

# When Fibroids Aren't Fibroids: A Rare Case of Smooth Muscle Tumor of Uncertain Malignant Potential

Authors: Aamina R. Khaleel<sup>1</sup>, Natasha Vania, D.O, M.A<sup>2</sup>, Esra Erden, MD<sup>2</sup>, Erum Azhar, MD, MS PHS, MHQS, FACOG<sup>2</sup>, Mia Lynne Van Eken D.O., MBA, FACOG<sup>2,3</sup>

1-Rocky Vista University College of Osteopathic Medicine, Ivins, UT

2-Creighton University East Valley Arizona, Obstetrics and Gynecology Residency Program, Gilbert, AZ

3. East Valley Women for Women, Chandler, AZ



## OBJECTIVES

- To highlight inclusion of smooth muscle tumors of uncertain malignant potential (STUMP) in the differential diagnosis of rapidly growing or numerous uterine fibroids.
- To underscore diagnostic and management challenges of STUMP due to the absence of standardized, evidence-based surveillance guidelines.

## INTRODUCTION/BACKGROUND

Uterine smooth muscle tumors range from benign leiomyomas to aggressive leiomyosarcomas. Smooth muscle tumor of uncertain malignant potential (STUMP) is a diagnostically challenging intermediate, not meeting criteria for either<sup>1</sup>. Although STUMP carries a more favorable prognosis than leiomyosarcoma, recurrence—including progression to leiomyosarcoma—can occur years after treatment<sup>3,4</sup>. Currently, no standardized, evidence-based guidelines exist for STUMP postoperative management or surveillance; recommendations rely on retrospective studies and expert consensus. Management is further complicated in reproductive-aged patients desiring fertility preservation, underscoring the value of individual case reports.

## CASE DESCRIPTION

- A G1P1 in her 40s with a more than ten year history of uterine fibroids, diagnosed following her first pregnancy, with a prolonged gap in follow-up.
- Upon re-establishing care with her primary OB/GYN in Nov.2023, pelvic ultrasonography demonstrated progression from four to six fibroids, the largest increasing to 4.7 cm.
- By 2024 end, she developed: worsening bloating, intermenstrual bleeding, heavy menses, and cycle length shortening from 25 to 21 days. Endometrial biopsy revealed simple hyperplasia without atypia.
- Repeat imaging showed the dominant fibroid at 5.8 cm and uterine volume increasing from 370 cc to 724 cc over one year. Medical management included 10 mg norethindrone daily. After consultation with Interventional Radiology, she underwent uterine artery embolization (UAE) March 2025.
- Pre-UAE MRI demonstrated an enlarged uterus measuring 11.8 × 13.8 × 16.6 cm with approximately 25 fibroids. Although UAE provided transient improvement, symptoms recurred within three months, requiring an increase in norethindrone to 5 mg twice daily and iron supplementation.
- June 2025 ultrasonography showed continued uterine enlargement (784.5 mL). Given persistent symptoms and progressive growth, the patient elected hysterectomy. Norethindrone temporarily increased to 15 mg daily.
- Following her primary OB/GYN's leave of absence in August 2025, the patient was referred to our clinic. Examination revealed an enlarged uterus extending to the umbilicus. An open hysterectomy was scheduled for October 2025.
- Intraoperatively, numerous fibroids required piecemeal removal, yielding a specimen weight of 787 grams. Histopathology revealed STUMP within multiple fibroids. The patient was referred to Gynecologic Oncology, recommending annual surveillance with physical and pelvic examinations and baseline CT imaging.

## DISCUSSION

This case illustrates the challenge of differentiating STUMP from benign leiomyomas preoperatively, as clinical presentation and imaging findings are often indistinguishable. Definitive diagnosis relies on histopathologic assessment of mitotic activity, cytologic atypia, and necrosis. The rarity of STUMP limits available prognostic data and complicates surveillance planning, necessitating individualized management strategies based on expert consensus.

## OUTCOMES/CONCLUSION

- Persistent abnormal uterine bleeding and progressive uterine enlargement despite therapy should prompt consideration of rare uterine neoplasms, including STUMP.
- Increased reporting improves diagnostic awareness and guides surveillance recommendations.

## REFERENCES

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