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SALZBURGER SYMPOSIUM THORAXCHIRURGIE
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MEDIZINISCHE
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Oxford Debate: Non-intubated VATS

Con

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NIVATS Potential Benefits and Evidence

- Reduced Airway Trauma
 - Hoarseness after DLT Intubation
 - Tracheal injury **187 case reports... since 1972**
- Reduced Risk of Barotrauma and Volutrauma to the lungs
 - Ventilator induced lung injury **Pulmonary complications equal**
- Avoid GA: residual neuromuscular blockade, nausea, vomiting
 - **Gastrointestinal symptoms reduced, earlier oral intake**
- Reduced in-room operative time **5-10 min**
- Shorter chest tube indwelling time **0,7d**
- **Faster Recovery/ LOS↓ 1d**

Grott M, Eichhorn M, Eichhorn F, Schmidt W, Kreuter M, Winter H. Thoracic surgery in the non-intubated spontaneously breathing patient. *Respir Res.* 2022 Dec 27;23(1):379.

Liu S, Mao Y, Qiu P, Faridovich KA, Dong Y. Airway Rupture Caused by Double-Lumen Tubes: A Review of 187 Cases. *Anesth Analg.* 2020 Nov;131(5):1485-1490.

Abdul Khader A, Pons A, Palmares A, Booth S, Proli C, De Sousa P, Lim E. Are chest drains routinely required after thoracic surgery? A drainology study of on-table chest-drain removals. *JTCVS Open.* 2023 Jun 2;16:960-964.



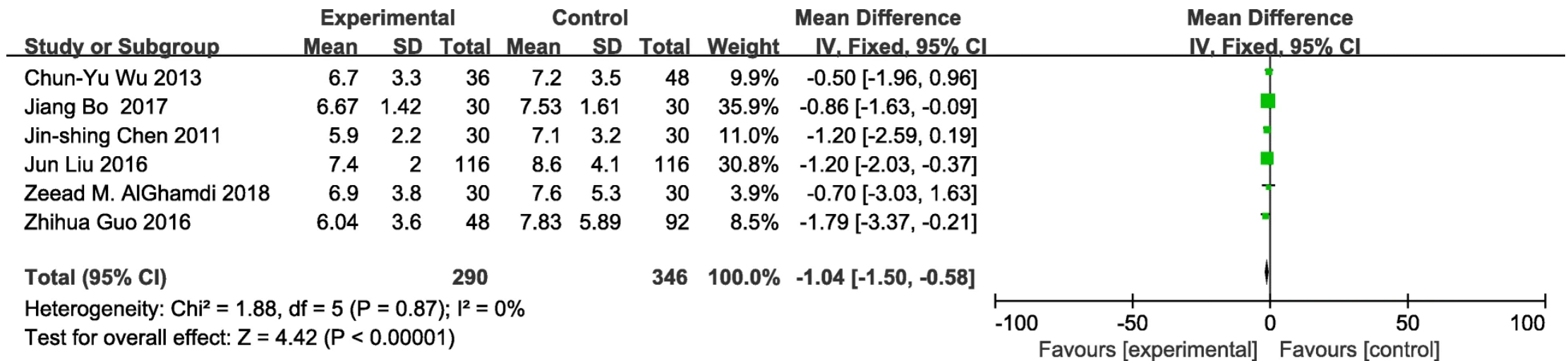
RESEARCH

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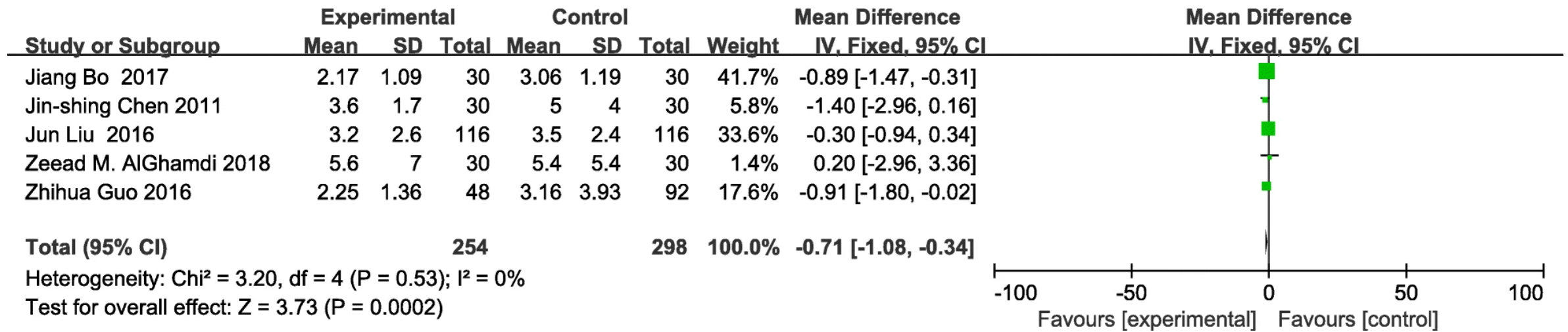


