

Table S1 Comparison of lung ultrasound measurements of the right lung between the case group and the control group

Right lung	The number of B-lines			H (mm)		
	Case group (n=65)	Control group (n=60)	P	Case group (n=65)	Control group (n=60)	P
Parasternal line						
2 nd LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.80, 1.30)	0.70 (0.60, 0.70)	<0.001*
3 rd LIS	0.00 (0.00, 2.00)	0.00 (0.00, 0.00)	<0.001*	0.90 (0.80, 1.10)	0.70 (0.60, 0.80)	<0.001*
4 th LIS	0.00 (0.00, 2.00)	0.00 (0.00, 0.00)	<0.001*	0.80 (0.70, 1.00)	0.80 (0.70, 0.80)	<0.001*
5 th LIS	0.00 (0.00, 2.75)	0.00 (0.00, 0.00)	<0.001*	0.95 (0.80, 1.18)	0.75 (0.70, 0.80)	<0.001*
Midclavicular line						
2 nd LIS	0.00 (0.00, 4.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.80, 1.40)	0.70 (0.60, 0.80)	<0.001*
3 rd LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	0.90 (0.80, 1.30)	0.70 (0.70, 0.80)	<0.001*
4 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.00 (0.80, 1.40)	0.70 (0.70, 0.80)	<0.001*
5 th LIS	0.00 (0.00, 2.50)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.90, 1.40)	0.70 (0.70, 0.80)	<0.001*
Anterior axillary line						
2 nd LIS	0.00 (0.00, 5.00)	0.00 (0.00, 0.00)	<0.001*	1.20 (0.90, 1.40)	0.70 (0.70, 0.80)	<0.001*
3 rd LIS	0.00 (0.00, 4.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.80, 1.40)	0.70 (0.70, 0.80)	<0.001*
4 th LIS	0.00 (0.00, 3.25)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.80, 1.40)	0.70 (0.70, 0.80)	<0.001*
5 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.90, 1.50)	0.80 (0.70, 0.80)	<0.001*
Midaxillary line						
2 nd LIS	0.00 (0.00, 4.00)	0.00 (0.00, 0.00)	<0.001*	1.20 (1.00, 1.60)	0.80 (0.70, 0.90)	<0.001*
3 rd LIS	0.00 (0.00, 1.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.90, 1.30)	0.80 (0.70, 0.80)	<0.001*
4 th LIS	0.00 (0.00, 2.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.80, 1.40)	0.80 (0.70, 0.83)	<0.001*
5 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.90, 1.45)	0.80 (0.70, 0.90)	<0.001*
Posterior axillary line						
7 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.30 (0.90, 1.50)	0.70 (0.70, 0.80)	<0.001*
8 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.30 (1.00, 1.65)	0.70 (0.70, 0.80)	<0.001*
Subscapular line						
7 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.20 (0.90, 1.60)	0.70 (0.70, 0.80)	<0.001*
8 th LIS	0.00 (0.00, 4.75)	0.00 (0.00, 0.00)	<0.001*	1.30 (1.00, 1.60)	0.70 (0.70, 0.80)	<0.001*
Paravertebral line						
2 nd LIS	0.00 (0.00, 0.00)	0.00 (0.00, 0.00)	<0.001*	1.00 (0.80, 1.20)	0.70 (0.70, 0.73)	<0.001*
3 rd LIS	0.00 (0.00, 0.00)	0.00 (0.00, 0.00)	<0.001*	1.00 (0.80, 1.20)	0.70 (0.70, 0.80)	<0.001*
4 th LIS	0.00 (0.00, 0.00)	0.00 (0.00, 0.00)	<0.001*	1.00 (0.80, 1.30)	0.70 (0.70, 0.80)	<0.001*
5 th LIS	0.00 (0.00, 1.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.80, 1.50)	0.70 (0.70, 0.80)	<0.001*
6 th LIS	0.00 (0.00, 1.00)	0.00 (0.00, 0.00)	<0.001*	1.20 (1.00, 1.60)	0.70 (0.70, 0.80)	<0.001*
7 th LIS	0.00 (0.00, 2.00)	0.00 (0.00, 0.00)	<0.001*	1.30 (1.00, 1.50)	0.80 (0.70, 0.80)	<0.001*
8 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.40 (1.10, 1.70)	0.80 (0.70, 0.80)	<0.001*

Data are presented as the median (upper quartile, lower quartile); H, pleural line thickness; LIS, lung intercostal spaces. *P<0.001.

