

Appendix 2 (as submitted by the authors): Definitions of variables used in the prediction model for the new onset postoperative atrial fibrillation (POAF)

1. Age – Patient age recorded in years
2. Sex – Male or female.
3. Frail – defined as living in nursing home and/or requires assistance with activities of daily living (ADL)
4. History of coronary artery disease – A current or prior history of any one of the following:
 - i. angina; ii. myocardial infarction or acute coronary syndrome; iii. a segmental cardiac wall motion abnormality on echocardiography or a segmental fixed defect on radionuclide imaging; iv. a positive radionuclide exercise, echocardiographic exercise, or pharmacological cardiovascular stress test demonstrating cardiac ischemia; v. coronary angiographic or computer tomography (CT) coronary angiographic evidence of atherosclerotic stenosis $\geq 50\%$ of the diameter of any coronary artery; vi. ECG with pathological Q waves in two contiguous leads.
5. Recent high-risk coronary artery disease – A physician diagnosis ≤ 6 months prior to non-cardiac surgery of: a myocardial infarction, acute coronary syndrome, Canadian Cardiovascular Society Class (CCSC) III angina, or CCSC IV angina

CCSC III angina - angina occurring with level walking of 1-2 blocks or climbing ≤ 1 flight of stairs at a normal pace

CCSC IV angina - inability to carry on any physical activity without the development of angina.

6. History of peripheral vascular disease – A physician diagnosis of a current or prior history of: intermittent claudication, vascular surgery for atherosclerotic disease, an ankle/arm systolic blood pressure ratio ≤ 0.90 in either leg at rest, or angiographic or doppler study demonstrating $\geq 70\%$ stenosis in a non-cardiac artery.
7. History of cerebral vascular event (CVE) – History of stroke (a physician diagnosis of a current or prior stroke, or CT or magnetic resonance evidence of a stroke) or history of transient ischemic attack (TIA) (a physician diagnosis of a current or prior TIA)
8. History of congestive heart failure – A physician diagnosis of a current or prior episode of congestive heart failure or prior radiographic evidence of vascular redistribution, interstitial pulmonary edema, or frank alveolar pulmonary edema.
9. Diabetes – Patient stated that they have a diagnosis of diabetes or a physician has previously recorded that the patient has diabetes. This included gestational diabetes at the time of non-cardiac surgery, but not past gestational diabetes that had resolved.
10. Hypertension – A physician diagnosis of hypertension.
11. History of aortic stenosis – A physician diagnosis of aortic stenosis
12. Chronic obstructive pulmonary disease (COPD) – A physician current or prior diagnosis of chronic bronchitis, emphysema, or COPD, or a patient provided a history of daily production of sputum for at least 3 months in 2 consecutive years.
13. Obstructive sleep apnea- A physician or sleep study diagnosis of obstructive sleep apnea
14. Current smoker – tobacco use within 30 days before surgery
15. Former smoker – tobacco use in the past, but not within 30 days before surgery
16. Urgent/Emergent surgery – Emergency surgery was surgery that occurred < 24 hours after a patient developed an acute surgical condition, and urgent surgery was surgery that occurred 24-72 hours after a patient developed an acute surgical condition.

17. Open surgery – open surgery alone or open surgery + endoscopic surgery

18. Endoscopic surgery: include all endoscopic, laparoscopic, thoracoscopic, endovascular and arthroscopic techniques

19. General anesthesia- includes any of the following anesthesia(s):

- general alone
- general + nerve block
- general + nitrous oxide
- general + nitrous oxide + nerve block

20. Regional anesthesia – includes any of the following anesthesia(s):

- spinal
- epidural
- nerve block
- or any combination of above at the same time

21. Combined anesthesia includes any of the following anesthesia(s):

- general + spinal
- general + epidural
- general + nerve block

22. Major thoracic surgery - A patient undergoing one or more of the following thoracic surgeries: pneumonectomy, lobectomy, wedge resection of lung, resection of mediastinal tumor, or major chest wall resection.

22. Major non-thoracic surgery – major surgeries including: orthopedic, general, urology or gynecology, neurosurgery, vascular.

Below are specific definitions for each type major non-thoracic surgery:

- Major orthopedic surgery – A patient undergoing one or more of the following orthopedic

surgeries: major hip or pelvis surgery, internal fixation of femur, knee arthroplasty, above knee amputations, or lower leg amputation (amputation below knee but above foot).

- Major general surgery – A patient undergoing one or more of the following general surgeries: complex visceral resection, partial or total colectomy or stomach surgery, other intra-abdominal surgery, or major head and neck resection for non-thyroid tumor.

- Major urology or gynecology surgery – A patient undergoing one or more of the following major urology or gynecology surgeries: nephrectomy, ureterectomy, bladder resection, retroperitoneal tumor resection, exenteration, cytoreduction surgery, hysterectomy, radical prostatectomy, or transurethral prostatectomy.

- Major neurosurgery – A patient undergoing one or more of the following neurosurgeries: craniotomy or major spine surgery (i.e., surgery involving multiple levels of the spine).

- Major vascular surgery – A patient undergoing one or more of the following vascular surgeries: thoracic aorta reconstructive vascular surgery, aorto-iliac reconstructive vascular surgery, peripheral vascular reconstruction without aortic cross-clamping, extracranial cerebrovascular surgery, or endovascular abdominal aortic aneurysm repair

23. Other surgeries - Low-risk surgeries – A patient undergoing one or more of the following surgeries: parathyroid, thyroid, breast, hernia, local anorectal procedure, oophorectomy, salpingectomy, endometrial ablation, peripheral nerve surgery, ophthalmology, ears/nose/throat surgery, vertebral disc surgery, hand surgery, cosmetic surgery, arterio-venous access surgery for dialysis, or any other surgery not mentioned above.

24. Preoperative estimated glomerular filtration rate (eGFR) was calculated using CKD-Epi equation and latest available preoperative serum creatinine value.

