

## SUPPLEMENTARY DATA

### Search strategy

#### EMBASE

Search carried out April 18<sup>th</sup> 2024

Embase Classic+Embase <1946 to April 18, 2024>

- 1 "fem\$ neck fracture\*".mp.
- 2 exp femur neck fracture/ or exp femoral neck fracture/
- 3 1 or 2
- 4 exp osteosynthesis/
- 5 exp internal fixator/
- 6 exp bone screw/
- 7 internal fixation device\*.mp.
- 8 device\*, internal fixation.mp.
- 9 internal fixator\*.mp.
- 10 osteosynthesis.mp.
- 11 osteosyntheses.mp.
- 12 screw\*.mp.
- 13 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12
- 14 3 and 13

Embase search: 4,842

#### MEDLINE

Search carried out April 18<sup>th</sup> 2024

Ovid MEDLINE(R) ALL <1946 to April 18, 2024>

- 1 "fem\$ neck fracture\*".mp.
- 2 exp Femoral Neck Fractures/
- 3 1 or 2
- 4 exp Fracture Fixation, Internal/
- 5 exp Internal Fixators/
- 6 exp Bone Screws/
- 7 internal fixation device\*.mp.
- 8 device\*, internal fixation.mp.
- 9 internal fixator\*.mp.
- 10 osteosynthesis.mp.
- 11 osteosyntheses.mp.
- 12 screw\*.mp.
- 13 4 or 5 or 6 or 7 or 8 or 9 or 10 or 11 or 12
- 14 3 and 13

Medline search: 4,127

#### COCHRANE

Search carried out April 18<sup>th</sup> 2024

- | ID  | Search   | Hits              |
|-----|--|-------------------|
| #1  | MeSH descriptor: [Femoral Neck Fractures]          | explode all trees |
| #2  | ("femur neck fracture"):ti,ab,kw                   |                   |
| #3  | ("femur neck fractures"):ti,ab,kw                  |                   |
| #4  | ("femoral neck fracture"):ti,ab,kw                 |                   |
| #5  | ("femoral neck fractures"):ti,ab,kw                |                   |
| #6  | "femoral neck fracture"                            |                   |
| #7  | "femoral neck fractures"                           |                   |
| #8  | "femur neck fracture"                              |                   |
| #9  | "femur neck fractures"                             |                   |
| #10 | #1 OR #2 OR #3 OR #4 OR #5 OR #6 OR #7 OR #8 OR #9 |                   |

#11 MeSH descriptor: [Internal Fixators] explode all trees  
 #12 MeSH descriptor: [Fracture Fixation, Internal] explode all trees  
 #13 ("internal fixation"):ti,ab,kw  
 #14 ("Internal fixator"):ti,ab,kw  
 #15 ("internal fixators"):ti,ab,kw  
 #16 ("osteosynthesis"):ti,ab,kw  
 #17 ("osteosyntheses"):ti,ab,kw  
 #18 (screw):ti,ab,kw  
 #19 (screws):ti,ab,kw  
 #20 (implant):ti,ab,kw  
 #21 (implants):ti,ab,kw  
 #22 "internal fixation"  
 #23 "internal fixator"  
 #24 "internal fixators"  
 #25 osteosynthesis  
 #26 osteosyntheses  
 #27 screw\*  
 #28 implant\*  
 #29 #11 OR #12 OR #13 OR #14 OR #15 OR #16 OR #17 OR #18 OR #19 OR #20 OR  
 #21 OR #22 OR #23 OR #24 OR #25 OR #26 OR #27 OR #28  
 #30 #10 AND #29  
 Cochrane search: 460

