

Appendix 1. AI-driven Radiologic Features

Variables	Overall	Training	Test	P-value
Proportion of BL (%)	1.90 [0.35, 6.07]	1.36 [0.25, 3.99]	2.40 [0.82, 6.52]	0.103
Proportion of GGO in BL (%)	1.61 [0.26, 4.84]	1.08 [0.20, 3.20]	2.00 [0.66, 5.97]	0.063
Proportion of CV in BL (%)	0.09 [0.02, 0.39]	0.06 [0.02, 0.37]	0.13 [0.02, 0.42]	0.237
Proportion of RL (%)	1.79 [0.28, 6.24]	0.98 [0.21, 5.00]	2.34 [0.46, 6.55]	0.138
Proportion of GGO in RL (%)	1.46 [0.23, 4.87]	0.80 [0.16, 3.78]	2.09 [0.40, 5.17]	0.106
Proportion of CV in RL (%)	0.07 [0.02, 0.38]	0.05 [0.01, 0.38]	0.12 [0.02, 0.38]	0.358
Proportion of LL (%)	1.25 [0.21, 5.69]	0.92 [0.17, 5.10]	2.45 [0.22, 6.09]	0.358
Proportion of GGO in LL (%)	1.00 [0.15, 4.98]	0.69 [0.12, 3.96]	2.00 [0.18, 5.18]	0.295
Proportion of CV in LL (%)	0.08 [0.01, 0.47]	0.08 [0.01, 0.44]	0.07 [0.01, 0.49]	0.556
Proportion of RUL (%)	0.32 [0.03, 3.11]	0.21 [0.03, 2.19]	0.62 [0.02, 3.61]	0.646
Proportion of GGO in RUL (%)	0.30 [0.02, 2.67]	0.19 [0.03, 1.89]	0.60 [0.02, 3.54]	0.542
Proportion of CV in RULL (%)	0.02 [0.00, 0.18]	0.02 [0.00, 0.20]	0.02 [0.00, 0.12]	0.821
Proportion of RML (%)	0.18 [0.01, 1.78]	0.24 [0.03, 2.25]	0.12 [0.00, 1.25]	0.225
Proportion of GGO in RML (%)	0.18 [0.01, 1.63]	0.23 [0.03, 2.04]	0.11 [0.00, 1.20]	0.25
Proportion of CV in RML (%)	0.00 [0.00, 0.06]	0.01 [0.00, 0.08]	0.00 [0.00, 0.02]	0.031
Proportion of RLL (%)	2.09 [0.33, 8.88]	1.46 [0.28, 7.42]	3.54 [0.57, 9.77]	0.206
Proportion of GGO in RLL (%)	1.79 [0.31, 8.06]	1.31 [0.23, 6.44]	3.46 [0.35, 8.41]	0.189
Proportion of CV in RLL (%)	0.12 [0.02, 0.72]	0.09 [0.02, 0.71]	0.15 [0.01, 0.71]	0.634
Proportion of LUL (%)	0.35 [0.03, 3.68]	0.26 [0.03, 3.27]	0.66 [0.04, 4.02]	0.524
Proportion of GGO in LUL (%)	0.32 [0.03, 3.41]	0.22 [0.03, 2.85]	0.64 [0.03, 3.80]	0.513
Proportion of CV in LUL (%)	0.02 [0.00, 0.26]	0.01 [0.00, 0.25]	0.02 [0.00, 0.24]	0.503
Proportion of LLL (%)	1.73 [0.10, 7.03]	1.46 [0.11, 6.26]	2.31 [0.09, 8.80]	0.632
Proportion of GGO in LLL (%)	1.44 [0.10, 6.60]	1.35 [0.11, 5.75]	2.12 [0.08, 7.19]	0.626
Proportion of CV in LLL (%)	0.14 [0.00, 0.67]	0.14 [0.00, 0.61]	0.07 [0.01, 0.92]	0.818
Proportion of Posterior apical segment of LUL (%)	0.32 [0.03, 4.40]	0.29 [0.03, 3.29]	0.56 [0.02, 6.03]	0.442
Proportion anterior segment of LUL (%)	0.01 [0.00, 0.81]	0.03 [0.00, 0.66]	0.00 [0.00, 1.26]	0.993
Proportion of upper lingual segment of LUL (%)	0.00 [0.00, 0.49]	0.00 [0.00, 0.08]	0.00 [0.00, 2.13]	0.391
Proportion of sublingual segment of LUL (%)	0.22 [0.00, 3.75]	0.17 [0.02, 2.68]	0.31 [0.00, 5.05]	0.906
