

Accuracy of ultrasound evaluation of endometrial cancer for assessing myometrial invasion and cervical stromal involvement.

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Objectives:

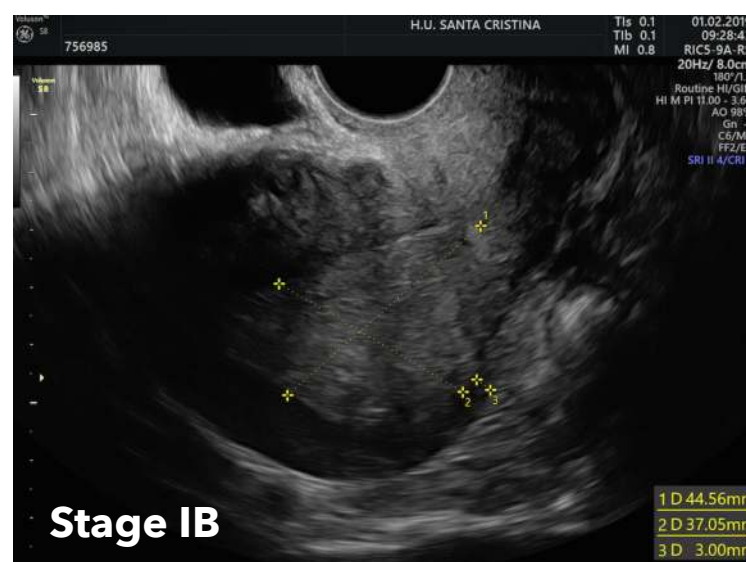
Preoperative assessment of myometrial infiltration in patients with endometrial cancer may help to identify high-risk cases that may benefit from extended surgery. The aim of this study is to analyse the diagnostic accuracy of two-dimensional transvaginal ultrasound (2D-TVU) for detecting deep myometrial invasion (MI) and cervical stromal involvement (CSI) of endometrial cancer.

Methods:

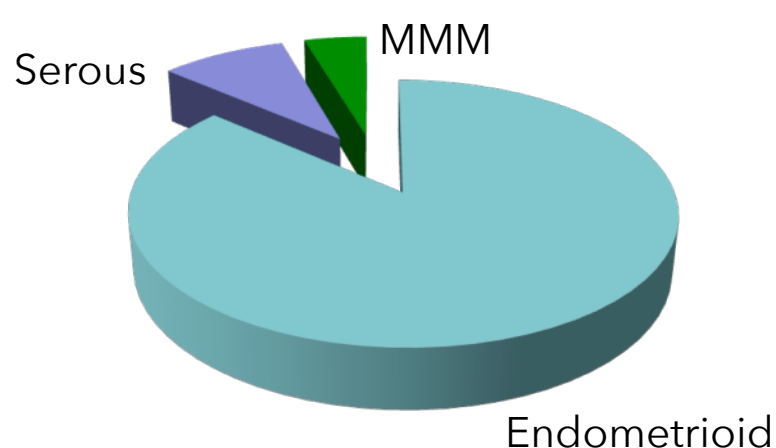
All patients with an endometrial biopsy confirming endometrial cancer underwent a transvaginal ultrasound before surgery. MI and CSI was assessed by subjective impression and recorded prospectively. At the time of the operation the specimens were sent for frozen section and the decision of performing lymph node dissection (LND) was taken intraoperatively. Histological diagnosis after hysterectomy served as gold standard.

Results:

- Twenty-two patients were included in the study. The mean age was 64.3 years old (43-84).
- The histology was endometrioid in 19 patients (86.4%), serous in 2 (9.1%) and Mixed Müllerian Malignant Tumour in 1 (4.5%). Superficial MI (<50%) on ultrasound was reported in 15 patients (68.2%) and deep MI (>50%) in 6 cases (27.3%). Just in one case the cervix was thought to be affected on ultrasound (4.5%).
- All patients had hysterectomy and bilateral salpingo-oophorectomy, 10 patients underwent bilateral pelvic LND and 4 para-aortic LND, based on MI on frozen section and histological type.
- The final tumour stage on histology was pT1A in 14 patients (63.6%), pT1B in 6 (27.3%) and pT2 in 2 (9%). There was just one case of no correlation between frozen section and final histology and the patient had a re-operation for LND. Two patients had pelvic and para-aortic lymph node involvement (stage IIIC2).
- Accuracy for diagnosing deep MI with 2D-TVU was 86.4%, and for cervical involvement was 95.5%.



Type of endometrial cancer



	Stage IA (<50% MI)	Stage IB (>50% MI)	Stage II (CSI)
US evaluation	15 (68.2%)	6 (27.3%)	1(4.5%)
Final Histology	14 pT1A	6 pT1B	2pT2

Accuracy for diagnosing deep MI with 2D-TVU was 86.4%, and for cervical involvement was 95.5%.

Conclusions:

- Ultrasound evaluation by subjective impression seems to be a good method for assessing MI and CSI in endometrial cancer.
- The use of preoperative ultrasound in combination with frozen section improves diagnostic performance.