**Supplemental Digital Content**

*Risks of cardiovascular adverse events and death in patients with prior stroke undergoing emergency non-cardiac, non-intracranial surgery: The importance of operative timing.*

*Christiansen et al*

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# Table 1. Coding details for surgery type and comorbidities

|  |  |
| --- | --- |
| **Surgery type** | **NOMESCO codea** |
| Intracranial | A (if surgery on intracranial structures) |
| Neurological | A (if not intracranial structures) |
| Endocrine | B |
| Eye | C |
| Ear/nose/throat | D |
| Thoracic/pulmonary | G |
| Breast | H |
| Abdominal (bowel) | J (if surgery on esophagus, ventricle, or intestines) |
| Abdominal (non-bowel) | J (if not esophagus, ventricle, or intestines) |
| Male reproductive | K (if surgery on urethra, prostate, scrotum, or penis) |
| Urology | K (if not urethra, prostate, scrotum, or penis) |
| Female reproductive | L |
| Minor orthopedic | N (if surgery on arm, ankle or foot) |
| Major orthopedic | N (if not arm, ankle or foot) |
| Non-arterial vessels | P (if surgery on lymph or venous vessels) |
| Arterial vessels | P (if not lymph or venous vessels) |
| Plastic | Q |
| **Comorbidity** | **ICD-10 code** |
| Atrial fibrilation | I48 |
| Ischemic heart disease | I20, I23, I24, I25 |
| Congestive heart failureb | I42, I50, I110, J819 |
| Myocardial infarction. | I21 |
| Cerebrovascular disease | I63, I64 |
| Diabetesc | E10-E14 (excluding E109, E119, E129, E139) |
| Peripheral vascular disease | I70, I74 |
| Metastatic cancer | C00-C96 |
| Chronic obstructive pulmonary disease | J42, J44 |
| Coagulation deficiencies | D60-D69 |
| Rheumatologic disease | M05, M06, M32, M33, M34, M353 |
| Liver disease | K70-K77, B150, B160, B190 |
| Venous thromboembolism | I26, I80, I82 (excluding I800, I808, I820) |
| Renal disease | N03, N04, N17, N18, N19, R34, I12, I13 |
| **Footnote:** aNOMESCO (Nordic Medico-Statistical Committee) ’s Classification of Surgical Procedures (NCSP) bChronic heart failure defined as present diagnosis or from use of loop diuretics. cDiabetes defined as present diagnosis or from use of glucose lowering agents (ATC-code A10). | |

# Table 2. Subcategories of orthopedic surgery.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **No Stroke** | | **Stroke <3 months** | | **Stroke 3-9 months** | | **Stroke >9 months** | |
|  | **N=63,382** | | **N=1,326** | | **N=705** | | **N=2,695** | |
| **Procedures n (% fractures)** | **n** | **%** | **n** | **%** | **n** | **%** | **n** | **%** |
| ankle/foot | 9,004 | 75.3% | 71 | 49.3% | 48 | 45.8% | 222 | 50.0% |
| columna/pelvis | 1,613 | 38.1% | 27 | 40.7% | na | na | 28 | 32.1% |
| elbow/antibrachi | 8,842 | 83.9% | 60 | 80% | 45 | 86.7% | 183 | 86.9% |
| hand/wrist | 5,118 | 44.5% | 22 | 40.9% | 11 | 63.6% | 51 | 31.4% |
| hip/femoral | 27,263 | 57.3% | 1,005 | 55.9% | 524 | 61.5% | 1,897 | 60.8% |
| knee/tibial/fibular | 7,298 | 40.5% | 91 | 27.5% | 45 | 13.3% | 206 | 27.2% |
| shoulder | 4,244 | 52.5% | 50 | 30% | 27 | 55.6% | 108 | 43.5% |
| **Footnote:** List of subgroups of orthopedic surgery. Columns marked % indicates percent of fracture repairs. | | | | | | | | |