Proportion of dorsal segment of LLL (%)	0.90 [0.04, 9.70]	0.81 [0.04, 5.69]	1.15 [0.07, 12.46]	0.407
Proportion of anterior medial basal segment of LLL (%)	0.32 [0.01, 3.57]	0.27 [0.02, 3.12]	0.34 [0.00, 3.99]	0.908
Proportion of outer basal segment of LLL (%)	0.76 [0.00, 11.95]	0.55 [0.00, 10.29]	2.02 [0.00, 13.05]	0.507
Proportion of posterior basal segment of LLL (%)	1.56 [0.15, 9.36]	1.31 [0.15, 7.57]	1.87 [0.16, 9.54]	0.889
Proportion of apical segment of RUL (%)	0.13 [0.02, 1.54]	0.11 [0.03, 1.41]	0.13 [0.02, 1.58]	0.852
Proportion of posterior segment of RUL (%)	0.36 [0.00, 4.78]	0.25 [0.00, 4.19]	0.69 [0.00, 7.24]	0.485
Proportion of anterior segment of RUL (%)	0.00 [0.00, 0.48]	0.00 [0.00, 0.48]	0.00 [0.00, 0.39]	0.814
Proportion of outer segment of RML (%)	0.10 [0.00, 2.33]	0.15 [0.00, 2.40]	0.07 [0.00, 1.88]	0.642
Proportion of inner segment of RML (%)	0.08 [0.00, 0.67]	0.15 [0.00, 1.48]	0.02 [0.00, 0.29]	0.017
Proportion of dorsal segment of RLL (%)	1.01 [0.00, 6.56]	1.01 [0.00, 4.73]	1.17 [0.00, 12.10]	0.552
Proportion of basal segment of RLL (%)	0.09 [0.00, 1.30]	0.10 [0.00, 1.91]	0.07 [0.00, 0.90]	0.829
Proportion of anterior basal segment of RLL (%)	0.28 [0.00, 1.96]	0.26 [0.01, 1.58]	0.48 [0.00, 2.59]	0.735
Proportion of outer basal segment of RLL (%)	3.02 [0.20, 12.78]	1.44 [0.12, 13.28]	4.30 [0.26, 12.50]	0.337
Proportion of posterior basal segment of RLL (%)	2.75 [0.28, 11.80]	1.76 [0.22, 10.99]	5.95 [0.29, 18.49]	0.259
Volume of BL (cm ³)	73.97 [16.17, 196.14]	46.84 [11.31, 140.06]	97.85 [34.07, 214.20]	0.048

Volume of GGO (cm ³)	61.37 [14.39, 164.78]	45.06 [10.64, 129.94]	92.16 [29.35, 193.12]	0.043
Volume of CV (cm ³)	3.70 [0.83, 18.25]	2.75 [0.78, 12.98]	4.73 [1.18, 19.78]	0.297
Volume of RL (cm ³)	30.89 [7.16, 111.55]	21.90 [5.00, 96.70]	57.36 [9.70, 127.07]	0.089
Volume of GGO in RL (cm ³)	28.33 [6.04, 98.39]	20.93 [4.21, 88.42]	52.60 [9.24, 114.29]	0.073
Volume of CV in RL (cm ³)	1.56 [0.38, 7.80]	1.17 [0.39, 7.49]	2.19 [0.40, 11.95]	0.433
Volume of LL (cm ³)	22.70 [3.81, 80.46]	17.22 [3.15, 65.16]	41.89 [4.65, 85.79]	0.298
Volume of GGO in LL (cm ³)	21.41 [3.05, 67.89]	14.93 [2.65, 57.42]	40.32 [4.34, 75.61]	0.272
Volume of CV in LL (cm ³)	1.33 [0.23, 7.38]	1.33 [0.15, 6.44]	1.29 [0.29, 8.34]	0.522
Volume of RUL (cm ³)	2.48 [0.31, 23.98]	1.86 [0.44, 18.23]	5.41 [0.24, 30.50]	0.622
Volume of GGO in RUL (cm ³)	2.42 [0.29, 21.32]	1.71 [0.36, 15.15]	4.99 [0.22, 26.93]	0.558
