**Summary of Findings – Operatieve behandeling**

Question 1. *What are the (un)beneficial effects of a soft tissue procedure compared to an osseous procedure for patients with shoulder instability **who suffered 2 or more dislocations** and/or with less than 25% bone loss?*

| Outcome | Study results and measurements | Absolute effect estimates | | Certainty of the Evidence (Quality of evidence) | Conclusions |
|---|---|---|---|---|---|
| | | Osseous procedure | Soft tissue procedure | | |
| (re)dislocation (critical) | Risk difference: 0.04 (95%-BI -0.09 — 0.17) Based on data from 222 patients in 3 studies | **27** per 1000* | **98** per 1000<br>Difference: **71 more per 1000** | **Low** Due to very serious risk of bias[1] | Soft tissue procedure may result in little to no difference in (re)dislocation when compared with osseous procedure in patients with shoulder instability with two or more luxations with <25% bone loss.<br><br>*Source: Zarezade (2014), Kukkonen (2021), and Abouelsoud (2015)* |
| Complications (critical) | Risk difference 0.00 (95%-CI -0.03 — 0.03) Based on data from 262 patients in 4 studies | **0** per 1000* | **0** per 1000<br>Difference: - | **Low** Due to very serious risk of bias[1] | Soft tissue procedure may result in little to no difference in complications when compared with osseous procedure in patients with shoulder instability with two or more luxations with <25% bone loss.<br><br>*Source: Zarezade (2014), Kukkonen (2021), Russo (2016), and Abouelsoud (2015* |
| Persistent apprehension (important) | Relative Risk 2.18 (95%-CI 0.96 — 4.91) Based op data van 121 patients in 1 study | **119** per 1000* | **259** per 1000<br>Difference: **140 morer per 1000** (95% CI 5 lower – 465 more) | **Low** Due to serious risk of bias, due to serious imprecision[2] | Soft tissue procedure may result in an increase in persistent apprehension when compared with bony procedure in patients with shoulder instability with two or more luxations with <25% bone loss.<br><br>*Source: Kukkonen (2021)* |
| Subluxation (important) | Based on data from 40 patients in 1 study | Persistent instability was only reported in one study (Russo, 2017). The outcome was only reported for the total study population, not per treatment arm. It was reported that: "*three* | | **No GRADE** | It was not possible to draw conclusions or grade the level of evidence, due to the absence of comparative data. |

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| | | *months post-operatively, one patient had a shoulder subluxation"* | | *Source: -* |
| Persistent instability (important) | Based on data from 40 patients in 1 study | Persistent instability was only reported in one study (Russo, 2017). The outcome was only reported for the total study population, not per treatment arm. It was reported that: *"Shoulder stiffness occurred in one female patients with restoration of ROM after 14 months, and in one patient a posterior instability was reported at two years of follow-up.* | **No GRADE** | It was not possible to draw conclusions or grade the level of evidence, due to the absence of comparative data.<br><br>*Source: -* |

1. **Risk of Bias: very serious.** Due to uncertainty whether randomization was performed.
2. **Risk of Bias: serious**. Due to lack of blinding
   **Imprecision: serious.** Due to overlap of the upper limit of the 95% confidence interval with the minimal clinically important difference.

*Question 2a. and 2b.*
*2a. What are the (un)beneficial effects of an **arthroscopic soft tissue (Bankart) procedure, compared with an open soft tissue (Bankart) surgery** in patients with traumatic anterior shoulder instability (without clear bone loss of the glenoid)?*

| **Outcome** | **Study results and measurements** | **Absolute effect estimates**<br>Open Bankart / Arthroscopic Bankart | **Certainty of the evidence** (Quality of evidence) | **Summary** |
|---|---|---|---|---|
| Redislocation | Relative risk: 1.83<br>(CI 95% 1.16 - 2.89)<br>Based on data from 750 participants in 6 studies | **67** per 1000 / **123** per 1000<br>Difference: **56 more per 1000**<br>(CI 95% 11 more - 127 more) | **Low**<br>Due to serious risk of bias, due to serious imprecision[1] | Arthroscopic Bankart repair might increase the risk of redislocation when compared with open Bankart repair in patients with shoulder instability. |
| Complications | Relative risk: 0.7<br>(CI 95% 0.27 - 1.8)<br>Based on data from 364 participants in 1 studies | **55** per 1000 / **38** per 1000<br>Difference: **17 fewer per 1000**<br>(CI 95% 40 fewer - 44 more) | **Very low**<br>Due to serious risk of bias, due to very serious imprecision[2] | The evidence is very uncertain about the effect of arthroscopic Bankart repair on complications, when compared with open Bankart Repair in patients with shoulder instability. |
| Subluxation | Based on data of 0 participants in 0 studies | - | **No GRADE**<br>(no evidence was found) | No evidence was found regarding the effect of postoperative functional activity when compared with postoperative immobilization in patients with shoulder instability that was operatively treated. |

