Objective
To compare diagnostic accuracy of saline infused sonohysterography (SIS) with transvaginal ultrasound (TVS) in detection of endometrial pathology in premenopausal women.

Methods
We retrospectively analyzed a total of 299 premenopausal women (21≤ age <49) who were histologically diagnosed by operative hysteroscopy after TVS and SIS between January 2007 and November 2017 in a single institution. Sensitivity, specificity and likelihood ratio (LR+) of TVS and SIS were calculated for the diagnosis of endometrial pathology.

Results
In detecting any endometrial pathology, both TVS and SIS had high sensitivity (99.6% vs. 100%), but, specificity of both were low (2.7% vs. 54%). The LR+ of SIS was higher than TVS (2.18 vs. 1.02), and LR- of SIS was lower than TVS (0 vs. 0.14).

Conclusion
The present study proved that SIS is better modality than TVS in detecting any endometrial pathology. In addition, SIS appears to be more effective than TVS in identifying SM uterine leiomyoma.

Figure 1. Comparison of ROC curves of the diagnostic accuracy of TVS and SIS for polyp (upper) and submucosal myoma (lower)