

# Uterine Smooth Muscle Tumor of Unknown Malignant Potential (STUMP): Diagnostic and Management Challenges

DR ARFA BIN SAQIB, FELLOW- GYNAECOLOGICAL ONCOLOGY, SURGICAL ONCOLOGY;  
DR MARIA ASLAM, , FELLOW- GYNAECOLOGICAL ONCOLOGY, SURGICAL ONCOLOGY;  
DR ANAM RIAZ, SURGICAL ONCOLOGY;  
DR M. USMAN, SURGICAL ONCOLOGY;  
DR AAMIR ALI SYED, SURGICAL ONCOLOGY;  
DR SHAHID KHATTAK, SURGICAL ONCOLOGY;  
Shaukat Khanum Memorial Cancer Hospital and Research Centre, Radiation Oncology, Lahore, Pakistan.

## BACKGROUND

Uterine smooth muscle tumors of uncertain malignant potential (STUMP) are rare neoplasms that lie between benign leiomyomas and malignant leiomyosarcomas. They present a major diagnostic dilemma due to overlapping histological and imaging features and pose management challenges in balancing oncologic safety and fertility preservation.

## OBJECTIVE

To report a rare case of STUMP in a young nulliparous woman and highlight the diagnostic ambiguity, imaging features, surgical management, and post-treatment surveillance plan.

