**Supplementary Table S1:** Area under the receiver operating characteristic (ROC) curves for prediction of delayed graft function, comparing between cumulative urine volume and individual urine volume at each time points.

|  |  |  |
| --- | --- | --- |
| **Biomarkers** | **AUC (95% Confidence Interval)** | **p-value** |
| Cumulative 1-hour urine volume | 0.860 (0.764-0.955) | <0.001 |
| Cumulative 2-hour urine volume | 0.905 (0.828-0.983) | <0.001 |
| Cumulative 3-hour urine volume | 0.935 (0.876-0.994) | <0.001 |
| Cumulative 4-hour urine volume | 0.939 (0.882-0.996) | <0.001 |
| Cumulative 5-hour urine volume | 0.939 (0.882-0.996) | <0.001 |
| Cumulative 6-hour urine volume | 0.939 (0.882-0.996) | <0.001 |
| Individual urine volume in hour 2 | 0.900 (0.821-0.979) | <0.001 |
| Individual urine volume in hour 3 | 0.936 (0.876-0.995) | <0.001 |
| Individual urine volume in hour 4 | 0.917 (0.850-0.985) | <0.001 |
| Individual urine volume in hour 5 | 0.918 (0.851-0.986) | <0.001 |
| Individual urine volume in hour 6 | 0.923 (0.857-0.988) | <0.001 |

**Supplementary Table S2:** Full details of sensitivity and specificity in every hourly urine volume for predicting DGF

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cumulative urine volume after 1 hours** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 25 ml | 62.5 | 85.7 | 74.1 | 4.38 | 0.44 |
| < 30 ml | 79.2 | 82.9 | 81.0 | 4.62 | 0.25 |
| < 40 ml | 83.3 | 82.9 | 83.1 | 4.86 | 0.20 |
| < 60 ml | 83.3 | 80.0 | 81.7 | 4.17 | 0.21 |
| **Cumulative urine volume after 2 hours** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 140 ml | 83.3 | 82.9 | 83.1 | 4.86 | 0.20 |
| < 170 ml | 87.5 | 80 | 83.8 | 4.38 | 0.16 |
| < 200 ml | 87.5 | 77.1 | 82.3 | 3.83 | 0.16 |
| < 230 ml | 87.5 | 74.3 | 80.9 | 3.40 | 0.17 |
| **Cumulative urine volume after 3 hours** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 130 ml | 79.2 | 88.6 | 83.9 | 6.93 | 0.24 |
| < 180 ml | 79.2 | 85.7 | 82.4 | 5.54 | 0.24 |
| < 230 ml | 83.3 | 85.7 | 84.5 | 5.83 | 0.19 |
| < 300 ml | 87.5 | 77.1 | 82.3 | 3.83 | 0.16 |
| **Cumulative urine volume after 4 hours** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 330 ml | 79.2 | 82.9 | 81.0 | 4.62 | 0.25 |
| **< 350 ml** | **87.5** | **82.9** | **85.2** | **5.10** | **0.15** |
| < 380 ml | 87.5 | 80.0 | 83.8 | 4.38 | 0.16 |
| < 400 ml | 87.5 | 77.1 | 82.3 | 3.83 | 0.16 |
| **Cumulative urine volume after 5 hours** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 380 ml | 79.2 | 85.7 | 82.4 | 5.54 | 0.24 |
| < 420 ml | 83.3 | 85.7 | 84.5 | 5.83 | 0.19 |
| < 450 ml | 83.3 | 74.3 | 78.8 | 3.24 | 0.22 |
| < 520 ml | 87.5 | 71.4 | 79.5 | 3.06 | 0.18 |
| **Cumulative urine volume after 6 hours** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 460 ml | 79.2 | 85.7 | 82.4 | 5.54 | 0.24 |
| < 490 ml | 83.3 | 82.9 | 83.1 | 4.86 | 0.20 |
| < 530 ml | 83.3 | 74.3 | 78.8 | 3.24 | 0.22 |
| < 580 ml | 87.5 | 74.3 | 80.8 | 3.40 | 0.17 |

