8%) | 0 (0%) |
| History of acute coronary disease | 1 (1.0%) | 0 (0%) |
| History of abdominal aortic aneurysm | 0 (0.0%) | 0 (0%) |
| History of peripheral arterial disease | 6 (5.8%) | 0 (0%) |
| History of cerebrovascular disease | 2 (1.9%) | 0 (0%) |
| History of arrhythmia | 5 (4.9%) | 0 (0%) |
| History of chronic lung disease | 1 (1.0%) | 0 (0%) |
| History of oxygen inhalation therapies | 0 (0.0%) | 0 (0%) |
| History of smoking | 22 (21%) | 0 (0%) |
| History of hepatitis B infection | 2 (1.9%) | 0 (0%) |
| History of hepatitis C infection | 2 (1.9%) | 0 (0%) |
| History of HIV infection | 1 (1.0%) | 0 (0%) |
| History of AIDS | 1 (1.0%) | 0 (0%) |
| History of psychiatric disorder | 0 (0.0%) | 0 (0%) |
| History of amputation of lower limbs | 0 (0.0%) | 0 (0%) |
| History of paralysis | 0 (0.0%) | 0 (0%) |
| History of blindness | 0 (0.0%) | 0 (0%) |
| History of walking difficulties | 2 (1.9%) | 0 (0%) |
| *Time between dialysis and first inscription could have negatives values because of preemptive listing. Acronyms: BMI = Body Mass Index, DOM-TOM = overseas departments, HLA = Human Leucocyte Antigen, HIV = Human Immunodeficiency Virus, AIDS = Acquired Immune Deficiency Syndrome.* | | | |

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| **eTable 4:** Characteristics of matched and unmatched patients at the first dialysis session after placement on the waiting list | | | |
| Median [interquartile range]  Effective (%) | **Unmatched patients**  **(N=1836)** | **Matched patients**  **(N=21292)** | **p-value** |
| Recipient age (years) | 57.7 [49.3;64.2] | 54.8 [43.9;63.4] | <0.01 |
| Male recipient | 1184 (65%) | 13635 (64%) | 0.72 |
| Recipient BMI (kg/m²) | 26.0 [22.8;30.1] | 24.9 [22.1;28.4] | <0.01 |
| Year of inscription on waiting list |  |  | <0.01 |
| * 2005-2007 | 48 (2.6%) | 2702 (13%) |  |
| * 2008-2010 | 179 (9.7%) | 5830 (27%) |  |
| * 2011-2013 | 448 (24%) | 7016 (33%) |  |
| * 2014-2016 | 1161 (63%) | 5744 (27%) |  |
| Primary cause of end stage renal disease |  |  | <0.01 |
| * Diabetic nephropathy | 446 (24%) | 2605 (12%) |  |
| * Hypertension | 351 (19%) | 3237 (15%) |  |
| * Other | 238 (13%) | 3400 (16%) |  |
| * Polycystic Kidney Disease | 198 (11%) | 3480 (16%) |  |
| * Primary glomerulopathy | 283 (15%) | 5034 (24%) |  |
| * Pyelonephritis | 78 (4.2%) | 1037 (4.9%) |  |
| * Unknown | 242 (13%) | 2499 (12%) |  |
| Recipient blood group |  |  | <0.01 |
| * A | 574 (31%) | 8428 (40%) |  |
| * AB | 61 (3.3%) | 874 (4.1%) |  |
| * B | 314 (17%) | 2546 (12%) |  |
| * O | 887 (48%) | 9444 (44%) |  |
| Dialysis technique |  |  | <0.01 |
| * Hemodialysis | 1630 (89%) | 17981 (85%) |  |
| * Peritoneal dialysis | 206 (11%) | 3310 (16%) |  |
| Time from dialysis to inscription (days) | 245.0 [21.5;496.0] | 193.0 [-1.0;414.0] | <0.01 |
| Calculated Panel Reactive Antibody > 0% | 1270 (69%) | 7835 (37%) | <0.01 |
| Potential matched donors | 277.0 [93.0;518.2] | 424.0 [179.0;634.0] | <0.01 |
| Positive anti-HLA class I antibodies | 513 (28%) | 4453 (21%) | <0.01 |
| Positive anti-HLA class II antibodies | 315 (17%) | 2923 (14%) | <0.01 |
| History of diabetes | 724 (39%) | 4412 (21%) | <0.01 |
| History of malignancy | 77 (4.2%) | 564 (2.6%) | <0.01 |