# Table 3. Baseline characteristics for vascular surgery.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **No previous stroke** | | **Stroke < 3 months** | | **Stroke 3-9 months** | | **Stroke >9 months** | |
| **N (%)#** | **3,144** | **%** | **94** | **%** | **64** | **%** | **207** | **%** |
| Age - mean (SD\*) | 68 | 14\* | 69 | 12\* | 71 | 12\* | 72 | 11\* |
| Men | 1,897 | 60.3 | 50 | 53.2 | 33 | 51.6 | 121 | 58.5 |
| Body mass index – mean (SD\*) | 25.1 | 4.9\* | 24.6 | 4.0\* | 25.5 | 5.0\* | 25.2 | 5.2\* |
| Missing data body mass index | 125 | 4.0 | 3 | 3.2 | <3 (NA) |  | 8 | 3.9 |
| **Medication** | | | | | | | | |
| Lipid lowering agents | 1,279 | 40.7 | 56 | 59.6 | 42 | 65.6 | 114 | 55.1 |
| Antithromboticsa | 1,360 | 43.3 | 70 | 74.5 | 47 | 73.4 | 160 | 77.3 |
| Beta-blocking agents | 864 | 27.5 | 29 | 30.9 | 29 | 45.3 | 78 | 37.7 |
| Renin-Angiotensin System-inhibitors | 1,130 | 35.9 | 45 | 47.9 | 33 | 51.6 | 91 | 44.0 |
| Aldosterone antagonists | 179 | 5.7 | 8 | 8.5 | 5 | 7.8 | 11 | 5.3 |
| Glucose lowering agents | 408 | 13.0 | 18 | 19.1 | 12 | 18.8 | 30 | 14.5 |
| Thiazides | 449 | 14.3 | 17 | 18.1 | 13 | 20.3 | 29 | 14.0 |
| Calcium channel blocking agents | 698 | 22.2 | 26 | 27.7 | 24 | 37.5 | 67 | 32.4 |
| Loop diuretics | 645 | 20.5 | 27 | 28.7 | 27 | 42.2 | 63 | 30.4 |
| Digoxin | 232 | 7.4 | 7 | 7.4 | 13 | 20.3 | 16 | 7.7 |
| Vitamin-K antagonist | 280 | 8.9 | 8 | 8.5 | 7 | 10.9 | 17 | 8.2 |
| **Comorbid diseases** | | | | | | | | |
| Myocardial infarction | 211 | 6.7 | 9 | 9.6 | 10 | 15.6 | 22 | 10.6 |
| Chronic obstructive pulmonary disease | 275 | 8.7 | 16 | 17.0 | 9 | 14.1 | 27 | 13.0 |
| Anemia | 209 | 6.6 | 11 | 11.7 | 10 | 15.6 | 22 | 10.6 |
| Metastatic cancer | 47 | 1.5 | <3 (NA) |  | <3 (NA) |  | 6 | 2.9 |
| Peptic Ulcer | 191 | 6.1 | 7 | 7.4 | 12 | 18.8 | 16 | 7.7 |
| Renal disease | 317 | 10.1 | 11 | 11.7 | 12 | 18.8 | 35 | 16.9 |
| Rheumatologic disease | 43 | 1.4 | <3 (NA) |  | 3 | 4.7 | 4 | 1.9 |
| Peripheral artery disease | 996 | 31.7 | 38 | 40.4 | 27 | 42.2 | 106 | 51.2 |
| Liver disease | 77 | 2.4 | <3 (NA) |  | <3 (NA) |  | <3 (NA) |  |
| Chronic heart failure | 745 | 23.7 | 31 | 33.0 | 29 | 45.3 | 73 | 35.3 |
| Ischemic heart disease | 505 | 16.1 | 25 | 26.6 | 26 | 40.6 | 70 | 33.8 |
| Atrial fibrillation | 356 | 11.3 | 19 | 20.2 | 20 | 31.3 | 50 | 24.2 |
| Venous Thromboembolism | 122 | 3.9 | 7 | 7.4 | 3 | 4.7 | 9 | 4.3 |
| Diabetes Mellitus | 461 | 14.7 | 20 | 21.3 | 16 | 25.0 | 36 | 17.4 |
| **Surgeries N (%)** | | | | | | | | |
| Arterial vessel | 2,800 | 89.1 | 90 | 95.7 | 63 | 98.4 | 203 | 98.1 |
| Non-arterial vessel | 344 | 10.9 | 4 | 4.3 | <3 (NA) |  | 4 | 1.9 |
| **Surgical Risk** | | | | | | | | |
| Low | 0 |  | 0 |  | 0 |  | 0 |  |
| Intermediate | 446 | 14.2 | 11 | 11.7 | 4 | 6.3 | 11 | 5.3 |
| High | 2,698 | 85.8 | 83 | 88.3 | 60 | 93.8 | 196 | 94.7 |
| **Footnote:** Abbreviations: aAntithrombotics included any combination of acetylsalicylic acid, dipyridamole and clopidogrel. Due to potential identification of individual patients, author are not allowed to publish very small numbers, thus groups with less than 3 patients have been replaced with <3 (NA).Testing for difference between stroke and no stroke patients overall showed that all p were <0.05 with the exception of aldosterone antagonists, thiazid, glucose lowering drugs, vitamin k antagonists, sex, venous thromboembolism, liver disease, rheumatic disease and metastatic cancer. | | | | | | | | |

