

## Appendix 1 - Supplementary tables

Table A1 – Search strategy for PubMed

| #  | Query   |
|----|---|
| #1 | ("Arthroplasty, Replacement"[Mesh] AND "Shoulder Joint"[Mesh])  |
| #2 | "Arthroplasty, Replacement, Shoulder"[Mesh]   |
| #3 | shoulder replacement*[tiab]   |
| #4 | shoulder arthroplast*[tiab]   |
| #5 | #1 OR #2 OR #3 OR #4  |
| #6 | "Osteoarthritis"[Mesh]  |
| #7 | "Arthritis"[Mesh]   |
| #8 | osteoarthrit*[tiab] OR osteo-arthrit*[tiab] OR arthrit*[tiab] OR arthropath*[tiab]  |
| 9  | #6 OR #7 OR #8  |
| 10 | "Patient Reported Outcome Measures"[Mesh]   |
| 11 | "Visual Analog Scale"[Mesh]   |
| 12 | "Range of Motion, Articular"[Mesh]  |
| 13 | patient reported outcome*[tiab] OR PROM[tiab] OR PROMS[tiab] OR Oxford Shoulder Score[tiab] OR OSS[tiab] OR Quick DASH[tiab] OR quickdash[tiab] OR Shoulder Pain Disability Index[tiab] OR SPADI[tiab] OR Western Ontario[tiab] OR WOSI[tiab] OR WOOS[tiab] OR Shoulder Disability Questionnaire*[tiab] OR SDQ[tiab] OR Society Standardized Shoulder Assessment Form*[tiab] OR SSSAF[tiab] OR American Shoulder and Elbow Surgeons Standardized Shoulder Assessment Form*[tiab] OR ASES[tiab] OR numeric pain rating scal*[tiab] OR numeric rating scal*[tiab] OR NPRS[tiab] OR visual analog scal*[tiab] OR VAS pain[tiab] OR range of motion[tiab] OR AROM[tiab] |
| 14 | #10 OR #11 OR #12 OR #13  |
| 15 | #5 AND #9 AND #14   |
| 16 | "Letter"[Publication Type] OR "Editorial"[Publication Type] OR "News"[Publication Type] OR "Comment"[Publication Type] OR "Case Reports"[Publication Type] OR "Letter"[Title] OR "Editorial"[Title] OR "comment*"[Title] OR "case report"[Title]  |
| 17 | #15 NOT #16   |

Table A2 – Minimal Clinically Important Differences (MCIDs)

| <b>Outcome measure</b>  | <b>MCID</b> |
|---|-------------|
| American Shoulder and Elbow Surgeons (ASES) score (1)   | 13.5        |
| ASES function (2)   | 5.8*        |
| ASES pain (2)   | 7.2*        |
| Disabilities of Arm, Shoulder and Hand (DASH) score (3)   | 10.83       |
| Oxford Shoulder Score (OSS) (4)   | 6.9         |
| Patient-Reported Outcomes Measurement Information System – Depression (PROMIS-D) score (5)            | 3.9         |
| Patient-Reported Outcomes Measurement Information System – Physical Functioning (PROMIS-PF) score (5) | 1.7         |
| Patient-Reported Outcomes Measurement Information System – Pain Interference (PROMIS-PI) score (5)    | 6.6         |
| Patient-Reported Outcomes Measurement Information System – Upper Extremity (PROMIS-UE) score (5)      | 7           |
| Penn Shoulder Score (PSS) (6)   | 12.1        |
| Quick Disabilities of Arm, Shoulder and Hand (QuickDASH) score (7)                                    | 13.4        |
| Single Assessment Numeric Evaluation (SANE) score (8)   | 18.1        |
| Shoulder Pain and Disability Index (SPADI) score (9)  | 20.6        |
| Simple Shoulder Test (STT) (10)   | 3           |
| Visual Analogue Scale (VAS) pain score (11)   | 3.28        |
| Western Ontario Osteoarthritis of the Shoulder (WOOS) % score (12)                                    | 10.2        |
| WOOS raw score (recalculated from MCID WOOS % score)  | 193.8       |

\* = Smallest Detectable Change used since no MCID was found in the literature

Table A3 - Individual results for prognostic factor ‘Male gender’

| Study   | n    | n other factors | β/OR (95% CI)            | p value | RoB | Forest plot |
|---|------|-----------------|--------------------------|---------|-----|-------------|
| <b><u>MALE GENDER ON FUNCTIONAL RECOVERY AND PAIN</u></b>     |      |                 |                          |         |     |             |
| <b>MEDIUM-SHORT TERM</b>                                      |      |                 |                          |         |     |             |
| <b>ASES raw</b>   |      |                 |                          |         |     |             |
| Cho 2017  | 46   | 5               | ±-8.41 (-21.95 - 5.13)** | .217    | ⊗   |             |
| Matsen 2019   | 691  | 2               | 0.9 (-0.7 to 2.4)        | -       | ⊗   |             |
| Wong 2017   | 117  | 6               | -                        | >.05    | ⊖   |             |
| No data available from Lapner 2015                            |      |                 |                          |         |     |             |
| <b>ASES improved</b>  |      |                 |                          |         |     |             |
| Chang 2022*   | 227  | 2               | -                        | >.05    | ⊗   |             |
| No data available from Lapner 2015                            |      |                 |                          |         |     |             |
| <b>ASES %MPI</b>  |      |                 |                          |         |     |             |
| Matsen 2019   | 690  | 2               | 0.9 (-1.6 to 3.4)        | -       | ⊗   |             |
| No data for WOOS% (Lapner 2015)                               |      |                 |                          |         |     |             |
| <b>MEDIUM-LONG TERM</b>                                       |      |                 |                          |         |     |             |
| <b>ASES raw</b>   |      |                 |                          |         |     |             |
| Lansdown 2021   | 324  | 7               | 6 (-)                    | .023    | ⊗   |             |
| Matsen 2019   | 400  | 2               | 3.9 (1.6 to 6.2)         | <.05    | ⊗   |             |
| Okoroha 2019  | 2364 | 5               | -                        | <.01    | ⊗   |             |
| Pettit 2022   | 189  | 4               | 0.49 (-3.4 to 4.4)       | .08     | ⊖   |             |
| Shields 2017  | 272  | 4               | 6.3 (-)                  | .01     | ⊗   |             |
| No data available from Dekker 2022, Moverman 2021, Patel 2019 |      |                 |                          |         |     |             |
| <b>ASES change</b>  |      |                 |                          |         |     |             |
| Friedman 2018   | 660  | 1               | 7.58 (5.27 to 9.89)      | <.001   | ⊗   |             |
| No data available from Patel 2019, Shields 2017               |      |                 |                          |         |     |             |
| <b>ASES %MPI</b>  |      |                 |                          |         |     |             |
| Matsen 2019   | 400  | 2               | 6.3 (0.7 to 12)          | <.05    | ⊗   |             |
| <b>ASES, poor score</b>                                       |      |                 |                          |         |     |             |
| No data available from McFarland 2021                         |      |                 |                          |         |     |             |
| <b>ASES MOI</b>   |      |                 |                          |         |     |             |
| Polce 2021  | 105  | 3               | 0.87 (0.71 to 1.06)      | .163    | ⊗   |             |
| <b>ASES TE</b>  |      |                 |                          |         |     |             |
| Huber 2020  | 168  | 4               | -0.02 (-0.09 to 0.04)    | .518    | ⊖   |             |
| <b>SPADI change</b>   |      |                 |                          |         |     |             |
| Friedman 2018   | 660  | 1               | -12.78 (-16.28 to -9.28) | <.001   | ⊗   |             |
| No data available from Patel 2019                             |      |                 |                          |         |     |             |
| <b>LONG TERM</b>  |      |                 |                          |         |     |             |
| <b>ASES raw</b>   |      |                 |                          |         |     |             |
| Saini 2022  | 311  | 4               | ±3.1 (-0.52 to 6.6)**    | .094    | ⊖   |             |

Table A3 - Individual results for prognostic factor 'Male gender' (continued)

| Study  | n    | n other factors | $\beta$ /OR (95% CI)       | p value | RoB | Forest plot |
|--|------|-----------------|----------------------------|---------|-----|-------------|
| <b>OSS raw</b>   |      |                 |                            |         |     |             |
| Edwards 2020   | 32   | 4               | 1.46 (-5.06 to 7.99)       | .649    | ⊖   |             |
| <b><u>MALE GENDER ON FUNCTIONAL RECOVERY</u></b>                     |      |                 |                            |         |     |             |
| <b>SHORT TERM</b>  |      |                 |                            |         |     |             |
| <b>QuickDASH raw</b>   |      |                 |                            |         |     |             |
| Sayed-Noor 2018  | 63   | 6               | -0.17 (-12 to 3)           | .2      | ⊖   |             |
| <b>MEDIUM-SHORT TERM</b>   |      |                 |                            |         |     |             |
| <b>ASES function raw</b>   |      |                 |                            |         |     |             |
| Wong 2017  | 117  | 6               | -                          | .003    | ⊖   |             |
| <b>QuickDASH raw</b>   |      |                 |                            |         |     |             |
| Kadum 2018   | 63   | 6               | .68 (-3.6 to 4.95)         | .75     | ⊖   |             |
| Sayed-Noor 2018  | 63   | 6               | -0.13 (-10.4 to 3.8)       | .35     | ⊖   |             |
| <b>SST100 raw</b>  |      |                 |                            |         |     |             |
| Matsen 2019  | 588  | 2               | 3.3 (0.4 to 6.3)           | <.05    | ⊗   |             |
| <b>SST %MPI</b>  |      |                 |                            |         |     |             |
| Matsen 2019  | 588  | 2               | 5 (0.2 to 9.9)             | <.05    | ⊗   |             |
| <b>SSV raw</b>   |      |                 |                            |         |     |             |
| Cho 2017   | 46   | 5               | $\pm 2.04$ (-10.3 - 6.3)** | .622    | ⊗   |             |
| <i>No data for PROMIS-D / PROMIS-PI / PROMIS-UE (Franovic 2020)</i>  |      |                 |                            |         |     |             |
| <b>MEDIUM-LONG TERM</b>  |      |                 |                            |         |     |             |
| <b>ASES function raw</b>   |      |                 |                            |         |     |             |
| Shields 2017   | 272  | 4               | 2.4 (-)                    | .003    | ⊗   |             |
| <b>SST raw</b>   |      |                 |                            |         |     |             |
| Okoroha 2019   | 2364 | 5               | -                          | <.01    | ⊗   |             |
| <i>No data available from Fehringer 2002, Green 2020, Patel 2019</i> |      |                 |                            |         |     |             |
| <b>SST change</b>  |      |                 |                            |         |     |             |
| Friedman 2018  | 660  | 1               | 1.41 (1.07 to 1.75)        | <.001   | ⊗   |             |
| <i>No data available from Green 2020, Patel 2019</i>                 |      |                 |                            |         |     |             |
| <b>SST100 raw</b>  |      |                 |                            |         |     |             |
| Matsen 2019  | 574  | 2               | 4.3 (1.1 to 7.4)           | <.05    | ⊗   |             |
| <b>SST100 %MPI</b>   |      |                 |                            |         |     |             |
| Matsen 2019  | 574  | 2               | 6.8 (2.4 to 11.3)          | <.05    | ⊗   |             |

Table A3 - Individual results for prognostic factor 'Male gender' (*continued*)

| Study   | n  | n other factors | $\beta$ /OR (95% CI)   | p value | RoB | Forest plot |
|---|----|-----------------|------------------------|---------|-----|-------------|
| <i>No data for ASES function change (Shields 2017), DASH / DASH change (Green 2020), SANE raw (Dekker 2022, Moverman 2021), QuickDASH raw (Dekker 2022)</i> |    |                 |                        |         |     |             |
| <b>LONG TERM</b>  |    |                 |                        |         |     |             |
| <b>QuickDASH raw</b>  |    |                 |                        |         |     |             |
| Edwards 2020  | 32 | 4               | -2.29 (-6.56 to 11.99) | .745    | ⊖   |             |

