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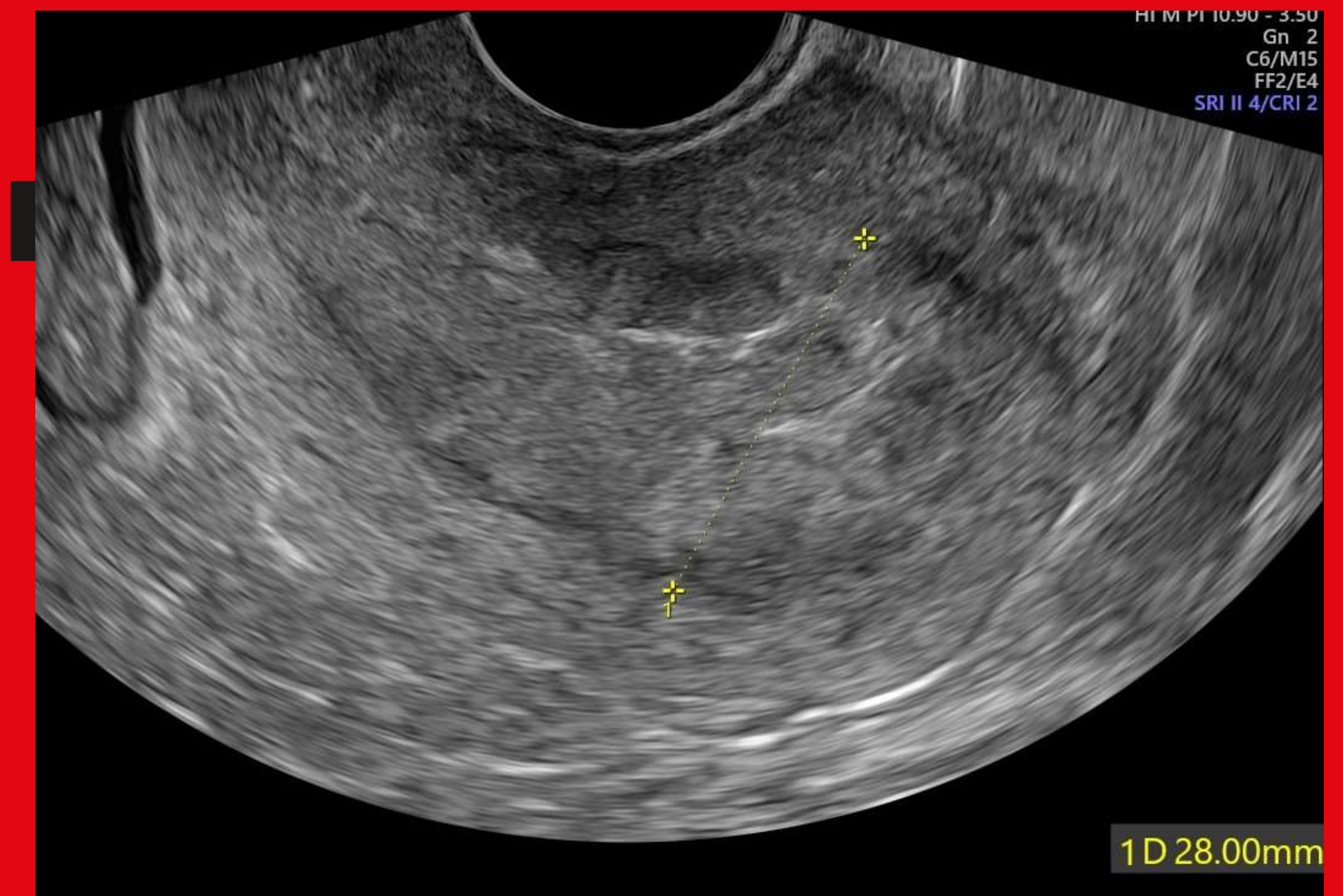
Expert gynecological sonographer's evaluation can replace MRI in myometrial invasion detection in endometrial cancer

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Objectives Preoperative work up is mandatory in patients affected by endometrial cancer and it includes pelvic examination and imaging investigations. MRI is highly specific in the assessment of deep myometrial invasion (MI), cervical stromal involvement and lymph node involvement but preoperative transvaginal/transabdominal ultrasound (TV/TA US) can be also a sensitive and specific tool in the evaluation of myometrium, cervical stroma and lymph nodes.

Methods Prospective evaluation of comparison of diagnostic accuracy of MRI and TV/TA US for myometrial invasion detection, was performed by different expert sonographers.

Results 37 patients with endometrial cancer were enrolled and underwent both pelvic MRI and TV/TA US. Myometrial invasion assessment of MRI and US were compared to final surgical histological staging (invasion of more or less than 50% of myometrium, cervical involvement and lymph nodes metastasis). In 28 of 37 (76%) patients, MRI and US were concordant on myometrial invasion and were confirmed by surgical staging; among these ones, in one case the two techniques agreed on cervical invasion and suspicious lymph nodes while in one case they both did not evaluate a synchronous ovarian cancer. In 2 patients myometrial invasion was not evaluable by US because of patients' habitus. In 4 of 37 patients (10 %), both MRI and US underrated MI, while in 2 (5%) they both overrated MI. In one case (2,7%) US overrated MI compared to MRI and surgical staging.



Conclusion

Diagnostic performance of TVUS and MRI for detecting myometrial invasion in endometrial carcinoma are similar.