Supporting information A:
Comparison of parameters between the VATS and thoracotomy group.

| Variable                               | VATS         | Thoracotomy | p Value |
|----------------------------------------|--------------|-------------|---------|
| Female [n]                             | 20 (50.0)    | 14 (35.0)   | 0.258   |
| Age [years]                            | 67 (55-74)   | 67 (57-74)  | 0.904   |
| COPD [n]                               | 14 (35.0)    | 15 (37.5)   | 1.000   |
| Smoker (current)                       | 10 (25.0)    | 14 (35.0)   | 0.465   |
| BMI [kg/m2]                            | 27 (22-30)   | 26 (23-29)  | 0.516   |
| FEV1 [% Ref]                           | 86 (78-98)   | 77 (69-83)  | 0.004*  |
| DLCOc [% Ref]                          | 81 (65-92)   | 72 (53-86)  | 0.231   |

ASA

|        |        |        | 0.959 |
|--------|--------|--------|-------|
| 2      | 7 (17.5)| 8 (20.0)|       |
| 3      | 30 (75.0)| 29 (72.5)|       |
| 4      | 3 (7.5) | 3 (7.5) |       |

Anticoagulation | 13 (32.5) | 17 (42.5) | 0.489 |
Segmentectomy   | 10 (25.0) | 11 (27.5) | 1.000 |
Complex surgery | 1 (2.5)   | 21 (52.5) | <0.001* |

Histology

|                |        |        | 0.228 |
|----------------|--------|--------|-------|
| Benign         | 4 (10.0)| 1 (2.5)|       |
| Metastasis     | 5 (12.5)| 9 (22.5)|       |
| Primary lung malignancy | 31 (77.5)| 30 (75.0)|       |

UICC Stage (NSCLC) | 0.005*

|      |        |        |       |
|------|--------|--------|-------|
| IA1  | 2 (8.0) | 2 (7.7) |       |
| IA2  | 9 (36.0)| 3 (11.5)|       |
| IA3  | 3 (12.0)| 1 (3.8) |       |
| IB   | 6 (24.0)| 2 (7.7) |       |
| IIA  | 1 (4.0) | 2 (7.7) |       |
| IIB  | 0       | 5 (19.2)|       |
| IIIA | 2 (8.0) | 7 (26.9)|       |
| IIIB | 1 (4.0) | 1 (3.8) |       |
| IVA  | 1 (4.0) | 3 (11.5)|       |

Mortality (30 day) | 0 | 1 (2.5%) | 1.000 |
Major complications | 2 (5.0) | 13 (32.5) | 0.003* |
Reoperation | 0 | 4 (10.0) | 0.116 |

Air leak intervention | 4 (10.0) | 1 (2.5) | 0.359 |
Bronchoscopy (all) | 2 (5.0) | 11 (27.5) | 0.013* |
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Comparison of parameters between the VATS and thoracotomy group.

| Variable                        | VATS   | Thoracotomy | p Value |
|---------------------------------|--------|-------------|---------|
| Pneumonia                       | 1 (2.5)| 5 (12.5)    | 0.201   |
| Hospital stay [days]            | 4 (4-6)| 6 (4-8)     | 0.001*  |
| Chest tube duration [days]      | 2 (2-4)| 3 (2-5)     | 0.022*  |
| Chest x-ray                     |        |             |         |
| Pneumothorax                    | 21 (52.5)| 19 (48.7)  | 0.821   |
| Dystelektasis                   | 10 (25.0)| 19 (48.7)  | 0.0600  |
| Pleural effusion                | 24 (61.5)| 35 (89.7)  | 0.007*  |
| Surgical emphysema              | 14 (35.9)| 13 (33.3)  | 1.000   |

ASA: American Society of Anesthesiologists; BMI: Body Mass Index; COPD: chronic obstructive pulmonary disease; DLCO: Diffusing capacity of the lungs for carbon monoxide; FEV1: Forced Expiratory Pressure in 1 Second; IQR: Interquartile range; NSCLC: Non-small cell lung cancer; UICC: Union for International Cancer Control.