**MALE GENDER ON PAIN**

**MEDIUM-SHORT TERM**

|                      |     |   |                                |      |   |  |
|----------------------|-----|---|--------------------------------|------|---|--|
| <b>ASES pain raw</b> |     |   |                                |      |   |  |
| Wong 2017            | 17  | 6 | -                              | >.05 | ⊖ |  |
| <b>VAS pain raw</b>  |     |   |                                |      |   |  |
| Cho 2017             | 46  | 5 | $\pm 0.61 (-1.01 - 2.23)^{**}$ | .45  | ⊗ |  |
| Wong 2017            | 117 | 6 | -                              | >.05 | ⊖ |  |

**MEDIUM-LONG TERM**

*No data for VAS pain (Green 2020, Moverman 2021, Shields 2017), VAS pain change (Green 2020, Patel 2019, Shields 2017)*

\* Chang 2022 reported a simple and complex model, only the complex model was extracted for this table

\*\* Cho 2017 and Saini 2022 did not specify whether 'male' or 'female' was the reference category, so the direction of effect cannot be interpreted

Table A4 - Individual results for prognostic factor 'Higher age'

| Study  | n    | n other factors | $\beta$ /OR (95% CI)             | p value | RoB | Forest plot |
|--|------|-----------------|----------------------------------|---------|-----|-------------|
| <b><u>HIGHER AGE ON FUNCTIONAL RECOVERY AND PAIN</u></b>                             |      |                 |                                  |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |      |                 |                                  |         |     |             |
| <b>ASES raw</b>  |      |                 |                                  |         |     |             |
| Cho 2017   | 46   | 5               | 0.19 (-0.38 to 0.76)             | .513    | ⊗   |             |
| Matsen 2019  | 691  | 2               | 0.12 (0.04 to 0.2)*              | <.05    | ⊗   |             |
| Wong 2017  | 117  | 6               | -                                | >.05    | ⊖   |             |
| <i>No data available from Lapner 2015</i>  |      |                 |                                  |         |     |             |
| <b>ASES %MPI</b>   |      |                 |                                  |         |     |             |
| Matsen 2019  | 691  | 2               | 0.16 (0.02 to 0.29)*             | <.05    | ⊗   |             |
| <i>No data for WOOS% (Lapner 2015)</i>   |      |                 |                                  |         |     |             |
| <b>MEDIUM-LONG TERM</b>  |      |                 |                                  |         |     |             |
| <b>ASES raw</b>  |      |                 |                                  |         |     |             |
| Matsen 2019  | 400  | 2               | 0.09 (-0.05 to 0.23)*            | -       | ⊗   |             |
| Patel 2019   | 2364 | 5               | -                                | .069    | ⊗   |             |
| Pettit 2022  | 197  | 4               | -0.28 (-0.6 to 0.04)             | .08     | ⊖   |             |
| Saini 2022   | 311  | 4               | -0.12 (-0.36 to 0.11)            | .29     | ⊖   |             |
| <i>No data available from Dekker 2022, Lansdown 2021, Okoroha 2019, Shields 2017</i> |      |                 |                                  |         |     |             |
| <b>ASES change</b>   |      |                 |                                  |         |     |             |
| Friedman 2018  | 660  | 1               | 0.19 (0.04 to 0.34)              | .011    | ⊗   |             |
| Patel 2019   | 1135 | 4               | -                                | .87     | ⊗   |             |
| <i>No data available from Shields 2017</i>   |      |                 |                                  |         |     |             |
| <b>ASES %MPI</b>   |      |                 |                                  |         |     |             |
| Matsen 2019  | 400  | 2               | 0.11 (-0.22 to 0.44)*            | -       | ⊗   |             |
| <b>ASES, poor score</b>  |      |                 |                                  |         |     |             |
| <i>No data available from McFarland 2021</i>   |      |                 |                                  |         |     |             |
| <b>ASES, poor improvement</b>  |      |                 |                                  |         |     |             |
| Chang 2022**   | 227  | 2               | -                                | >.05    | ⊗   |             |
| <b>ASES TE</b>   |      |                 |                                  |         |     |             |
| Huber 2020   | 168  | 4               | 0.02 (-0.05 to 0.1) $\bar{\tau}$ | .546    | ⊖   |             |
| Huber 2020   | 168  | 4               | 0.09 (-0.01 to 0.2) $\bar{\tau}$ | .087    | ⊖   |             |
| <b>SPADI raw</b>   |      |                 |                                  |         |     |             |
| Patel 2019   | 1135 | 4               | -                                | .051    | ⊗   |             |
| <b>SPADI change</b>  |      |                 |                                  |         |     |             |
| Friedman 2018  | 660  | 1               | -0.29 (-0.46 to 0.07)            | .02     | ⊗   |             |
| Patel 2019   | 1135 | 4               | -                                | .223    | ⊗   |             |

Table A4 - Individual results for prognostic factor 'Higher age' (*continued*)

| Study  | n    | n other factors | $\beta$ /OR (95% CI)   | p value | RoB | Forest plot |
|--|------|-----------------|------------------------|---------|-----|-------------|
| <b>LONG TERM</b>   |      |                 |                        |         |     |             |
| <b>OSS raw</b>   |      |                 |                        |         |     |             |
| Edwards 2020   | 32   | 4               | -0.41 (-0.9 to 0.08)   | .094    | ⊖   |             |
| <b><u>HIGHER AGE ON FUNCTIONAL RECOVERY</u></b>                      |      |                 |                        |         |     |             |
| <b>SHORT TERM</b>  |      |                 |                        |         |     |             |
| <b>QuickDASH raw</b>   |      |                 |                        |         |     |             |
| Sayed-Noor 2018  | 63   | 6               | -0.17 (-0.73 to -0.15) | .2      | ⊖   |             |
| <b>MEDIUM-SHORT TERM</b>   |      |                 |                        |         |     |             |
| <b>ASES function raw</b>   |      |                 |                        |         |     |             |
| Wong 2017  | 117  | 6               | -                      | >.05    | ⊖   |             |
| <b>QuickDASH raw</b>   |      |                 |                        |         |     |             |
| Kadum 2018   | 63   | 6               | 0.15 (-0.14 to 0.44)   | .29     | ⊖   |             |
| Sayed-Noor 2018  | 63   | 6               | -0.48 (-0.92 to -0.04) | .03     | ⊖   |             |
| <b>SST100 raw</b>  |      |                 |                        |         |     |             |
| Matsen 2019  | 588  | 2               | 0.07 (-0.08 to 0.23)*  | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |      |                 |                        |         |     |             |
| Matsen 2019  | 588  | 2               | 0.07 (-0.17 to 0.32)*  | -       | ⊗   |             |
| <b>SSV raw</b>   |      |                 |                        |         |     |             |
| Cho 2017   | 46   | 5               | 0.13 (-0.22 to 0.48)   | .465    | ⊗   |             |
| <i>No data for PROMIS-UE / PROMIS-PI / PROMIS-D (Franovic 2020)</i>  |      |                 |                        |         |     |             |
| <b>MEDIUM-LONG TERM</b>  |      |                 |                        |         |     |             |
| <b>SST raw</b>   |      |                 |                        |         |     |             |
| Patel 2019   | 1135 | 4               | -                      | .313    | ⊗   |             |
| <i>No data available from Fehring 2002, Green 2020, Okoroha 2019</i> |      |                 |                        |         |     |             |
| <b>SST change</b>  |      |                 |                        |         |     |             |
| Friedman 2018  | 660  | 1               | 0.01 (-0.02 to 0.03)   | .611    | ⊗   |             |
| Patel 2019   | 1135 | 4               | -                      | .708    | ⊗   |             |
| <i>No data available from Green 2020</i>                             |      |                 |                        |         |     |             |
| <b>SST100 raw</b>  |      |                 |                        |         |     |             |
| Matsen 2019  | 574  | 2               | 0.18 (0.03 to 0.34)*   | <.05    | ⊗   |             |
| <b>SST100 %MPI</b>   |      |                 |                        |         |     |             |
| Matsen 2019  | 574  | 2               | 0.2 (-0.02 to 0.43)*   | -       | ⊗   |             |

Table A4 - Individual results for prognostic factor 'Higher age' (*continued*)

| Study   | n    | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|---|------|-----------------|----------------------|---------|-----|-------------|
| <i>No data for ASES ADL / ASES ADL change (Shields 2017), QuickDASH (Dekker 2022), DASH / DASH change (Green 2020), SANE (Dekker 2020), SST % improvement (Fehring 2002), SSV / SSV change (Shields 2017)</i> |      |                 |                      |         |     |             |
| <b>LONG TERM</b>  |      |                 |                      |         |     |             |
| <b>QuickDASH raw</b>  |      |                 |                      |         |     |             |
| Edwards 2020  | 32   | 4               | 0.86 (-0.21 to 1.93) | .11     | ⊖   |             |
| <b><u>HIGHER AGE ON PAIN</u></b>  |      |                 |                      |         |     |             |
| <b>MEDIUM-SHORT TERM</b>  |      |                 |                      |         |     |             |
| <b>ASES pain raw</b>  |      |                 |                      |         |     |             |
| Wong 2017   | 117  | 6               | -                    | >.05    | ⊖   |             |
| <b>VAS pain raw</b>   |      |                 |                      |         |     |             |
| Cho 2017  | 46   | 5               | -0.03 (-0.1 to 0.04) | .398    | ⊗   |             |
| Wong 2017   | 117  | 6               | -                    | >.05    | ⊖   |             |
| <b>MEDIUM-LONG TERM</b>   |      |                 |                      |         |     |             |
| <b>VAS pain raw</b>   |      |                 |                      |         |     |             |
| Patel 2019  | 1135 | 4               | -                    | .03     | ⊗   |             |
| Shields 2017  | 272  | 4               | -0.03 (-)            | .04     | ⊗   |             |
| <i>No data available from Green 2020</i>  |      |                 |                      |         |     |             |
| <b>VAS pain change</b>  |      |                 |                      |         |     |             |
| Patel 2019  | 1135 | 4               | -                    | .564    | ⊗   |             |
| <i>No data available from Green 2020, Shields 2017</i>  |      |                 |                      |         |     |             |

\* Recalculated to reflect change per year of age; Matsen 2019 reported per 10 years of age

\*\* Chang 2022 reported a simple and complex model, only the complex model was extracted for this table

† Age 65-70 compared to age < 65

‡ Age > 70 compared to age < 65

† Age 70-80 compared to age < 70

‡ Age 80+ compared to age < 70



Table A5 - Individual results for prognostic factor 'Higher BMI'





| Study   | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB   | Forest plot |
|---|-----|-----------------|----------------------|---------|---|-------------|
| <b><u>HIGHER BMI ON FUNCTIONAL RECOVERY AND PAIN</u></b>  |     |                 |                      |         |   |             |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                      |         |   |             |
| <b>ASES raw</b>   |     |                 |                      |         |   |             |
| Wong 2017   | 117 | 6               | -                    | >.05    |    |             |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                      |         |   |             |
| <b>ASES, poor score</b>   |     |                 |                      |         |   |             |
| <i>No data available from McFarland 2021</i>  |     |                 |                      |         |   |             |
| <i>No data for ASES raw (Lansdown 2021, Okoroha 2019, Patel 2019, Shields 2017), ASES change (Patel 2019, Shields 2017), SPADI / SPADI change / UCLA / UCLA change (Patel 2019)</i> |     |                 |                      |         |   |             |
| <b><u>HIGHER BMI ON FUNCTIONAL RECOVERY</u></b>   |     |                 |                      |         |   |             |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                      |         |   |             |
| <b>ASES function raw</b>  |     |                 |                      |         |   |             |
| Wong 2017   | 117 | 6               | -                    | >.05    |  |             |
| <b>Outcomes without data</b>  |     |                 |                      |         |   |             |
| <i>PROMIS-D / PROMIS-PI / PROMIS-UE (Franovic 2020)</i>   |     |                 |                      |         |   |             |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                      |         |   |             |
| <i>No data for ASES ADL (Shields 2017), SST raw (Okoroha 2019, Patel 2019), SST change (Patel 2019), SSV (Shields 2017)</i>   |     |                 |                      |         |   |             |
| <b><u>HIGHER BMI ON PAIN</u></b>  |     |                 |                      |         |   |             |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                      |         |   |             |
| <b>ASES pain raw</b>  |     |                 |                      |         |   |             |
| Wong 2017   | 117 | 6               | -                    | >.05    |  |             |
| <b>VAS pain raw</b>   |     |                 |                      |         |   |             |
| Wong 2017   | 117 | 6               | -                    | >.05    |  |             |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                      |         |   |             |
| <i>No data for VAS pain (Patel 2019, Shields 2017)</i>  |     |                 |                      |         |   |             |