# Table 4. Absolute risks of major adverse cardiovascular events, stratified by revised cardiac risk index in patients with previous stroke.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Group | Stroke as only predictor | Stroke+1  predictor | Stroke+2  predictors | Stroke+3  predictors | Stroke+4/5  predictors |
|  | N=3,878 | N=2,143 | N=1,136 | N=286 | N=52 |
| Events | 369 | 317 | 202 | 44 | 16 |
| 30-day Absolute risk | 9.5 | 14.8 | 17.9 | 15.4 | 30.2 |
| **Footnote:** In accordance to the revised cardiac risk index previous stroke gives 1 point. Risk predictors of revised cardiac risk index include history of ischemic heart disease, congestive heart failure, stroke/transient ischemic attack or insulin dependent diabetes, chronic kidney disease, undergoing suprainguinal vascular, intraperitoneal, or intrathoracic surgery. | | | | | |

# Table 5. Baseline characteristics before and after propensity score matching.

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **All patients with stroke ≤ 14 days prior to surgery** | | | | | **Propensity score matched cohort** | | | | |
|  | **Stroke 1-3 days** | | **Stroke 4-14 days** | |  | **Stroke 1-3 days** | | **Stroke 4-14 days** | |  |
|  | **N=1,027** | | **N=418** | |  | **N=323** | | **N=323** | |  |
|  | **n** | **(%)** | **n** | **(%)** | **Standardized  mean differences** | **n** | **(%)** | **n** | **(%)** | **Standardized  mean differences** |
| Age – mean (SD\*) | 75 | 13\* | 71 | 14\* | 0.2857 | 73 | 14\* | 73 | 14\* | 0.0480 |
| Gender – n (%) male | 480 | 46.7 | 219 | 52.4 | 0.1133 | 167 | 51.7 | 167 | 51.7 | 0.0000 |
| Body mass index – mean (SD\*) | 24.0 | 4.6\* | 25.1 | 5.2\* | 0.2195 | 24.4 | 4.7\* | 24.5 | 4.7\* | 0.0273 |
| **Medication** |  |  |  |  |  |  |  |  |  |  |
| Lipid lowering agents | 337 | 32.8 | 154 | 36.8 | 0.0846 | 122 | 37.8 | 119 | 36.8 | 0.0192 |
| Antitromboticsa | 647 | 63.0 | 235 | 56.2 | 0.1385 | 196 | 60.7 | 191 | 59.1 | 0.0316 |
| Beta-blocking agents | 235 | 22.9 | 92 | 22.0 | 0.0209 | 70 | 21.7 | 76 | 23.5 | 0.0444 |
| Renin-Angiotensin System-inhibitors | 311 | 30.3 | 144 | 34.4 | 0.0892 | 107 | 33.1 | 106 | 32.8 | 0.0066 |
| Aldosterone antagonists | 50 | 4.9 | 16 | 3.8 | 0.0511 | 6 | 1.9 | 10 | 3.1 | 0.0797 |
| Glucose lowering agents | 137 | 13.3 | 61 | 14.6 | 0.0362 | 45 | 13.9 | 47 | 14.6 | 0.0177 |
| Thiazides | 174 | 16.9 | 79 | 18.9 | 0.0510 | 68 | 21.1 | 64 | 19.8 | 0.0307 |
| Calcium channel blocking agents | 223 | 21.7 | 86 | 20.6 | 0.0279 | 72 | 22.3 | 68 | 21.1 | 0.0301 |
| Loop diuretics | 216 | 21.0 | 89 | 21.3 | 0.0064 | 62 | 19.2 | 71 | 22.0 | 0.0690 |
| Digoxin | 88 | 8.6 | 29 | 6.9 | 0.0610 | 23 | 7.1 | 26 | 8.0 | 0.0351 |
