

**Table S1** Multivariable analysis of factors associated with chest tube duration and length of stay

Variable	Chest tube duration (h)			Length of stay (d)		
	RoM	95% CI	P value	RoM	95% CI	P value
Group						
NPSD	Reference			Reference		
TCCD	1.17	1.07–1.27	<0.001***	1.15	1.07–1.24	<0.001***
Sex						
Female	Reference			Reference		
Male	1.00	0.91–1.10	0.97	1.02	0.94–1.11	0.60
Smoking						
No	Reference			Reference		
Yes	1.09	0.97–1.23	0.16	1.02	0.91–1.13	0.78
Diabetes mellitus						
No	Reference			Reference		
Yes	1.02	1.90–1.14	0.80	1.00	0.90–1.11	0.95
Hypertension						
No	Reference			Reference		
Yes	0.98	0.89–1.10	0.77	0.98	0.89–1.08	0.69
Coronary heart disease						
No	Reference			Reference		
Yes	0.98	0.81–1.18	0.81	0.97	0.82–1.15	0.75
Myasthenia gravis						
No	Reference			Reference		
Yes	1.12	1.00–1.25	0.051	1.14	1.04–1.26	0.006**
COPD/emphysema						
No	Reference			Reference		
Yes	1.02	0.83–1.25	0.87	0.97	0.81–1.17	0.74
ASA grade, n (%)						
III	Reference			Reference		
I	0.78	0.56–1.09	0.15	0.79	0.59–1.06	0.12
II	0.96	0.86–1.09	0.56	0.96	0.87–1.07	0.47
Pathological type						
Malignant	Reference			Reference		
Benign	0.95	0.86–1.04	0.25	0.96	0.89–1.04	0.313
Age, per 1-year increase	1.01	1.00–1.01	<0.001***	1.01	1.00–1.01	<0.001**
BMI, per 1 kg/m <sup>2</sup> increase	1.02	1.01–1.03	0.002**	1.01	1.01–1.02	0.002**

Data presented as ratio of means (RoM) with 95% confidence intervals from generalized linear models (log link, gamma distribution). RoM >1 indicates longer chest tube duration or length of stay relative to the reference category. \*\*, P<0.01; \*\*\*, P<0.001. ASA, American Society of Anesthesiologists; BMI, body mass index; CI, confidence interval; COPD, chronic obstructive pulmonary disease; NPSD, negative pressure suction device; TCCD, traditional chest closed drainage.

**Table S2** Sensitivity analysis excluding patients with myasthenia gravis: multivariable analysis of chest tube duration and length of stay

Variable	Chest tube duration (h)			Length of stay (d)		
	RoM	95% CI	P value	RoM	95% CI	P value
Group						
NPSD	Reference			Reference		
TCCD	1.21	1.10–1.33	<0.001***	1.19	1.10–1.28	<0.001***
Sex						
Female	Reference			Reference		
Male	0.93	0.83–1.04	0.22	0.95	0.87–1.04	0.30
Smoking						
No	Reference			Reference		
Yes	1.15	1.00–1.31	0.048*	1.06	0.95–1.18	0.33
Diabetes mellitus						
No	Reference			Reference		
Yes	1.06	0.92–1.21	0.44	0.99	0.89–1.11	0.87
Hypertension						
No	Reference			Reference		
Yes	0.98	0.86–1.12	0.77	1.03	0.93–1.14	0.56
Coronary heart disease						
No	Reference			Reference		
Yes	0.95	0.78–1.17	0.65	0.95	0.80–1.11	0.49
COPD/emphysema						
No	Reference			Reference		
Yes	1.12	0.87–1.43	0.39	1.08	0.88–1.32	0.47
ASA grade, n (%)						
III	Reference			Reference		
I	0.72	0.48–1.08	0.11	0.79	0.57–1.09	0.15
II	0.92	0.79–1.07	0.28	0.98	0.87–1.10	0.72
Pathological type						
Malignant	Reference			Reference		
Benign	0.95	0.86–1.05	0.31	0.92	0.85–1.00	0.047*
Age, per 1-year increase	1.01	1.00–1.01	0.002**	1.01	1.00–1.01	0.002**
BMI, per 1 kg/m <sup>2</sup> increase	1.02	1.01–1.04	<0.001***	1.01	1.01–1.03	<0.001***

Sensitivity analysis excluding all 38 patients with myasthenia gravis (n=136: TCCD =79, NPSD =57). Data presented as ratio of means (RoM) with 95% confidence intervals from generalized linear models. RoM >1 indicates longer chest tube duration or length of stay relative to the reference category. \*, P<0.05; \*\*, P<0.01; \*\*\*, P<0.001. ASA, American Society of Anesthesiologists; BMI, body mass index; CI, confidence interval; COPD, chronic obstructive pulmonary disease; NPSD, negative pressure suction device; TCCD, traditional chest closed drainage.