Supplementary Appendix

The Eurolung1 model(Brunelli et al. 2017):

logit (morbidity) = -2.465 + 0.497*sex male (coded 1 for male and 0 for female) + 0.026*age + 0.231*CAD (coded 1 for presence of CAD) + 0.371*CVD (coded 1 for presence of CVD) + 0.152*CKD (coded 1 for presence of CKD) - 0.015*ppoFEV1 + 0.514*extended resections[#] (coded 1 for presence of extended resection) + 0.497*thoracotomy (coded 1 for thoracotomy and 0 for VATS)

The parsimonious Eurolung1 model(Brunelli et al. 2020):

logit (morbidity) = -2.852 + 0.021*age + 0.472*male - 0.015*ppoFEV1 + 0.662*thoracotomy + 0.324* extended resection[#]

The aggregate Eurolung1 model(Brunelli et al. 2017):

1 point: CKD

2 points: CAD and CVD

3 points: age > 65, sex male, thoracotomy, extended resections[#] and ppoFEV1 < 70%

The points were summed for each patient to generate an aggregate score.

[#]extended resection: associated with chest wall, Pancoast tumours, resection of the atrium or superior vena cava, diaphragm resection, vertebral resection, pleuropneumonectomy, sleeve pneumonectomies, intrapericardial pneumonectomy

The Brunelli model(Brunelli et al. 2006):

Predicted morbidity: ln [R/(1-R)] = -2.1 + 0.035*age - 0.02*FVC + 0.6*extended resection + 0.7*cardiac co-morbidity

FVC: the percentages of predicted forced vital capacity

cardiac co-morbidity: previous cardiac surgery, previous myocardial infarction, history of coronary artery disease, current treatment for arrhythmia, cardiac failure or hypertension.

The Age-adjusted Charlson comorbidity index(Yang et al. 2018):

1 point: Myocardial infarction, congestive heart failure, peripheral vascular disease, cerebral vascular disease, dementia, chronic obstructive pulmonary disease, connective tissue disease, ulcer disease, mild liver disease, diabetes

2 points: Hemiplegia, moderate/severe renal disease, diabetes with end-organ damage, any tumor, leukemia, lymphoma

3 points: Moderate/severe liver disease

6 points: Metastatic solid tumor, AIDS

Additional: 1 point for each decade over age 40 years

Reference

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