

**Assessment of risk of bias in systematic reviews using the ROBIS tool**

| Study           | Patients                          | Index test(s)   | Reference standard | Target condition(s)                             | Domain 1 | Domain 2 | Domain 3 | Domain 4 | Overall risk of bias |
|-----------------|-----------------------------------|---|--------------------|---|----------|----------|----------|----------|----------------------|
| Hegedus et al.  | Patients with shoulder complaints | Hawkins, Kennedy, Neer, Painful Arc, Empty Can, Resisted external rotation  | Arthroscopy        | Subacromial pain syndrome, anterior instability | Low      | Low      | Low      | Low      | Low                  |
| Hermanns et al. | Patients with shoulder complaints | Painful Arc, Gerber, Resisted external rotation, Full can, Empty can, External rotation lag, Internal rotation lag, Dropping Sign | Ultrasound or MRI  | Rotator cuff pathology                          | Low      | Low      | Low      | Low      | Low                  |

**Assessment of risk of bias in diagnostic accuracy studies using the QUADAS-2 tool**

| Study         | Domain 1A | Domain 1B | Domain 2A | Domain 2B | Domain 3A | Domain 3B | Domain 4A | Overall risk of bias |
|---------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|----------------------|
| Taylor et al. | Low       | Low       | Low       | Low       | Low       | Low       | Low       | Low                  |
| Kim et al.    | Low       | Low       | Low       | Low       | Low       | Low       | Low       | Low                  |

**Assessment of risk of bias in randomized controlled trials using the ROB2 tool**

| Study             | Domain 1      | Domain 2      | Domain 3      | Domain 4      | Domain 5      | Overall risk of bias |
|-------------------|---------------|---------------|---------------|---------------|---------------|----------------------|
| Sakata et al.     | Low           | Some concerns | Low           | Low           | Some concerns | Some concerns        |
| Andersson et al.  | Low           | Some concerns | Low           | Low           | Some concerns | Some concerns        |
| Swanik et al.     | Some concerns | High          | High          | Low           | Some concerns | High                 |
| Sommervold et al. | Low           | Some concerns | Low           | Low           | Some concerns | Some concerns        |
| Cha et al.        | Some concerns | Some concerns | Low           | Some concerns | Some concerns | Some concerns        |
| Giombini et al.   | Some concerns | Some concerns | Low           | Some concerns | Some concerns | Some concerns        |
| Lluch et al.      | Low           | Some concerns | Low           | Some concerns | Low           | Some concerns        |
| Lynch et al.      | Some concerns | High          | High          | Some concerns | Some concerns | High                 |
| Asker et al.      | Low           | Some concerns | Some concerns | Low           | Low           | Some concerns        |
| Pas et al.        | Low           | Some concerns | High          | Low           | Low           | High                 |
| Achenbach et al.  | Low           | Some concerns | High          | Low           | Low           | High                 |

**Assessment of risk of bias in non-randomized studies of interventions using the ROBINS-I tool**

| Study              | Domain 1 | Domain 2 | Domain 3 | Domain 4 | Domain 5       | Domain 6 | Domain 7 | Overall risk of bias |
|--------------------|----------|----------|----------|----------|----------------|----------|----------|----------------------|
| Shitara et al.     | Critical | Low      | Low      | Low      | Low            | Low      | Low      | Critical             |
| Mey et al.         | Serious  | Low      | Low      | Low      | No information | Moderate | Moderate | Moderate             |
| Merolla et al. (A) | Serious  | Low      | Low      | Low      | Low            | Moderate | Moderate | Serious              |
| Merolla et al. (B) | Serious  | Low      | Low      | Low      | Low            | Moderate | Moderate | Serious              |