Table S2 Comparison of lung ultrasound measurements of the left lung between the case group and the control group

Left lung	The number of B-lines			H (mm)		
	Case group (n=65)	Control group (n=60)	P	Case group (n=65)	Control group (n=60)	P
Parasternal line						
2 nd LIS	0.00 (0.00, 1.50)	0.00 (0.00, 0.00)	<0.001*	0.80 (0.70, 1.00)	0.60 (0.60, 0.70)	<0.001*
3 rd LIS	0.00 (0.00, 1.00)	0.00 (0.00, 0.00)	<0.001*	0.80 (0.70, 1.00)	0.60 (0.60, 0.70)	<0.001*
4 th LIS	0.00 (0.00, 0.00)	0.00 (0.00, 0.00)	<0.001*	0.85 (0.80, 1.00)	0.70 (0.60, 0.70)	<0.001*
Midclavicular line						
2 nd LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	0.90 (0.70, 1.20)	0.60 (0.60, 0.70)	<0.001*
3 rd LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	0.90 (0.70, 1.10)	0.70 (0.60, 0.70)	<0.001*
4 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.00 (0.80, 1.20)	0.70 (0.60, 0.70)	<0.001*
Anterior axillary line						
2 nd LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.90, 1.30)	0.70 (0.70, 0.80)	<0.001*
3 rd LIS	0.00 (0.00, 4.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.80, 1.30)	0.70 (0.70, 0.80)	<0.001*
4 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.00 (0.85, 1.40)	0.70 (0.70, 0.80)	<0.001*
Midaxillary line						
2 nd LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.20 (0.90, 1.60)	0.80 (0.70, 0.90)	<0.001*
3 rd LIS	0.00 (0.00, 2.00)	0.00 (0.00, 0.00)	<0.001*	1.10 (0.80, 1.30)	0.75 (0.70, 0.80)	<0.001*
4 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.05 (0.88, 1.40)	0.80 (0.70, 0.80)	<0.001*
Posterior axillary line						
7 th LIS	0.00 (0.00, 2.25)	0.00 (0.00, 0.00)	<0.001*	1.30 (1.00, 1.80)	0.70 (0.70, 0.80)	<0.001*
8 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.40 (1.10, 1.90)	0.70 (0.70, 0.80)	<0.001*
Subscapular line						
7 th LIS	0.00 (0.00, 4.00)	0.00 (0.00, 0.00)	<0.001*	1.30 (1.10, 1.70)	0.75 (0.70, 0.80)	<0.001*
8 th LIS	0.00 (0.00, 5.00)	0.00 (0.00, 0.00)	<0.001*	1.40 (1.10, 1.80)	0.80 (0.70, 0.80)	<0.001*
Paravertebral line						
2 nd LIS	0.00 (0.00, 0.00)	0.00 (0.00, 0.00)	<0.001*	0.95 (0.80, 1.20)	0.70 (0.70, 0.80)	<0.001*
3 rd LIS	0.00 (0.00, 0.00)	0.00 (0.00, 0.00)	<0.001*	1.00 (0.80, 1.23)	0.70 (0.70, 0.80)	<0.001*
4 th LIS	0.00 (0.00, 0.00)	0.00 (0.00, 0.00)	<0.001*	1.00 (0.80, 1.30)	0.70 (0.70, 0.80)	<0.001*
5 th LIS	0.00 (0.00, 1.00)	0.00 (0.00, 0.00)	<0.001*	1.30 (0.90, 1.50)	0.80 (0.70, 0.80)	<0.001*
6 th LIS	0.00 (0.00, 2.00)	0.00 (0.00, 0.00)	<0.001*	1.20 (1.00, 1.60)	0.80 (0.70, 0.80)	<0.001*
7 th LIS	0.00 (0.00, 2.00)	0.00 (0.00, 0.00)	<0.001*	1.30 (1.00, 1.70)	0.80 (0.70, 0.80)	<0.001*
8 th LIS	0.00 (0.00, 3.00)	0.00 (0.00, 0.00)	<0.001*	1.30 (1.10, 1.80)	0.80 (0.78, 0.90)	<0.001*

