

## Correspondence



# Letter to editor in response to: Comparison of diagnostic accuracy between endometrial curettage and aspiration biopsy in patients treated with progestin for endometrial hyperplasia: a Korean Gynecologic Oncology Group study

## OPEN ACCESS

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### Conflict of Interest

No potential conflict of interest relevant to this article was reported.

### Author Contributions

Conceptualization: S.S.; Methodology: S.S., S.M.; Supervision: S.S.; Validation: S.S.; Writing - original draft: S.S., S.M.; Writing - review & editing: S.S., S.M.

- ▶ See the article “Comparison of diagnostic accuracy between endometrial curettage and aspiration biopsy in patients treated with progestin for endometrial hyperplasia: a Korean Gynecologic Oncology Group study” in volume 31, e51.

To the Editor,

We read the paper from Kim et al. [1] published in *J Gynecol Oncol*. The aim of the study was to compare the diagnostic accuracy of dilatation and curettage (D&C) versus endometrial aspiration biopsy in follow-up evaluation of patients treated with progestin for endometrial hyperplasia (EH). In a prospective multicenter study, the authors reported kappa value to compare.

Although we appreciate this significant study, we would like to raise some methodological issues that can affect the interpretation of results. First, it is important to note that the estimate reported by the authors cannot provide all the information needed for diagnostic accuracy and decision-making in clinical practice, since prevalence of the concordance cells dramatically affect the value of kappa [2-4]. Therefore, an alternative approach is to determine sensitivity, specificity, positive and negative predictive values, the likelihood ratios (LR+, ranging from 1 to infinity; the higher the LR+, the more accurate the test; and LR-, ranging from 0 to 1; the lower the LR-, the more accurate the test) and odds ratio (ratio of true to false results), which provides a more accurate estimate [2,5,6]. Second, the authors estimated the diagnostic accuracy by agreement. They mentioned that aspiration biopsy is less accurate than D&C and might not be a reliable method. It should be noted that agreement is typically used to determine reliability (precision). There is a methodological difference between accuracy and reliability. Third, in diagnostic accuracy research, it is essential to evaluate the diagnostic added value, since a diagnostic accuracy of a single test might be excellent, however for clinical purposes it can be worthless. Like evaluating discrimination, it would be possible to estimate the diagnostic added value by receiver operating characteristic (ROC) [2,7,8].

Eventually, any decision in clinical practice needs to evaluate both reliability and accuracy of the test. Without knowledge about the reliability of the test, any judgment would be wrong.

Hence, we suggest the authors to estimate both accuracy and reliability of the test by an appropriate method.

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## REFERENCES

1. Kim MK, Seong SJ, Park DC, Hong JH, Roh JW, Kang SB. Comparison of diagnostic accuracy between endometrial curettage and aspiration biopsy in patients treated with progestin for endometrial hyperplasia: a Korean Gynecologic Oncology Group study. *J Gynecol Oncol* 2020;31:e51.  
[PUBMED](#) | [CROSSREF](#)
2. Grobbee DE, Hoes AW. *Clinical epidemiology: principles, methods, and applications for clinical research*. Burlington, MA: Jones & Bartlett Learning; 2014.
3. Sabour S. Reproducibility of semi-automatic coronary plaque quantification in coronary CT angiography with sub-mSv radiation dose; common mistakes. *J Cardiovasc Comput Tomogr* 2016;10:e21-2.  
[PUBMED](#) | [CROSSREF](#)
4. Naderi M, Sabour S. Reproducibility of diagnostic criteria associated with atypical breast cytology: a methodological issue. *Cytopathology* 2018;29:396.  
[PUBMED](#) | [CROSSREF](#)
5. Sabour S. A common mistake in assessing the diagnostic value of a test: failure to account for statistical and methodologic issues. *J Nucl Med* 2017;58:1182-3.  
[PUBMED](#) | [CROSSREF](#)
6. Šimundić AM. Measures of diagnostic accuracy: basic definitions. *EJIFCC* 2009;19:203-11.  
[PUBMED](#)
7. Sabour S, Ghassemi F. Accuracy, validity, and reliability of the infrared optical head tracker (IOHT). *Invest Ophthalmol Vis Sci* 2012;53:4776.  
[PUBMED](#) | [CROSSREF](#)
8. Sabour S. Reproducibility of dynamic Scheimpflug-based pneumotonometer and its correlation with a dynamic bidirectional pneumotometry device: methodological issues. *Cornea* 2015;34:e14-5.  
[PUBMED](#) | [CROSSREF](#)