Volume of CV in RUL (cm ³)	0.14 [0.01, 1.27]	0.14 [0.01, 1.38]	0.13 [0.01, 0.86]	0.81
Volume of RML(cm ³)	0.83 [0.04, 6.12]	1.01 [0.14, 6.82]	0.52 [0.01, 5.58]	0.344
Volume of GGO in RML (cm ³)	0.78 [0.04, 5.66]	0.97 [0.14, 6.34]	0.50 [0.01, 5.45]	0.387
Volume of CV in RML (cm ³)	0.02 [0.00, 0.26]	0.04 [0.00, 0.42]	0.00 [0.00, 0.10]	0.018
Volume of RLL(cm ³)	20.52 [3.89, 72.33]	13.38 [3.89, 60.45]	32.20 [5.47, 82.70]	0.099
Volume of GGO in RUL (cm ³)	18.33 [3.18, 64.78]	11.59 [3.18, 52.44]	30.25 [3.73, 72.85]	0.093
Volume of CV in RUL (cm ³)	1.08 [0.24, 5.74]	0.87 [0.28, 5.43]	1.48 [0.16, 6.27]	0.423
Volume of LUL(cm ³)	4.35 [0.37, 31.47]	3.38 [0.39, 27.41]	7.11 [0.36, 46.92]	0.478
Volume of GGO in LUL (cm ³)	3.45 [0.32, 26.15]	3.05 [0.33, 24.62]	6.59 [0.31, 46.66]	0.435
Volume of CV in LUL (cm ³)	0.23 [0.02, 2.01]	0.21 [0.01, 1.92]	0.23 [0.05, 1.89]	0.545
Volume of LLL(cm ³)	12.50 [1.21, 51.59]	11.63 [1.45, 42.95]	16.56 [1.03, 54.93]	0.501
Volume of GGO in LLL (cm ³)	11.40 [1.16, 45.27]	9.98 [1.39, 36.36]	16.13 [0.92, 52.03]	0.484
Volume of CV in LLL (cm ³)	0.90 [0.06, 5.02]	1.09 [0.06, 3.61]	0.63 [0.06, 5.66]	0.715
volume of Posterior apical segment of LULL (cm ³)	1.56 [0.16, 16.72]	1.48 [0.16, 14.61]	2.24 [0.20, 27.54]	0.383
volume Anterior segment of LULL (cm ³)	0.02 [0.00, 1.52]	0.08 [0.00, 1.02]	0.00 [0.00, 2.55]	0.948
volume of Upper segment in LULL (cm ³)	0.00 [0.00, 0.07]	0.00 [0.00, 0.01]	0.00 [0.00, 0.27]	0.297
volume of Sublingual segment of LULL (cm ³)	0.82 [0.01, 9.18]	0.73 [0.07, 7.31]	0.93 [0.00, 10.41]	0.94
volume of Dorsal segment of LLLL (cm ³)	1.94 [0.07, 11.32]	1.70 [0.07, 9.98]	2.75 [0.15, 14.24]	0.423
volume of Anterior medial basal segment of LLLL (cm ³)	0.83 [0.03, 6.90]	0.76 [0.05, 5.64]	1.22 [0.00, 10.68]	0.879
volume of Outer basal segment of LLLL (cm ³)	0.62 [0.00, 5.60]	0.42 [0.00, 3.97]	1.94 [0.00, 9.07]	0.179
volume of Posterior basal segment of LLLL (cm ³)	4.84 [0.54, 20.68]	3.58 [0.56, 19.56]	5.62 [0.43, 22.25]	0.727
volume of Apical segment of RULL (cm ³)	0.47 [0.05, 4.22]	0.51 [0.11, 3.00]	0.40 [0.03, 4.62]	0.796
volume of Posterior segment of RULL (cm ³)	1.42 [0.01, 15.77]	0.90 [0.02, 8.80]	1.85 [0.02, 22.75]	0.363
volume of Anterior segment of RULL (cm ³)	0.00 [0.00, 1.01]	0.00 [0.00, 0.95]	0.01 [0.00, 1.10]	0.701
volume of Outer segment of RMLL (cm ³)	0.22 [0.00, 3.86]	0.28 [0.00, 3.06]	0.11 [0.00, 4.26]	0.955
volume of Inner segment of RMLL (cm ³)	0.16 [0.00, 1.19]	0.24 [0.00, 2.77]	0.05 [0.00, 0.61]	0.022
volume of Dorsal segment of RLLL (cm ³)	1.59 [0.00, 6.40]	1.20 [0.00, 4.32]	1.89 [0.01, 14.04]	0.314