Table A6 - Individual results for prognostic factor ‘ASA score’

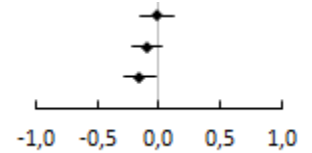
| Study | n | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|-------|---|-----------------|----------------------|---------|-----|-------------|
|-------|---|-----------------|----------------------|---------|-----|-------------|

**ASA SCORE ON FUNCTIONAL RECOVERY AND PAIN**

**MEDIUM-LONG TERM**

**ASES TE**

|            |     |   |                                     |      |   |
|------------|-----|---|-------------------------------------|------|---|
| Huber 2020 | 168 | 4 | -0.02 (-0.16 to 0.12) <sup>†</sup>  | .79  |  |
| Huber 2020 | 168 | 4 | -0.09 (-0.21 to 0.03) <sup>‡</sup>  | .157 |   |
| Huber 2020 | 168 | 4 | -0.16 (-0.28 to -0.03) <sup>‡</sup> | .013 |   |



**ASA SCORE ON FUNCTIONAL RECOVERY**

**MEDIUM-SHORT TERM**

*No data for PROMIS-D / PROMIS-PI / PROMIS-UE (Kohan 2020)*

- † ASA II compared to ASA I
- ‡ ASA III compared to ASA I
- ‡ ASA ≥ IV compared to ASA I

Table A7 - Individual results for prognostic factor 'Diagnosis'

| Study   | n   | n other factors | $\beta$ /OR (95% CI)             | p value | RoB | Forest plot |
|---|-----|-----------------|----------------------------------|---------|-----|-------------|
| <b><u>DIAGNOSIS ON FUNCTIONAL RECOVERY AND PAIN</u></b>                                 |     |                 |                                  |         |     |             |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                                  |         |     |             |
| <b>Diagnosis: RA compared to OA</b>   |     |                 |                                  |         |     |             |
| <b>ASES raw</b>   |     |                 |                                  |         |     |             |
| Lapner 2015   | 62  | 8               | -                                | >.05    | ⊗   |             |
| <b>WOOS%</b>  |     |                 |                                  |         |     |             |
| Lapner 2015   | 62  | 8               | -16.8 (-30.3 to -3.2)            | .017    | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                                  |         |     |             |
| <b>Diagnosis: OA compared to CTA</b>  |     |                 |                                  |         |     |             |
| <b>ASES raw</b>   |     |                 |                                  |         |     |             |
| Saini 2022  | 311 | 4               | 9.3 (5.4 to 13.1)                | <.01    | ⊖   |             |
| <i>No data available from Moverman 2021*</i>  |     |                 |                                  |         |     |             |
| <b>Diagnosis: RCA compared to degenerative joint disease</b>                            |     |                 |                                  |         |     |             |
| <b>ASES, poor score</b>   |     |                 |                                  |         |     |             |
| Carducci 2019   | 137 | 3               | 1.79 (0.66 to 4.75)              | -       | ⊗   |             |
| <b>ASES, poor improvement</b>   |     |                 |                                  |         |     |             |
| Carducci 2019   | 137 | 3               | 1.43 (0.44 to 4.53)              | -       | ⊗   |             |
| <b>Diagnosis: RCT compared to degenerative joint disease</b>                            |     |                 |                                  |         |     |             |
| <b>ASES, poor score</b>   |     |                 |                                  |         |     |             |
| Carducci 2019   | 137 | 3               | 2.21 (0.75 to 6.37)              | -       | ⊗   |             |
| <b>ASES, poor improvement</b>   |     |                 |                                  |         |     |             |
| Carducci 2019   | 137 | 3               | 2.42 (0.67 to 8.83)              | -       | ⊗   |             |
| <i>No data for ASES change / UCLA / UCLA change / SPADI / SPADI change (Patel 2019)</i> |     |                 |                                  |         |     |             |
| <b>Diagnosis: OA compared to other diagnosis</b>  |     |                 |                                  |         |     |             |
| <b>ASES, poor improvement</b>   |     |                 |                                  |         |     |             |
| Forlizzi 2022   | 162 | 8               | 0.17 (0.03 to 0.84) <sup>†</sup> | .03     | ⊖   |             |
| <b>Diagnosis: RCA compared to other diagnosis</b>                                       |     |                 |                                  |         |     |             |
| <b>ASES, poor improvement</b>   |     |                 |                                  |         |     |             |
| Forlizzi 2022   | 162 | 8               | 0.71 (0.16 to 3.33) <sup>†</sup> | .69     | ⊖   |             |

Table A7 - Individual results for prognostic factor 'Diagnosis' (continued)

| Study                                | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--------------------------------------|-----|-----------------|----------------------|---------|-----|-------------|
| <b>LONG TERM</b>                     |     |                 |                      |         |     |             |
| <b>Diagnosis: CTA compared to OA</b> |     |                 |                      |         |     |             |
| <b>ASES SCB</b>                      |     |                 |                      |         |     |             |
| Werner 2016                          | 490 | 3               | 0.14 (0.07 to 0.3)   | <.001   | ⊗   |             |

**DIAGNOSIS ON FUNCTIONAL RECOVERY**

**MEDIUM-LONG TERM**

No data for SANE (Moverman 2021), SST (Okoroha 2019, Patel 2019), SST change (Patel 2019)

**DIAGNOSIS ON PAIN**

**MEDIUM-SHORT TERM**

No data for VAS pain raw (Moverman 2021, Patel 2019), VAS pain change (Patel 2019)

\* Reference category unclear

† Inverse of reported odds ratio and confidence interval (reported OR was for top 25% of ASES scores)

Table A8 - Individual results for prognostic factor ‘Comorbidities’

| Study   | n   | n other factors | $\beta$ /OR (95% CI)    | p value | RoB | Forest plot |
|---|-----|-----------------|-------------------------|---------|-----|-------------|
| <b><u>COMORBIDITIES ON FUNCTIONAL RECOVERY AND PAIN</u></b> |     |                 |                         |         |     |             |
| <b>MEDIUM-SHORT TERM</b>                                    |     |                 |                         |         |     |             |
| <b>Charlson Comorbidity Index</b>                           |     |                 |                         |         |     |             |
| <b>ASES raw</b>   |     |                 |                         |         |     |             |
| Wong 2017   | 117 | 6               | -                       | >.05    | ⊖   |             |
| <b>Smoking</b>  |     |                 |                         |         |     |             |
| <b>ASES raw</b>   |     |                 |                         |         |     |             |
| Wong 2017   | 117 | 6               | -                       | >.05    | ⊖   |             |
| <b>MEDIUM-LONG TERM</b>                                     |     |                 |                         |         |     |             |
| <b>Diabetes Mellitus</b>                                    |     |                 |                         |         |     |             |
| <b>ASES MOI</b>   |     |                 |                         |         |     |             |
| Polce 2021  | 105 | 3               | 0.74 (0.53 to 1.05)     | .091    | ⊗   |             |
| <b>Comorbidity back pain</b>                                |     |                 |                         |         |     |             |
| <b>ASES SCB</b>   |     |                 |                         |         |     |             |
| Werner 2016   | 490 | 3               | 0.42 (0.24 to 0.71)     | .002    | ⊗   |             |
| <b>Presence of functional somatic disorder</b>              |     |                 |                         |         |     |             |
| <b>ASES raw</b>   |     |                 |                         |         |     |             |
| Moverman 2021   | 480 | 6               | -9.75 (-13.61 to -5.89) | <.001   | ⊗   |             |
| <b>Number of patient-reported allergies</b>                 |     |                 |                         |         |     |             |
| <b>ASES top score</b>                                       |     |                 |                         |         |     |             |
| Forlizzi 2022   | 162 | 8               | 0.83 (0.71 to 0.97)     | .02     | ⊖   |             |
| <i>No data for ASES raw (Moverman 2021)</i>                 |     |                 |                         |         |     |             |
| <b>Charlson Comorbidity Index</b>                           |     |                 |                         |         |     |             |
| <i>No data for ASES raw (Lansdown 2021)</i>                 |     |                 |                         |         |     |             |
| <b>Comorbidities</b>  |     |                 |                         |         |     |             |
| <i>No data for ASES raw (McFarland 2021)</i>                |     |                 |                         |         |     |             |
| <b>Smoking</b>  |     |                 |                         |         |     |             |
| <i>No data for ASES raw (McFarland 2021)</i>                |     |                 |                         |         |     |             |

Table A8 - Individual results for prognostic factor 'Comorbidities' (*continued*)

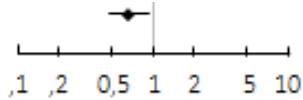
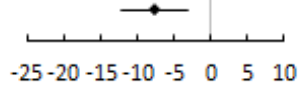
| Study   | n   | n other factors | $\beta$ /OR (95% CI)    | p value | RoB | Forest plot   |
|---|-----|-----------------|-------------------------|---------|-----|---|
| <b><u>COMORBIDITIES ON FUNCTIONAL RECOVERY</u></b>                    |     |                 |                         |         |     |   |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                         |         |     |   |
| <b>Charlson Comorbidity Index</b>                                     |     |                 |                         |         |     |   |
| <b>ASES function raw</b>  |     |                 |                         |         |     |   |
| Wong 2017   | 117 | 6               | -                       | >.05    |     |   |
| <b>Smoking</b>  |     |                 |                         |         |     |   |
| <b>ASES function raw</b>  |     |                 |                         |         |     |   |
| Wong 2017   | 117 | 6               | -                       | >.05    |     |   |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                         |         |     |   |
| <b>Diabetes Mellitus</b>  |     |                 |                         |         |     |   |
| <b>SANE MOI</b>   |     |                 |                         |         |     |   |
| Polce 2021  | 105 | 1               | 0.66 (0.47 to 0.93)     | .02     |     |   |
| <b>Presence of functional somatic disorder</b>                        |     |                 |                         |         |     |   |
| <b>SANE raw</b>   |     |                 |                         |         |     |   |
| Moverman 2021   | 480 | 6               | -7.63 (-12.12 to -3.15) | .001    |     |  |
| <b>Number of comorbidities</b>  |     |                 |                         |         |     |   |
| <i>No data for DASH / DASH change / SST / SST change (Green 2020)</i> |     |                 |                         |         |     |   |
| <b>Number of patient-reported allergies</b>                           |     |                 |                         |         |     |   |
| <i>No data for SANE (Moverman 2021)</i>                               |     |                 |                         |         |     |   |
| <b><u>COMORBIDITIES ON PAIN</u></b>                                   |     |                 |                         |         |     |   |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                         |         |     |   |
| <b>Charlson Comorbidity Index</b>                                     |     |                 |                         |         |     |   |
| <b>ASES pain raw</b>  |     |                 |                         |         |     |   |
| Wong 2017   | 117 | 6               | -                       | >.05    |     |   |
| <b>VAS pain raw</b>   |     |                 |                         |         |     |   |
| Wong 2017   | 117 | 6               | -                       | >.05    |     |   |
| <b>Smoking</b>  |     |                 |                         |         |     |   |
| <b>ASES pain raw</b>  |     |                 |                         |         |     |   |
| Wong 2017   | 117 | 6               | -                       | >.05    |     |   |
| <b>VAS pain raw</b>   |     |                 |                         |         |     |   |
| Wong 2017   | 117 | 6               | -                       | >.05    |     |   |