| Vitamin K antagonists | 99 | 9.6 | 35 | 8.4 | 0.0443 | 26 | 8.0 | 30 | 9.3 | 0.0440 |
| **Comorbid Disease** |  |  |  |  |  |  |  |  |  |  |
| Myocardial infarction | 62 | 6.0 | 36 | 8.6 | 0.0990 | 25 | 7.7 | 22 | 6.8 | 0.0358 |
| Chronic obstructive pulmonary disease | 105 | 10.2 | 55 | 13.2 | 0.0914 | 45 | 13.9 | 40 | 12.4 | 0.0458 |
| Anemia and coagulation  defects | 141 | 13.7 | 51 | 12.2 | 0.0455 | 42 | 13.0 | 39 | 12.1 | 0.0280 |
| Metastatic cancer | 36 | 3.5 | 29 | 6.9 | 0.0455 | 17 | 5.3 | 19 | 5.9 | 0.0280 |
| Peptic Ulcer | 79 | 7.7 | 42 | 10.0 | 0.0829 | 29 | 9.0 | 28 | 8.7 | 0.0109 |
| Renal disease | 54 | 5.3 | 34 | 8.1 | 0.0829 | 23 | 7.1 | 26 | 8.0 | 0.0109 |
| Rheumatologic disease | 20 | 1.9 | 11 | 2.6 | 0.0458 | 10 | 3.1 | 9 | 2.8 | 0.0183 |
| Peripheral vascular disease | 107 | 10.4 | 49 | 11.7 | 0.0416 | 27 | 8.4 | 37 | 11.5 | 0.1038 |
| Liver disease | 14 | 1.4 | 15 | 3.6 | 0.1436 | <3 (NA) |  | 4 | 1.2 | 0.1061 |
| Congestive heart failure | 277 | 27.0 | 118 | 28.2 | 0.0281 | 85 | 26.3 | 91 | 28.2 | 0.0417 |
| Ischemic heart disease | 161 | 15.7 | 87 | 20.8 | 0.1333 | 60 | 18.6 | 59 | 18.3 | 0.0080 |
| Atrial fibrillation | 180 | 17.5 | 78 | 18.7 | 0.0294 | 57 | 17.6 | 61 | 18.9 | 0.0321 |
| Venous Tromboembolism | 46 | 4.5 | 15 | 3.6 | 0.0453 | 10 | 3.1 | 15 | 4.6 | 0.0803 |
| Diabetes Mellitus | 161 | 15.7 | 69 | 16.5 | 0.0226 | 52 | 16.1 | 52 | 16.1 | 0.0000 |
| **Surgery** |  |  |  |  |  |  |  |  |  |  |
| Orthopedic surgery | 644 | 62.7 | 174 | 41.6 | 0.4317 | 160 | 49.5 | 160 | 49.5 | 0.0000 |
| Abdominal surgery | 271 | 26.4 | 123 | 29.4 | 0.0678 | 101 | 31.3 | 101 | 31.3 | 0.0000 |
| Other type surgery | 112 | 10.9 | 121 | 28.9 | 0.4636 | 62 | 19.2 | 62 | 19.2 | 0.0000 |
| **Surgery Risk** |  |  |  |  |  |  |  |  |  |  |
| Low | 70 | 6.8 | 39 | 9.3 | 0.0924 | 25 | 7.7 | 28 | 8.7 | 0.0338 |
| Intermediate | 957 | 93.2 | 379 | 90.7 | 0.0924 | 298 | 92.3 | 295 | 91.3 | 0.0338 |
| High | 0 |  | 0 |  |  | 0 |  | 0 |  |  |
| **Footnote:** baseline characteristics for patients with stroke within 14 days following surgery, and for the propensity score matched cohort. Results are displayed in N (%) and p-value for difference. Abbreviations: aAntithrombotics included any combination of acetylsalicylic acid, dipyridamole and clopidogrel. Standardized mean differences were used for evaluating differences in baseline characteristics between the propensity score matched population. A standardized mean difference <0.10 is conventionally interpreted as minimal imbalances between the groups. Due to potential identification of individual patients, author are not allowed to publish very small numbers, thus groups with less than 3 patients have been replaced with <3 (NA). | | | | | | | | | | |

