

BACKGROUND

- Total knee arthroplasty (TKA) leads to significant, enduring, postoperative pain.
- Current research inadequately addresses cryoneurolysis’ role in diminishing postoperative opioid use.
- This study investigates the influence of cryoneurolysis on opioid consumption and hospitalization duration following TKA.

METHODS

- PubMed, EMBASE, and Cochrane were systematically searched for randomized controlled trials and observational studies comparing standard of care (SOC) versus SOC plus cryoneurolysis before TKA.
- Statistical analysis was performed using RevMan 5.4. Heterogeneity was assessed using the Cochran Q test and I2 statistics. The risk of bias was appraised according to the RoB-2 and Robins-I tools.

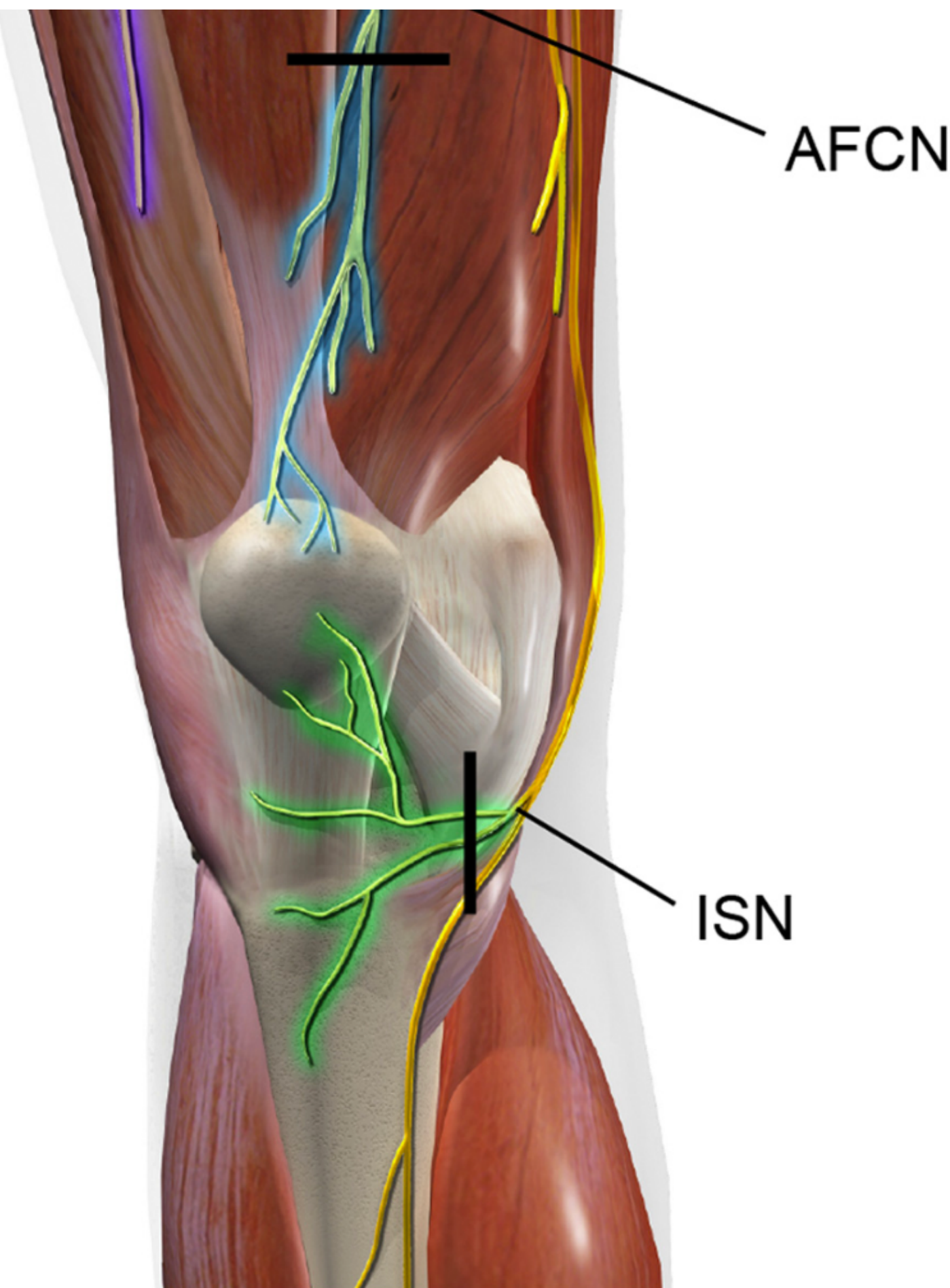
RESULTS

- There were no statistical differences between groups regarding:
  - cumulative opioid consumption at 6 weeks
- Cryoneurolysis group:
  - showed lower hospital length of stay

534

Patients undergoing total knee arthroplasty surgery included

- Dasa, V 2016
- Mihalko, W.M 2021
- Urban, J.A 2021
- Lung, B.E, 2022
- Swisher, M.W 2022



Cryoneurolysis ISN and AFCN treatment lines.  
AFCN, anterior femoral cutaneous nerve; ISN, infrapatellar branches of the saphenous nerve.

