

Liposomal Bupivacaine vs Long-Acting Local Anesthetics for Intercostal Nerve Block in Thoroscopic Surgeries: A Meta-Analysis

Victor LF Kauer, Gustavo R. M. Wegner, Bruno F. M. Wegner, Henrique P Gnoatto ,Gabriel L. González, Tatiana S. Nascimento

Introduction

- Liposomal bupivacaine may prolong analgesia after intercostal nerve block (ICNB)
- Its clinical benefit over conventional long-acting local anesthetics remains uncertain
- compare LB vs LALA for ICNB in thoracoscopic surgery

Methods

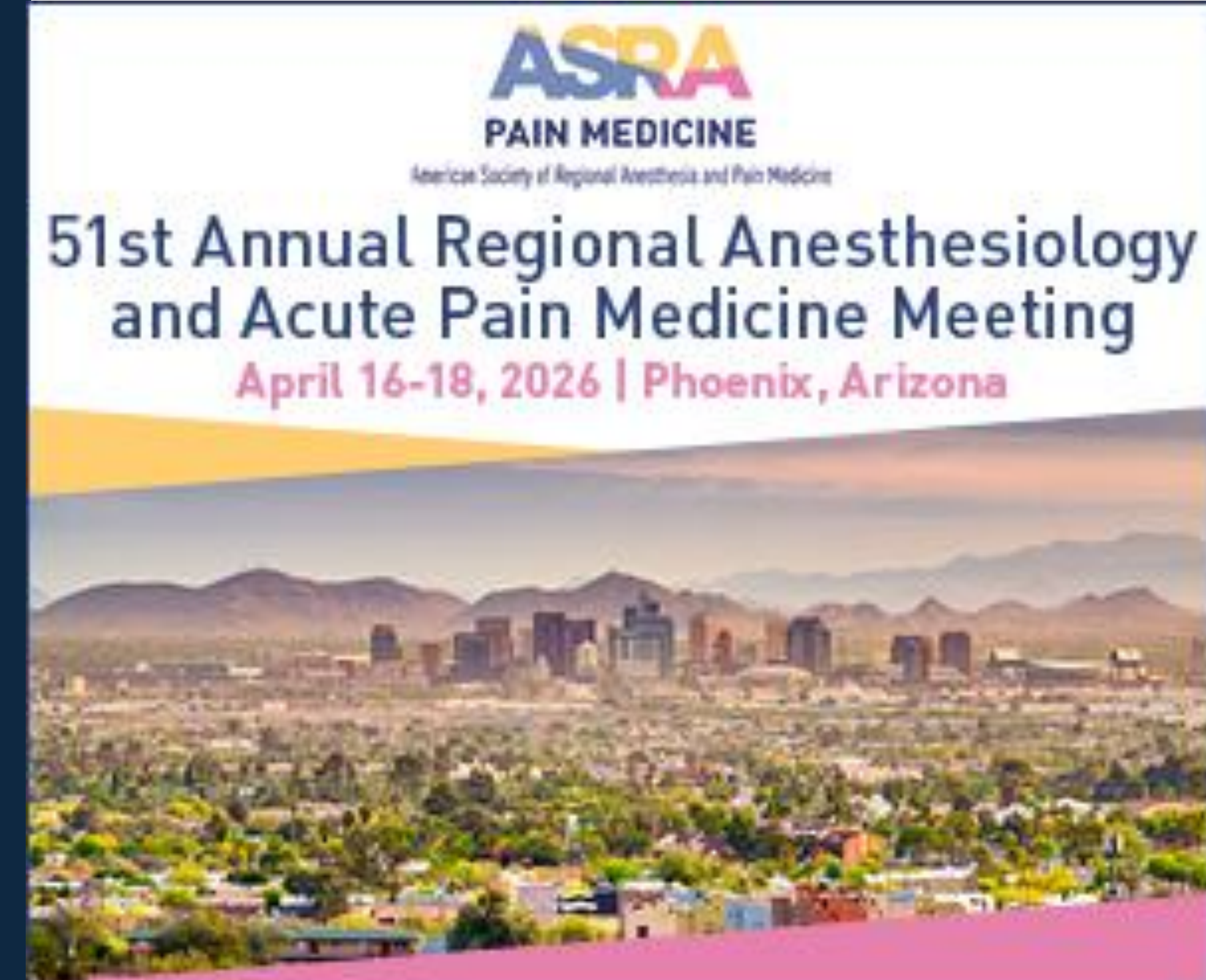