volume of Basal segment of RLLL (cm ³)	0.03 [0.00, 0.81]	0.04 [0.00, 0.98]	0.03 [0.00, 0.61]	0.995
volume of Anterior basal segment of RLLL (cm ³)	0.75 [0.00, 5.20]	0.59 [0.04, 4.50]	1.06 [0.00, 5.75]	0.445
volume of Outer basal segment of RLLL (cm ³)	6.14 [0.43, 22.14]	3.54 [0.28, 19.29]	8.68 [0.51, 23.73]	0.405
volume of Posterior basal segment of RLLL (cm ³)	6.17 [0.68, 27.45]	3.80 [0.70, 17.50]	14.37 [0.70, 41.68]	0.142
Proportion volume of BL [-1000~-700]	86.31 [74.21, 90.74]	82.63 [71.14, 90.33]	87.03 [77.29, 90.78]	0.157
Proportion volume of BL [-700~-600]	5.21 [2.98, 8.68]	5.49 [2.89, 9.50]	5.05 [3.01, 8.02]	0.592
Proportion volume of BL [-600~-500]	2.36 [1.53, 4.39]	2.41 [1.52, 4.64]	2.36 [1.54, 4.05]	0.761
Proportion volume of BL [-500~-300]	2.36 [1.78, 4.15]	2.35 [1.79, 4.30]	2.37 [1.74, 4.09]	0.602
Proportion volume of BL [-300~-200]	0.73 [0.61, 1.21]	0.72 [0.62, 1.19]	0.75 [0.57, 1.23]	0.381

Proportion volume of BL [-200~60]	1.84 [1.53, 2.52]	1.87 [1.58, 2.50]	1.76 [1.44, 2.50]	0.256
Proportion volume of BL [60~1000]	0.18 [0.12, 0.31]	0.21 [0.15, 0.47]	0.15 [0.11, 0.22]	0.003
Volume of BL [-1000~-700] (cm ³)	3147.42 [2176.59, 4207.45]	3028.42 [1983.53, 4193.97]	3270.19 [2426.40, 4262.64]	0.31
Volume of BL [-700~-600] (cm ³)	188.28 [139.64, 258.20]	207.44 [137.53, 259.12]	186.39 [141.07, 249.04]	0.911
Volume of BL [-600~-500] (cm ³)	93.41 [72.25, 132.60]	99.05 [71.85, 131.08]	91.59 [72.84, 132.38]	0.969
Volume of BL [-500~-300] (cm ³)	94.52 [78.03, 126.55]	101.02 [80.67, 122.88]	91.53 [77.33, 136.62]	0.915
Volume of BL [-300~-200] (cm ³)	30.39 [25.55, 38.88]	30.90 [26.14, 38.30]	29.80 [24.98, 40.74]	0.704
Volume of BL [-200~60] (cm ³)	73.37 [58.81, 95.32]	75.57 [59.67, 95.31]	68.93 [58.46, 95.29]	0.839
Volume of BL [60~1000] (cm ³)	6.77 [4.63, 9.94]	7.92 [5.24, 11.64]	5.78 [4.38, 8.50]	0.004
Proportion volume of LL [-1000~-700]	85.69 [72.58, 90.53]	82.17 [70.11, 89.88]	86.75 [77.58, 91.41]	0.106
Proportion volume of LL [-700~-600]	5.33 [2.99, 9.18]	5.84 [3.08, 9.99]	4.60 [2.98, 8.91]	0.438
Proportion volume of LL [-600~-500]	2.47 [1.52, 4.26]	2.60 [1.62, 4.66]	2.41 [1.46, 4.07]	0.465
Proportion volume of LL [-500~-300]	2.46 [1.79, 4.45]	2.44 [1.86, 4.44]	2.47 [1.64, 4.62]	0.485
Proportion volume of LL [-300~-200]	0.76 [0.58, 1.28]	0.76 [0.63, 1.25]	0.77 [0.56, 1.35]	0.319
Proportion volume of LL [-200~60]	1.74 [1.45, 2.42]	1.77 [1.49, 2.42]	1.73 [1.39, 2.45]	0.45
Proportion volume of LL [60~1000]	0.17 [0.13, 0.30]	0.20 [0.15, 0.44]	0.16 [0.13, 0.25]	0.008
