

# Evidence Update

Summary of a Cochrane Review

Tuberculosis Series

Do corticosteroids prevent death and improve respiratory function in people with tuberculous pleurisy?

There is insufficient evidence to determine whether corticosteroids benefit people with tuberculous pleurisy.

## Background

There have been reports that corticosteroids, used in addition to antituberculous therapy, may benefit people with tuberculous pleurisy. However, research findings are inconsistent, and there are potential adverse effects of corticosteroids, especially in HIV-positive people.

## Inclusion criteria

### Studies:

Randomized controlled trials and quasi-randomized controlled trials.

### Participants:

People diagnosed with tuberculous pleurisy.

### Intervention:

Intervention: any corticosteroid.

Control: no treatment, placebo or other active treatment.

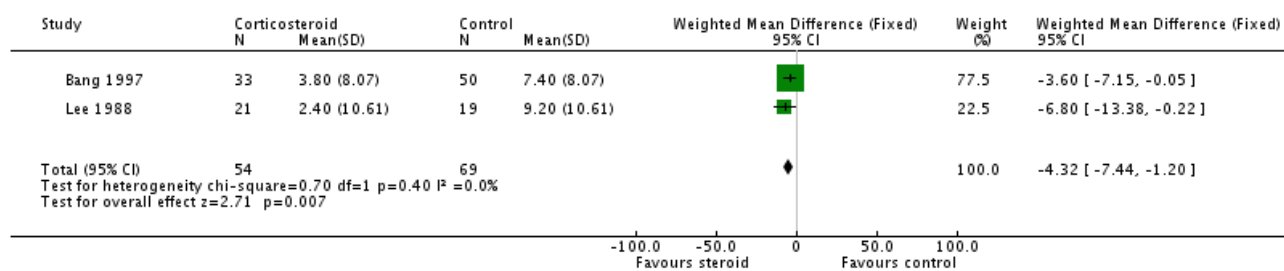
### Selected outcomes:

Death from any cause, improvement in respiratory function, reabsorption of clinical effusion, presence of plural thickening, improvement in clinical symptoms and signs, HIV-associated events.

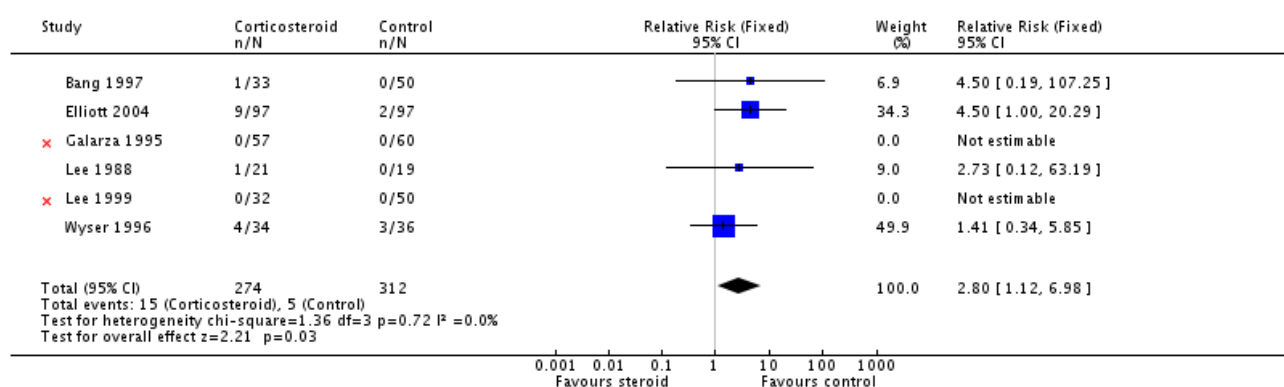
## Results

- Six trials comprising 633 participants were included; one trial had adequate allocation concealment.
- One trial found that corticosteroids had no significant effect on the number of deaths (194 participants).
- There was no significant improvement in respiratory function in those taking corticosteroids compared with control (191 participants, 2 trials).
- Presence of residual fluid at four weeks (relative risk 0.76, 95% confidence interval 0.62 to 0.94; 394 participants, 3 trials) and pleural thickening (RR 0.69, 95% CI 0.51 to 0.94; 309 participants, 4 trials) were lower in participants receiving corticosteroids. Presence of residual fluid at eight weeks was no different in the corticosteroid group compared with controls (399 participants, 4 trials).
- Symptoms disappeared faster in people receiving corticosteroids (weighted mean difference -4.32 days, 95% CI -7.44 to -1.20; 123 participants, 2 trials).
- Adverse events leading to treatment discontinuation were more common among those taking corticosteroids (RR 2.80, 95% CI 1.12 to 6.98; 586 participants, 6 trials).
- One trial showed the risk of Kaposi's sarcoma may be increased in HIV-positive people taking corticosteroids (194 participants).

## Corticosteroids vs control: days to improvement in symptoms



## Corticosteroids vs control: adverse events leading to treatment discontinuation



## Authors' conclusions

### Implications for practice:

There is insufficient evidence to determine whether potential benefits of corticosteroids outweigh potential harms for people with tuberculous pleurisy.

### Implications for research:

Further large trials with sufficient statistical power to evaluate the effects of corticosteroids on mortality and important morbidity outcomes are needed. Careful attention should be given to adverse events, particularly in HIV-positive people.