Table A8 - Individual results for prognostic factor 'Comorbidities' (*continued*)

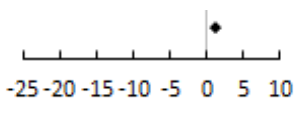
| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot   |
|--|-----|-----------------|----------------------|---------|-----|---|
| <b>MEDIUM-LONG TERM</b>                                    |     |                 |                      |         |     |   |
| <b>Presence of functional somatic disorder</b>             |     |                 |                      |         |     |   |
| <b>VAS pain raw</b>  |     |                 |                      |         |     |   |
| Moverman 2021  | 480 | 6               | 1.13 (0.72 to 1.53)  | <.001   |     |  |
| <b>Number of comorbidities</b>                             |     |                 |                      |         |     |   |
| <i>No data for VAS pain / VAS pain change (Green 2020)</i> |     |                 |                      |         |     |   |
| <b>Number of patient-reported allergies</b>                |     |                 |                      |         |     |   |
| <i>No data for VAS pain (Moverman 2021)</i>                |     |                 |                      |         |     |   |

Table A9 - Individual results for prognostic factor 'Rotator cuff status'

| Study  | n  | n other factors | $\beta$ /OR (95% CI)  | p value | RoB | Forest plot |
|--|----|-----------------|-----------------------|---------|-----|-------------|
| <b><u>ROTATOR CUFF STATUS ON FUNCTIONAL RECOVERY AND PAIN</u></b>  |    |                 |                       |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |    |                 |                       |         |     |             |
| <b>Preoperative supraspinatus occupation area</b>  |    |                 |                       |         |     |             |
| <b>WOOS%</b>   |    |                 |                       |         |     |             |
| Lapner 2015  | 62 | 8               | 0.27 (0.06 to 0.47)   | .013    | ⊗   |             |
| <i>No data for ASES raw (Lapner 2015)</i>  |    |                 |                       |         |     |             |
| <b>Preoperative infraspinatus and supraspinatus Warner grade +<br/>Preoperative infraspinatus and supraspinatus fatty infiltration +<br/>Preoperative infraspinatus and supraspinatus Goutallier grade +<br/>Preoperative supraspinatus strength</b> |    |                 |                       |         |     |             |
| <i>No data for ASES raw / WOOS% (Lapner 2015)</i>  |    |                 |                       |         |     |             |
| <b>MEDIUM-LONG TERM</b>  |    |                 |                       |         |     |             |
| <b>Preoperative supraspinatus occupation area</b>  |    |                 |                       |         |     |             |
| <i>No data available for ASES raw (Lapner 2015)</i>  |    |                 |                       |         |     |             |
| <b>LONG TERM</b>   |    |                 |                       |         |     |             |
| <b>Preoperative supraspinatus Warner grade</b>   |    |                 |                       |         |     |             |
| <b>OSS raw</b>   |    |                 |                       |         |     |             |
| Edwards 2020   | 32 | 4               | 3.99 (-5.45 to 13.44) | .393    | ⊖   |             |
| <b>Rotator cuff muscles fatty infiltration</b>   |    |                 |                       |         |     |             |
| <b>OSS raw</b>   |    |                 |                       |         |     |             |
| Edwards 2020   | 32 | 4               | -2.76 (-9.55 to 4.03) | .411    | ⊖   |             |
| <b>Tendinopathy grade</b>  |    |                 |                       |         |     |             |
| <b>OSS raw</b>   |    |                 |                       |         |     |             |
| Edwards 2020   | 32 | 4               | 3.97 (-0.77 to 8.71)  | .097    | ⊖   |             |
| <b><u>ROTATOR CUFF STATUS ON FUNCTIONAL RECOVERY</u></b>   |    |                 |                       |         |     |             |
| <b>SHORT TERM</b>  |    |                 |                       |         |     |             |
| <b>Preoperative infraspinatus Warner grade</b>   |    |                 |                       |         |     |             |
| <b>QuickDASH raw</b>   |    |                 |                       |         |     |             |
| Sayed-Noor 2018  | 63 | 6               | -0.09 (-14 to 7)      | .48     | ⊖   |             |



Table A9 - Individual results for prognostic factor 'Rotator cuff status' (continued)

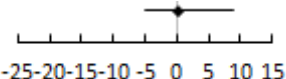
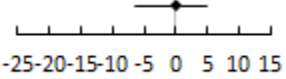
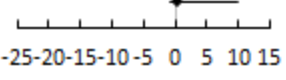
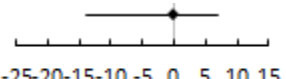
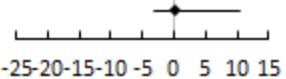
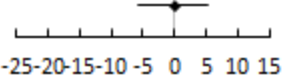
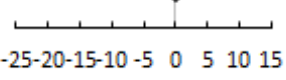
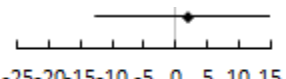
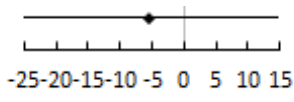
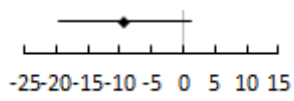
| Study  | n  | n other factors | $\beta$ /OR (95% CI)   | p value | RoB | Forest plot   |
|--|----|-----------------|------------------------|---------|-----|---|
| <b>Preoperative infraspinatus Goutallier grade</b>   |    |                 |                        |         |     |   |
| <b>QuickDASH raw</b>                                 |    |                 |                        |         |     |   |
| Sayed-Noor 2018                                      | 63 | 6               | 0.17 (-5 to 9)         | .60     | ⊖   |    |
| <b>Preoperative supraspinatus Warner grade</b>       |    |                 |                        |         |     |   |
| <b>QuickDASH raw</b>                                 |    |                 |                        |         |     |   |
| Sayed-Noor 2018                                      | 63 | 6               | -0.04 (-6.3 to 5)      | .80     | ⊖   |    |
| <b>Preoperative supraspinatus Goutallier grade</b>   |    |                 |                        |         |     |   |
| <b>QuickDASH raw</b>                                 |    |                 |                        |         |     |   |
| Sayed-Noor 2018                                      | 63 | 6               | 0.32 (-0.68 to 10)     | .08     | ⊖   |    |
| <b>MEDIUM-SHORT TERM</b>                             |    |                 |                        |         |     |   |
| <b>Preoperative infraspinatus Warner grade</b>       |    |                 |                        |         |     |   |
| <b>QuickDASH raw</b>                                 |    |                 |                        |         |     |   |
| Sayed-Noor 2018                                      | 63 | 6               | -0.09 (-14 to 7)       | .54     | ⊖   |  |
| <b>Preoperative infraspinatus Goutallier grade</b>   |    |                 |                        |         |     |   |
| <b>QuickDASH raw</b>                                 |    |                 |                        |         |     |   |
| Sayed-Noor 2018                                      | 63 | 6               | 0.22 (-3 to 10.5)      | .28     | ⊖   |  |
| <b>Preoperative supraspinatus Warner grade</b>       |    |                 |                        |         |     |   |
| <b>QuickDASH raw</b>                                 |    |                 |                        |         |     |   |
| Sayed-Noor 2018                                      | 63 | 6               | -0.02 (-5.7 to 5.2)    | .92     | ⊖   |  |
| <b>Preoperative supraspinatus Goutallier grade</b>   |    |                 |                        |         |     |   |
| <b>QuickDASH raw</b>                                 |    |                 |                        |         |     |   |
| Sayed-Noor 2018                                      | 63 | 6               | 0.01 (-0.059 to 5.9)   | .98     | ⊖   |  |
| <b>MEDIUM-LONG TERM</b>                              |    |                 |                        |         |     |   |
| <b>Tear limited to supraspinatus + infraspinatus</b> |    |                 |                        |         |     |   |
| <b>SST 30%MPI</b>                                    |    |                 |                        |         |     |   |
| Somerson 2016  | 42 | 3               | ∞ (2.01 to ∞)          | .02     | ⊗   |   |
| <b>LONG TERM</b>                                     |    |                 |                        |         |     |   |
| <b>Preoperative supraspinatus Warner grade</b>       |    |                 |                        |         |     |   |
| <b>QuickDASH raw</b>                                 |    |                 |                        |         |     |   |
| Edwards 2020   | 32 | 4               | 2.06 (-12.79 to 16.92) | .778    | ⊖   |  |

Table A9 - Individual results for prognostic factor 'Rotator cuff status' (*continued*)

| Study  | n  | n other factors | $\beta$ /OR (95% CI)    | p value | RoB | Forest plot   |
|--|----|-----------------|-------------------------|---------|-----|---|
| <b>Rotator cuff muscles fatty infiltration</b> |    |                 |                         |         |     |   |
| <b>QuickDASH raw</b>                           |    |                 |                         |         |     |   |
| Edwards 2020                                   | 32 | 4               | -5.62 (-26.28 to 15.04) | .581    | ⊖   |  |
| <b>Tendinopathy grade</b>                      |    |                 |                         |         |     |   |
| <b>QuickDASH raw</b>                           |    |                 |                         |         |     |   |
| Edwards 2020                                   | 32 | 4               | -9.21 (-19.58 to 1.15)  | .079    | ⊖   |  |

∞ Infinity

Table A10 - Individual results for prognostic factor ‘Glenohumeral characteristics’

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b><u>GLENOHUMERAL CHARACTERISTICS ON FUNCTIONAL RECOVERY AND PAIN</u></b> |     |                 |                      |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |     |                 |                      |         |     |             |
| <b>Preoperative glenoid retroversion (per 10°)</b>                         |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 168 | 2               | 0.5 (-2 to 2.9)      | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 168 | 2               | 1.5 (-12.3 to 15.2)  | -       | ⊗   |             |
| <b>Preoperative glenoid anteversion compared to neutral</b>                |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 691 | 2               | 2.1 (-17.8 to 21.9)  | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 691 | 2               | 6.9 (-30.4 - 44.1)   | -       | ⊗   |             |
| <b>Preoperative glenoid retroversion &gt;15° compared to neutral</b>       |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 691 | 2               | 1 (-2.2 to 4.1)      | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 691 | 2               | 2.4 (-3.6 to 8.4)    | -       | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>  |     |                 |                      |         |     |             |
| <b>Preoperative glenoid retroversion (per 10°)</b>                         |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 187 | 2               | 2.8 (0.1 to 5.5)     | <.05    | ⊗   |             |
| <i>No data available from Dekker 2022</i>                                  |     |                 |                      |         |     |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 187 | 2               | 14 (-9.1 to 37.1)    | -       | ⊗   |             |
| <b>Preoperative glenoid anteversion compared to neutral</b>                |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 400 | 2               | -0.4 (-34.6 to 33.9) | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 400 | 2               | 3.4 (-95.4 to 102.3) | -       | ⊗   |             |

Table A10 - Individual results for prognostic factor ‘Glenohumeral characteristics’ (*continued*)