| History of liver cirrhosis | 20 (1.1%) | 112 (0.5%) | <0.01 |
| History of heart failure | 223 (12%) | 1709 (8.0%) | <0.01 |
| History of coronary heart disease | 260 (14%) | 1898 (8.9%) | <0.01 |
| History of acute coronary disease | 116 (6.3%) | 844 (4.0%) | <0.01 |
| History of abdominal aortic aneurysm | 31 (1.7%) | 193 (0.9%) | <0.01 |
| History of peripheral arterial disease | 219 (12%) | 1387 (6.5%) | <0.01 |
| History of cerebrovascular disease | 132 (7.2%) | 948 (4.5%) | <0.01 |
| History of arrhythmia | 133 (7.2%) | 1210 (5.7%) | 0.01 |
| History of chronic lung disease | 113 (6.2%) | 935 (4.4%) | <0.01 |
| History of oxygen inhalation therapies | 50 (2.7%) | 288 (1.4%) | <0.01 |
| History of smoking | 639 (35%) | 7079 (33%) | 0.18 |
| History of hepatitis B infection | 39 (2.1%) | 257 (1.2%) | <0.01 |
| History of hepatitis C infection | 40 (2.2%) | 275 (1.3%) | <0.01 |
| History of HIV infection | 42 (2.3%) | 239 (1.1%) | <0.01 |
| History of AIDS | 19 (1.0%) | 84 (0.4%) | <0.01 |
| History of psychiatric disorder | 23 (1.3%) | 223 (1.0%) | 0.48 |
| History of amputation of lower limbs | 11 (0.6%) | 104 (0.5%) | 0.64 |
| History of paralysis | 11 (0.6%) | 132 (0.6%) | 1.00 |
| History of blindness | 52 (2.8%) | 334 (1.6%) | <0.01 |
| History of walking difficulties | 74 (4.0%) | 413 (1.9%) | <0.01 |
| *Time between dialysis and the first inscription could have negative values because of preemptive listing. Acronyms: BMI = Body Mass Index, HLA = Human Leucocyte Antigen, HIV = Human Immunodeficiency Virus, AIDS = Acquired Immune Deficiency Syndrome.* | | | |

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| **eTable 5:** Patient characteristics in the transplantation and awaiting KT groups at the time of pseudo randomization. Optimal matching algorithm has been used in this analysis. | | | |
| Median [interquartile range]  Effective (%) | **Awaiting transplantation group**  **N=10882** | **Transplantation group N=10882** | **Standardized difference** |
| Recipient age (years) | 57.1 [46.1;65.3] | 55.4 [44.5;64.1] | 10.1% |
| Male recipient | 7005 (64%) | 6955 (64%) | 0.7% |
| Recipient BMI (kg/m²) | 25.2 [22.3;28.6] | 25.0 [22.1;28.4] | 4.5% |
| Year of inscription on waiting list |  |  | 19% |
| * 2005-2007 | 1242 (11%) | 1483 (14%) |  |
| * 2008-2010 | 2691 (25%) | 3143 (29%) |  |
| * 2011-2013 | 3426 (32%) | 3605 (33%) |  |
| * 2014-2016 | 3523 (32%) | 2651 (24%) |  |
| Primary cause of end stage renal disease |  |  | 6.3% |
| * Diabetic nephropathy | 1712 (16%) | 1759 (16%) |  |
| * Hypertension | 2480 (23%) | 2638 (24%) |  |
| * Other | 1705 (16%) | 1614 (15%) |  |
| * Polycystic Kidney Disease | 1319 (12%) | 1268 (12%) |  |
| * Primary glomerulopathy | 1408 (13%) | 1247 (12%) |  |
| * Pyelonephritis | 1751 (16%) | 1802 (17%) |  |
| * Unknown | 507 (4.7%) | 554 (5.1%) |  |
| Recipient blood group |  |  | 37% |
| * A | 3394 (31%) | 5194 (48%) |  |
| * AB | 364 (3.3%) | 529 (4.9%) |  |
| * B | 1557 (14%) | 1070 (9.8%) |  |
| * O | 5567 (51%) | 4089 (38%) |  |
| Dialysis technique |  |  | 1.4% |
| * Hemodialysis | 9223 (85%) | 9166 (84%) |  |
| * Peritoneal dialysis | 1659 (15%) | 1715 (16%) |  |
| Time from dialysis to inscription (days) | 207.0 [5.0;440.0] | 183.0 [-5.0;397.0] | 6.3% |
