

Table S1 Predictors involved in the Model building algorithm

Group	Name
Admission	03_Admission.date, 04_Hospital.records.number, 05_Patient.ID, 06_Gender, 07_Patient.code, 08_Age.at.surgical.procedure.date, 09_Type, 10_Validation.date, 11_Experience.number
Comorbidities	03_Smoker, 08_Myocardial.infarction, 09_Congestive.heart.failure, 10_Peripheral.vascular.disease, 11_Cerebrovascular.disease, 12_Dementia, 13_COPD, 14_Connective.tissue.disease, 15_Peptic.ulcer.disease, 16_Diabetes.mellitus, 17_Moderate.to.severe.chronic.kidney.disease, 18_Hemiplegia, 19_Leukemia, 20_Malignant.lymphoma, 21_Solid.tumor, 22_Liver.disease, 23_AIDS, 24_Scoring..Age, 25_Final.score
ECOG	03_ECOG.score
Neoadjuvant.treatments	03_Done
PET	03_Done
Preoperative.diagnosis	03_Done
Pulmonary.function.evaluation	03_BMI..Height..cm., 04_BMI..Weight..kg., 05_BMI..value, 06_Spirometry..Done, 08_Spirometry..FEV1.perc, 10_Spirometry..FVC.perc, 12_Spirometry..DLCO.slash.VA.perc, 13_Hemogasanalysis..Done, 17_6.minutes.walking.test..Done, 23_Cardiac.stress..Done, 26_Lung.scintigraphy..Done
Surgical.procedure	03_Date, 04_Seniority..years.from.the.end.of.the.residency., 05_First.operator.experience.in.VATS.lobectomy, 06_Surgical.technique, 07_Number.of.incisions.apart.from.utility.thoracotomy, 08_Number.of.trocars, 09_Length.utility.thoracotomy..cm., 10_Degree.thoracoscope, 11_Length.thoracoscope..mm., 12_Operative.time..skin.to.skin.in.minutes., 13_Side, 14_Type.of.resection, 15_En.bloc, 16_Fissureless.lobectomy, 17_Lymph.node.dissection..Done, 18_Lymph.node.dissection..Type, 19_Lymph.node.dissection..Technique, 37_Number.of.N1.resected.lymph.nodes, 38_Number.of.N2.resected.lymph.nodes, 39_Number.of.N3.resected.lymph.nodes, 40_Total.resected.lymph.nodes, 41_Preoperative.histology, 42_Conversion, 60_Blood.loss, 61_Adhesiolysis, 62_Soft.tissue.retractors..Used, 64_Number.of.chest.tubes.used, 65_Chest.tube.1..FR.slash.CH., 66_Chest.tube.1.Under.water.seal.drain, 73_Pain.relief.techniques..Intercostal.block, 74_Pain.relief.techniques..Pericostal.cathethers, 75_Pain.relief.techniques..Peridural.cathethers, 76_Pain.relief.techniques..Elastomeric.pump.ev, 77_Pain.relief.techniques..PEC.block.1, 78_Pain.relief.techniques..PEC.block.2, 79_Pain.relief.techniques..Serratus.Plane.Block, 80_Pain.relief.techniques..Other, 83_Haemostasis.and.tissue.sealing..Used
Thorax.ct.scan	03_Done, 04_T..Value, 05_T..Size, 06_T..Lung, 07_T..Lobe, 09_N, 10_Station..N1.10, 11_Station..N1.11, 12_Station..N1.12_13_14, 13_Station..N2.1, 14_Station..N2.2, 15_Station..N2.3, 16_Station..N2.4, 17_Station..N2.5, 18_Station..N2.6, 19_Station..N2.7, 20_Station..N2.8, 21_Station..N2.9, 22_Station..N3.Contralateral, 23_Station..N3.Supraclavicular, 24_Station..N3.Other, 25_M, 26_M..Pleural.Effusion..citologically.proven., 27_M..Controlateral.Lung, 28_M..Thorax, 29_M..Brain, 30_M..Bone, 31_M..Extra.thoracic.nodes, 32_M..Kidney, 33_M..Adrenal.gland, 34_M..Bowel, 35_M..Liver, 36_M..Other, 37_TNM.Stage..8th.ed., 39_Ground.Glass.Opacity

PAL, prolonged air leak; BMI, body mass index; FEV1, forced expiratory volume in 1 second; COPD, chronic obstructive pulmonary disease; FVC, forced vital capacity; DLCO/VA, diffusing capacity of the lung for carbon monoxide divided by alveolar volume; ECOG, Eastern Cooperative Oncology Group; PET, positron emission tomography; CT, computer tomography.