# 

# Table 6. Sensitivity analyses, full study cohort, risks of 30-day major adverse cardiovascular events

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **No previous**  **stroke** | | **Stroke**  **< 3 months** | | | **Stroke**  **3-9 months** | | | **Stroke**  **>9 months** | | |  |
| **Characteristics** | | | | | | | | | | | | |
|  | **N** | **%** | **N** | **%** | | **N** | **%** | | **N** | **%** | | **P-value** |
| **Time of surgery -Reg. Hours** | 70259 | 51.8 | 824 | 36.0 | | 437 | 40.1 | | 1708 | 41.5 | |  |
| **-Odd Hours** | 65430 | 48.2 | 1465 | 64.0 | | 653 | 59.9 | | 2409 | 58.5 | | <0.001 |
| **Anesthesia type**  **- Other** | 26302 | 19.4 | 600 | 26.2 | | 332 | 30.5 | | 1282 | 31.1 | |  |
| **- General** | 109387 | 80.6 | 1689 | 73.8 | | 758 | 69.5 | | 2835 | 68.9 | | <0.001 |
| **Anesthesia duration - <120 min** | 52577 | 38.7 | 980 | 42.8 | | 456 | 41.8 | | 1671 | 40.6 | |  |
| * **- ≥120 min** | 83112 | 61.3 | 1309 | 57.2 | | 634 | 58.2 | | 2446 | 59.4 | | <0.001 |
| **Stratified adjusted logistic regressions** | | | | | | | | | | | | |
|  | **OR** | **95%CI** | **OR** | **95%CI** | | **OR** | **95%CI** | | **OR** | **95%CI** | | **P for inter-**  **action** |
| **Time of surgery -Reg. Hours** | Ref | Ref | 5.51 | 4.58 | 6.63 | 1.76 | 1.24 | 2.50 | 1.34 | 1.08 | 1.66 |  |
| **-Odd Hours** | Ref | Ref | 4.25 | 3.62 | 4.99 | 2.00 | 1.52 | 2.64 | 1.81 | 1.55 | 2.11 | 0.012 |
| **Anesthesia type**  **- Other** | Ref | Ref | 4.61 | 3.67 | 5.77 | 1.38 | 0.92 | 2.09 | 1.56 | 1.25 | 1.94 |  |
| **- General** | Ref | Ref | 4.78 | 4.14 | 5.52 | 2.24 | 1.73 | 2.90 | 1.64 | 1.41 | 1.92 | 0.175 |
| **Anesthesia duration - <120 min** | Ref | Ref | 6.69 | 5.44 | 8.23 | 2.39 | 1.65 | 3.46 | 2.14 | 1.74 | 2.64 |  |
| * **- ≥120 min** | Ref | Ref | 3.93 | 3.39 | 4.56 | 1.74 | 1.33 | 2.27 | 1.41 | 1.20 | 1.64 | <0.001 |
| **Footnote**: Regular hours were weekdays 7am-4pm, all others were odd hours.  Other anesthesia type included regional anesthesia, sedation and monitoring only.  All analyses included all variables in Table 1. | | | | | | | | | | | | |

