

External validation, radiological evaluation, and development of deep learning automatic lung segmentation in contrast enhanced chest CT

Electronic Supplementary Material

Table 1a. DICE and accuracy scores for each patient in performance testing.

Case	Accuracy	Dice Similarity Coefficient (DSC)	Normalised Surface Distance (NSD)
1	0.999	0.995	0.988
2	0.995	0.967	0.941
3	0.999	0.996	0.994
4	0.999	0.996	0.994
5	0.998	0.993	0.990
6	0.998	0.987	0.991
7	0.999	0.995	0.991
8	0.997	0.974	0.930
9	0.998	0.992	0.992
10	0.999	0.995	0.989
11	0.999	0.995	0.999
12	0.999	0.996	0.996
Mean (95% Confidence Interval)	0.998 (95% CI 0.9976 to 0.9989)	0.990 (95% CI 0.9840 to 0.9962)	0.983 (95% CI 0.9686 to 0.9972)

Table 1b. Scan DICOM (Digital Imaging and Communications in Medicine) information for each cohort.

Characteristic	Sheffield Reference Cohort N = 225¹	Stanford External Cohort N = 28
Scanner manufacturer		
GE MEDICAL SYSTEMS	225 (100%)	6 (21%)
SIEMENS		21 (75%)
TOSHIBA		1 (4%)
Scanner model name		
LightSpeed Pro 32	64 (26%)	0 (0%)
LightSpeed VCT	161 (72%)	4 (14%)
SOMATOM Definition AS+		7 (25%)
SOMATOM Definition Edge		4 (14%)
SOMATOM Definition Flash		2 (7%)
SOMATOM Force		3 (11%)
Sensation 64		5 (18%)
Aquilion		1 (4%)
Scan slice thickness		
0.625	225 (100%)	1 (4%)
1.0		20 (71%)
1.25		5 (18%)
2.0		2 (7%)
kvp		
80	0 (0%)	1 (4%)
100	39 (17%)	4 (14%)
120	186 (83%)	23 (82%)
¹ n (%)		