Volume of LL [-1000~-700] (cm ³)	1433.85 [972.72, 1974.55]	1412.84 [868.29, 1965.61]	1505.99 [1128.37, 1959.86]	0.276
Volume of LL [-700~-600] (cm ³)	90.22 [64.64, 126.07]	98.95 [64.38, 125.60]	83.70 [65.73, 123.43]	0.717
Volume of LL [-600~-500] (cm ³)	44.13 [33.86, 62.29]	46.30 [33.88, 61.20]	43.53 [33.73, 64.67]	0.911
Volume of LL [-500~-300] (cm ³)	43.40 [37.42, 60.54]	43.53 [38.75, 58.63]	43.40 [37.05, 64.88]	0.88
Volume of LL [-300~-200] (cm ³)	13.96 [11.54, 18.39]	14.12 [12.12, 18.23]	13.67 [11.36, 19.55]	0.781
Volume of LL [-200~60] (cm ³)	32.02 [25.97, 43.01]	32.73 [26.66, 41.96]	31.59 [25.59, 45.22]	0.626
Volume of LL [60~1000] (cm ³)	3.03 [2.24, 4.65]	3.42 [2.42, 5.13]	2.66 [2.19, 4.15]	0.03
Proportion volume of RL [-1000~-700]	86.55 [75.67, 90.83]	83.16 [71.69, 90.82]	87.22 [79.63, 90.77]	0.17
Proportion volume of RL [-700~-600]	4.81 [2.90, 8.83]	5.10 [2.80, 9.27]	4.63 [3.18, 7.82]	0.718
Proportion volume of RL [-600~-500]	2.28 [1.55, 4.38]	2.32 [1.46, 4.63]	2.21 [1.61, 4.08]	0.9
Proportion volume of RL [-500~-300]	2.31 [1.77, 3.98]	2.30 [1.77, 4.23]	2.31 [1.75, 3.42]	0.792
Proportion volume of RL [-300~-200]	0.76 [0.60, 1.12]	0.74 [0.62, 1.11]	0.76 [0.58, 1.11]	0.362
Proportion volume of RL [-200~60]	1.97 [1.57, 2.53]	2.01 [1.66, 2.64]	1.90 [1.51, 2.41]	0.162
Proportion volume of RL [60~1000]	0.17 [0.12, 0.32]	0.21 [0.13, 0.48]	0.14 [0.09, 0.22]	0.001
volume of RL [-1000~-700] (cm ³)	1689.60 [1170.39, 2247.81]	1647.84 [1065.97, 2236.84]	1738.47 [1294.74, 2313.11]	0.333
volume of RL [-700~-600] (cm ³)	102.96 [75.78, 137.06]	105.69 [70.81, 137.53]	101.45 [78.43, 129.76]	0.938
volume of RL [-600~-500] (cm ³)	49.83 [38.57, 66.81]	50.94 [37.30, 64.84]	48.78 [39.74, 70.42]	0.859
volume of RL [-500~-300] (cm ³)	50.81 [41.70, 67.24]	52.73 [41.71, 66.22]	50.31 [41.61, 68.95]	0.983
volume of RL [-300~-200] (cm ³)	16.47 [13.52, 20.49]	16.53 [13.84, 20.43]	15.79 [13.18, 20.48]	0.621
volume of RL [-200~60] (cm ³)	40.80 [32.20, 53.89]	41.38 [33.65, 53.97]	39.46 [30.55, 52.36]	0.431
volume of RL [60~1000] (cm ³)	3.64 [2.42, 5.61]	4.58 [2.98, 6.72]	2.99 [1.78, 4.46]	< 0.001

Abbreviations: BL, bilateral lung lesions; CV, consolidation; GGO, ground-glass opacity; RL, right lung lobe lesions; LL, left lung lobe lesions; RUL, right upper lung lobe lesions; RML, right middle lung lobe lesions; RLL, right lower lung lobe lesions; LUL, left upper lung lobe lesions; LLL, left lower lung lobe lesions

Data are presented as medians (interquartile ranges, IQR).