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b>Preoperative glenoid retroversion &gt;15° compared to neutral</b> |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 400 | 2               | 3.4 (-0.8 to 7.5)    | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 400 | 2               | 6.7 (-5.3 to 18.8)   | -       | ⊗   |             |
| <b>Glenoid inclination (degrees)</b>                                 |     |                 |                      |         |     |             |
| <i>No data for ASES raw (Dekker 2022)</i>                            |     |                 |                      |         |     |             |
| <b><u>GLENOHUMERAL CHARACTERISTICS ON FUNCTIONAL RECOVERY</u></b>    |     |                 |                      |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |     |                 |                      |         |     |             |
| <b>Preoperative glenoid retroversion (per 10°)</b>                   |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 347 | 2               | 1.5 (-0.8 to 3.7)    | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 347 | 2               | 5.4 (-3.6 to 14.4)   | -       | ⊗   |             |
| <b>Preoperative glenoid anteversion compared to neutral</b>          |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 3.9 (-6.7 to 14.5)   | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 4.1 (-9.9 to 18.2)   | -       | ⊗   |             |
| <b>Preoperative glenoid retroversion &gt;15° compared to neutral</b> |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 3.8 (-0.6 to 8.2)    | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 4.6 (-1.2 to 10.5)   | -       | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>  |     |                 |                      |         |     |             |
| <b>Preoperative glenoid retroversion (per 10°)</b>                   |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 334 | 2               | 1.8 (-0.5 to 4.2)    | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 334 | 2               | 8.3 (-0.6 to 17.3)   | -       | ⊗   |             |
| <i>No data for SANE raw / QuickDASH raw (Dekker 2022)</i>            |     |                 |                      |         |     |             |

Table A10 - Individual results for prognostic factor 'Glenohumeral characteristics' (*continued*)

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b>Preoperative glenoid anteversion compared to neutral</b>          |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 1.1 (-9.5 to 11.6)   | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | -0.2 (-13.9 to 13.4) | -       | ⊗   |             |
| <b>Preoperative glenoid retroversion &gt;15° compared to neutral</b> |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 4.3 (-0.4 to 9.1)    | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 6 (-0.2 to 12.1)     | -       | ⊗   |             |
| <b>Glenoid inclination</b>   |     |                 |                      |         |     |             |
| No data for SANE raw / QuickDASH raw (Dekker 2022)                   |     |                 |                      |         |     |             |

Table A11 - Individual results for prognostic factor ‘Depression and Anxiety’

| Study  | n   | n other factors | $\beta$ /OR (95% CI)  | p value | RoB | Forest plot |
|--|-----|-----------------|-----------------------|---------|-----|-------------|
| <b><u>DEPRESSION AND ANXIETY ON FUNCTIONAL RECOVERY AND PAIN</u></b> |     |                 |                       |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |     |                 |                       |         |     |             |
| <b>HADS Depression</b>   |     |                 |                       |         |     |             |
| <b>ASES raw</b>  |     |                 |                       |         |     |             |
| Cho 2017   | 46  | 5               | 0.14 (-2.03 to 2.31)  | .897    | ⊗   |             |
| <b>HADS Anxiety</b>  |     |                 |                       |         |     |             |
| <b>ASES raw</b>  |     |                 |                       |         |     |             |
| Cho 2017   | 46  | 5               | 0.79 (-1.32 to 2.89)  | .454    | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>  |     |                 |                       |         |     |             |
| <b>Depression</b>  |     |                 |                       |         |     |             |
| <b>ASES raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020   | 111 | 2               | -2.5 (-10.1 to 5.2)   | .53     | ⊗   |             |
| <b>ASES change</b>   |     |                 |                       |         |     |             |
| Werner 2017  | 616 | ?               | -                     | .018    | ⊗   |             |
| <b>ASES top score</b>  |     |                 |                       |         |     |             |
| Forlizzi 2022  | 162 | 8               | 0.39 (0.16 to 0.99)   | .046    | ⊖   |             |
| <b>WOOS raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020   | 111 | 2               | 40.1 (-98.7 to 178.8) | .57     | ⊗   |             |
| <b>Anxiety</b>   |     |                 |                       |         |     |             |
| <b>ASES raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020   | 111 | 2               | -3.6 (-10.6 to 3.4)   | .31     | ⊗   |             |
| <i>No data available from Moverman 2021</i>                          |     |                 |                       |         |     |             |
| <b>WOOS raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020   | 111 | 2               | 74.7 (-50.9 to 200.3) | .24     | ⊗   |             |
| <b><u>DEPRESSION AND ANXIETY ON FUNCTIONAL RECOVERY</u></b>          |     |                 |                       |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |     |                 |                       |         |     |             |
| <b>HADS Depression</b>   |     |                 |                       |         |     |             |
| <b>SSV raw</b>   |     |                 |                       |         |     |             |
| Cho 2017   | 46  | 5               | 0.53 (-0.8 to 1.86)   | .426    | ⊗   |             |

Table A11 - Individual results for prognostic factor 'Depression and Anxiety' (*continued*)

| Study   | n   | n other factors | $\beta$ /OR (95% CI)  | p value | RoB | Forest plot |
|---|-----|-----------------|-----------------------|---------|-----|-------------|
| <b>HADS Anxiety</b>   |     |                 |                       |         |     |             |
| <b>SSV raw</b>  |     |                 |                       |         |     |             |
| Cho 2017  | 46  | 5               | -0.01 (-1.3 to 1.28)  | .982    | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                       |         |     |             |
| <b>Depression</b>   |     |                 |                       |         |     |             |
| <b>PROMIS-UE raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020  | 111 | 2               | 2.7 (-1.2 to 6.7)     | .17     | ⊗   |             |
| <b>PROMIS-PF raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020  | 111 | 2               | 1.6(-2.4 to 5.5)      | .43     | ⊗   |             |
| <b>PROMIS-PI raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020  | 111 | 2               | -0.8 (-4.5 to 2.9)    | .68     | ⊗   |             |
| <b>Anxiety</b>  |     |                 |                       |         |     |             |
| <b>PROMIS-UE raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020  | 111 |                 | -4.6 (-8.2 to -0.9)   | .02     | ⊗   |             |
| <b>PROMIS-PF raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020  | 111 |                 | -3.3 (-6.8 to 0.3)    | .07     | ⊗   |             |
| <b>PROMIS-PI raw</b>  |     |                 |                       |         |     |             |
| Kohan 2020  | 111 |                 | 4.3 (0.9 to 7.7)      | .01     | ⊗   |             |
| <i>No data for SANE raw (Moverman 2021)</i>                                   |     |                 |                       |         |     |             |
| <b>Anxiety/depression</b>   |     |                 |                       |         |     |             |
| <i>No data for DASH raw / SST raw / DASH change / SST change (Green 2020)</i> |     |                 |                       |         |     |             |
| <b><u>DEPRESSION AND ANXIETY ON PAIN</u></b>                                  |     |                 |                       |         |     |             |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                       |         |     |             |
| <b>HADS Depression</b>  |     |                 |                       |         |     |             |
| <b>VAS pain raw</b>   |     |                 |                       |         |     |             |
| Cho 2017  | 46  | 5               | -0.02 (-0.28 to 0.24) | .899    | ⊗   |             |
| <b>HADS Anxiety</b>   |     |                 |                       |         |     |             |
| <b>VAS pain raw</b>   |     |                 |                       |         |     |             |
| Cho 2017  | 46  | 5               | -0.01 (-0.36 to 0.14) | .382    | ⊗   |             |

Table A11 - Individual results for prognostic factor ‘Depression and Anxiety’ (*continued*)

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b>MEDIUM-LONG TERM</b>  |     |                 |                      |         |     |             |
| <b>Depression</b>  |     |                 |                      |         |     |             |
| <b>VAS pain raw</b>  |     |                 |                      |         |     |             |
| Kohan 2020   | 111 | 2               | 0.5 (-0.4 to 1.4)    | .29     | ⊗   |             |
| <b>Anxiety</b>   |     |                 |                      |         |     |             |
| <b>VAS pain raw</b>  |     |                 |                      |         |     |             |
| Kohan 2020   | 111 | 2               | 0.4 (-0.5 to 1.2)    | .39     | ⊗   |             |
| <i>No data available from Moverman 2021</i>                          |     |                 |                      |         |     |             |
| <b>Anxiety/depression</b>  |     |                 |                      |         |     |             |
| <i>No data available for VAS pain / VAS pain change (Green 2020)</i> |     |                 |                      |         |     |             |



Table A12 - Individual results for prognostic factor 'Expectations'

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b><u>EXPECTATIONS ON FUNCTIONAL RECOVERY AND PAIN</u></b> |     |                 |                      |         |     |             |
| <b>MEDIUM-LONG TERM</b>                                    |     |                 |                      |         |     |             |
| <b>Number of very important expectations</b>               |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Swarup 2017  | 67  | ?               | 1.53 (-)             | .007    |     |             |
| <i>No data available from Rauck 2018</i>                   |     |                 |                      |         |     |             |
| <b>ASES change</b>   |     |                 |                      |         |     |             |
| Swarup 2017  | 67  | ?               | 1.13 (-)             | .037    |     |             |
| <b>Expectation 'Relieving nighttime pain'</b>              |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Rauck 2018   | 137 | ?               | 7 (-)                | .048    |     |             |
| <i>No data available from Rauck 2018</i>                   |     |                 |                      |         |     |             |
| <b><u>EXPECTATIONS ON FUNCTIONAL RECOVERY</u></b>          |     |                 |                      |         |     |             |
| <b>MEDIUM-LONG TERM</b>                                    |     |                 |                      |         |     |             |
| <b>Mean preoperative expectation score</b>                 |     |                 |                      |         |     |             |
| <b>DASH raw</b>  |     |                 |                      |         |     |             |
| Green 2020   | 176 | 8               | -10 (-15 to -3)      | .007    |     |             |
| <b>DASH change</b>   |     |                 |                      |         |     |             |
| Green 2020   | 176 | 8               | -10 (-15 to -3)      | .004    |     |             |
| <b>SST raw</b>   |     |                 |                      |         |     |             |
| Green 2020   | 176 | 8               | 0.7 (-0.5 to 1.9)    | .29     |     |             |
| <b>SST change</b>  |     |                 |                      |         |     |             |
| Green 2020   | 176 | 8               | 0.7 (-0.5 to 1.9)    | .265    |     |             |
| <b>Expectation 'Improving non-overhead sports'</b>         |     |                 |                      |         |     |             |
| <b>SAS raw</b>   |     |                 |                      |         |     |             |
| Rauck 2018   | 137 | ?               | 2.8 (-)              | .02     |     |             |
| <b>Confidence in achieving outcomes</b>                    |     |                 |                      |         |     |             |
| <b>PSS raw</b>   |     |                 |                      |         |     |             |
| Styron 2015  | 436 | 8               | 2.65 (0.14 to 5.16)  | .039    |     |             |

Table A12 - Individual results for prognostic factor 'Expectations' (*continued*)

| Study   | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|---|-----|-----------------|----------------------|---------|-----|-------------|
| <b><u>EXPECTATIONS ON PAIN</u></b>            |     |                 |                      |         |     |             |
| <b>MEDIUM-LONG TERM</b>                       |     |                 |                      |         |     |             |
| <b>Number of very important expectations</b>  |     |                 |                      |         |     |             |
| <b>VAS pain raw</b>                           |     |                 |                      |         |     |             |
| Swarup 2017                                   | 67  | ?               | -0.16 (-)*           | .01     | ⊗   |             |
| No data available from Rauck 2018             |     |                 |                      |         |     |             |
| <b>VAS pain change</b>                        |     |                 |                      |         |     |             |
| Swarup 2017                                   | 67  | ?               | -0.15 (-)*           | .02     | ⊗   |             |
| <b>Expectation 'Relieving nighttime pain'</b> |     |                 |                      |         |     |             |
| <b>VAS pain raw</b>                           |     |                 |                      |         |     |             |
| Rauck 2018                                    | 137 | ?               | -0.59 (-)*           | .047    | ⊗   |             |
| <b>VAS pain change</b>                        |     |                 |                      |         |     |             |
| Rauck 2018                                    | 137 | ?               | -0.61 (-)*           | .039    | ⊗   |             |
| <b>Mean preoperative expectation score</b>    |     |                 |                      |         |     |             |
| <b>VAS pain raw</b>                           |     |                 |                      |         |     |             |
| Green 2020                                    | 176 | 8               | -0.4 (-1.3 to 0.6)*  | .453    | ⊗   |             |
| <b>VAS pain change</b>                        |     |                 |                      |         |     |             |
| Green 2020                                    | 176 | 8               | -0.4 (-1.3 to 0.6)*  | .452    | ⊗   |             |
| <b>Confidence in achieving outcomes</b>       |     |                 |                      |         |     |             |
| <b>PSS pain raw</b>                           |     |                 |                      |         |     |             |
| Styron 2015                                   | 436 | 8               | 1.99 (0.17 to 3.82)  | .033    | ⊖   |             |