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| Surgical duration | Based on data from 592 participants in 3 studies | Difference: **MD 41.90 lower** (CI 95% 64.24 lower - 19.57 lower) | **Low** Due to serious risk of bias, due to serious imprecision[3] | Arthroscopic Bankart repair might reduce the surgical duration when compared with open Bankart repair in patients with shoulder instability. |
| Persisting apprehension | Based on data of 0 participants in 0 studies | - | **No GRADE** (no evidence was found) | No evidence was found regarding the effect of postoperative functional activity when compared with postoperative immobilization in patients with shoulder instability that was operatively treated. |
| *2b. What are the (un)beneficial effects of an **arthroscopic osseous (Bristow-Latarjet) procedure compared with an open osseous (Bristow-Latarjet) procedure** in patients with traumatic anterior shoulder instability (with suspicion of bone loss of the anterior glenoid)?* | | | | |
| Redislocation | Relative risk: 0.78 (CI 95% 0.23 - 2.62) Based on data from 716 participants in 9 studies | **16** per 1000 **12** per 1000 Difference: **4 fewer per 1000** (CI 95% 12 fewer - 26 more) | **Very Low** Due to serious risk of bias, due to very serious imprecision[4] | The evidence is very uncertain about the effect of arthroscopic open Coracoid transfer surgery on redislocation when compared with open coracoid transfer surgery in patients with shoulder instability. |
| Complicaties post-operative | Relative risk: 0.81 (CI 95% 0.47 - 1.41) Based on data from 1100 participants in 10 studies | **95** per 1000 **77** per 1000 Difference: **18 fewer per 1000** (CI 95% 50 fewer - 39 more) | **Very Low** Due to serious risk of bias, due to very serious imprecision[4] | The evidence is very uncertain about the effect of arthroscopic open Coracoid transfer surgery on surgical duration when compared with open coracoid transfer surgery in patients with shoulder instability. |
| *(Re)dislocation and subluxation (postoperative instability)* | Relative risk: 0.71 (95% CI 0.33 to 1.52) Based on data from 1322 participants in 13 studies | **25** per 1000 **18** per 1000 Difference:7 **fewer per 1000** (CI 95% 17 fewer – 13 more) | **Very Low** Due to serious risk of bias, due to very serious imprecision[4] | The evidence is very uncertain about the effect of arthroscopic open Coracoid transfer surgery on surgical duration when compared with open coracoid transfer surgery in patients with shoulder instability.. |
| Surgical duration | Based on data from 372 participants in 5 studies | | **Very Low** Due to serious risk of bias, due to very serious imprecision[4] | The evidence is very uncertain about the effect of arthroscopic open Coracoid transfer surgery on surgical duration when compared with open coracoid transfer surgery in patients with shoulder instability. |

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| | | Difference: **MD 28.17 lower** (CI 95% 7.73 lower - 48.61 higher) | | |
| Persisting apprehension | Relative risk: 1.24 (CI 95% 0.65 - 2.37) Based on data from 747 participants in 7 studies | **114** per 1000 **141** per 1000 Difference: **27 more per 1000** (CI 95% 40 fewer - 156 more) | **Very Low** Due to serious risk of bias, due to very serious imprecision[4] | The evidence is very uncertain about the effect of arthroscopic open Coracoid transfer surgery on surgical duration when compared with open coracoid transfer surgery in patients with shoulder instability. |

1. **Risk of bias: serious.** Lack of blinding. **Imprecision: serious.** overlap of the lower limit of the 95% confidence interval with the minimal clinically important difference.
2. **Risk of bias: serious.** Lack of blinding. **Imprecision: serious.** overlap of the both limits of the 95% confidence interval with the minimal clinically important difference.
3. **Risk of bias: serious.** Lack of blinding. **Imprecision: serious.** overlap of the upper limit of the 95% confidence interval with the minimal clinically important difference.
4. **Risk of Bias: serious.** Due to lack of correction for confounding factors (not clear if intervention and control group were comparable). **Imprecision: very serious.** Due to overlap of both limits of the 95% confidence interval with the minimal clinically important difference

Question 3. *What are the (un)beneficial effects of a soft tissue procedure compared to an osseous procedure for patients with **recurrent shoulder instability after previous surgery** with <15 % bone loss?*

| **Outcome** | **Study results and measurements** | **Absolute effect estimates** | | **Certainty of the Evidence** (Quality of evidence) | **Conclusions** |
|---|---|---|---|---|---|
| | | Osseous procedure | Soft tissue procedure | | |
| Redislocation (critical)<br><br>persistent instability, subluxation (Important) | RD: -0.06 (95% CI -0.27, 0.15).<br>RD: 0.28 (95% CI 0.14 to 0.42).<br>Based on data from 114 patients in 2 studies (not pooled) | Calvo (2021): **179** per 1000<br><br>Elamo (2020): **0** per 1000 | Calvo (2021): **118** per 1000<br><br>Elamo (2020): **283** per 1000 | **Very Low** Due to serious risk of bias, Due to inconsistency[1] | The evidence is very uncertain about the effect of soft tissue procedure on redislocation, persistent instability and subluxation, when compared with osseous procedure in patients with recurrent shoulder instability after previous operative treatment with <15% bone loss.<br><br>*Source: Calvo (2021), Elamo (2020)* |
| Complications (critical) | RR: 0.00<br>RR: 1.58 (95% CI 0.73, 3.42) | Calvo (2021): | Calvo (2021): | **Very Low** | The evidence is very uncertain about the effect of soft tissue procedures on |

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| | Based on data from 114 patients in 2 studies (not pooled) | **0** per 1000<br><br>Elamo (2020): **261** per 1000 | **0** per 1000<br><br>Elamo (2020): **413** per 1000 | Due to serious risk of bias,<br>Due to inconsistency[1] | complications when compared with osseous procedure in patients with recurrent shoulder instability after previous operative treatment with <15% bone loss.<br><br>*Source: Calvo (2021), Elamo (2020)* |
| Persistent apprehension (important) | No evidence | - | | **No GRADE** | No evidence was found regarding the effect of soft tissue procedure one persistent apprehension when compared with osseous procedure in patients with recurrent shoulder instability after previous operative treatment with <15% bone loss.<br><br>*Source: -* |

1. **Risk of Bias: serious.** Due to concerns regarding the selection of participants and lack of correction for confounding factors
**Inconsistency: serious.** Due to conflicting results
**(Results were retrieved from observational studies, start GRADE low)**