Objectives To prospectively evaluate the diagnostic performance of transvaginal ultrasound (TVUS) in patients with endometriosis, after implementation of a feedback protocol.

Methods Three ultrasonographers, activating for at least 5 years, were assessed using a standardized scoring form, and then trained to perform the IDEA (International Deep Infiltrating Endometriosis Analysis) four steps protocol for examining women with clinical suspicion of endometriosis. 68 surgically confirmed endometriosis cases were used to enhance personal feedback, to discuss differences between the TVUS assessment and surgical findings. 5 different endometriosis-related lesions were discussed by two experienced minimally invasive surgeons and the three ultrasonographers. After the execution of the feedback sessions (four weeks, 12 meetings), 31 new, surgically managed cases were assessed by the two teams, using the same form. Kappa coefficients, sensitivity, specificity, and differences in percentage agreement and correct diagnosis (p-value, McNemar's test) were calculated for each lesion. Overall accuracy was investigated.

Results The overall kappa and percentage of agreement between the 2 teams were dramatically increased in comparison with the previous results (k=0.81 versus k=0.48 and 90.7% versus 78.2%, respectively). The sensitivity was increased from 35.6% to 78.8% for ultrasonographer 1, from 61.5% to 72.6% for ultrasonographer 2 and from 50.2% to 66% for ultrasonographer 3. The overall specificity increased from 74.1% to 88.3%. The overall agreement was also much higher compared to the previous results (33.7% and 63.6%). The most important improvement was recorded in regards to the pouch of Douglas assessment.

Conclusion The implementation of a feedback protocol improved the accuracy of TVUS in patients with clinical suspicion of endometriosis.