#### SCOPUS

Search carried out April 18<sup>th</sup> 2024

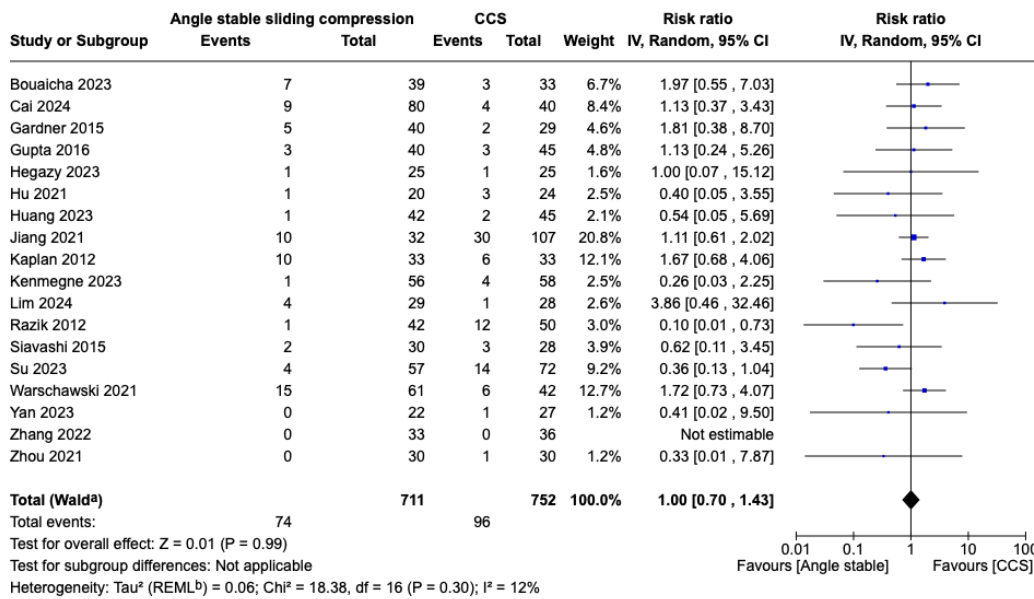
( ( TITLE-ABS-KEY ( "femur neck fracture\*" OR "femoral neck fracture\*" OR "collum femoris fracture\*" ) ) OR "femur neck fracture\*" OR "femoral neck fracture\*" OR "collum femoris fracture\*" ) AND ( ( TITLE-ABS-KEY ( "internal fixation" OR "internal fixator\*" OR osteosynthesis OR osteosyntheses OR screw\* OR implant\* ) ) OR "internal fixation" OR "internal fixator\*" OR osteosynthesis OR osteosyntheses OR screw\* OR implant\* )

Scopus search: 14,753

Total reports: 24,182

# Analysis of combined studies and funnel plots

Figure A. Avascular necrosis, combined studies

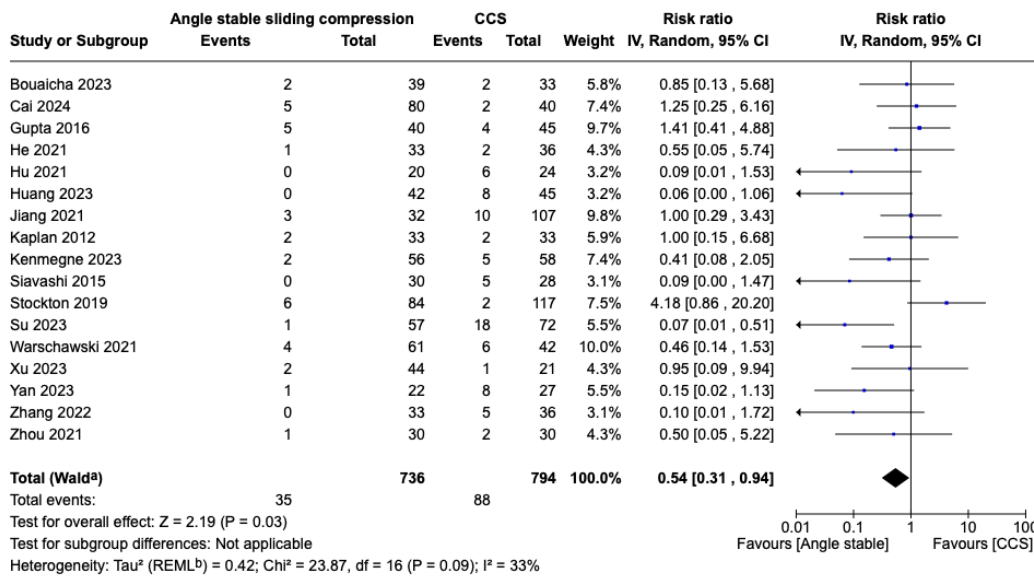


**Footnotes**

<sup>a</sup>CI calculated by Wald-type method.