**Supplementary Table S3:** Area under the receiver operating characteristic (ROC) curves for prediction of delayed graft function, stratified by urine volume per patient’s body weight (ml/kg)

|  |  |  |
| --- | --- | --- |
| **Biomarkers** | **AUC (95% Confidence Interval)** | **p-value** |
| Cumulative 1-hour urine volume/body weight (ml/kg) | 0.873 (0.782-0.964) | <0.001 |
| Cumulative 2-hour urine volume/body weight (ml/kg) | 0.910 (0.834-0.985) | <0.001 |
| Cumulative 3-hour urine volume/body weight (ml/kg) | 0.933 (0.874-0.993) | <0.001 |
| Cumulative 4-hour urine volume/body weight (ml/kg) | 0.935 (0.875-0.994) | <0.001 |
| Cumulative 5-hour urine volume/body weight (ml/kg) | 0.935 (0.875-0.994) | <0.001 |
| Cumulative 6-hour urine volume/body weight (ml/kg) | 0.932 (0.872-0.992) | <0.001 |

**Supplementary Table S4:** Sensitivity and specificity of cumulative urine volume per patient’s body weight for predicting DGF.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Cumulative urine volume after 1 hour (ml/kg)** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 0.6 ml/kg | 79.2 | 82.9 | 81.0 | 4.62 | 0.25 |
| < 0.7 ml/kg | 83.3 | 82.9 | 83.1 | 4.86 | 0.20 |
| < 0.8 ml/kg | 83.3 | 80.0 | 81.7 | 4.17 | 0.21 |
| < 0.9 ml/kg | 83.3 | 77.1 | 80.2 | 3.65 | 0.22 |
| **Cumulative urine volume after 2 hour (ml/kg)** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 1.6 ml/kg | 79.2 | 85.7 | 82.4 | 5.54 | 0.24 |
| < 1.8 ml/kg | 83.3 | 85.7 | 84.5 | 5.83 | 0.19 |
| < 2.2 ml/kg | 83.3 | 82.9 | 83.1 | 4.86 | 0.20 |
| < 2.5 ml/kg | 83.3 | 80.0 | 81.7 | 4.17 | 0.21 |
| **Cumulative urine volume after 3 hour (ml/kg)** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 2.7 ml/kg | 75.0 | 85.7 | 80.4 | 5.25 | 0.29 |
| < 3.0 ml/kg | 79.2 | 85.7 | 82.4 | 5.54 | 0.24 |
| < 3.2 ml/kg | 83.3 | 85.7 | 84.5 | 5.83 | 0.19 |
| < 3.4 ml/kg | 83.3 | 82.9 | 83.1 | 4.86 | 0.20 |
| **Cumulative urine volume after 4 hour (ml/kg)** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 4.5 ml/kg | 79.2 | 82.9 | 81.0 | 4.62 | 0.25 |
| **< 5.8 ml/kg** | **87.5** | **82.9** | **85.2** | **5.10** | **0.15** |
| < 6.7 ml/kg | 87.5 | 80.0 | 83.8 | 4.38 | 0.16 |
| < 7.0 ml/kg | 87.5 | 77.1 | 82.3 | 3.83 | 0.16 |
| **Cumulative urine volume after 5 hour (ml/kg)** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 8.8 ml/kg | 87.5 | 74.3 | 80.9 | 3.40 | 0.17 |
| < 9.5 ml/kg | 91.7 | 74.3 | 83.0 | 3.56 | 0.11 |
| < 9.8 ml/kg | 91.7 | 71.4 | 81.5 | 3.21 | 0.12 |
| < 10.2 ml/kg | 91.7 | 68.6 | 80.1 | 2.92 | 0.12 |
| **Cumulative urine volume after 6 hour (ml/kg)** | **Sensitivity (%)** | **Specificity (%)** | **Accuracy (%)** | **Positive likelihood ratio** | **Negative likelihood ratio** |
| < 10.2 ml/kg | 87.5 | 74.3 | 80.9 | 3.40 | 0.17 |
| < 10.8 ml/kg | 91.7 | 74.3 | 83.0 | 3.56 | 0.11 |
| < 11.2 ml/kg | 91.7 | 71.4 | 81.5 | 3.21 | 0.12 |
| < 11.6 ml/kg | 91.7 | 68.6 | 80.1 | 2.92 | 0.12 |