# Table 7. Main analyses repeated for patients undergoing orthopedic surgery only.

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **No previous stroke** | | | **<3 months** | | | | **3-9 months** | | | | | **>9 months** | | | | |
|  | **N=63,382** | | | **N=1,326** | | | | **N=705** | | | | | **N=2,695** | | | | |
| **Crude Incidence** | | | | | | | | | | | | | | | | | |
|  | **n** | | **%** | **n** | | **%** | | **n** | | | **%** | | **n** | | **%** | | |
| **30-days All-cause mortality** | 2993 | | 4.7 | 186 | | 14.0 | | 71 | | | 10.1 | | 276 | | 10.2 | | |
| **30-day MACE** | 1771 | | 2.8 | 261 | | 19.7 | | 61 | | | 8.7 | | 223 | | 8.3 | | |
| **- Acute Myocardial Infarction** | 226 | | 0.4 | 12 | | 0.9 | | 6 | | | 0.9 | | 18 | | 0.7 | | |
| **- Ischemic Stroke** | 228 | | 0.4 | 139 | | 10.5 | | 13 | | | 1.8 | | 62 | | 2.3 | | |
| **- Cardiovascular Death** | 1317 | | 2.1 | 110 | | 8.3 | | 42 | | | 6.0 | | 143 | | 5.3 | | |
| **Fully adjusted logistic regression models** | | | | | | | | | | | | | | | | | |
|  | **OR** | **95% CI** | | **OR** | **95% CI** | | | | **OR** | **95% CI** | | | **OR** | **95% CI** | | | |
| **30-day all-cause mortality** | Ref | Ref | | 1.54 | 1.29 | | 1.84 | | 1.09 | 0.83 | | 1.43 | 1.20 | 1.04 | | 1.38 |
| **30-day MACE** | Ref | Ref | | 4.25 | 3.62 | | 5.00 | | 1.60 | 1.20 | | 2.14 | 1.59 | 1.36 | | 1.86 |
| **- ischemic stroke** | Ref | Ref | | 22.28 | 17.43 | | 28.49 | | 3.80 | 2.13 | | 6.78 | 4.87 | 3.60 | | 6.60 |
| **Footnote:** Crude incidence and odds ratios for patients undergoing orthopedic surgery, stratified by stroke groups, with no previous stroke, as the reference. MACE; Major adverse cardiovascular events. | | | | | | | | | | | | | | | | | |