Comparison of non-intubated and intubated video-assisted thoracoscopic surgeries of major pulmonary resections for lung cancer—a meta-analysis

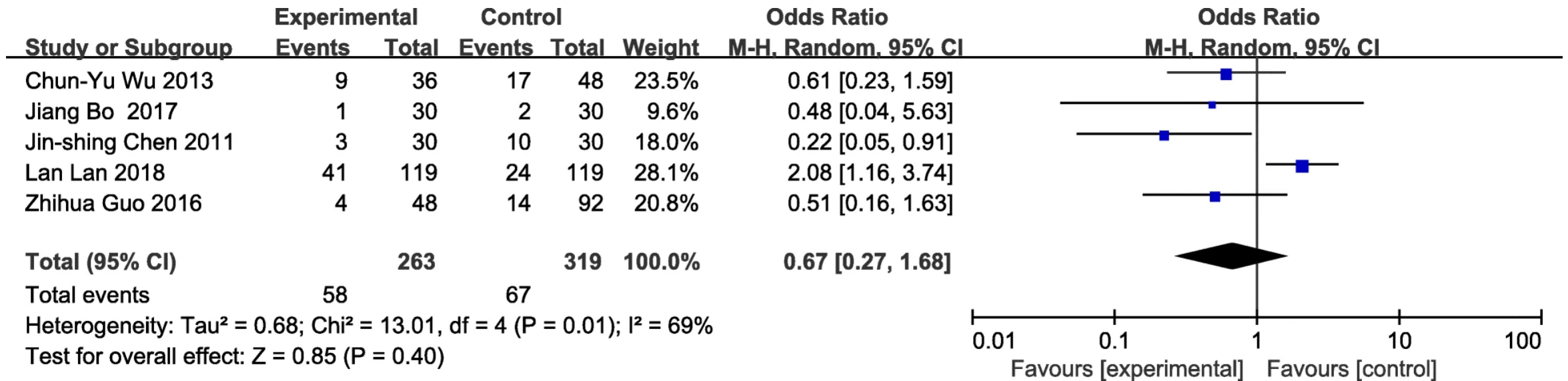
Wenfei Xue, Guochen Duan*, Xiaopeng Zhang, Hua Zhang, Qingtao Zhao, Zhifei Xin and Jie He



Forest plot of hospital stay for the non-intubated group vs. the intubated group. CI: confidence interval; IV: inverse variance; SD: standard deviation



Forest plot of **duration of chest-tube** placement for the non-intubated group vs. the intubated group



Forest plot of **postoperative complication** rate for the non-intubated group vs. the intubated group

Wu et al.: Stridor, Delir, subkutanes Emphysem

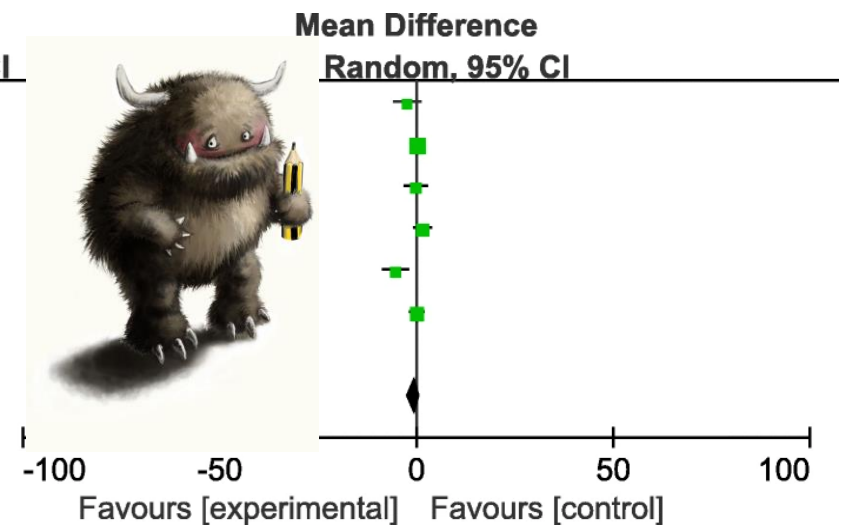
Chen et al.: Heiserkeit (40% vs 6%)

