

Step1:

- **Answer:**
 - b) Cystic degeneration

step2:

- **Answer:**
 - b) Aggressive angiomyxoma

- **Findings:**

- Contrast enhanced MRI shows an enhancing, isointense signal on T1, hyper intense signal on T2 ,Large pelvic soft tissue mass with displacement of the bowel loops, uterus and urinary bladder.
- Trans levator - para vaginal extension to the perineal region is noted.
- A laminated pattern with alternating hyper- and hypointense linear areas due to the presence of collagen fibrils in the myxoid tissue is seen on T2 weighted images.
- Swirling or laminated pattern on contrast-enhanced MRI is characteristic for the aggressive angiomyxoma and it provides the diagnosis.

- **Discussion:**

- Aggressive angiomyxoma is a rarely encountered benign mesenchymal tumor that occurs predominantly in the pelvic and perineal area, with a strong female predominance in premenopausal age group. The tumor is derived from mesenchymal tissue mostly from the pelvic and perineal regions including the genitourinary tract and rectum. Despite its name, it represents a benign tumoral lesion and the term “aggressive” emphasizes the often-infiltrative nature of the tumor and its frequent association with local recurrence.
- Surgical resection with long term follow up is the treatment of choice.
- In ER and PR positive cases, hormonal therapy is also found to be helpful.
- Aggressive angiomyxomas display unusual growth patterns like trans levator extension with displacement of perineal structures rather than invasion with preservation of fat planes between the tumor and the organs in the vicinity.
- Reported signal characteristics of the lesion include: T1: tends to be iso to low signal,T2: predominantly high signal and typically has a swirled appearance, Due to the presence of collagen fibrils in the myxoid tissue, a laminated pattern may be seen on T2W images and post contrast T1 images, with alternating hyper- and hypointense linear areas. Rarely, cystic degeneration and intra tumoral vessels may be seen.



Sonographic view of the lesion shows hypoechoic mass with fibrillary internal structures (arrow).

Cingoz M et al. Radiologic imaging findings of pelvic aggressive angiomyxoma correlated with surgical and pathological features. *Egypt J Radiol Nucl Med* 52, 259 (2021).

▪ **References:**

- Surabhi V, Garg N, Frumovitz M, Bhosale P, Prasad S, Meis J. Aggressive Angiomyxomas: A Comprehensive Imaging Review With Clinical and Histopathologic Correlation. *American Journal of Roentgenology*. 2014;202(6):1171-1178.
- Karwacki GM, Stöckli M, Kettelhack C, Mengiardi B, Studler U. Radiographic diagnosis and differentiation of an aggressive angiomyxoma in a male patient. *J Radiol Case Rep*. 2013 Jul 1;7(7):1-6.

“Case courtesy of Behnaz Moradi, MD, Associate Professor of Radiology, Yas complex Hospital, Tehran University of Medical Sciences. “