\* Recalculated to reflect VAS on 0 - 10 scale instead of 0 - 100 as reported in studies

Table A13 - Individual results for prognostic factor ‘Classification systems’

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b><i>CLASSIFICATION SYSTEMS ON FUNCTIONAL RECOVERY AND PAIN</i></b> |     |                 |                      |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |     |                 |                      |         |     |             |
| <b>Walch A2 compared to A1</b>                                       |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 0 (-3.2 to 3.3)      | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | -0.9 (-6.4 to 4.6)   | -       | ⊗   |             |
| <b>Walch B1 compared to A1</b>                                       |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 1.9 (-1.4 to 5.1)    | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 4 (-1.5 to 9.5)      | -       | ⊗   |             |
| <b>Walch B2 compared to A1</b>                                       |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | -1.2 (-4.3 to 1.9)   | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | -2.7 (-8 to 2.6)     | -       | ⊗   |             |
| <b>Walch C compared to A1</b>  |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 2.4 (-5.5 to 10.2)   | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 2.6 (-10.8 to 15.9)  | -       | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>  |     |                 |                      |         |     |             |
| <b>Walch A2 compared to A1</b>                                       |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | -0.8 (-4.4 to 2.7)   | -       | ⊗   |             |
| Pettit 2022  | 197 | 4               | 5.7 (-0.87 to 12.3)* | .09     | ⊖   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | -0.7 (-9.6 to 8.2)   | -       | ⊗   |             |
| <b>Walch B1 compared to A1</b>                                       |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 0.1 (-3.3 to 3.6)    | -       | ⊗   |             |

Table A13 - Individual results for prognostic factor ‘Classification systems’ (continued)

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 1.4 (-7.3 to 10.1)   | -       | ⊗   |             |
| <b>Walch B1 compared to A2</b>   |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Pettit 2022  | 197 | 4               | -2.3 (-12.3 to 7.4)  | .64     | ⊖   |             |
| <b>Walch B2 compared to A1</b>   |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 0.5 (-2.9 to 3.9)    | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | -0.5 (-9 to 8)       | -       | ⊗   |             |
| <b>Walch B2 compared to A2</b>   |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Pettit 2022  | 197 | 4               | 0.43 (-6.1 to 6.9)   | .9      | ⊖   |             |
| <b>Walch B3 compared to A2</b>   |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Pettit 2022  | 197 | 4               | 2.5 (-4.3 to 9.2)    | .47     | ⊖   |             |
| <b>Walch C compared to A1</b>  |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 2.8 (-6.7 to 12.4)   | -       | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 380 | 2               | 4.3 (-19.7 to 28.2)  | -       | ⊗   |             |
| <b>Concentric wear (Walch A1/A2) compared to eccentric wear (B1/B2/B3/D)</b> |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Kohan 2020   | 111 | 2               | -3.5 (-9.5 to 2.5)   | .26     | ⊗   |             |
| <b>WOOS raw</b>  |     |                 |                      |         |     |             |
| Kohan 2020   | 111 | 2               | 62.7 (-46 to 171.4)  | .26     | ⊗   |             |
| <b>Walch classification</b>  |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Dekker 2022  | 168 | 6               | -                    | >.05    | ⊗   |             |
| <b>Hamada grade 3 compared to Hamada grade 2</b>                             |     |                 |                      |         |     |             |
| <b>ASES TE</b>   |     |                 |                      |         |     |             |
| Huber 2020   | 168 | 4               | 0.05 (-0.03 to 0.14) | .299    | ⊖   |             |

Table A13 - Individual results for prognostic factor 'Classification systems' (continued)

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b>Hamada grade <math>\geq 4</math> compared to Hamada grade 2</b> |     |                 |                      |         |     |             |
| <b>ASES TE</b>   |     |                 |                      |         |     |             |
| Huber 2020   | 168 | 4               | 0.08 (0 to 0.15)     | .042    | ⊖   |             |
| <b><u>CLASSIFICATION SYSTEMS ON FUNCTIONAL RECOVERY</u></b>        |     |                 |                      |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |     |                 |                      |         |     |             |
| <b>Walch A2 compared to A1</b>                                     |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | -0.8 (-5 to 3.4)     | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 1.3 (-5.6 to 8.1)    | -       | ⊗   |             |
| <b>Walch B1 compared to A1</b>                                     |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 1.2 (-3.5 to 5.9)    | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 5.3 (-2.4 to 13)     | -       | ⊗   |             |
| <b>Walch B2 compared to A1</b>                                     |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 1.5 (-3.2 to 6.2)    | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 5 (-2.7 to 12.6)     | -       | ⊗   |             |
| <b>Walch C compared to A1</b>                                      |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 5.1 (-12.3 to 22.5)  | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 588 | 2               | 10.9 (-17.5 to 39.3) | -       | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>  |     |                 |                      |         |     |             |
| <b>Walch A2 compared to A1</b>                                     |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 0.4 (-4.3 to 5)      | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 1.7 (-4.9 to 8.3)    | -       | ⊗   |             |

Table A13 - Individual results for prognostic factor 'Classification systems' (*continued*)

| Study  | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|--|-----|-----------------|----------------------|---------|-----|-------------|
| <b>Walch B1 compared to A1</b>   |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 2.5 (-2.7 to 7.7)    | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 5.2 (-2.2 to 12.5)   | -       | ⊗   |             |
| <b>Walch B2 compared to A1</b>   |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 1.1 (-4 to 6.3)      | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 3.5 (-3.8 to 10.9)   | -       | ⊗   |             |
| <b>Walch C compared to A1</b>  |     |                 |                      |         |     |             |
| <b>SST100 raw</b>  |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 7.2 (-11.2 to 25.5)  | -       | ⊗   |             |
| <b>SST100 %MPI</b>   |     |                 |                      |         |     |             |
| Matsen 2019  | 574 | 2               | 11.7 (-14.3 to 37.8) | -       | ⊗   |             |
| <b>Concentric wear (Walch A1/A2) compared to eccentric wear (B1/B2/B3/D)</b> |     |                 |                      |         |     |             |
| <b>PROMIS-UE raw</b>   |     |                 |                      |         |     |             |
| Kohan 2020   | 111 | 2               | -3 (-6.1 to 0.1)     | .06     | ⊗   |             |
| <b>PROMIS-PF raw</b>   |     |                 |                      |         |     |             |
| Kohan 2020   | 111 | 2               | -4.2 (-7.3 to -1.1)  | <.01    | ⊗   |             |
| <b>PROMIS-PI raw</b>   |     |                 |                      |         |     |             |
| Kohan 2020   | 111 | 2               | 3.2 (0.3 to 6.1)     | .03     | ⊗   |             |
| <b>Walch classification</b>  |     |                 |                      |         |     |             |
| <b>ASES raw</b>  |     |                 |                      |         |     |             |
| Dekker 2022  | 168 | 6               | -                    | >.05    | ⊗   |             |
| <b><u>CLASSIFICATION SYSTEMS ON PAIN</u></b>                                 |     |                 |                      |         |     |             |
| <b>MEDIUM-LONG TERM</b>  |     |                 |                      |         |     |             |
| <b>Concentric wear (Walch A1/A2) compared to eccentric wear (B1/B2/B3/D)</b> |     |                 |                      |         |     |             |
| <b>VAS pain raw</b>  |     |                 |                      |         |     |             |
| Kohan 2020   | 111 | 2               | 0.5 (-0.5 to 1.2)    | .19     | ⊗   |             |

† Inverse of reported regression coefficient and confidence interval (reported estimates were for Walch A1 compared to A2)

Table A14 - Individual results for prognostic factor 'Preoperative status'

| Study   | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|---|-----|-----------------|----------------------|---------|-----|-------------|
| <b><u>PREOPERATIVE STATUS ON FUNCTIONAL RECOVERY AND PAIN</u></b> |     |                 |                      |         |     |             |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                      |         |     |             |
| <b>Preoperative ASES score</b>                                    |     |                 |                      |         |     |             |
| <i>No data for ASES raw (Strotman 2020)</i>                       |     |                 |                      |         |     |             |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                      |         |     |             |
| <b>Preoperative ASES score</b>                                    |     |                 |                      |         |     |             |
| <b>ASES raw</b>   |     |                 |                      |         |     |             |
| Pettit 2022   | 197 | 4               | 0.06 (-0.06 to 0.2)  | .35     | ⊖   |             |
| Saini 2022  | 311 | 4               | 0.14 (0.03 to 0.24)  | .01     | ⊖   |             |
| <i>No data available from Dekker 2022, Moverman 2021</i>          |     |                 |                      |         |     |             |
| <b>ASES poor score</b>  |     |                 |                      |         |     |             |
| Carducci 2019   | 137 | 3               | 0.95 (0.72 to 1.24)  | -       | ⊗   |             |
| Forlizzi 2022   | 162 | 8               | 1 (0.96 to 1.01)*    | .27     | ⊖   |             |
| <b>ASES poor improvement</b>                                      |     |                 |                      |         |     |             |
| Carducci 2019   | 137 | 3               | 2.96 (2.04 to 4.62)  | -       | ⊗   |             |
| <b>ASES MCID</b>  |     |                 |                      |         |     |             |
| Werner 2016   | 490 | 1               | 0.96 (0.94 to 0.98)  | <.001   | ⊗   |             |
| <b>ASES SCB</b>   |     |                 |                      |         |     |             |
| Werner 2016   | 490 | 3               | 0.91 (0.89 to 0.92)  | <.001   | ⊗   |             |

**PREOPERATIVE STATUS ON FUNCTIONAL RECOVERY**

**SHORT TERM**

**Preoperative QuickDASH score**

**QuickDASH raw**

|                 |    |   |                    |      |   |  |
|-----------------|----|---|--------------------|------|---|--|
| Sayed-Noor 2018 | 63 | 6 | 0.3 (0.04 to 0.58) | .027 | ⊖ |  |
|-----------------|----|---|--------------------|------|---|--|

**MEDIUM-SHORT TERM**

**Preoperative QuickDASH score**

**QuickDASH raw**

|                 |    |   |                       |     |   |  |
|-----------------|----|---|-----------------------|-----|---|--|
| Kadum 2018      | 63 | 6 | -0.02 (-0.17 to 0.14) | .8  | ⊖ |  |
| Sayed-Noor 2018 | 63 | 6 | 0.03 (-0.25 to 0.3)   | .85 | ⊖ |  |

