Supplementary Appendix

The Eurolung1 model (Brunelli et al. 2017):
\[
\text{logit}(\text{morbidity}) = -2.465 + 0.497 \times \text{sex male} (\text{coded 1 for male and 0 for female}) + 0.026 \times \text{age} + 0.231 \times \text{CAD} (\text{coded 1 for presence of CAD}) + 0.371 \times \text{CVD} (\text{coded 1 for presence of CVD}) + 0.152 \times \text{CKD} (\text{coded 1 for presence of CKD}) - 0.015 \times \text{ppoFEV1} + 0.231 \times \text{CAD} (\text{coded 1 for presence of CAD}) + 0.371 \times \text{CVD} (\text{coded 1 for presence of CVD}) - 0.015 \times \text{ppoFEV1} + 0.514 \times \text{extended resections}^# (\text{coded 1 for presence of extended resection}) + 0.497 \times \text{thoracotomy} (\text{coded 1 for thoracotomy and 0 for VATS})
\]

The parsimonious Eurolung1 model (Brunelli et al. 2020):
\[
\text{logit}(\text{morbidity}) = -2.852 + 0.021 \times \text{age} + 0.472 \times \text{male} - 0.015 \times \text{ppoFEV1} + 0.662 \times \text{thoracotomy} + 0.324 \times \text{extended resection}^#
\]

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: \( \ln \left[ \frac{R}{1-R} \right] = -2.1 + 0.035 \times \text{age} - 0.02 \times \text{FVC} + 0.6 \times \text{extended resection} + 0.7 \times \text{cardiac co-morbidity} \)
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


