

## **Top Cited Endometriosis References**

**Abrao, M. S., et al. (2007). "Comparison between clinical examination, transvaginal sonography and magnetic resonance imaging for the diagnosis of deep endometriosis." *Hum Reprod* 22(12): 3092-3097.**

**BACKGROUND:** Deeply infiltrating endometriosis affecting the retrocervical region and the rectosigmoid generally requires surgical treatment. Clinical examination, transvaginal ultrasonography (TVUS) and pelvic magnetic resonance imaging (MRI) are useful in the preoperative diagnosis of the involvement of these sites. The objective of this study was to evaluate the capacity of digital vaginal examination, TVUS and MRI to diagnose rectosigmoid and retrocervical involvement. **METHODS:** A total of 104 patients with clinically suspected endometriosis were submitted to clinical examination, pelvic MRI and TVUS until 3 months prior to videolaparoscopy and the findings of these methods were matched with histopathological confirmation of endometriosis. **RESULTS:** Endometriosis was histologically confirmed in 98 of 104 (94.2%) patients. With respect to the rectosigmoid and retrocervical sites, respectively, digital vaginal examination had a sensitivity of 72 and 68%, specificity of 54 and 46%, positive predictive value (PPV) of 63 and 45%, negative predictive value (NPV) of 64 and 69% and accuracy of 63 and 55%. For TVUS, sensitivity was 98 and 95%, specificity 100 and 98%, PPV 100 and 98%, NPV 98 and 97% and accuracy 99 and 97%. MRI had a sensitivity of 83 and 76%, specificity of 98 and 68%, PPV of 98 and 61%, NPV of 85 and 81% and accuracy of 90 and 71%. **CONCLUSIONS:** TVUS had better sensitivity, specificity, PPV, NPV and accuracy in cases of deep retrocervical and rectosigmoid endometriosis when compared with MRI and digital vaginal examination, confirming that it is an important preoperative examination for the definition of surgical strategies.

**Bazot, M., et al. (2004). "Deep pelvic endometriosis: MR imaging for diagnosis and prediction of extension of disease." *Radiology* 232(2): 379-389.**

**PURPOSE:** To prospectively evaluate the accuracy of magnetic resonance (MR) imaging for the preoperative diagnosis of deep pelvic endometriosis and extension of the disease. **MATERIALS AND METHODS:** One hundred ninety-five patients (mean age, 34.2 years; range, 20-71 years) who were suspected of having pelvic endometriosis were recruited at two institutions. Two experienced radiologists evaluated the MR images independently. Deep pelvic endometriosis was defined as implants or tissue masses that appeared as hypointense areas and/or hyperintense foci on T1- or T2-weighted MR images in the following locations: torus uterinus, uterosacral ligaments (USLs), vagina, rectovaginal septum, rectosigmoid, and bladder. MR imaging results were compared with surgical and pathologic findings. Sensitivity, specificity, predictive values, and accuracy of MR imaging for prediction of deep pelvic endometriosis were assessed. **RESULTS:** Pelvic endometriosis was confirmed at pathologic examination in 163 (83.6%) of 195 patients. Endometriomas, peritoneal lesions, and deep pelvic endometriosis were diagnosed on the basis of surgical findings, alone or combined with pathologic findings, in 111 (68.1%), 83 (50.9%), and 103 (63.2%) of 163 patients, respectively. Torus uterinus and USL were the most frequent sites of deep pelvic endometriosis. The sensitivity, specificity, positive and negative predictive values, and accuracy of MR imaging for deep pelvic endometriosis were 90.3% (93 of 103), 91% (84 of 92), 92.1% (93 of 101), 89% (84 of 94), and 90.8% (177 of 195), respectively. The

sensitivity, specificity, and accuracy, respectively, of MR imaging for the diagnosis of endometriosis in specific sites were as follows: USL, 76% (57 of 75), 83.3% (100 of 120), and 80.5% (157 of 195); vagina, 76% (16 of 21), 95.4% (166 of 174), and 93.3% (182 of 195); rectovaginal septum, 80% (eight of 10), 97.8% (181 of 185), and 96.9% (189 of 195); rectosigmoid, 88% (53 of 60), 97.8% (132 of 135), and 94.9% (185 of 195); and bladder, 88% (14 of 16), 98.9% (177 of 179), and 97.9% (191 of 195). CONCLUSION: MR imaging demonstrates high accuracy in prediction of deep pelvic endometriosis in specific locations.

**Bazot, M., et al. (2009). "Diagnostic accuracy of physical examination, transvaginal sonography, rectal endoscopic sonography, and magnetic resonance imaging to diagnose deep infiltrating endometriosis." *Fertil Steril* 92(6): 1825-1833.**

OBJECTIVE: To compare the value of physical examination, transvaginal sonography (TVS), rectal endoscopic sonography (RES), and magnetic resonance imaging (MRI) for the assessment of different locations of deep infiltrating endometriosis (DIE). DESIGN: Retrospective longitudinal study. SETTING: Tertiary university gynecology unit. PATIENT(S): Ninety-two consecutive patients with clinical evidence of pelvic endometriosis. INTERVENTION(S): Physical examination, TVS, RES, and MRI, performed preoperatively. MAIN OUTCOME MEASURE(S): Descriptive statistics, calculation of likelihood ratios (LR(+)) and LR(-)) of physical examination, TVS, RES, and MRI for DIE in specific locations confirmed by surgery/histology. RESULT(S): The sensitivity and LR(+) and LR(-) values of physical examination, TVS, RES, and MRI were, respectively, 73.5%, 3.3, and 0.34, 78.3%, 2.34, and 0.32, 48.2%, 0.86, and 1.16, and 84.4%, 7.59, and 0.18 for uterosacral ligament endometriosis; 50%, 3.88, and 0.57, 46.7%, 9.64, and 0.56, 6.7%, -, and 0.93, and 80%, 5.51, and 0.23 for vaginal endometriosis; and 46%, 1.67, and 0.75, 93.6%, -, and 0.06, 88.9%, 12.89, and 0.12, and 87.3%, 12.66, and 0.14 for intestinal endometriosis. CONCLUSION(S): The MRI performs similarly to TVS and RES for the diagnosis of intestinal endometriosis but has higher sensitivity and likelihood ratios for uterosacral ligament and vaginal endometriosis.

**Dallaudiere, B., et al. (2013). "MRI atlas of ectopic endometriosis." *Diagn Interv Imaging* 94(3): 263-280.**

Ectopic endometriosis is a common condition which is often underdiagnosed, where MRI can help make a diagnosis simply, non-invasively and without irradiation. However, imagery signs of it are enormously polymorphic with a wide range of possible locations. In this paper, we have tried to illustrate comprehensively all its MRI appearances depending on the different locations where it occurs.

**Koutoukos, I., et al. (2011). "Imaging of endometriosis with computerized tomography colonography." *Fertil Steril* 95(1): 259-260.**

We demonstrate the use of computerized tomography colonography for the imaging of intestinal endometriosis to facilitate preoperative management in our hospital setting.

**Umaria, N. and J. F. Olliff (2001). "Imaging features of pelvic endometriosis." Br J Radiol 74(882): 556-562.**

Although laparoscopy remains the investigation of choice in the diagnosis of endometriosis, imaging does play a significant role in its management. This pictorial review concentrates on the techniques used in the imaging of endometriosis.