Table A14 - Individual results for prognostic factor 'Preoperative status' (continued)

| Study   | n  | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|---|----|-----------------|----------------------|---------|-----|-------------|
| <b>Preoperative electrical pain threshold operative side</b>                  |    |                 |                      |         |     |             |
| <b>QuickDASH raw</b>  |    |                 |                      |         |     |             |
| Kadum 2018  | 63 | 6               | -2.2 (-3.1 to -1.3)  | .0001   | ⊖   |             |
| <b>Preoperative pain at rest</b>  |    |                 |                      |         |     |             |
| <b>QuickDASH raw</b>  |    |                 |                      |         |     |             |
| Kadum 2018  | 63 | 6               | 0.23 (0.07 to 0.39)  | .007    | ⊖   |             |
| <b>Preoperative pain on exertion</b>  |    |                 |                      |         |     |             |
| <b>QuickDASH raw</b>  |    |                 |                      |         |     |             |
| Kadum 2018  | 63 | 6               | 0.05 (-0.07 to 0.17) | .43     | ⊖   |             |
| <b>Preoperative electrical pain threshold contralateral side</b>              |    |                 |                      |         |     |             |
| <b>QuickDASH raw</b>  |    |                 |                      |         |     |             |
| Kadum 2018  | 63 | 6               | 0.14 (-0.28 to 0.56) | .49     | ⊖   |             |
| <b>Preoperative PROMIS-D score</b>  |    |                 |                      |         |     |             |
| <b>Preoperative PROMIS-PI score</b>   |    |                 |                      |         |     |             |
| <b>Preoperative PROMIS-UE score</b>   |    |                 |                      |         |     |             |
| <i>No data available for PROMIS-D / PROMIS-PI / PROMIS-UE (Franovic 2020)</i> |    |                 |                      |         |     |             |
| <b>MEDIUM-LONG TERM</b>   |    |                 |                      |         |     |             |
| <b>Preoperative SST score</b>   |    |                 |                      |         |     |             |
| <b>SST raw</b>  |    |                 |                      |         |     |             |
| Chawla 2022   | 39 | ?               | -                    | <.001   | ⊗   |             |
| <i>No data available from Green 2020</i>                                      |    |                 |                      |         |     |             |
| <b>SST 30% MPI</b>  |    |                 |                      |         |     |             |
| Somerson 2016   | 42 | 3               | 0.56 (0.17 to 1.04)  | .068    | ⊗   |             |
| <i>No data for SST change (Green 2020)</i>                                    |    |                 |                      |         |     |             |
| <b>Preoperative active external rotation</b>                                  |    |                 |                      |         |     |             |
| <b>SST 30% MPI</b>  |    |                 |                      |         |     |             |
| Somerson 2016   | 42 | 3               | 0.71 (0.38 to 0.9)   | <.001   | ⊗   |             |
| <b>Preoperative VAS pain score</b>  |    |                 |                      |         |     |             |
| <b>SST raw</b>  |    |                 |                      |         |     |             |
| Chawla 2022   | 39 | ?               | -                    | >.05    | ⊗   |             |
| <i>No data available from Green 2020</i>                                      |    |                 |                      |         |     |             |
| <b>SST 30% MPI</b>  |    |                 |                      |         |     |             |
| Somerson 2016   | 42 | 3               | 1.02 (0.95 to 1.11)  | .611    |     |             |
| <b>Preoperative DASH score</b>  |    |                 |                      |         |     |             |
| <i>No data for DASH raw / DASH change (Green 2020)</i>                        |    |                 |                      |         |     |             |



Table A14 - Individual results for prognostic factor 'Preoperative status' (*continued*)

| Study   | n | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|---|---|-----------------|----------------------|---------|-----|-------------|
| <b>Preoperative QuickDASH score</b>   |   |                 |                      |         |     |             |
| <i>No data for QuickDASH raw (Dekker 2022)</i>  |   |                 |                      |         |     |             |
| <b>Preoperative SANE score</b>  |   |                 |                      |         |     |             |
| <i>No data for SANE raw (Dekker 2022, Moverman 2021)</i>                              |   |                 |                      |         |     |             |
| <b>Preoperative shoulder function (SST categorical)</b>                               |   |                 |                      |         |     |             |
| <i>No data for SST raw / SST change / SST % improvement (Fehringner 2002)</i>         |   |                 |                      |         |     |             |
| <b><u>PREOPERATIVE STATUS ON PAIN</u></b>   |   |                 |                      |         |     |             |
| <b>MEDIUM-SHORT TERM</b>  |   |                 |                      |         |     |             |
| <b>Preoperative VAS pain score</b>  |   |                 |                      |         |     |             |
| <i>No data for VAS pain raw (Strotman 2020)</i>                                       |   |                 |                      |         |     |             |
| <b>MEDIUM-LONG TERM</b>   |   |                 |                      |         |     |             |
| <b>Preoperative VAS pain score</b>  |   |                 |                      |         |     |             |
| <i>No data for VAS pain (Green 2020, Moverman 2021), VAS pain change (Green 2020)</i> |   |                 |                      |         |     |             |

\* Inverse of reported odds ratio and confidence interval (reported OR was for top 25% of ASES scores)

Table A15 - Individual results for prognostic factor ‘Sociodemographic factors’

| Study | n | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|-------|---|-----------------|----------------------|---------|-----|-------------|
|-------|---|-----------------|----------------------|---------|-----|-------------|

**SOCIODEMOGRAPHIC FACTORS ON FUNCTIONAL RECOVERY AND PAIN**

**MEDIUM-LONG TERM**

**Living alone**

**ASES SCB**

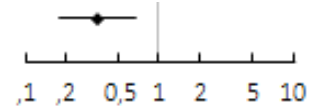
Werner 2016

490

3

0.36 (0.19 to 0.69)

.002



**College education**

**Level of activity at work**

**Marital status**

*No data for ASES poor score (McFarland 2021)*

**Home zip code median income**

*No data for ASES raw (Lansdown 2021)*

**SOCIODEMOGRAPHIC FACTORS ON FUNCTIONAL RECOVERY**

**MEDIUM-LONG TERM**

**College education**

**Work status**

*No data for DASH / DASH change / SST / SST change (Green 2020)*

**SOCIODEMOGRAPHIC FACTORS ON PAIN**

**MEDIUM-LONG TERM**

**College education**

**Work status**

*No data for VAS pain raw / VAS pain change (Green 2020)*

Table A16 - Individual results for prognostic factor ‘Symptoms and History’

| Study  | n   | n other factors | β/OR (95% CI)         | p value | RoB | Forest plot |
|--|-----|-----------------|-----------------------|---------|-----|-------------|
| <b><u>SYMPTOMS AND HISTORY ON FUNCTIONAL RECOVERY AND PAIN</u></b> |     |                 |                       |         |     |             |
| <b>MEDIUM-SHORT TERM</b>   |     |                 |                       |         |     |             |
| <b>Duration of symptoms</b>  |     |                 |                       |         |     |             |
| <b>ASES raw</b>  |     |                 |                       |         |     |             |
| Cho 2017   | 46  | 5               | 0.02 (-0.03 to 0.06)  | .531    | ⊗   |             |
| <b>Dominant side / hand dominance</b>                              |     |                 |                       |         |     |             |
| <b>ASES raw</b>  |     |                 |                       |         |     |             |
| Wong 2017  | 117 | 6               | -                     | >.05    | ⊖   |             |
| <i>No data available from Lapner 2015</i>                          |     |                 |                       |         |     |             |
| <i>No data for WOOS% (Lapner 2015)</i>                             |     |                 |                       |         |     |             |
| <b>Involved side</b>   |     |                 |                       |         |     |             |
| <b>ASES raw</b>  |     |                 |                       |         |     |             |
| Cho 2017   | 46  | 5               | ±0.04 (-12.8 - 12.9)* | .995    | ⊗   |             |
| <b>Previous surgery</b>  |     |                 |                       |         |     |             |
| <b>ASES raw</b>  |     |                 |                       |         |     |             |
| Matsen 2019  | 691 | 2               | -4.6 (-6.9 to -2.4)   | <.05    | ⊗   |             |
| <b>ASES %MPI</b>   |     |                 |                       |         |     |             |
| Matsen 2019  | 691 | 2               | -8.5 (-12.2 to -4.8)  | <.05    | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>  |     |                 |                       |         |     |             |
| <b>Dominant side</b>   |     |                 |                       |         |     |             |
| <b>ASES MOI</b>  |     |                 |                       |         |     |             |
| Polce 2021   | 105 | 3               | 0.83 (0.68 to 1.01)   | .061    | ⊗   |             |
| <b>ASES TE</b>   |     |                 |                       |         |     |             |
| Huber 2020   | 168 | 4               | 0.1 (-0.01 to 0.21)** | .07     | ⊖   |             |
| <i>No data for ASES poor score (McFarland 2021)</i>                |     |                 |                       |         |     |             |
| <b>Preoperative opioid use</b>                                     |     |                 |                       |         |     |             |
| <b>ASES poor score</b>   |     |                 |                       |         |     |             |
| Carducci 2019†   | 137 | 3               | 3.26 (1.08 to 10.07)  | -       | ⊗   |             |
| Forlizzi 2022  | 162 | 8               | 3.48 (1.32 to 11.11)‡ | .01     | ⊖   |             |
| <b>ASES poor improvement</b>                                       |     |                 |                       |         |     |             |
| Carducci 2019†   | 137 | 3               | 3.38 (0.9 to 12.75)   | -       | ⊗   |             |

Table A16 - Individual results for prognostic factor ‘Symptoms and History’ (*continued*)

| Study   | n   | n other factors | β/OR (95% CI)                    | p value | RoB | Forest plot |
|---|-----|-----------------|----------------------------------|---------|-----|-------------|
| <b>Previous surgery</b>   |     |                 |                                  |         |     |             |
| <b>ASES raw</b>   |     |                 |                                  |         |     |             |
| Shields 2017  | 272 | 4               | -9.5 (-)                         | <.001   | ⊗   |             |
| Matsen 2019   | 400 | 2               | -4.7 (-7.8 to -1.5)              | <.05    | ⊗   |             |
| Saini 2022  | 311 | 4               | -4.2 (-8.2 to -0.15)             | .042    | ⊖   |             |
| <i>No data available from Okoroha 2019, Patel 2019</i>                            |     |                 |                                  |         |     |             |
| <b>ASES change</b>  |     |                 |                                  |         |     |             |
| Shields 2017  | 272 | 4               | -7.9 (-)                         | .012    | ⊗   |             |
| <i>No data available from Patel 2019</i>  |     |                 |                                  |         |     |             |
| <b>ASES %MPI</b>  |     |                 |                                  |         |     |             |
| Matsen 2019   | 40  | 2               | -11.9 (-19.6 to -4.3)            | -       | ⊗   |             |
| <b>ASES, poor score</b>   |     |                 |                                  |         |     |             |
| McFarland 2021  | 19  | 9               | 2.4 (1 to 5.4) <sup>†</sup>      | .049    | ⊗   |             |
| McFarland 2021  | 25  | 9               | 1.6 (1.1 to 4.5) <sup>†</sup>    | .04     | ⊗   |             |
| Carducci 2019 <sup>†</sup>  | 137 | 3               | 2.46 (1.03 to 5.83)              | -       | ⊗   |             |
| Forlizzi 2022   | 162 | 8               | 2.78 (1.15 to 6.67) <sup>‡</sup> | .02     | ⊖   |             |
| <b>ASES, poor improvement</b>   |     |                 |                                  |         |     |             |
| Carducci 2019 <sup>†</sup>  | 137 | 3               | 3.77 (1.34 to 11.23)             | -       | ⊗   |             |
| <b>ASES MOI</b>   |     |                 |                                  |         |     |             |
| Polce 2021  | 105 | 3               | 0.83 (0.68 to 1.01)              | .061    | ⊗   |             |
| <b>ASES TE</b>  |     |                 |                                  |         |     |             |
| Huber 2020  | 168 | 4               | -0.1 (-0.21 to 0.01)             | .07     | ⊖   |             |
| <i>No data for SPADI raw / SPADI change / UCLA raw / UCLA change (Patel 2019)</i> |     |                 |                                  |         |     |             |
| <b>Percentage subluxation</b>   |     |                 |                                  |         |     |             |
| <i>No data for ASES raw (Dekker 2022)</i>   |     |                 |                                  |         |     |             |

**SYMPTOMS AND HISTORY ON FUNCTIONAL RECOVERY**

**MEDIUM-SHORT TERM**

**Duration of symptoms**

|                          |     |   |                          |      |   |  |
|--------------------------|-----|---|--------------------------|------|---|--|
| <b>SSV raw</b>           |     |   |                          |      |   |  |
| Cho 2017                 | 46  | 5 | -0.001 (-0.031 to 0.028) | .931 | ⊗ |  |
| <b>Dominant side</b>     |     |   |                          |      |   |  |
| <b>ASES function raw</b> |     |   |                          |      |   |  |
| Wong 2017                | 117 | 6 | -                        | >.05 | ⊖ |  |
| <b>Involved side</b>     |     |   |                          |      |   |  |
| <b>SSV raw</b>           |     |   |                          |      |   |  |
| Cho 2017                 | 46  | 5 | ±-2.27 (-10.12 - 5.58)*  | .562 | ⊗ |  |