<sup>b</sup>Tau<sup>2</sup> calculated by Restricted Maximum-Likelihood method.

Figure B. Fixation failure/cut out, combined studies

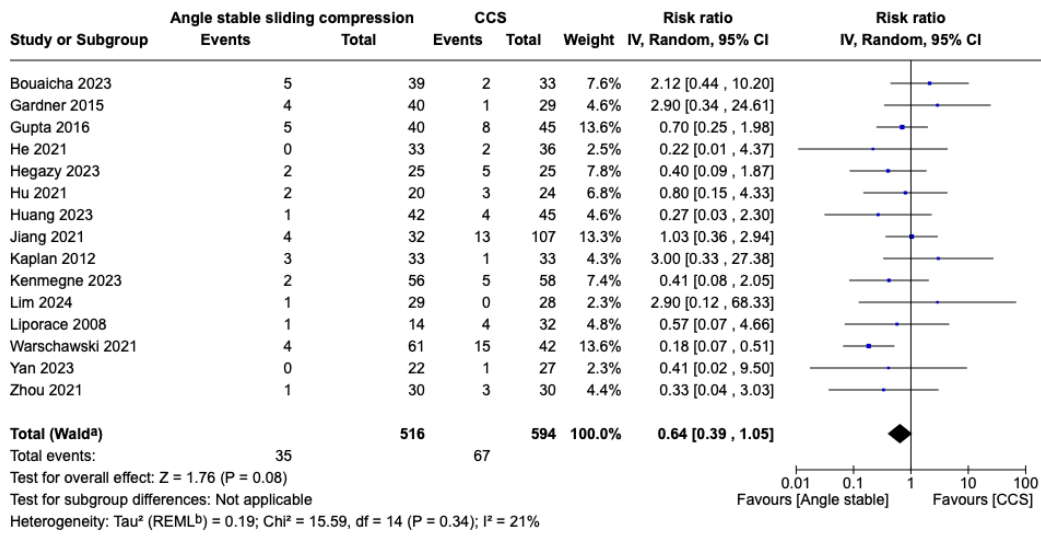


**Footnotes**

<sup>a</sup>CI calculated by Wald-type method.

<sup>b</sup>Tau<sup>2</sup> calculated by Restricted Maximum-Likelihood method.

Figure C. Non-union, combined studies

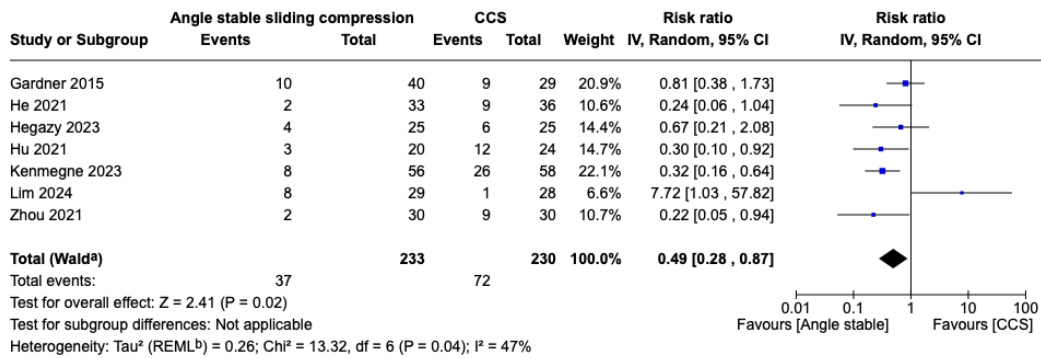


**Footnotes**

<sup>a</sup>CI calculated by Wald-type method.

<sup>b</sup>Tau<sup>2</sup> calculated by Restricted Maximum-Likelihood method.