Data are presented as the median (upper quartile, lower quartile); H, pleural line thickness; LIS, lung intercostal spaces. *P<0.001.

Table S3 Comparison of shear wave elastography measurements of the right lung between the case group and the control group

Right lung	E _{mean} (kPa)			C _{mean} (m/s)		
	Case group (n=65)	Control group (n=60)	P	Case group (n=65)	Control group (n=60)	P
Parasternal line						
2 nd LIS	11.17 (8.67, 18.30)	13.20 (8.08, 18.08)	0.876	1.90 (1.70, 2.43)	2.10 (1.60, 2.43)	0.736
3 rd LIS	16.10 (9.87, 21.03)	12.40 (8.88, 18.10)	0.054	2.30 (1.80, 2.63)	2.00 (1.68, 2.43)	0.042
4 th LIS	15.33 (10.85, 24.52)	14.15 (10.08, 18.60)	0.205	2.23 (1.88, 2.83)	2.15 (1.80, 2.50)	0.201
5 th LIS	18.38 (14.67, 26.98)	14.25 (10.90, 18.68)	0.007*	2.45 (2.07, 3.00)	2.20 (1.90, 2.50)	0.008*
Midclavicular line						
2 nd LIS	18.63 (14.67, 29.37)	16.30 (12.10, 20.70)	0.021*	2.47 (2.20, 3.10)	2.30 (2.00, 2.60)	0.021*
3 rd LIS	20.57 (13.87, 26.77)	16.10 (13.75, 18.28)	0.017*	2.60 (2.13, 3.00)	2.30 (2.10, 2.50)	0.018*
4 th LIS	20.90 (15.33, 26.07)	16.45 (14.38, 18.63)	0.001*	2.67 (2.27, 2.97)	2.30 (2.18, 2.50)	0.001*
5 th LIS	20.93 (15.10, 28.67)	16.00 (14.30, 18.80)	<0.001*	2.67 (2.20, 3.10)	2.30 (2.20, 2.50)	0.001*
Anterior axillary line						
2 nd LIS	17.07(13.03, 23.40)	15.90 (12.58, 17.05)	0.054	2.40 (2.07, 2.80)	2.30 (2.00, 2.40)	0.046*
3 rd LIS	16.13(12.13, 21.80)	14.50 (11.98, 17.30)	0.236	2.33 (2.00, 2.67)	2.20 (2.00, 2.40)	0.214
4 th LIS	16.22(12.42, 24.34)	15.30 (12.25, 18.63)	0.432	2.27 (2.03, 2.78)	2.20 (2.00, 2.50)	0.434
5 th LIS	18.47(14.43, 25.19)	15.85 (13.80, 18.68)	0.026*	2.45 (2.20, 2.90)	2.30 (2.18, 2.50)	0.036*