Appendix 2. Handcrafted-driven Radiologic Features

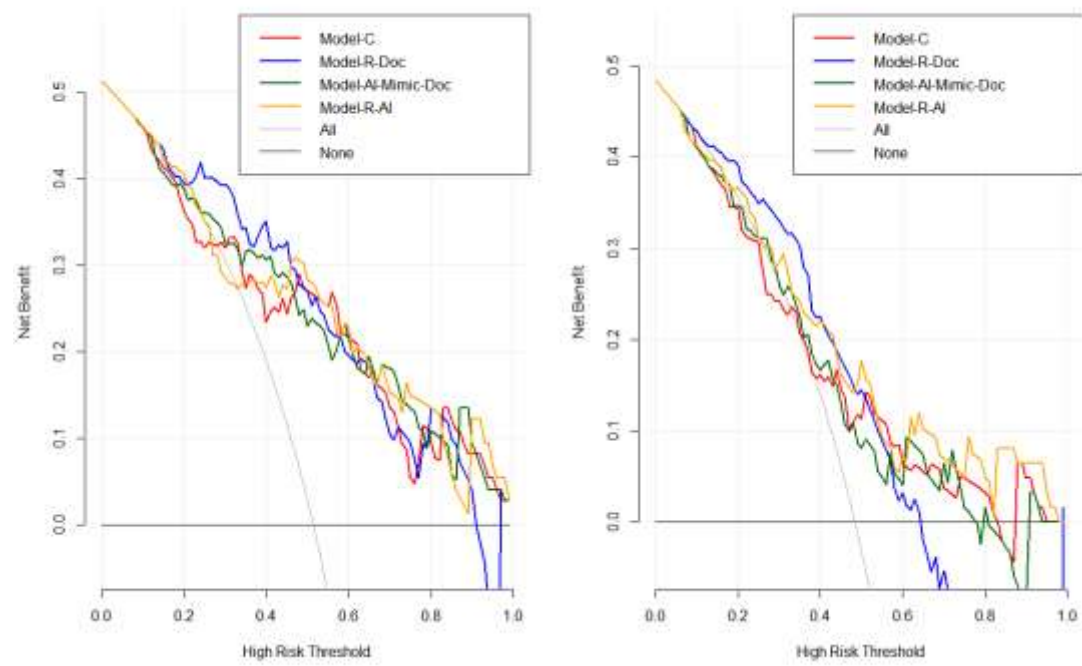
Variables	Training set
Lesion type	
Ground glass	261 (38.2)
Mixed and consolidation	421 (61.8)
Lesion size	
< 3 cm	242 (35.5)
≥ 3 cm	440 (64.5)
Single or bilateral	
Bilateral lung	420 (76.2)
Right lung	90 (13.2)
Left lung	72 (10.6)
Number of lesion	
Single	117 (17.1)
Multiple	565 (82.9)
Air bronchogram	
No	413 (60.6)
Yes	269 (39.4)
Vasodilatation sign	
No	242 (35.5)
Yes	440 (64.5)
Halo	
No	592 (86.8)
Yes	90 (13.2)
Reverse halo	
No	655 (96.1)
Yes	27 (3.9)
Mosaic	
No	628 (92.1)
Yes	54 (7.9)
Emphysema	
No	592 (86.8)
Yes	90 (13.2)
Pleural effusion	
No	619 (90.8)
Yes	63 (9.2)
Striped shadow	
No	296 (43.4)
Yes	386 (56.6)
Apical segment of RUL lesion type	
None	377 (55.3)
Ground glass	162 (23.7)
Mixed and consolidation	143 (21.1)
Apical segment of RUL lesion size	
None	377 (55.3)
< 3 cm	162 (23.7)
≥ 3 cm	143 (21.1)

Posterior segment of RUL lesion type	
None	350 (51.3)
Ground glass	207 (30.3)
Mixed and consolidation	125 (18.4)
Posterior segment of RUL lesion size	
None	350 (51.3)
< 3 cm	170 (24.9)
≥ 3 cm	162 (23.8)
Anterior segment of RUL lesion type	
None	440 (64.5)
Ground glass	108 (15.8)
Mixed and consolidation	134 (19.7)
Anterior segment of RUL lesion size	
None	440 (64.5)
< 3 cm	125 (18.4)
≤ 3 cm	117 (17.1)
Outer segment of RML lesion type	
None	359 (52.6)
Ground glass	179 (26.3)
Mixed and consolidation	144 (21.1)
Outer segment of RML lesion size	
None	359 (52.6)
< 3 cm	224 (32.9)
≥ 3 cm	99 (14.5)
Inner segment of RML lesion type	
None	449 (65.8)
Ground glass	134 (19.7)
Mixed and consolidation	99 (14.5)
