**Supplementary table 1.** Baseline characteristics of patients.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Graft loss (n=37)** | **No graft loss (n=537)** | ***P***  |
| Male, n (%) | 28 (76%) | 325 (61%) | 0.07 |
| Primary kidney diseases, n (%) | 27 (73%) | 442 (82%) | 0.79 |
| Secondary kidney disease, n (%) | 2 (5%) | 40 (7%) |
| Age at study entry (years) | 55.43 (40.39-63.05) | 54.61 (45.05-66.74) | 0.68 |
| Time post-transplantation (month) | 97.46 (41.39-164.30) | 68.76 (34.57-123.72) | 0.31 |
| Time on dialysis (month) | 45.00 (15.75-64.50) | 46.00 (20.00-76.00) | 0.06 |
| Donor age (years) | 49.00 (39.50-63.75) | 51.00 (39.00-60.00) | 0.76 |
| Cold ischemia time (hours) | 7.17 (4.36-16.77) | 8.72 (3.25-14.13) | 0.96 |
| Serum albumin (g/dl) | 4.45 (4.20-4.90) | 4.60 (4.40-4.80) | 0.47 |
| Total cholesterol (mg/dl) | 212.00 (176.00-260.00) | 217.00 (186.00-254.00) | 0.83 |
| Serum creatinine (mg/dl) | 2.74 (2.23-3.51) | 1.53 (1.25-1.97) | <0.001 |
| eGFRa (mL/min/1.73 m2) | 22 (16.75-34.00) | 44 (33.00-58.00) | <0.001 |
| Serum calcium (mmol/L) | 2.42 (2.32-2.54) | 2.47 (2.37-2.59) | 0.08 |
| Serum phosphorus (mmol/L) | 1.10 (0.89-1.35) | 0.85 (0.70-0.99) | <0.001 |
| Serum endostatin (pmol/l) | 207.72 (162.03-303.87) | 138.88 (106.81-178.55) | <0.001 |
| Fasting blood glucose (mg/dl) | 81.00 (72.00-103.00) | 87.00 (76.00-104.00) | 0.24 |
| Urinary protein excretion (mg/24h) | 443.50 (242.50-1588.25) | 153.00 (96.00-282.00) | <0.001 |

Data are given as median (interquartile ranges) or number (%). a, estimated glomerular filtration rate.*P* values represent differences between no graft loss group and graft loss group.

**Supplementary table 2.** Baseline characteristics of patients.

|  |  |  |  |
| --- | --- | --- | --- |
| **Variables** | **Death (n=62)** | **Survival (n=512)** | ***P***  |
| Male, n (%) | 45 (72.6%) | 308 (60.2%) | 0.058 |
| Primary kidney diseases, n (%) | 50 (80.6%) | 419 (81.8%) | 0.803 |
| Secondary kidney disease, n (%) | 5 (8.1%) | 37 (7.2%) |
| Age at study entry (years) | 69.0 (57.0, 74.0) | 54.0 (43.0, 64.0) | <0.0001 |
| Time post-transplantation (month) | 78.0 (48.2, 123.8) | 69.3 (34.4, 125.6) | 0.315 |
| Time on dialysis (month) | 54.5 (28.5, 74.8) | 45.0 (19.0, 75.0) | 0.128 |
| Donor age (years) | 55.5 (44.0, 69.8) | 50.0 (39.0, 59.0) | 0.007 |
| Cold ischemia time (hours) | 10.7 (7.3, 18.8) | 8.3 (3.1, 14.0) | 0.003 |
| Serum albumin (g/dl) | 4.4 (4.2, 4.7) | 4.6 (4.4, 4.8) | 0.015 |
| Total cholesterol (mg/dl) | 209.5 (170.0, 241.3) | 218.0 (185.0, 255.0) | 0.199 |
| Serum creatinine (mg/dl) | 1.8 (1.3, 2.4) | 1.6 (1.3, 2.0) | 0.019 |
| eGFRa (mL/min/1.73 m2) | 33.0 (25.0, 54.5) | 43.5 (32.0, 58.0) | 0.002 |
| Serum calcium (mmol/L) | 2.43 (2.33, 2.61) | 2.48 (2.38, 2.59) | 0.109 |
| Serum phosphorus (mmol/L) | 0.91 (0.75, 1.09) | 0.85 (0.70, 0.99) | 0.011 |
| Serum endostatin (pmol/l) | 146.90 (108.33, 223.31) | 141.62 (108.61, 179.86) | 0.215 |
| Fasting blood glucose (mg/dl) | 93.0 (81.8, 114.5) | 86.0 (75.0, 102.3) | 0.017 |
| Urinary protein excretion (mg/24h) | 183.0 (114.0, 338.5) | 160.0 (98.0, 301.8) | 0.370 |

Data are given as median (interquartile ranges) or number (%). a, estimated glomerular filtration rate.*P* values represent differences between death group and survival group.



**Supplementary figure 1.** Plots of serum endostatin concentrations with different immunosuppressive treatment. The median (interquartile range) of endostatin was 154.31 (117.51-202.07) pmol/l in CyA treated recipients; 153.06 (109.31-210.71) pmol/l in Everolimus treated recipients; 127.99 (104.08-165.43) pmol/l in Tacrolimus treated recipients; 110.75 (101.39-163.71) pmol/l in recipients who get combined medications (any two kinds of immunosuppressive drugs of CyA, Everolimus and Tacrolimus).



**Supplementary figure 2.** Receiver operating characteristic (ROC) curves for graft loss. The optimal cut-off value of baseline serum endostatin was 147.3 pmol/l, evaluated by ROC curves and Youden’s index (AUC = 0.79; 95%CI, 0.71-0.86; *P* < 0.001).



**Supplementary figure 3**. Scatterplots of endostatin levels and eGFR (a) and recipients’ age (b).



**Supplementary figure 4.** Receiver operating characteristic (ROC) curves of baseline serum endostatin for death (AUC = 0.55; 95%CI, 0.46-0.63; *P*=0.215).