Table A16 - Individual results for prognostic factor 'Symptoms and History' (*continued*)

| Study   | n   | n other factors | $\beta$ /OR (95% CI)       | p value | RoB | Forest plot |
|---|-----|-----------------|----------------------------|---------|-----|-------------|
| <b>Previous surgery</b>   |     |                 |                            |         |     |             |
| <b>SST100 raw</b>   |     |                 |                            |         |     |             |
| Matsen 2019   | 588 | 2               | -2.9 (-7.1 to 1.3)         | -       | ⊗   |             |
| <b>SST100 %MPI</b>  |     |                 |                            |         |     |             |
| Matsen 2019   | 588 | 2               | -4.3 (-11.3 to 2.7)        | -       | ⊗   |             |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                            |         |     |             |
| <b>Previous surgery</b>   |     |                 |                            |         |     |             |
| <b>ASES function raw</b>  |     |                 |                            |         |     |             |
| Shields 2017  | 272 | 4               | -2.4 (-)                   | .006    | ⊗   |             |
| <b>SSV raw</b>  |     |                 |                            |         |     |             |
| Shields 2017  | 272 | 4               | -9.2 (-)                   | <.001   | ⊗   |             |
| <b>SSV change</b>   |     |                 |                            |         |     |             |
| Shields 2017  | 272 | 4               | -11.1 (-)                  | .003    | ⊗   |             |
| <b>SST100 raw</b>   |     |                 |                            |         |     |             |
| Matsen 2019   | 574 | 2               | -4.9 (-9.4 to -.03)        | <.05    | ⊗   |             |
| <b>SST100 %MPI</b>  |     |                 |                            |         |     |             |
| Matsen 2019   | 574 | 2               | -5.6 (-12 to 0.8)          | -       | ⊗   |             |
| <i>No data for ASES function change (Shields 2017), SST raw / SST change (Okoroha 2019, Patel 2019)</i> |     |                 |                            |         |     |             |
| <b>Percentage subluxation</b>   |     |                 |                            |         |     |             |
| <i>No data for QuickDASH raw / SANE raw (Dekker 2022)</i>   |     |                 |                            |         |     |             |
| <b><u>SYMPTOMS AND HISTORY ON PAIN</u></b>  |     |                 |                            |         |     |             |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                            |         |     |             |
| <b>Duration of symptoms</b>   |     |                 |                            |         |     |             |
| <b>VAS pain raw</b>   |     |                 |                            |         |     |             |
| Cho 2017  | 46  | 5               | -0.002 (-0.007 to 0.004)   | .588    | ⊗   |             |
| <b>Dominant side</b>  |     |                 |                            |         |     |             |
| <b>ASES pain raw</b>  |     |                 |                            |         |     |             |
| Wong 2017   | 117 | 6               | -                          | >.05    | ⊖   |             |
| <b>VAS pain raw</b>   |     |                 |                            |         |     |             |
| Wong 2017   | 117 | 6               | -                          | >.05    | ⊖   |             |
| <b>Involved side</b>  |     |                 |                            |         |     |             |
| <b>VAS pain raw</b>   |     |                 |                            |         |     |             |
| Cho 2017  | 46  | 5               | $\pm 0.05$ (-1.49 - 1.59)* | .947    | ⊗   |             |

| Study | n | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|-------|---|-----------------|----------------------|---------|-----|-------------|
|-------|---|-----------------|----------------------|---------|-----|-------------|

**MEDIUM-LONG TERM**

**Previous surgery**

**VAS pain raw**

Shields 2017      272      4  
*No data available from Patel 2019*

0.09 ( - )

.001

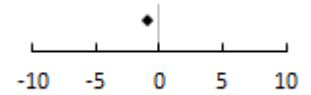


**VAS pain change**

Shields 2017      272      4  
*No data available from Patel 2019*

-1 ( - )

.011



**Dominant side**

*No data for VAS pain raw / VAS pain change (Green 2020)*

\* Cho 2017 did not specify whether 'yes' or 'no' was the reference category, so the direction of effect cannot be interpreted

Table A17 - Individual results for prognostic factor 'Insurance'

| Study   | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot |
|---|-----|-----------------|----------------------|---------|-----|-------------|
| <b><u>INSURANCE ON FUNCTIONAL RECOVERY AND PAIN</u></b>   |     |                 |                      |         |     |             |
| <b>MEDIUM-SHORT TERM</b>  |     |                 |                      |         |     |             |
| <b>Medicare compared to Medicaid</b>  |     |                 |                      |         |     |             |
| <b>ASES raw</b>   |     |                 |                      |         |     |             |
| Strotman 2020   | 91  | 2               | -                    | <.001   | ⊗   |             |
| <b>Private insurance compared to Medicaid</b>   |     |                 |                      |         |     |             |
| <b>ASES raw</b>   |     |                 |                      |         |     |             |
| Strotman 2020   | 91  | 2               | -                    | <.001   | ⊗   |             |
| <b>Private insurance compared to Workers' Compensation</b>  |     |                 |                      |         |     |             |
| <b>ASES raw</b>   |     |                 |                      |         |     |             |
| Strotman 2020   | 91  | 2               | -                    | .028    | ⊗   |             |
| <b>Medicare compared to Workers' Compensation<br/>Private insurance compared to Medicare<br/>Workers' Compensation compared to Medicaid</b> |     |                 |                      |         |     |             |
| <i>No data available for ASES raw (Strotman 2020)</i>   |     |                 |                      |         |     |             |
| <b>MEDIUM-LONG TERM</b>   |     |                 |                      |         |     |             |
| <b>Medicare compared to Medicaid</b>  |     |                 |                      |         |     |             |
| <b>ASES raw</b>   |     |                 |                      |         |     |             |
| Lansdown 2021   | 324 | 7               | 9.8 (-)              | .054    | ⊗   |             |
| <b>Private insurance compared to Medicaid</b>   |     |                 |                      |         |     |             |
| <b>ASES raw</b>   |     |                 |                      |         |     |             |
| Lansdown 2021   | 324 | 7               | 10.5 (-)             | .029    | ⊗   |             |
| <b>Private insurance compared to Medicaid/Medicare</b>  |     |                 |                      |         |     |             |
| <b>ASES top score</b>   |     |                 |                      |         |     |             |
| Forlizzi 2022   | 162 | 3               | 2.7 (1.12 to 6.5)    | .03     | ⊖   |             |
| <b>Workers' Compensation compared to other insurance</b>  |     |                 |                      |         |     |             |
| <b>ASES MOI</b>   |     |                 |                      |         |     |             |
| Polce 2021  | 105 | 3               | 0.80 (0.54 to 1.18)  | .259    | ⊗   |             |

Table A17 - Individual results for prognostic factor 'Insurance' (continued)

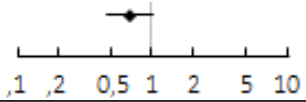
| Study   | n   | n other factors | $\beta$ /OR (95% CI) | p value | RoB | Forest plot   |
|---|-----|-----------------|----------------------|---------|-----|---|
| <b><u>INSURANCE ON FUNCTIONAL RECOVERY</u></b>            |     |                 |                      |         |     |   |
| <b>MEDIUM-LONG TERM</b>                                   |     |                 |                      |         |     |   |
| <b>Commercial insurance compared to Medicare</b>          |     |                 |                      |         |     |   |
| <b>SST raw</b>  |     |                 |                      |         |     |   |
| Chawla 2022   | 33  | ?               | -                    | >.05    | ⊗   |   |
| <b>Workers' Compensation compared to Medicare</b>         |     |                 |                      |         |     |   |
| Chawla 2022   | 33  | ?               | -                    | >.05    | ⊗   |   |
| <b>Workers' Compensation compared to other insurance</b>  |     |                 |                      |         |     |   |
| <b>SANE MOI</b>   |     |                 |                      |         |     |   |
| Polce 2021  | 105 | 1               | 0.71 (0.48 to 1.04)  | .085    | ⊗   |  |
| <b><u>INSURANCE ON PAIN</u></b>                           |     |                 |                      |         |     |   |
| <b>MEDIUM-SHORT TERM</b>                                  |     |                 |                      |         |     |   |
| <b>Medicaid compared to Medicare</b>                      |     |                 |                      |         |     |   |
| <b>VAS pain raw</b>                                       |     |                 |                      |         |     |   |
| Strotman 2020   | 91  | 1               | -                    | <.001   | ⊗   |   |
| <b>Medicaid compared to private insurance</b>             |     |                 |                      |         |     |   |
| <b>VAS pain raw</b>                                       |     |                 |                      |         |     |   |
| Strotman 2020   | 91  | 1               | -                    | <.001   | ⊗   |   |
| <b>Private insurance compared to Medicare</b>             |     |                 |                      |         |     |   |
| <b>Workers' Compensation compared to Medicare</b>         |     |                 |                      |         |     |   |
| <b>Medicaid compared to Workers' Compensation</b>         |     |                 |                      |         |     |   |
| <b>Private insurance compare to Workers' Compensation</b> |     |                 |                      |         |     |   |
| <i>No data for VAS pain raw (Strotman 2020)</i>           |     |                 |                      |         |     |   |



Table A18 – Details on which domains evidence was rated down

| Time point   | Domain                     | Prognostic factor       | Downgraded on |     |     |     |    | Upgraded on |    |     | Certainty |
|--------------|----------------------------|-------------------------|---------------|-----|-----|-----|----|-------------|----|-----|-----------|
|              |                            |                         | RoB           | Inc | Ind | Imp | PB | LE          | DR | PC  |           |
| Medium-short | Functional recovery & pain | Higher age              |               |     |     |     | x  |             |    |     | Moderate  |
|              | Functional recovery        | Male Gender             |               |     |     |     | x  |             |    |     | Moderate  |
|              |                            | Higher age              |               | x   |     | x   | x  |             |    |     | Very low  |
|              | Pain                       | Male gender             |               |     |     |     | x  |             |    |     | Moderate  |
| Higher age   |                            |                         |               |     | x   | x   |    |             |    | Low |           |
| Medium-long  | Functional recovery & pain | Walch A2 vs A1          |               |     |     |     |    |             |    |     | High      |
|              |                            | Depression              |               |     |     |     | x  |             |    |     | Moderate  |
|              |                            | Opioid use              |               |     |     | x   |    |             |    |     | Moderate  |
|              |                            | Preoperative ASES score |               | x   |     |     | x  |             |    |     | Low       |
|              |                            | Dominant side           |               | x   |     |     | x  |             |    |     | Low       |
|              |                            | Previous surgery        |               | x   |     |     | x  |             |    |     | Low       |
|              |                            | Male gender             |               | x   |     | x   | x  |             |    |     | Very low  |
|              |                            | Higher age              |               | x   |     | x   | x  |             |    |     | Very low  |
|              | Functional recovery        | Male gender             |               |     |     |     | x  |             |    |     | Moderate  |
|              |                            | Higher age              |               |     |     |     | x  |             |    |     | Moderate  |
|              |                            | Preoperative SST score  |               |     |     | x   | x  |             |    |     | Low       |
|              |                            | Previous surgery        |               |     |     | x   | x  |             |    | Low |           |
| Long         | Functional recovery & pain | Male gender             |               | x   |     | x   |    |             |    |     | Low       |

RoB = Risk of Bias, Inc = Incompleteness, Ind = Indirectness, Imp = Imprecision, PB = Publication Bias, LE = Large Effect, DR = Dose Response relationship, PC = Plausible Confounding

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