Inner segment of RML lesion size	
None	458 (67.1)
< 3 cm	144 (21.1)
≥ 3 cm	80 (11.8)
Dorsal segment of RLL lesion size type	
None	324 (47.4)
Ground glass	179 (26.3)
Mixed and consolidation	179 (26.3)
Dorsal segment of RLL lesion size	
None	324 (47.4)
< 3 cm	170 (24.9)
≥ 3 cm	189 (27.7)
Basal segment of RLL lesion type	
None	432 (63.2)
Ground glass	125 (18.4)
Mixed and consolidation	125 (18.4)
Basal segment of RLL lesion size	
None	432 (63.2)
< 3 cm	125 (18.4)
≥ 3 cm	125 (18.4)

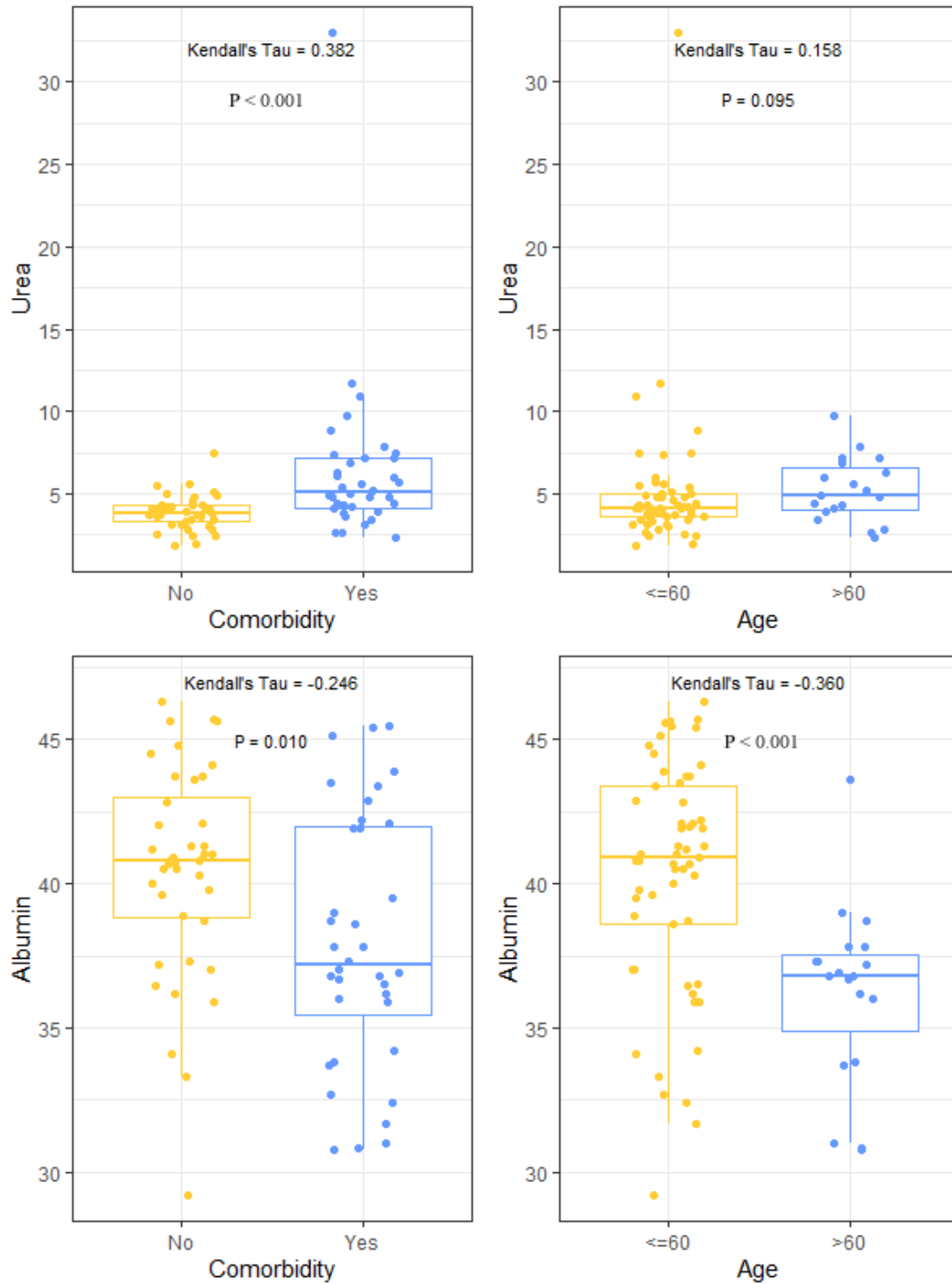
Anterior basal segment of RLL lesion type	
None	503 (73.7)
Ground glass	99 (14.5)
Mixed and consolidation	80 (11.8)
Anterior basal segment of RLL lesion size	
None	502 (73.7)
< 3 cm	54 (7.9)
≥ 3 cm	125 (18.4)
Outer basal segment of RLL lesion type	
None	270 (39.5)
Ground glass	188 (27.6)
Mixed and consolidation	224 (32.9)
Outer basal segment of RLL lesion size	
None	278 (40.8)
< 3 cm	153 (22.4)
≥ 3 cm	251 (36.8)
Posterior basal segment of RLL lesion type	
None	224 (32.9)
Ground glass	170 (24.9)
Mixed and consolidation	288 (42.1)
Posterior basal segment of RLL lesion size	
None	233 (34.2)
< 3 cm	179 (26.3)
≥ 3 cm	269 (39.5)
Posterior apical segment of LUL lesion type	
None	440 (64.5)
Ground glass	90 (13.2)
Mixed and consolidation	153 (22.4)
Posterior apical segment of LUL lesion size	
None	440 (64.5)
< 3 cm	80 (11.8)
≥ 3 cm	162 (23.7)
Anterior segment of LUL lesion type	
None	449 (65.8)
Ground glass	134 (19.7)
Mixed and consolidation	99 (14.5)
Anterior segment of LUL lesion size	
None	449 (65.8)
< 3 cm	108 (15.8)
≥ 3 cm	125 (18.4)
Upper lingual segment of LUL lesion type	
