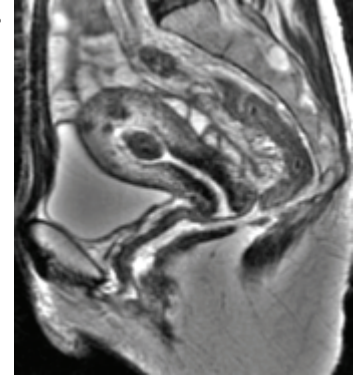


When Does She Need a Pelvic MRI?

Fibroids/Uterine Bleeding

Many pre and post-menopausal women develop abnormal uterine bleeding. While this sometimes can be evaluated by ultrasound, MRI is frequently used for more detailed evaluation of uterine bleeding. One of the most common causes is uterine fibroids. **Compared with ultrasound, MRI allows for much more anatomic detail as well as better measurements of uterine fibroids.** In addition, MRI can determine which and how many fibroids are degenerating, which can be a painful condition, as well as determine the exact location of fibroids which can, in many cases, contribute to uterine bleeding. Patients who undergo fibroid/uterine artery embolization for treatment contributing to excessive uterine bleeding will be imaged prior to and following uterine artery embolization with pelvic MR examinations, as **this allows for the evaluation of response to treatment.**



MRI of Submucous Fibroid

Evaluation of Adenomyosis

Adenomyosis, a condition in which the lining of the uterus grows into the muscular wall of the uterus, can contribute to significant pelvic pain and occasionally uterine bleeding. While this is an extremely difficult diagnosis to make on pelvic ultrasound due to the similar appearance of adenomyosis and fibroids, **pelvic MRI is an excellent modality at differentiating fibroids from adenomyosis.**

Evaluation of a Pelvic Mass, Especially an Ovarian Mass

If you feel a pelvic mass on manual exam, or if a pelvic mass is discovered as part of a CT scan or pelvic ultrasound, Pelvic MRI is frequently utilized for further evaluation. Both benign and malignant



Coronal MRI showing large ovarian cystadenocarcinoma.

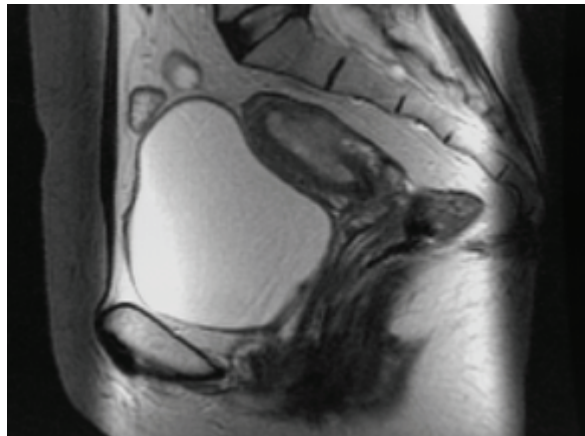
ovarian masses can occur and are sometimes difficult to characterize on ultrasound. **Due to its excellent tissue resolution and ability to differentiate between blood, fat, and other types of soft tissues, MRI is excellent at further characterizing masses within the ovary.** Possibilities would include a hemorrhagic cyst (a cyst which bleeds into itself) and endometrioma (a sequela of endometriosis), various types of benign and malignant ovarian tumors, and some conditions which may mimic an ovarian mass such as a peritoneal inclusion cyst which can occur in a patient who has had a prior hysterectomy but still has one or both ovaries remaining.

An additional indication for pelvic MRI is to **help differentiate a fibroid growing off the uterus which may mimic an ovarian mass on physical exam and sometimes on ultrasound.** Frequently, MRI can distinguish between this type of fibroid versus a more concerning ovarian mass.

Finally, hydrosalpinx, an abnormally dilated Fallopian tube, may also mimic an ovarian mass on pelvic CT scan or ultrasound. Again, MRI is frequently utilized to differentiate hydrosalpinx from a more concerning ovarian mass.

Pelvic Pain or Endometriosis

Endometriosis is a condition in which the lining of the uterus is found at different sites within the pelvis but outside of the uterus. This frequently can be a cause of significant pelvic pain and in some cases infertility and occasionally an ovarian or pelvic mass. MRI is sometimes used in the evaluation of pelvic pain as well as to evaluate for the presence and extent of endometriosis.



MRI demonstrating an endometrial carcinoma with deep myometrial invasion.

Pelvic Cancer

Ovarian, endometrial and cervical cancer may occur. As mentioned above, MRI is sometimes utilized in the evaluation of ovarian cancer. Pelvic MRI is also frequently utilized for staging of cervical cancer. In this context **MRI can help determine the extent of structures involved by the cervical cancer**, for example, whether or not the lower or upper uterus is involved and whether or not the structures next to the uterus, such as the ureters, are involved.

Evaluation of Infertility and Uterine Anomalies

The uterus is a tube-like structure which actually forms by the fusion of two smaller tubes, one on the left side of the body and one on the right side of the body to form a larger tube-like structure called the uterus. This fusion takes place in the fetus while the fetus is inside the maternal uterus. On occasion there can be a failure or a variation in the fusion between the left and right tubes during fetal development. Some of these malformations can interfere with the ability to become pregnant. **MRI is excellent at evaluating the various uterine anomalies as well as any associated anomalies such as malformations in the ovaries and kidneys.**