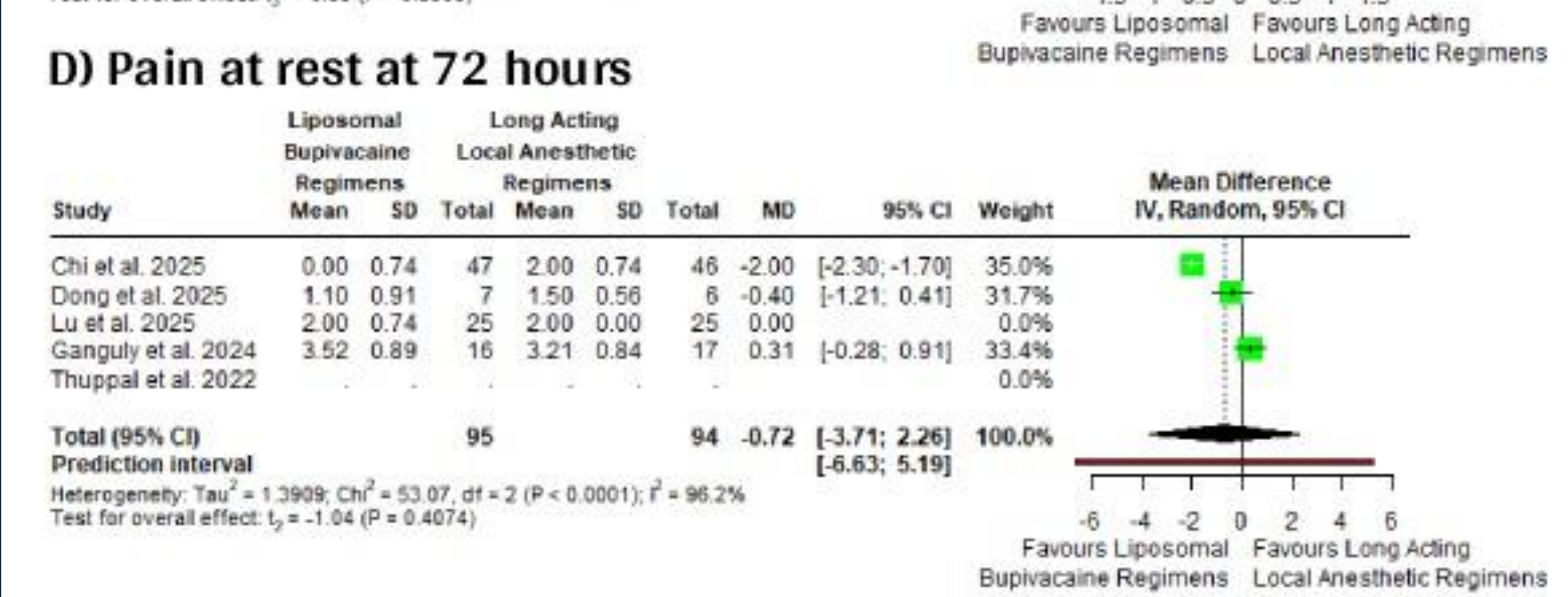
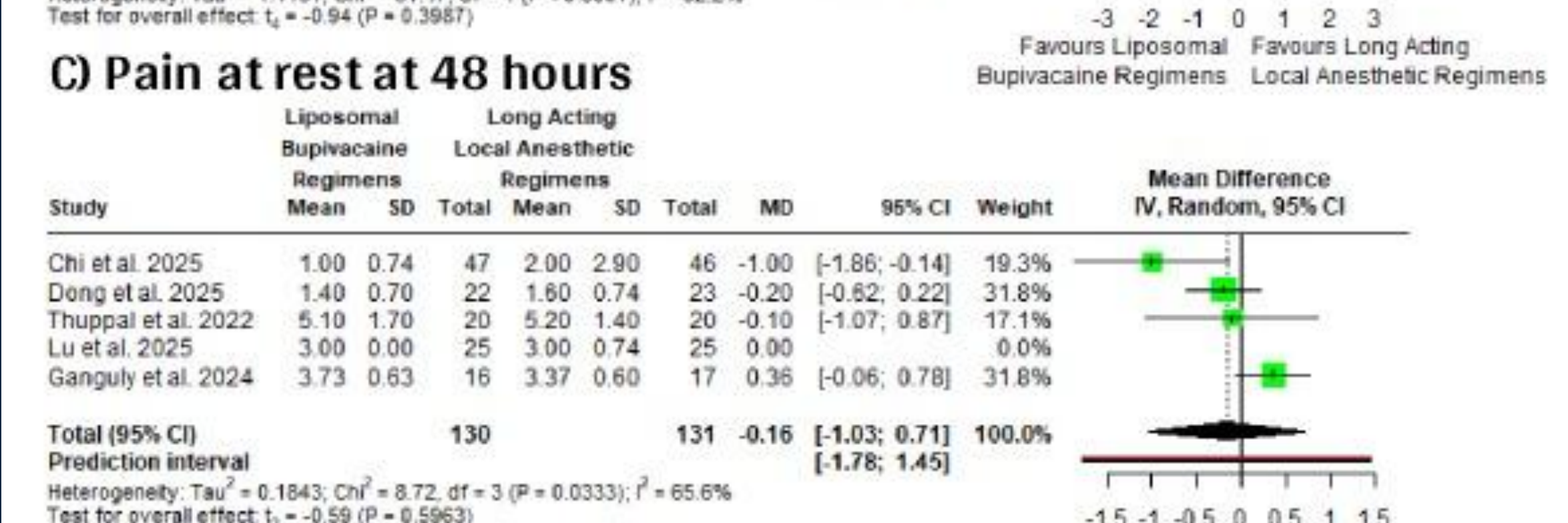
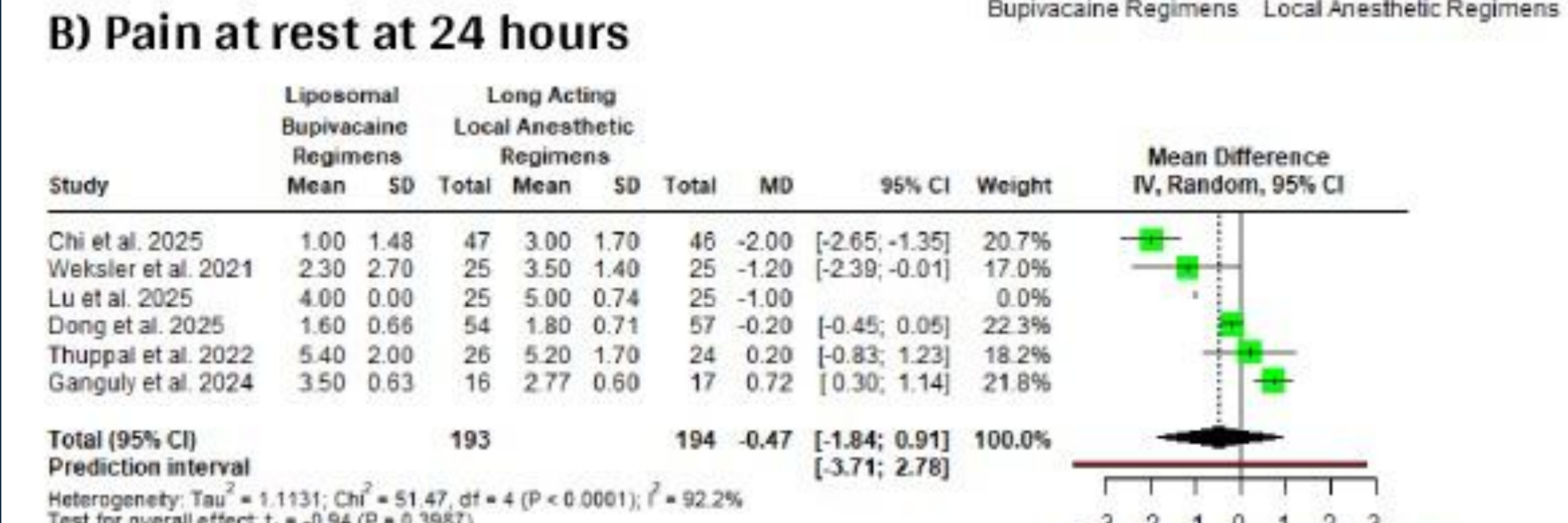
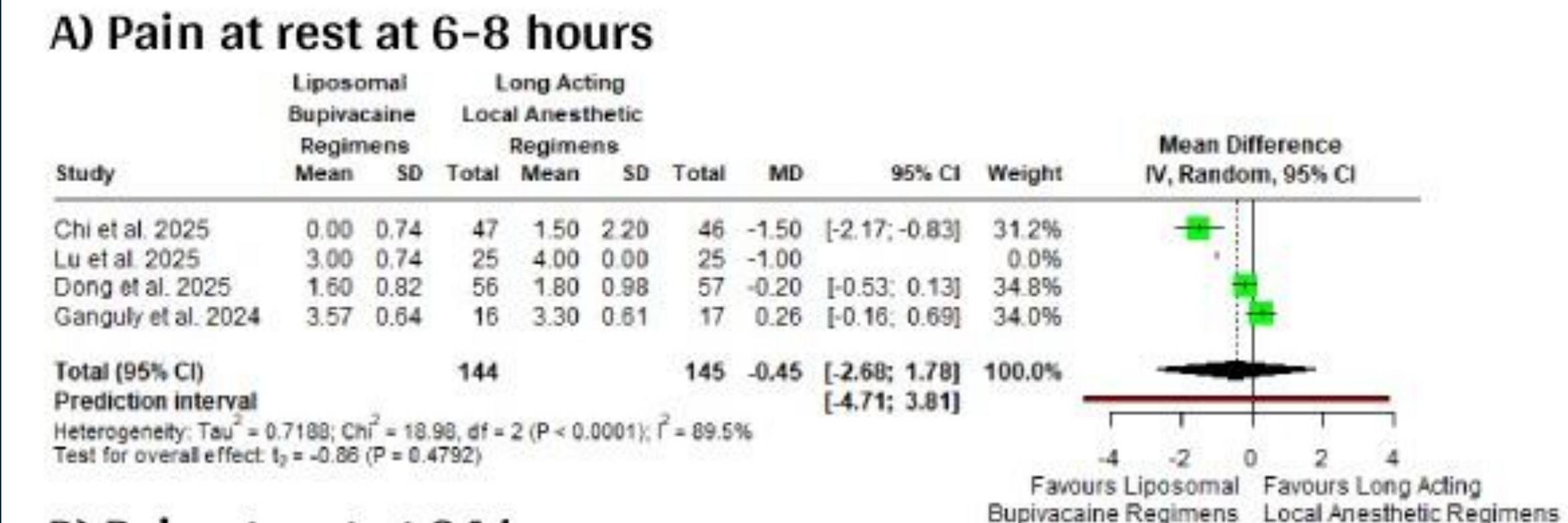
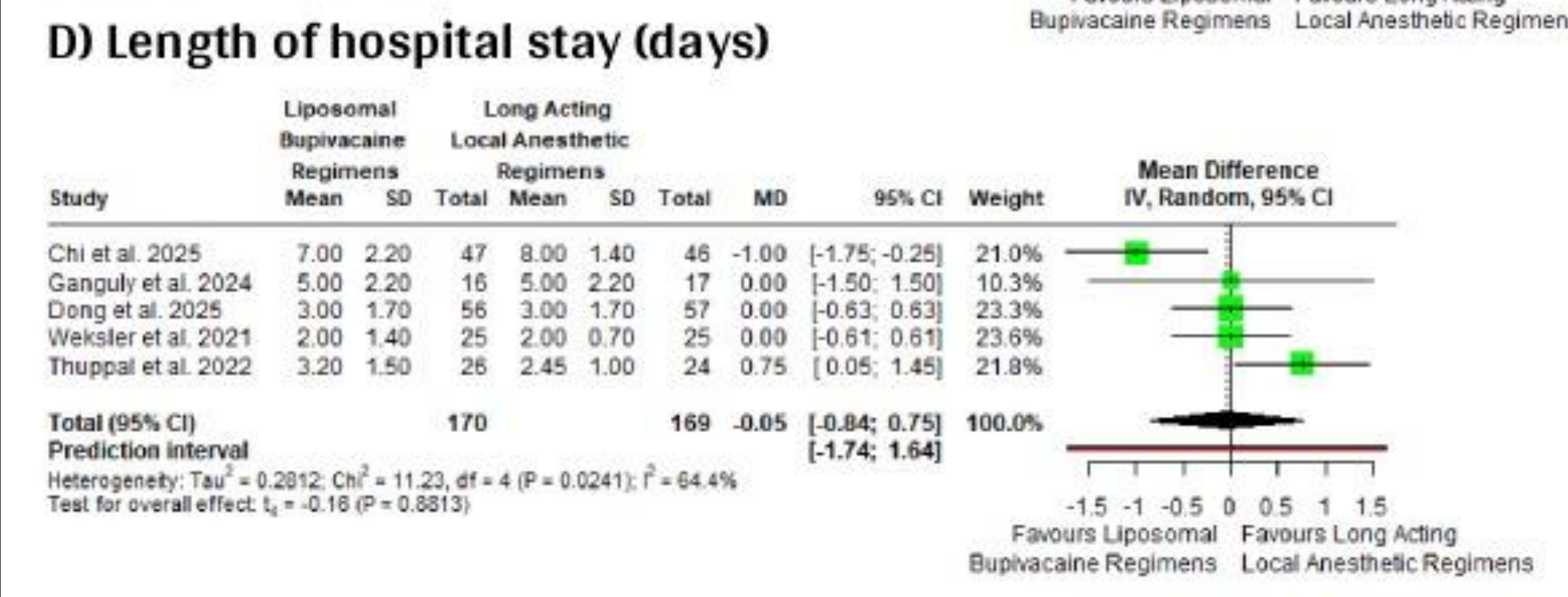
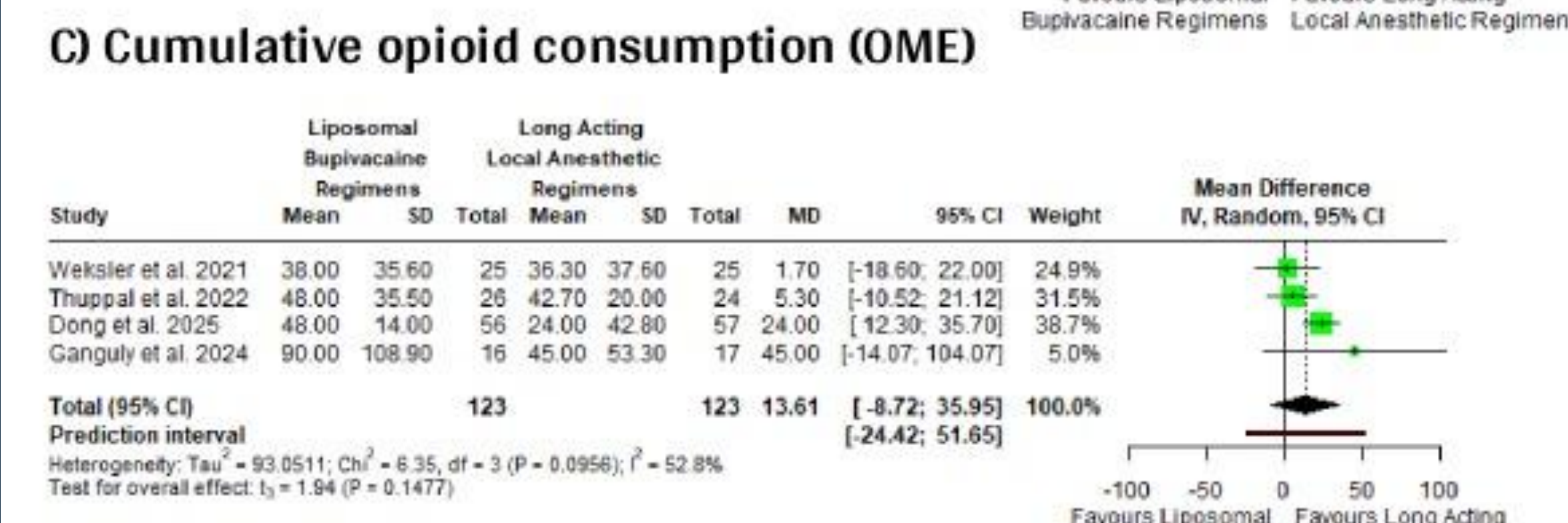