Lan et al.: mehr Erguss, Atelektasen nach NIVATS

Study or Subgroup	Experimental			Control			Weight	Mean Difference IV, Random, 95% CI
	Mean	SD	Total	Mean	SD	Total		
Chun-Yu Wu 2013	13.1	7.7	36	15.5	8.8	48	11.6%	-2.40 [-5.94, 1.14]
Jiang Bo 2017	8.67	2.43	30	8.43	2.33	30	25.0%	0.24 [-0.96, 1.44]
Jin-shing Chen 2011	13.8	6	30	14	6	30	13.9%	-0.20 [-3.24, 2.84]
Jun Liu 2016	17.2	9.1	116	15.7	9.5	116	17.3%	1.50 [-0.89, 3.89]
Zeead M. AlGhamdi 2018	12.6	6	30	18	7.4	30	12.2%	-5.40 [-8.81, -1.99]
Zhihua Guo 2016	8.06	6.22	48	8.02	4.31	92	20.0%	0.04 [-1.93, 2.01]
Total (95% CI)			290			346	100.0%	-0.64 [-2.19, 0.92]

Heterogeneity: Tau² = 2.13; Chi² = 12.93, df = 5 (P = 0.02); I² = 61%

Test for overall effect: Z = 0.80 (P = 0.42)



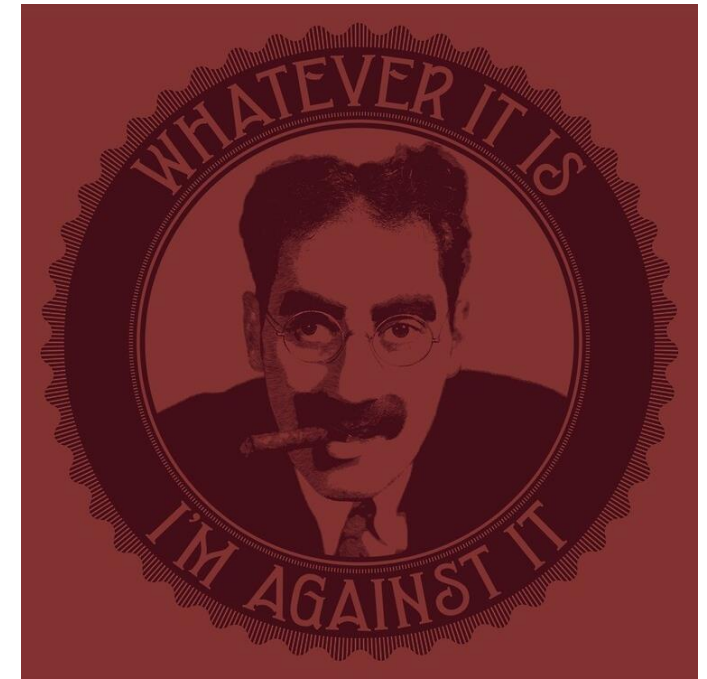
Forest plot of lymph node numbers for the non-intubated group vs. the intubated group

Potential Emergencies

= Emergency intubation in case of

- Cannot Ventilate LAMA / Airway loss
- Significant $\uparrow\uparrow\uparrow$ PaCO₂ / \downarrow PaO₂ / \downarrow pH
- Surgical Issues
- Mediastinal movements
- Coughing
- Uncooperative patient
- Major Hemorrhage

OLV???



Cons

- Hustenreiz
 - Vagale Stimulation während der Präparation am Hilus
 - Passagere Recurrensparese links durch LA
- Atelektasen und postoperative Lungenreexpansion
 - Mehr Atelektasen und Ergüsse nach NiVATS (Lan)
 - Ausgleich durch PEEP, CPAP am Ende der OP
- Erfahrenes Team mit wenig Turnover während des Eingriffs

Zusammenfassung

- Vereinfachung des Eingriffs? -
- Verbesserte Sicherheit des Eingriffs? -
- Verbessertes Prozess/optimierter Ablauf? +/-
 - Abhängig von den Strukturen
 - Stabiles, trainiertes Team
- Relevante Verbesserung des postoperativen Outcomes? -
 - Initial perioperativ? +/-
 - Langzeitergebnis? -
 - Onkologisches Ergebnis? ?

Mehrwert NIVATS?

- Diskussion über die Optimierung der Patientenversorgung
 - von OP, Anästhesie/OLV, Schmerztherapie, postoperative Rehabilitation

Egal, was es ist,
ich bin dagegen!



CHIRURGIE INNSBRUCK

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VIELEN DANK FÜR IHRE AUFMERKSAMKEIT
UND IHR ENGAGEMENT!