| Preemptive inscription on waiting list | 2667 (25%) | 2788 (26%) | 2.4% |
| Contraindication cumulative time (days) | 49.0 [0.0;208.0] | 38.0 [0.0;184.0] | 6.9% |
| Calculated Panel Reactive Antibody > 0% | 4099 (38%) | 3969 (37%) | 2.2% |
| Potential matched donors | 410.0 [158.0;630.0] | 434.0 [203.0;639.0] | 7.8% |
| Positive anti-HLA class I antibodies | 2339 (22%) | 2247 (21%) | 1.9% |
| Positive anti-HLA class II antibodies | 1532 (14%) | 1451 (13%) | 2.1% |
| History of diabetes | 2452 (23%) | 2142 (20%) | 6.6% |
| History of malignancy | 401 (3.7%) | 335 (3.1%) | 3.3% |
| History of liver cirrhosis | 83 (0.8%) | 57 (0.5%) | 3% |
| History of heart failure | 1096 (10%) | 859 (7.9%) | 7.4% |
| History of coronary heart disease | 1274 (12%) | 982 (9.0%) | 8.6% |
| History of acute coronary disease | 537 (4.9%) | 430 (4.0%) | 4.7% |
| History of abdominal aortic aneurysm | 146 (1.3%) | 97 (0.9%) | 4.3% |
| History of peripheral arterial disease | 962 (8.8%) | 745 (6.8%) | 7.3% |
| History of cerebrovascular disease | 579 (5.3%) | 531 (4.9%) | 2% |
| History of arrhythmia | 804 (7.4%) | 673 (6.2%) | 4.7% |
| History of chronic lung disease | 598 (5.5%) | 494 (4.5%) | 4.3% |
| History of oxygen inhalation therapies | 208 (1.9%) | 165 (1.5%) | 3% |
| History of smoking | 3964 (36%) | 3688 (34%) | 4.7% |
| History of hepatitis B infection | 188 (1.7%) | 115 (1.1%) | 5.7% |
| History of hepatitis C infection | 151 (1.4%) | 160 (1.5%) | 0.7% |
| History of HIV infection | 148 (1.4%) | 107 (1.0%) | 3.5% |
| History of AIDS | 62 (0.6%) | 32 (0.3%) | 4.2% |
| History of psychiatric disorder | 172 (1.6%) | 105 (1.0%) | 5.5% |
| History of amputation of lower limbs | 73 (0.7%) | 63 (0.6%) | 1.2% |
| History of paralysis | 88 (0.8%) | 75 (0.7%) | 1.4% |
| History of blindness | 231 (2.1%) | 201 (1.8%) | 2% |
| History of walking difficulties | 313 (2.9%) | 219 (2.0%) | 5.6% |
| *Acronyms: BMI = Body Mass Index, HLA = Human Leucocyte Antigen, HIV = Human Immunodeficiency Virus, AIDS = Acquired Immune Deficiency Syndrome* | | | | |

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| **eTable 6:** Mean life expectancy according to several follow-up times post pseudo randomization with an optimal matching algorithm | | | | | | | | |
| **Time**  **(years)** | **Transplantation group**  **mean life expectancy** | | **Awaiting transplantation group**  **mean life expectancy** | | **Mean life expectancy difference** | | **Relative mean life expectancy gain** | |
| **RMST** | **95%CI** | **RMST** | **95%CI** | **ΔRMST** | **95%CI** | **%** | **95%CI** |
| 1 | 0.98 years | [0.98;0.98] | 0.98 years | [0.98;0.98] | 0.04 months | [-0.01;0.09] | 0.37% | [-0.03 ; 0.77] |
| 3 | 2.88 years | [2.87;2.90] | 2.80 years | [2.78;2.81] | 1.05 months | [0.82;1.28] | 3.11% | [2.43 ; 3.82] |
| 5 | 4.70 years | [4.68;4.73] | 4.48 years | [4.45;4.51] | 2.74 months | [2.26;3.21] | 5.09% | [4.18 ; 6.00] |
| 10 | 8.81 years | [8.73;8.88] | 8.18 years | [8.09;8.28] | 7.50 months | [5.99;8.90] | 7.62% | [6.06 ; 9.14] |
| *Acronyms: : RMST = Restricted Mean Survival Time, Δ = Delta, % = Percentage* | | | | | | | | |

**eFigure 2**: Patient survival in the transplantation and awaiting transplantation groups in the optimal matched sub-cohort.