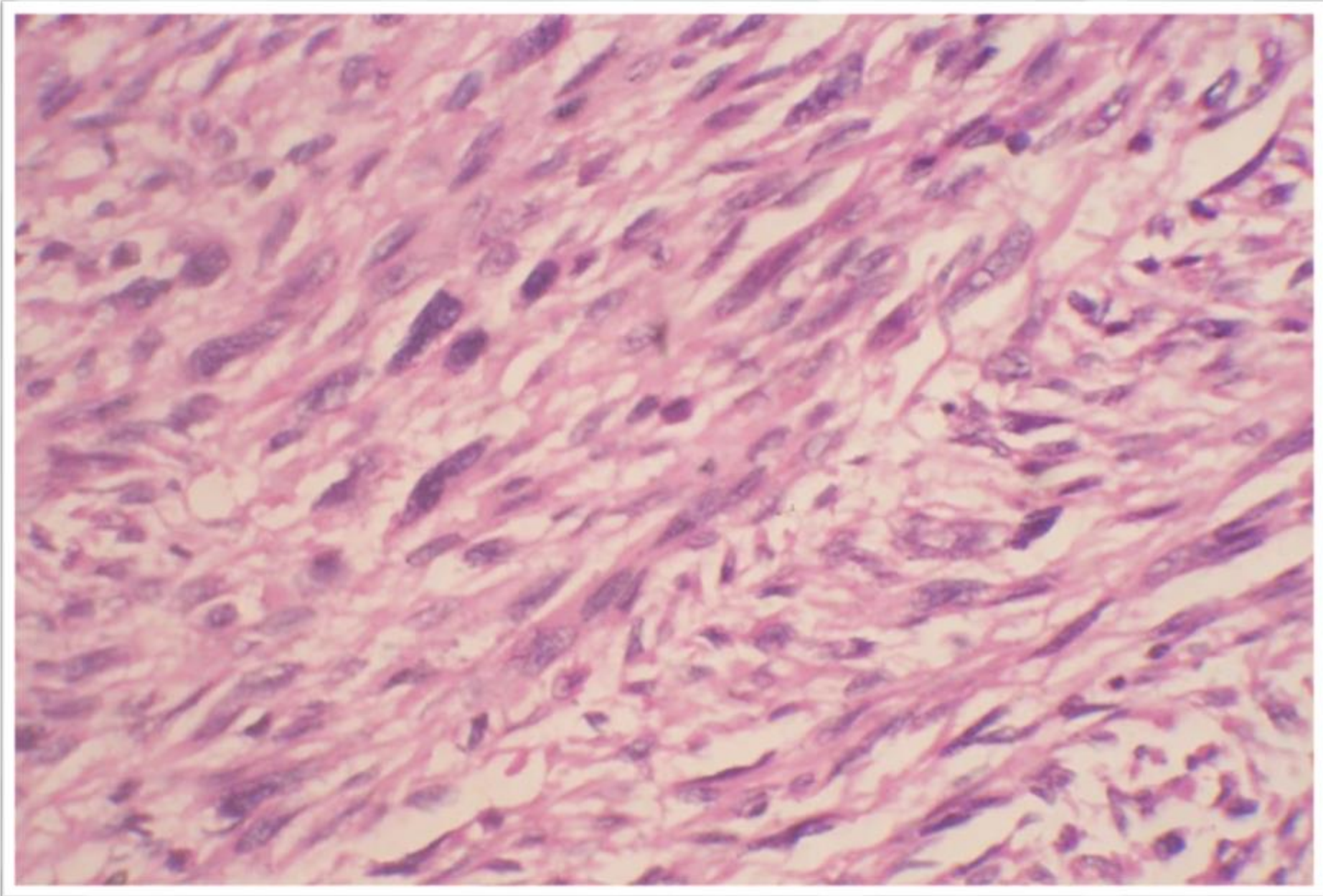
## CASE SUMMARY

### Patient Presentation:

- **Age:** 28 years
- **Gravida/Para:** Nulliparous
- **Symptoms:** Progressive abdominal pain and swelling for five months
- **Examination:** 24 cm abdominopelvic mass extending up to the epigastrium, firm and mobile.