# Table 8. Sensitivity analyses, Orthopedic surgery patients only, risks of 30-day major adverse cardiovascular events

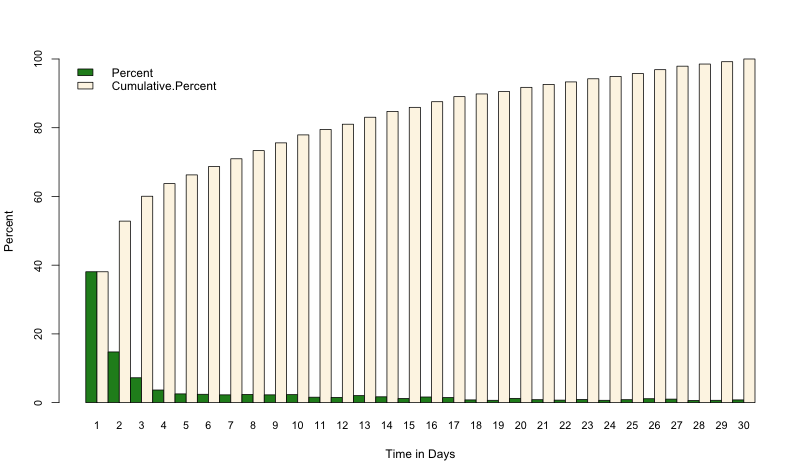
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **no previous stroke** | | **<3 months** | | | **3-9 months** | | | **>9 months** | | |  |
|  | **N=63,382** | | **N=1,326** | | | **N=705** | | | **N=2,695** | | |  |
| **Characteristics** | | | | | | | | | | | | |
|  | **n** | **%** | **n** | **%** | | **n** | **%** | | **n** | **%** | | **P-value** |
| **Time of surgery  - Regular hours** | 27965 | 44.1 | 577 | 43.5 | | 315 | 44.7 | | 1185 | 44.0 | | 0.958 |
| **- Odd Hours** | 35417 | 55.9 | 749 | 56.5 | | 390 | 55.3 | | 1510 | 56.0 | |  |
| **Anesthesia type**  **- Other** | 22033 | 34.8 | 503 | 37.9 | | 291 | 41.3 | | 1135 | 42.1 | | <0.001 |
| **- General** | 41349 | 65.2 | 823 | 62.1 | | 414 | 58.7 | | 1560 | 57.9 | |  |
| **Anesthesia duration - <120 min** | 24759 | 39.1 | 375 | 28.3 | | 214 | 30.4 | | 913 | 33.9 | | <0.001 |
| * **- ≥120 min** | 38623 | 60.9 | 951 | 71.7 | | 491 | 69.6 | | 1782 | 66.1 | |  |
| **Stratified adjusted logistic regressions** | | | | | | | | | | | | |
|  | | | | | | | | | | | | |
|  | **OR** | **95%CI** | **OR** | **95%CI** | | **OR** | **95%CI** | | **OR** | **95%CI** | | **P for interaction** |
| **Time of surgery  - Regular hours** | Ref | Ref | 4.93 | 3.87 | 6.29 | 1.44 | 0.94 | 2.23 | 1.32 | 1.02 | 1.72 | 0.101 |
| **- Odd Hours** | Ref | Ref | 3.89 | 3.13 | 4.83 | 1.72 | 1.17 | 2.53 | 1.79 | 1.46 | 2.20 |  |
| **Anesthesia type**  **- Other** | Ref | Ref | 4.30 | 3.36 | 5.52 | 1.41 | 0.91 | 2.18 | 1.64 | 1.30 | 2.07 | 0.827 |
| **- General** | Ref | Ref | 4.23 | 3.41 | 5.24 | 1.78 | 1.21 | 2.61 | 1.54 | 1.23 | 1.92 |  |
| **Anesthesia duration - <120 min** | Ref | Ref | 7.29 | 5.40 | 9.84 | 2.45 | 1.43 | 4.19 | 1.94 | 1.44 | 2.61 | <0.001 |
| * **- ≥120 min** | Ref | Ref | 3.44 | 2.84 | 4.17 | 1.40 | 1.00 | 1.96 | 1.46 | 1.21 | 1.77 |  |
| **Footnote:** Regular hours were weekdays 7am-4pm, all others were odd hours.  Other anesthesia type included regional anesthesia, sedation and monitoring only.  All analyses included all variables in Table 1. | | | | | | | | | | | | |

# Figure 1. Flow diagram of the inclusion and exclusion criteria of the study population.

Dias1.tif

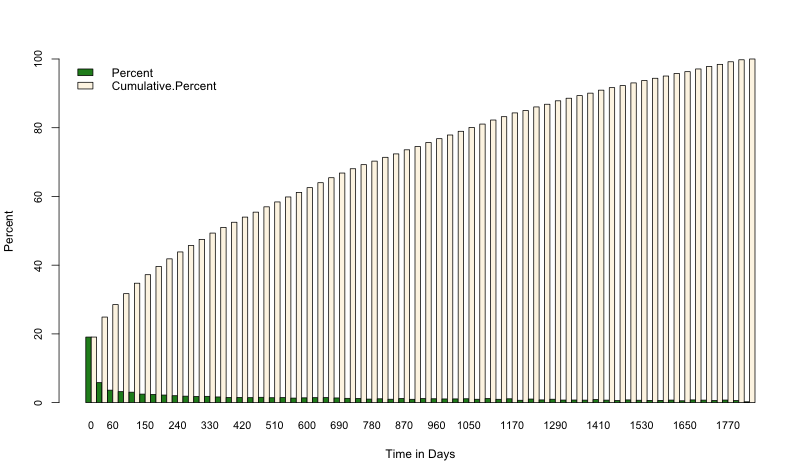
**Legend:** Flow diagram of definition of the study population, and the stroke groups.

# Figure 2a. Time between prior stroke and surgery in patients with a stroke up to 30 days prior surgery.

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**Legend:** X-axis shows time between prior stroke and surgery, in days. Y-axis shows percent of patients with a previous stroke, having surgery. Patients included in this histogram had surgery no more than 30 days following a stroke.

# Figure 2b. Time between prior stroke and surgery in patients with prior stroke.

****

**Legend:** X-axis shows time between prior stroke and surgery, in days. Y-axis shows percent of patients with a previous stroke, having surgery. Time between stroke and surgery was limited to a maximum of 5 years.