None	449 (65.8)
Ground glass	143 (21.1)
Mixed and consolidation	90 (13.2)
Upper lingual segment of LUL lesion size	
None	449 (65.8)
< 3 cm	117 (17.1)
≥ 3 cm	117 (17.1)

Sublingual segment of LUL lesion type	
None	404 (59.2)
Ground glass	134 (19.7)
Mixed and consolidation	144 (21.1)
Sublingual segment of LUL lesion size	
None	421 (61.8)
< 3 cm	126 (18.4)
≥ 3 cm	135 (19.7)
Dorsal segment of LLL lesion type	
None	350 (51.3)
Ground glass	170 (24.9)
Mixed and consolidation	162 (23.7)
Dorsal segment of LLL lesion size	
None	350 (51.3)
< 3 cm	117 (17.1)
≥ 3 cm	215 (31.6)
Anterior medial basal segment of LLL lesion type	
None	376 (55.3)
Ground glass	153 (22.4)
Mixed and consolidation	153 (22.4)
Anterior medial basal segment of LLL lesion size	
None	376(55.3)
< 3 cm	162 (23.7)
≥ 3 cm	144 (21.1)
Outer basal segment of LLL lesion type	
None	324 (47.4)
Ground glass	153 (22.4)
Mixed and consolidation	205 (30.3)
Outer basal segment of LLL lesion size	
None	324 (48.7)
< 3 cm	134 (19.7)
≥ 3 cm	215(31.6)
Posterior basal segment of LLL lesion type	
None	251 (36.8)
Ground glass	198 (28.9)
Mixed and consolidation	233 (34.2)
Posterior basal segment of LLL lesion size	
None	252 (36.8)
< 3 cm	215 (31.6)
≥ 3 cm	215 (31.6)

Abbreviation: BL, bilateral lung lesions; CV, consolidation; GGO, ground-glass opacity; RL, right lung lobe; LL, left lung lobe; RUL, right upper lung lobe; RML, right middle lung lobe; RLL, right lower lung lobe; LUL, left upper lung lobe; LLL, left lower lung lobe



Appendix 3. Decision curves of the four models



Appendix 4. Correlations between age, comorbidity and urea, albumin