Figure D. Any complication, combined studies

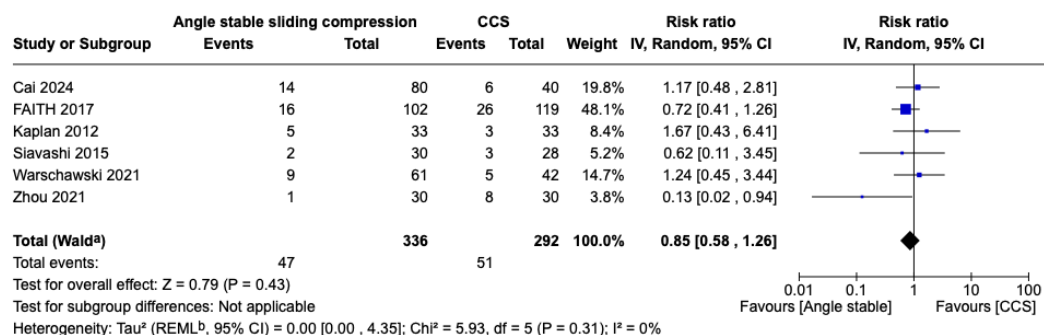


**Footnotes**

<sup>a</sup>CI calculated by Wald-type method.

<sup>b</sup>Tau<sup>2</sup> calculated by Restricted Maximum-Likelihood method.

Figure E. Reoperation, combined studies

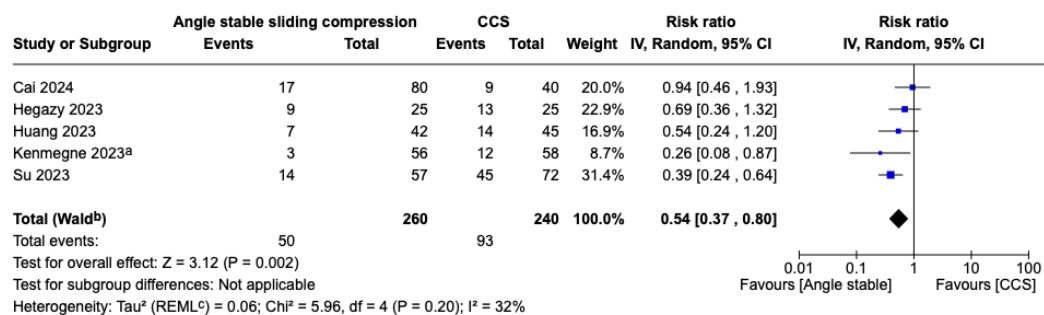


**Footnotes**

<sup>a</sup>CI calculated by Wald-type method.

<sup>b</sup>Tau<sup>2</sup> calculated by Restricted Maximum-Likelihood method.

Figure F. Shortening >5mm, combined studies



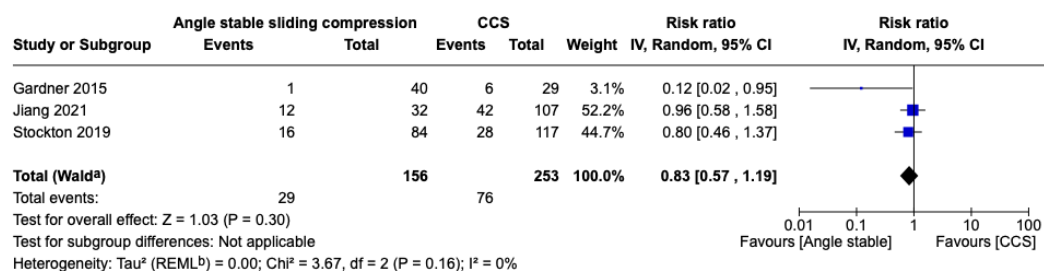
**Footnotes**

<sup>a</sup>>10mm

<sup>b</sup>CI calculated by Wald-type method.

<sup>c</sup>Tau<sup>2</sup> calculated by Restricted Maximum-Likelihood method.

Figure G. Failure, not specified, combined studies

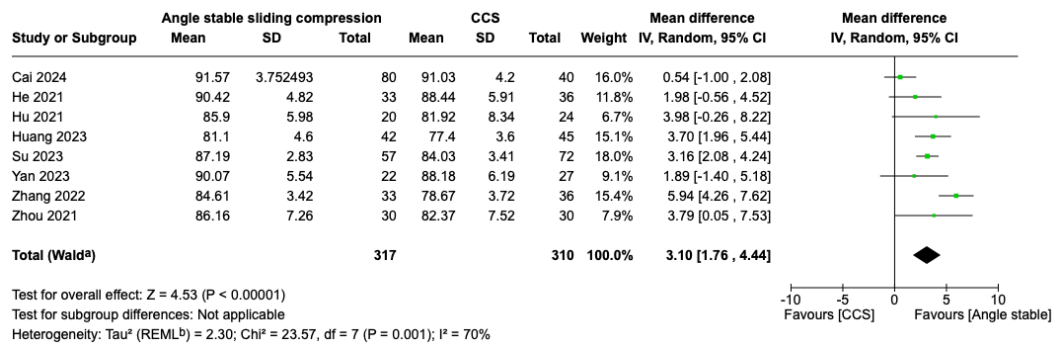


**Footnotes**

<sup>a</sup>CI calculated by Wald-type method.