Cryoneurolysis vs Standard of Care

57%

received cryoneurolysis.

CONCLUSIONS

Cumulative opioid consumption at 6 weeks

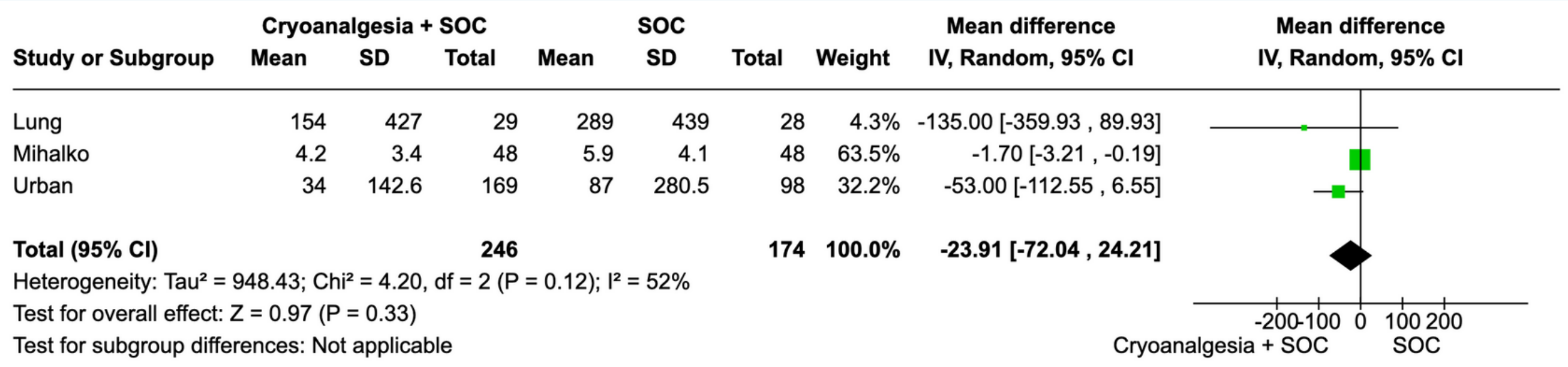
No significant difference

between groups in the pooled analysis

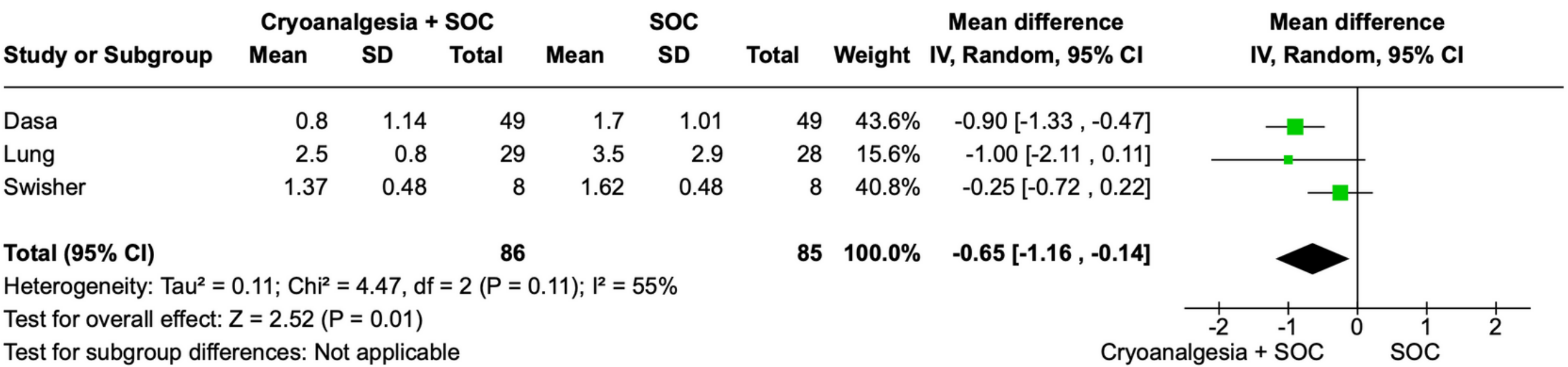
Hospital length of stay

favored intervention group

Cumulative opioid consumption at 6 weeks



Hospital length of stay



DISCUSSION

- Our results demonstrate that cryoneurolysis before TKA reduces the hospital length of stay, although this statistically significant difference may not be clinically significant. On the other hand, there is no difference in post-operative opioid consumption.
- Our limitations include the small number of included studies and considerable heterogeneity.