Midaxillary line						
2 nd LIS	16.53 (11.70, 19.57)	15.50 (13.08, 17.60)	0.949	2.30 (1.93, 2.53)	2.30 (2.10, 2.40)	0.943
3 rd LIS	15.60 (10.77, 24.30)	14.70 (12.30,16.90)	0.460	2.23 (1.90, 2.87)	2.20 (2.00, 2.40)	0.582
4 th LIS	16.83 (13.60, 24.00)	15.10 (12.65, 17.15)	0.022*	2.37 (2.13, 2.83)	2.20 (2.00, 2.40)	0.025*
5 th LIS	17.67 (12.49, 23.56)	15.30 (13.68, 17.45)	0.059	2.40 (2.02, 2.83)	2.20 (2.10, 2.40)	0.062
Posterior axillary line						
7 th LIS	16.80 (10.32, 21.41)	14.75 (11.73, 17.88)	0.295	2.32 (1.81, 2.63)	2.20 (1.98, 2.40)	0.364
8 th LIS	17.83 (13.17, 22.80)	14.25 (12.08, 16.30)	0.002*	2.43 (2.07, 2.73)	2.20 (2.00, 2.30)	0.004*
Subscapular line						
7 th LIS	17.00 (10.17, 21.73)	15.15 (12.18, 17.65)	0.212	2.30 (1.83, 2.67)	2.20 (2.00, 2.40)	0.213
8 th LIS	15.78 (10.52, 22.49)	14.20 (11.98, 18.63)	0.631	2.27 (1.85, 2.69)	2.15 (2.00, 2.50)	0.535
Paravertebral line						
2 nd LIS	27.90 (17.60, 39.72)	15.40 (12.45, 18.13)	<0.001*	3.00 (2.40, 3.53)	2.20 (2.00, 2.40)	<0.001*
3 rd LIS	26.70 (13.88, 37.62)	15.55 (12.48, 18.68)	<0.001*	2.98 (2.13, 3.52)	2.30 (2.00, 2.50)	<0.001*
4 th LIS	18.63 (12.43, 29.53)	16.95 (12.60, 18.85)	0.031*	2.47 (2.03, 3.13)	2.40 (2.00, 2.50)	0.035*
5 th LIS	18.97 (10.70, 27.17)	14.40 (10.78, 17.40)	0.042*	2.50 (1.87, 3.00)	2.20 (1.90, 2.40)	0.052
6 th LIS	14.93 (8.83, 22.70)	14.80 (12.33, 18.20)	0.763	2.20 (1.70, 2.67)	2.20 (2.00, 2.50)	0.876
7 th LIS	15.90 (10.17, 20.93)	14.75 (12.08, 18.20)	0.925	2.17 (1.80, 2.63)	2.20 (2.00, 2.50)	0.898
8 th LIS	13.67 (7.70, 19.90)	14.90 (13.00, 17.48)	0.226	2.10 (1.57, 2.57)	2.20 (2.00, 2.40)	0.290