<sup>b</sup>Tau<sup>2</sup> calculated by Restricted Maximum-Likelihood method.

Figure H. Harris Hip Score 6–24 months, combined studies

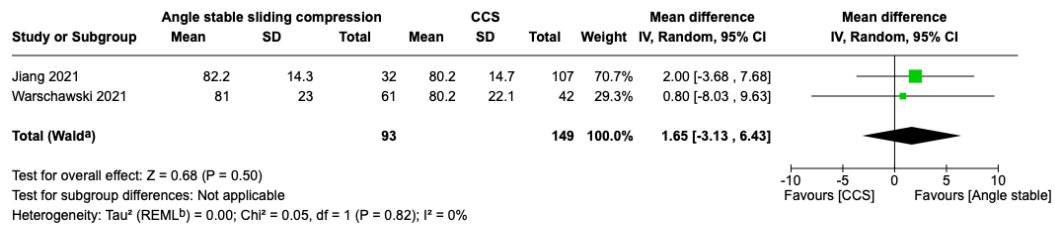


**Footnotes**

<sup>a</sup>CI calculated by Wald-type method.

<sup>b</sup> $\text{Tau}^2$  calculated by Restricted Maximum-Likelihood method.

Figure I. Harris Hip Score >24 months, combined studies



**Footnotes**

<sup>a</sup>CI calculated by Wald-type method.

<sup>b</sup> $\text{Tau}^2$  calculated by Restricted Maximum-Likelihood method.

Figure J. Funnel plot avascular necrosis, combined studies

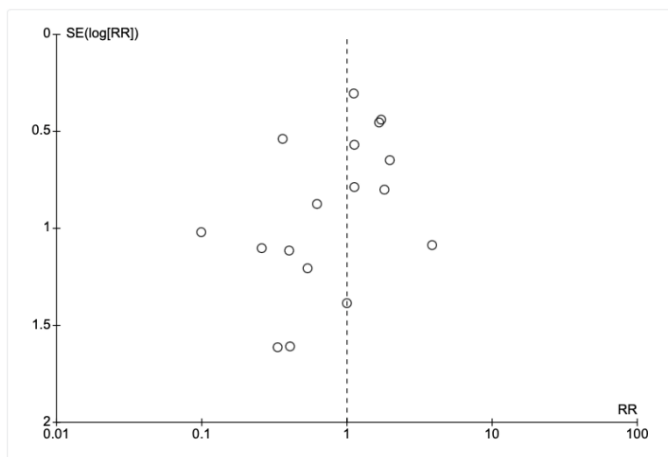


Figure K. Funnel plot fixation failure/cut out, combined studies

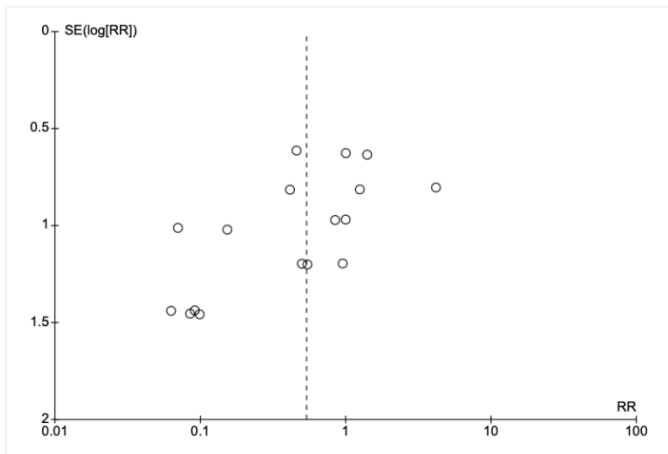


Figure L. Funnel plot non-union, combined studies