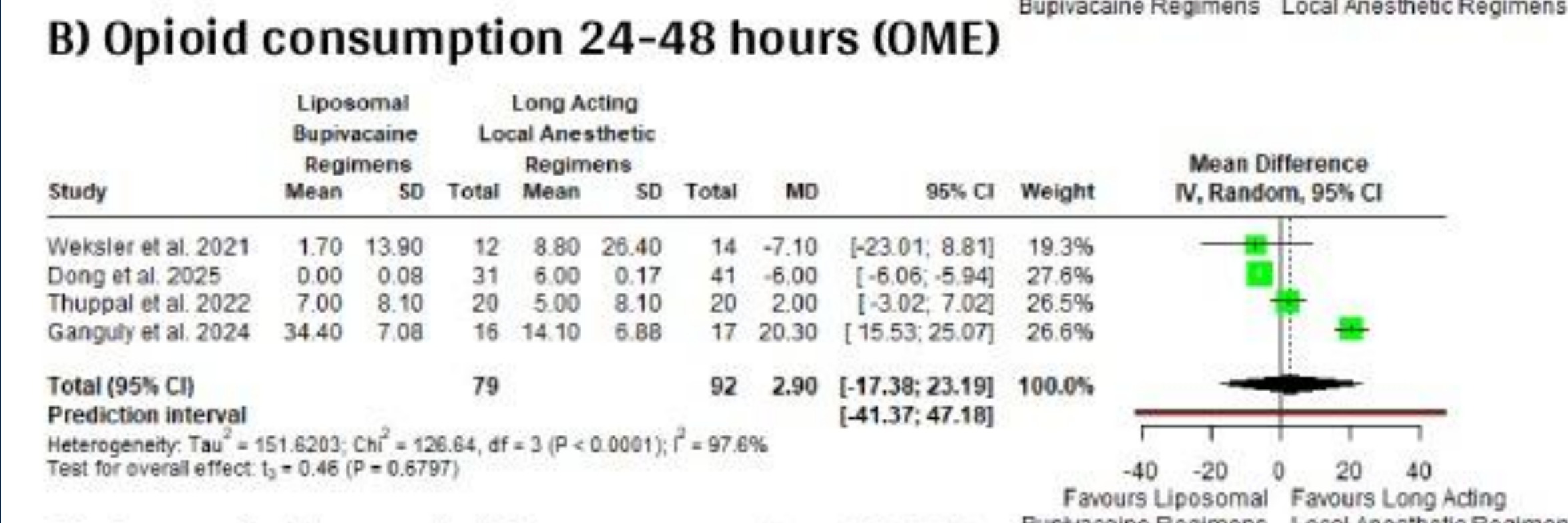
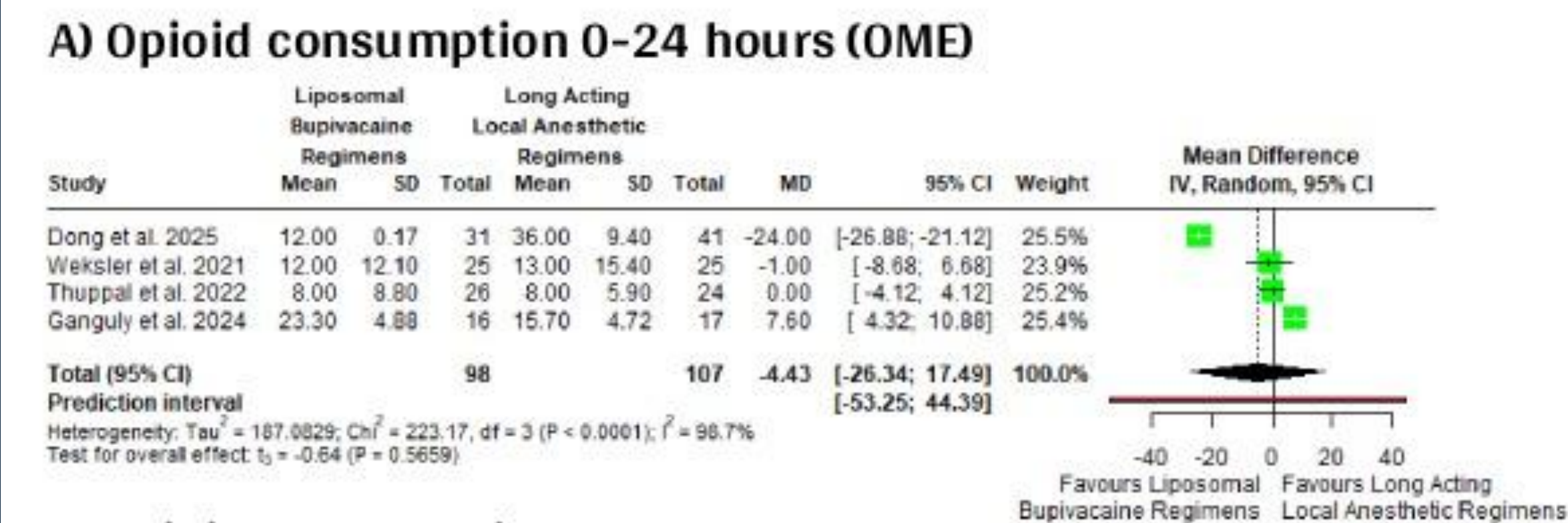
- Databases: PubMed, Embase, Cochrane Library, Web of Science (from inception to Jan 30, 2026)
- Population: adults undergoing thoracoscopic surgery with ICNB
- Intervention: regional anesthesia with LB
- Comparator: long-acting local anesthetics
- No restrictions to adjuvants
- Primary outcome
 - Opioid consumption (OME)
- Secondary outcomes:
 - Pain score
 - Length of stay



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Liposomal Bupivacaine is **not superior** to conventional long acting local anesthetics for **ICNB** in thoracoscopic surgeries



Results

- 6 RCTs (389 patients)
- LB vs LALA for ICNB
- No difference in opioid use
- No difference in pain scores (up to 72 h)
- No difference in length of stay
- High heterogeneity
- No clinically relevant benefit with LB

Conclusion

- No benefit of LB vs LALA for ICNB
- No improvement in pain, opioid use, or LOS
- Higher cost without clinical advantage
- Routine use of LB not supported