**Supplemental Digital Content**

Table S1. Comparison of demographic, preoperative, intraoperative characteristics and the incidences of outcome measures of the patients with emergent surgeries

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| --- | --- | --- | --- |
|  | Elective  N=4238 | Emergency  N=84 | P-Value |
| Demographic |  |  |  |
| Age | 60 (51-68) | 61.5 (41-74) | 0.70 |
| Sex, male | 113 (47.7) | 4 (28.6) | 0.26 |
| BMI, kg/m2 | 23. 6 (21.5-25.7) | 23.3 (20.6-25.6) | 0.23 |
| ASA ≥ 3 | 116 (2.7) | 30 (35.7) | < 0.01 |
| Laboratory |  |  |  |
| Cr, mg/dL | 0.8 (0.7-0.9) | 0.8 (0.6-1.0) | 0.90 |
| Alb, mg/dL | 3.7 (3.2-4.1) | 3.2 (2.3-3.8) | < 0.01 |
| Hb, g/dL | 12.3 (10.3-13.6) | 12.1 (10.9-13.8) | 0.78 |
| eGFR, ml/min/m2 | 75 (60-90) | 60 (60-78.5) | < 0.01 |
| Serum uric acid, mg/dL | 4.7 (3.8-5.7) | 4.5 (3.0-5.8) | 0.10 |
| Operation related |  |  |  |
| Sevoflurane use | 1215 (28.7) | 50 (59.5) | < 0.01 |
| Crystalloid,ml | 1200 (900-1600) | 1475 (1050-2000) | < 0.01 |
| Colloid, ml | 500 (0-500) | 500 (325-1000) | < 0.01 |
| Intraoperative diuretics | 37 (0.9) | 8 (9.5) | < 0.01 |
| Intraoperative transfusion | 160 (3.8) | 22 (26.2) | < 0.01 |
| Urine output | 230 (110-470) | 117.5 (57.5-250) | < 0.01 |
| Lowest MBP, mmHg | 70 (64.3-76.6) | 62.5 (58.0-71.6) | < 0.01 |
| Anesthetic time, min | 160 (130-197) | 172.5 (135-207.5) | 0.19 |
| Laparoscope | 1044 (24.6) | 6 (7.1) | < 0.01 |
| Comorbidity |  |  |  |
| Ischemic heart disease | 133 (3.1) | 7 (8.3) | 0.02 |
| Diabetes mellitus | 618 (14.6) | 9 (10.7) | 0.40 |
| Hypertension | 1390 (32.8) | 32 (38.1) | 0.37 |
| Cerebrovascular accident | 90 (2.1) | 4 (4.8) | 0.21 |
| Chronic lung disease | 146 (3.5) | 5 (6.0) | 0.35 |
| Chronic kidney disease | 49 (1.2) | 3 (3.6) | 0.13 |
| Smoking | 1879 (44.4) | 28 (33.3) | 0.06 |
| Outcome |  |  |  |
| ICU admission | 186 (4.4) | 38 (45.2) | < 0.01 |
| MACE | 19 (0.5) | 2 (2.4) | 0.08 |
| Hospital stay, days | 7 (6-9) | 12 (8-25.5) | < 0.01 |
| 30 day mortality | 6 (0.1) | 6 (7.1) | < 0.01 |
| Overall survival | 125.5 (795-1420) | 749 (543-1088.3) | < 0.01 |

Table S2. Logistic regression identifying predictors of mortality

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Univariate | | | Multivariate | | |
|  | OR | 95% CI | P-value | OR | 95% CI | P-Value |
| AKI-AKIN | 2.9 | 1.7-5.0 | < 0.01 |  |  |  |
| AKI-RIFLE | 3.5 | 1.9-6.3 | < 0.01 |  |  |  |
| Age | 1.0 | 1.0-1.1 | < 0.01 |  |  |  |
| Sex, female | 0.7 | 0.5-1.2 | 0.20 |  |  |  |
| BMI | 1.1 | 1.0-1.2 | < 0.01 | 1.1 | 1.01-1.2 | < 0.04 |
| ASA status | 17.0 | 10.4-27.9 | < 0.01 | 4.2 | 2.1-8.3 | < 0.01 |
| Sevoflurane | 1.4 | 0.9-2.2 | 0.14 |  |  |  |
| Emergency | 14.9 | 8.2-27.0 | < 0.01 | 4.5 | 2.0-10.5 | < 0.01 |
| Diuretics | 5.3 | 1.8-15.1 | < 0.01 |  |  |  |
| Intraoperative transfusion | 8.8 | 5.3-14.4 | < 0.01 |  |  |  |
| Intraoperative urine output | 1 | 1-1 | 0.70 |  |  |  |
| Lowest MBP | 0.9 | 0.9-1.0 | < 0.01 |  |  |  |
| Anesthetic time | 1.0 | 1.0-1.1 | < 0.01 | 1.01 | 1.0-1.01 | < 0.01 |
| Serum creatinine | 1.7 | 1.4-2.0 | < 0.01 |  |  |  |
| Albumin | 0.3 | 0.2-0.4 | < 0.01 | 0.4 | 0.3-0.7 | < 0.01 |
| Hemoglobin | 0.8 | 0.7-0.9 | < 0.01 |  |  |  |
| Serum uric acid | 0.9 | 0.8-1.1 | 0.20 |  |  |  |
| Ischemic heart disease | 2.4 | 1.4-5.7 | 0.04 |  |  |  |
| Diabetes mellitus | 3.3 | 2.1-5.3 | < 0.01 | 2.9 | 1.7-5.0 | < 0.01 |
| Hypertension | 2.0 | 1.3-3.1 | < 0.01 |  |  |  |
| Cerebrovascular accident | 3.7 | 1.6-8.8 | < 0.01 |  |  |  |
| Smoking | 1.3 | 0.9-2.1 | 0.19 |  |  |  |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Parameter | Estimate | Standard  Error | Wald  Chi-square | P value |
| Age \* Sevoflurane | 0.000833 | 0.00443 | 0.0353 | 0.8509 |
| Emergency \* Sevoflurane | 0.1803 | 0.1447 | 1.5521 | 0.2128 |
| Diuretics \* Sevoflurane | -0.4428 | 0.255 | 3.0153 | 0.0825 |
| Preoperative albumin \* Sevoflurane | -0.1596 | 0.0913 | 3.0523 | 0.0806 |
| Diabetes mellitus \* Sevoflurane | -0.1385 | 0.0707 | 3.839 | 0.0601 |
| Hypertension \* Sevoflurane | -0.0486 | 0.0561 | 0.7491 | 0.3868 |
| Beta blocker\* Sevoflurane | -0.3209 | 0.1952 | 2.704 | 0.1001 |

Table S3. Analysis of interaction between sevoflurane and significant variables

There were no interactions identified between sevoflurane and other independent variables either AKIN, or RIFLE criteria.