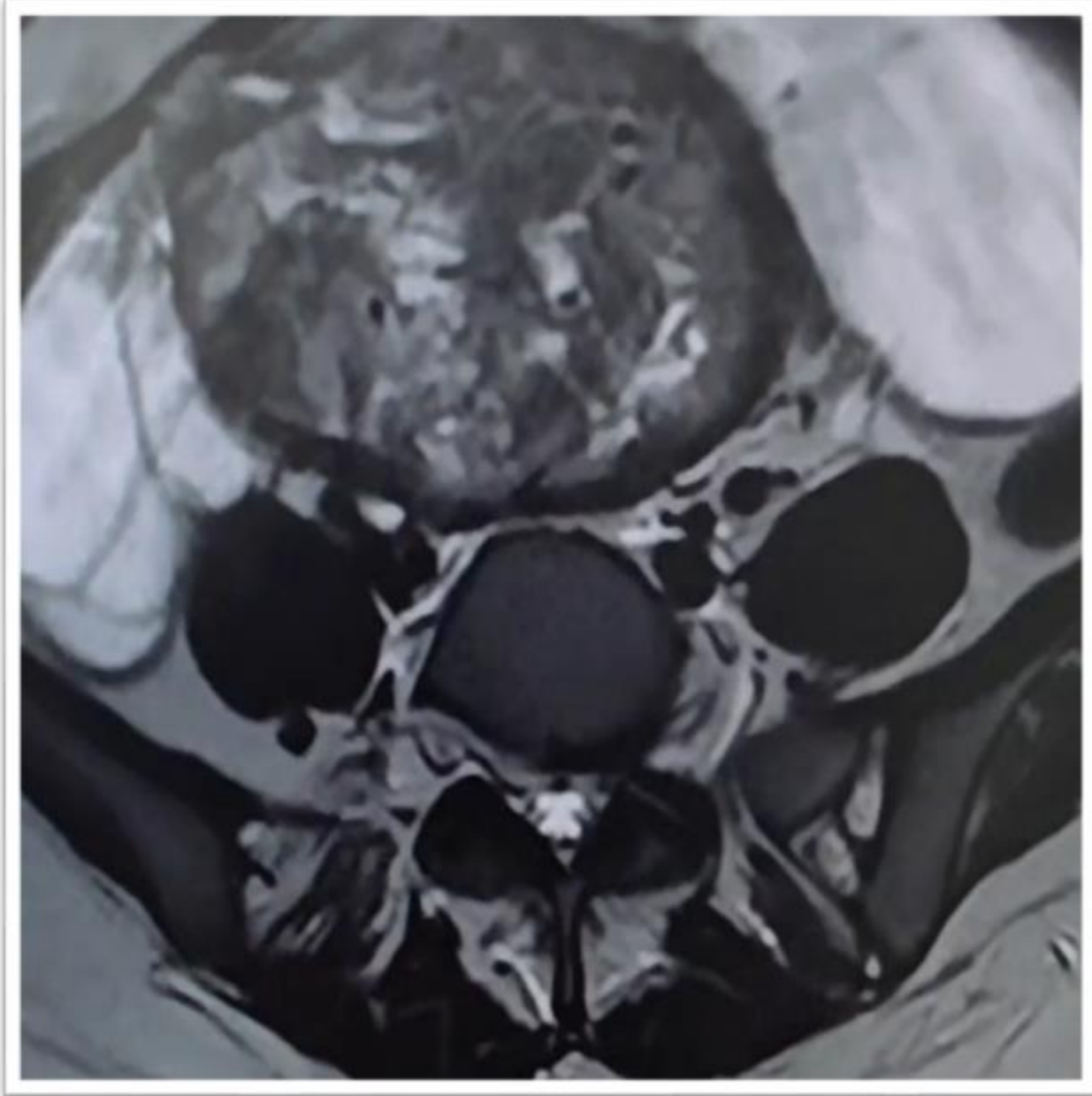
## HISTOPATHOLOGY

- Moderate **cellular atypia**.
- **Low mitotic activity** (2–5/10 HPF).
- **Focal coagulative necrosis** These features were consistent with a **uterine smooth muscle tumor of uncertain malignant potential (STUMP)** rather than leiomyosarcoma.



