



# QUADAS-2 tool for quality assessment in diagnostic meta-analysis

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Comment on: Xiang Y, Wang G, Zhou L, *et al.* A systematic review and meta-analysis on transvaginal ultrasonography in the diagnosis of deep invasive endometriosis. *Ann Palliat Med* 2022;11:281-90.

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We read with great interest the recently published article titled “*A systematic review and meta-analysis on transvaginal ultrasonography in the diagnosis of deep invasive endometriosis*” (1). This meta-analysis indicated that transvaginal ultrasonography was useful to diagnose deep invasive endometriosis with high sensitivity (98%) and specificity (nearly 100%). After reading this article in detail, we have several questions.

In the “*Quality assessment*” section, the authors stated “*The Quality Assessment of Diagnostic Accuracy Studies (QUADAS) recommended by the Cochrane Collaboration was used as a quality evaluation tool for diagnostic experiments to evaluate the risk of bias in the articles. As shown in Table 1...*” (see page 283) with citing the literature (see reference 16 of original article) (2). However, we found that the citation actually described the QUADAS-2 tool (2), not the QUADAS as the author stated in the article, which was the old version in 2003 (3). QUADAS has been revised as QUADAS-2 in 2011 (2). Although the authors cited the literature of QUADAS-2 (2), the *Tab. 1* of the original article was arranged according to the 2003 version of QUADAS (3). QUADAS-2 tool had been developed and refined after practice, and widely used to assess the quality of included studies in meta-analysis of diagnostic trials in recent years (4-6). The QUADAS-2 tool provided a presentation template of quality assessment results, which comprised 4 domains: patient selection, index test, reference standard, and flow and timing (2). Therefore, we suggested authors to use the QUADAS-2 tool to perform the quality assessment and present the results following the template provided by QUADAS-2 (2).

There were other issues. First, there were two “*Data extraction*” sections (see page 283), of which we thought the second “*Data extraction*” actually belonged to the “*Statistical analysis*”. Secondly, some data were not shown in the article. On page 283, the authors stated “*The data extracted for this study included basic information of the articles...basic participant characteristics of the subjects...research methods...*”, and “*The sensitivity of the research results was analyzed by investigating whether a single study affected the overall results of the combination...*”. But these data or results were not shown in the article. Thirdly, literature search was performed in several databases of “*PubMed, Medline, and Embase...*” (see page 282) but only “*PubMed*” record was shown in *Fig. 1* of the original article. Were there no records searched from other databases? Fourth, what was the “*Score*” in *Tab. 2* of the original article, it was not mentioned in the article.

Anyway, the authors concluded a clinically meaningful meta-analysis. We congratulate the authors on publishing their work in *Annals of Palliative Medicine* and sincerely look forward to the authors’ reply.

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## Footnote

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*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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