Data are presented as the median (upper quartile, lower quartile). E_{mean}, averaged mean Young's modulus; C_{mean}, averaged mean shear wave velocity; LIS, lung intercostal spaces; *P<0.001.

Table S4 Comparison of shear wave elastography measurements of the left lung between the case group and the control group

Left lung	Emean (kPa)			Cmean (m/s)		
	Case group (n=65)	Control group (n=60)	P	Case group (n=65)	Control group (n=60)	P
Parasternal line						
2 nd LIS	12.53 (8.72, 17.58)	11.90 (8.23, 16.83)	0.493	2.03 (1.70, 2.37)	2.00 (1.60, 2.30)	0.536
3 rd LIS	19.78 (9.98, 33.75)	14.85 (12.95, 20.13)	0.070	2.57 (1.80, 3.36)	2.20 (2.08, 2.50)	0.069
4 th LIS	21.20 (12.75, 28.06)	16.70 (13.75, 23.00)	0.121	2.62 (1.95, 3.03)	2.30 (2.10, 2.70)	0.133
Midclavicular line						
2 nd LIS	23.10 (16.97, 34.40)	18.05 (14.63, 22.15)	0.001*	2.83 (2.37, 3.37)	2.45 (2.20, 2.70)	0.001*
3 rd LIS	21.83 (16.82, 29.09)	17.05 (14.38, 20.45)	<0.001*	2.70 (2.39, 3.11)	2.40 (2.20, 2.63)	<0.001*
4 th LIS	21.37 (15.60, 27.80)	16.55 (13.68, 18.90)	<0.001*	2.67 (2.27, 3.03)	2.30 (2.10, 2.50)	<0.001*
Anterior axillary line						
2 nd LIS	17.40 (13.50, 21.97)	15.45 (12.35, 18.33)	0.053	2.43 (2.10, 2.70)	2.30 (2.00, 2.50)	0.032*
3 rd LIS	18.93 (13.80, 22.20)	15.45 (13.00, 11.60)	0.020*	2.47 (2.17, 2.73)	2.25 (2.10, 2.40)	0.018*
4 th LIS	18.23 (14.75, 23.58)	14.95 (11.60, 17.33)	<0.001*	2.47 (2.18, 2.78)	2.20 (1.98, 2.40)	<0.001*
Midaxillary line						
2 nd LIS	17.07 (13.33, 23.80)	15.90 (12.78, 18.35)	0.052	2.37 (2.10, 2.83)	2.30 (2.00, 2.50)	0.048*
3 rd LIS	18.67 (12.97, 25.20)	15.70 (13.10, 18.25)	0.072	2.50 (2.07, 2.90)	2.30 (2.10, 2.50)	0.072
4 th LIS	18.85 (14.77, 25.21)	15.75 (13.35, 18.25)	0.003*	2.50 (2.17, 2.91)	2.30 (2.10, 2.50)	0.004*
Posterior axillary line						
7 th LIS	14.85 (10.37, 22.87)	14.65 (11.50, 18.65)	0.447	2.20 (1.83, 2.73)	2.20 (1.90, 2.50)	0.514
8 th LIS	16.93 (11.90, 23.10)	14.25 (11.98, 17.63)	0.107	2.33 (1.97, 2.73)	2.20 (2.00, 2.40)	0.190
Subscapular line						
7 th LIS	16.53 (11.30, 24.33)	15.40 (11.70, 17.93)	0.239	2.33 (1.90, 2.83)	2.25 (1.98, 2.40)	0.306
8 th LIS	11.97 (7.67, 20.90)	15.95 (12.28, 18.95)	0.341	1.97 (1.58, 2.63)	2.30 (2.00, 2.50)	0.305
Paravertebral line						
2 nd LIS	28.23 (15.80, 38.42)	15.50 (10.65, 18.28)	<0.001*	3.05 (2.27, 3.58)	2.25 (1.88, 2.50)	<0.001*
3 rd LIS	24.08 (19.03, 31.97)	15.05 (12.88, 18.33)	<0.001*	2.77 (2.46, 3.25)	2.20 (2.08, 2.43)	<0.001*
4 th LIS	20.87 (16.93, 34.03)	15.70 (12.90, 18.53)	<0.001*	2.60 (2.27, 3.33)	2.25 (2.00, 2.50)	<0.001*
5 th LIS	18.73 (14.47, 29.80)	15.25 (12.80, 18.63)	0.001*	2.50 (2.20, 3.13)	2.20 (2.00, 2.50)	0.001*
6 th LIS	17.53 (12.73, 28.10)	15.55 (11.85, 18.38)	0.034*	2.40 (2.03, 3.00)	2.20 (1.98, 2.50)	0.028*
7 th LIS	14.97 (10.77, 24.00)	14.65 (11.20, 17.70)	0.349	2.17 (1.90, 2.80)	2.20 (1.90, 2.40)	0.365
8 th LIS	15.13 (9.53, 22.50)	14.55 (12.28, 18.15)	0.693	2.23 (1.77, 2.70)	2.20 (2.00, 2.50)	0.966

Data are presented as the median (upper quartile, lower quartile). Emean, averaged mean Young's modulus; Cmean, averaged mean shear wave velocity; LIS, lung intercostal spaces. *P<0.001.