## MANAGEMENT

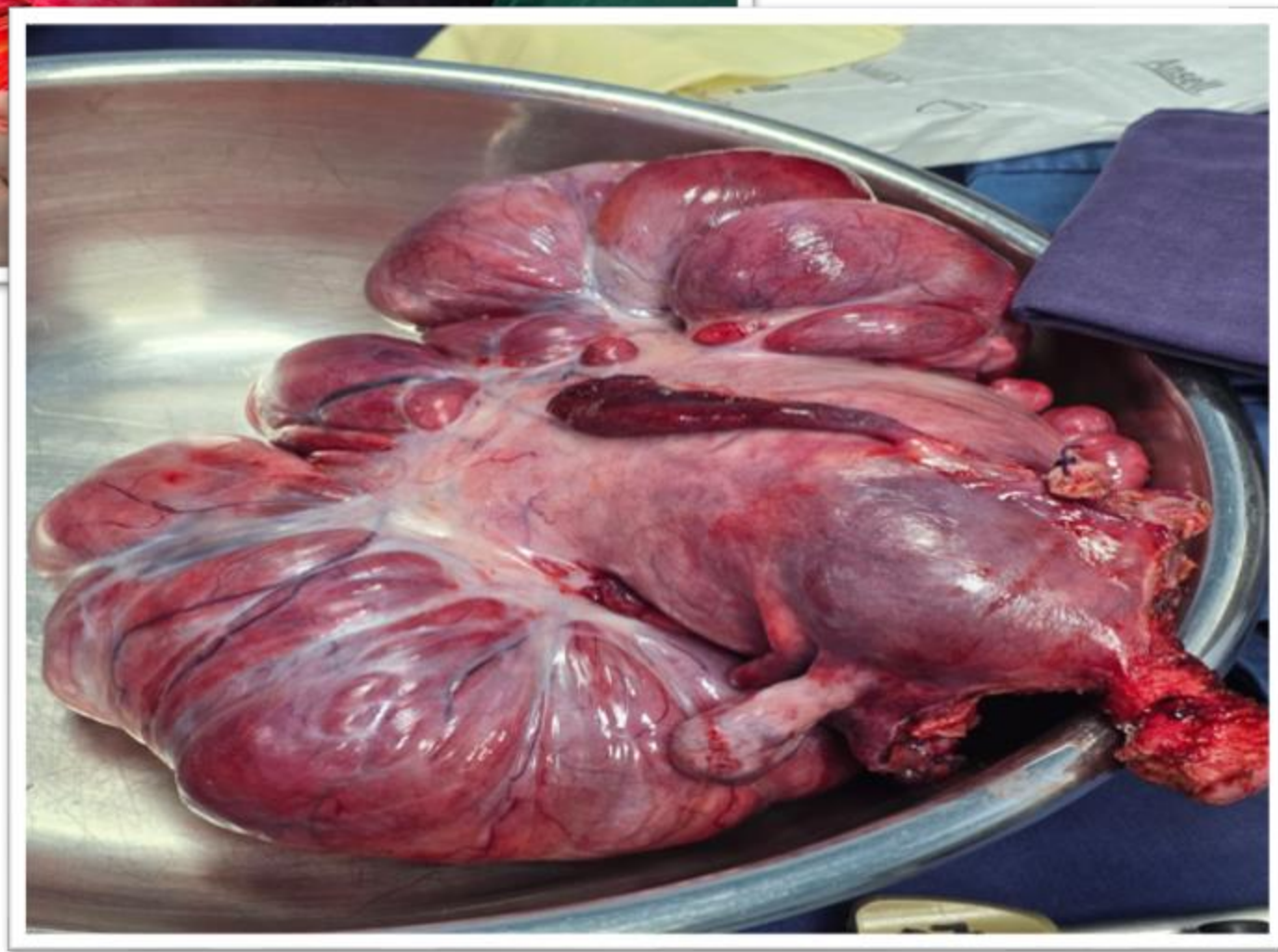
### Imaging



- **Ultrasound and CT scan:** Large, heterogeneous, solid-cystic uterine mass (197 × 205 × 77 mm).
- **Originating from** the uterine fundus and extending to the upper mid-abdomen.
- **Features** raised suspicion of a sarcomatous lesion.

### Surgical Management

- The patient underwent::
- Exploratory laparotomy, Total abdominal hysterectomy
- Bilateral salpingectomy
- Left oophorectomy, with preservation of the right ovary



## POST-OPERATIVE COURSE

- Recovery was uneventful.
- **Follow-up protocol:** CT imaging every 3 months for the first 3 years, then every 6 months for 2 years.
- No recurrence noted to date.
- Patient was counseled on fertility implications and hormonal changes.

## DISCUSSION

**Diagnostic dilemma:** Overlapping features between benign and malignant smooth muscle tumors make diagnosis challenging.  
**Histologic criteria:** Cellular atypia, mitotic index, and tumor cell necrosis (Stanford criteria).  
**Role of imaging:** MRI/CT often show nonspecific features; differentiation from leiomyosarcoma remains difficult.  
**Emerging tools:** Immunohistochemical markers (p16, p53, Ki-67) and molecular profiling may enhance accuracy.  
**Management decisions:** Depend on **age, fertility desire, tumor size, and risk features**.  
**Long-term follow-up** is essential due to risk of recurrence and rare malignant transformation.

## REFERENCES

1. Bucuri CE et al. *Current Oncology* 2024; 31(9): 5242–5254.
2. Montik N et al. *Diagnostics* 2024; 14(13): 1438.
3. Kurtoğlu N et al. *J Pediatr Adolesc Gynecol* 2025; 38(3): 429–432.

## KEY TAKEAWAYS

- STUMP lies on the histologic spectrum between leiomyoma and leiomyosarcoma.
- Requires **multidisciplinary management** (gynecologic oncology, pathology, radiology).
- **Fertility-sparing surgery** can be considered in carefully selected cases.
- **Regular surveillance** is mandatory for early detection of recurrence.

