**Supplementary material 3.** Guidance on the use of the methodological quality/risk of bias assessment instrument for studies of primary diagnostic accuracy(QUADAS-2)

# **Phase 1: State the review question:**

|  |
| --- |
| *Patients (setting, intended use of index test, presentation, prior testing):*  |
| *Index test(s):* IAO |
| *Reference standard and target condition:* PA |

**Phase 2: Draw a flow diagram for the primary study**

**Phase 3: Risk of bias and applicability judgments**

QUADAS-2 is structured so that 4 key domains are each rated in terms of the risk of bias and the concern regarding applicability to the research question (as defined above). Each key domain has a set of signalling questions to help reach the judgments regarding bias and applicability.

|  |  |  |
| --- | --- | --- |
| **DOMAIN 1: PATIENT SELECTION****A. Risk of Bias** |  |  |
| Describe methods of patient selection: |  |  |
| * Was a consecutive or random sample of patients enrolled?
 | Yes/No/Unclear |
| * Was a case-control design avoided?
 |  | Yes/No/Unclear |
| * Did the study avoid inappropriate exclusions?
 |  | Yes/No/Unclear |
| **Could the selection of patients have introduced bias?** | **RISK: LOW/HIGH/UNCLEAR** |
| **B. Concerns regarding applicability** |  |  |
| Describe included patients (prior testing, presentation, intended use of index test and setting)**:** |
| **Is there concern that the included patients do not match the review question?** | **CONCERN: LOW/HIGH/UNCLEAR** |

|  |  |  |
| --- | --- | --- |
| **DOMAIN 2: INDEX TEST(S)****If more than one index test was used, please complete for each test.****A. Risk of Bias** |  |  |
| Describe the index test and how it was conducted and interpreted: |  |  |
| * Were the index test results interpreted without knowledge

 of the results of the reference standard? | Yes/No/Unclear |
| * If a threshold was used, was it pre-specified?
 |  | Yes/No/Unclear |
| **Could the conduct or interpretation of the index test****have introduced bias?** | **RISK: LOW/HIGH/UNCLEAR** |
| **B. Concerns regarding applicability****Is there concern that the index test, its conduct, or interpretation differ from the review question?** |  |  |
| **CONCERN: LOW/HIGH/UNCLEAR** |

|  |  |  |
| --- | --- | --- |
| **DOMAIN 3: REFERENCE STANDARD****A. Risk of Bias** |  |  |
| Describe the reference standard and how it was conducted and interpreted: |
| * Is the reference standard likely to correctly classify the target

condition? | Yes/No/Unclear |
| * Were the reference standard results interpreted without knowledge of the results of the index test?
 | Yes/No/Unclear |
| **Could the reference standard, its conduct, or its****interpretation have introduced bias?** | **RISK: LOW /HIGH/UNCLEAR** |
| **B. Concerns regarding applicability** |  |  |
| **Is there concern that the target condition as defined by the reference standard does not match the review question?** | **CONCERN: LOW/HIGH/UNCLEAR** |

|  |  |  |
| --- | --- | --- |
| **DOMAIN 4: FLOW AND TIMING****A. Risk of Bias** |  |  |
| Describe any patients who did not receive the index test(s) and/or reference standard or who were excluded from the 2x2 table (refer to flow diagram):Describe the time interval and any interventions between index test(s) and reference standard: |
| * Was there an appropriate interval between index test(s)

and reference standard? | Yes/No/Unclear |
| * Did all patients receive a reference standard?
 |  | Yes/No/Unclear |
| * Did patients receive the same reference standard?
 |  | Yes/No/Unclear |
| * Were all patients included in the analysis?
 |  | Yes/No/Unclear |
| **Could the patient flow have introduced bias?** | **RISK: LOW /HIGH/UNCLEAR** |