

## Giant pelvic well-differentiated liposarcoma

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**Abstract**—Herein, we report a case of a giant well-differentiated liposarcoma located subgluteally and extending into the pelvis through the obturator foramen, nearby the urinary bladder and rectum without causing functional disturbances. The tumor was removed simultaneously with transgluteal posterior and anterior transabdominal approach. Six months postoperatively, no clinical and radiological evidence of recurrence was observed.

**Keywords**—well-differentiated liposarcoma, pelvic region, surgery.

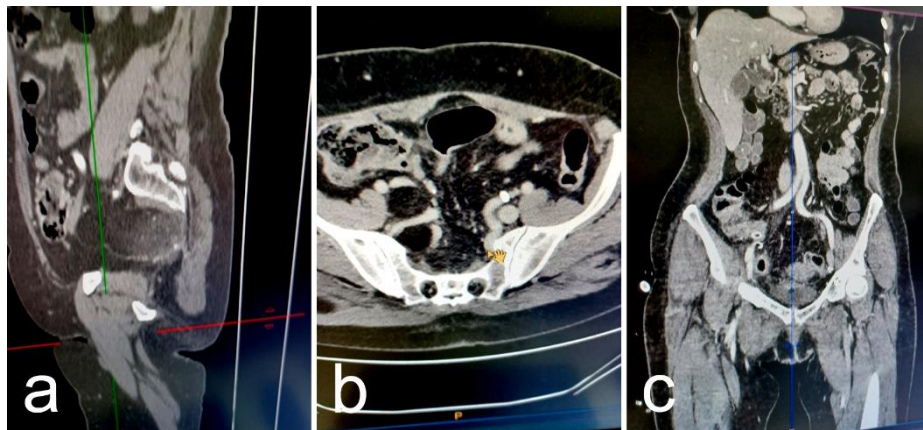
### 1 Introduction

In orthopedic practice the most frequent soft tissue tumors are adipocytic<sup>1</sup>. Benign ones, as lipomas are well known in the literature<sup>2,3</sup>. They could only be conservatively observed, or in cases of entrapment of regional nerves, impeding extremity function or due to cosmetic reasons lipomas could be excised<sup>2,3</sup>. Sometimes, the expected preoperatively tumor masses as lipomas, could be locally aggressive or atypical lipomatous tumor (ALT)/well-differentiated liposarcoma (WDL). ALT/WDL is described as a low-grade malignancy with minimal tendency for metastasis<sup>1,4</sup>. Nowadays, the term WDL is used for locations in the retroperitoneum, mediastinum, and deep pelvis, whereas the term ALT is used when affected extremities<sup>1</sup>. Close monitoring is advised due to the possibility of local recurrence or dedifferentiation<sup>1,4</sup>. MRI is the best imaging modality used preoperatively for diagnosis of soft tissue tumors<sup>5,6</sup>.

### 2. Case report

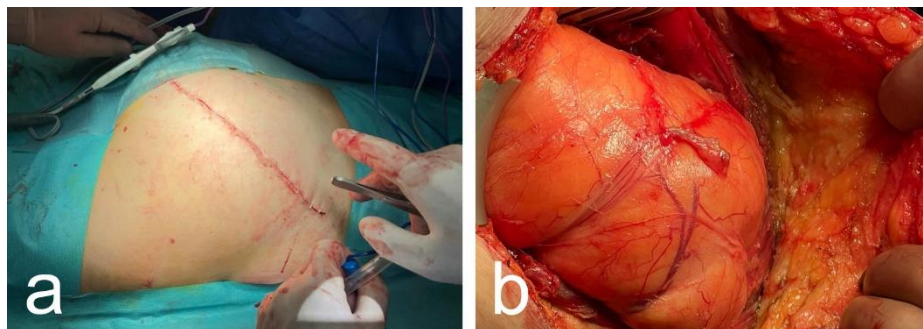
A 63-year-old female presented to our clinic with an abnormal tumor mass in the right gluteal region. The tumor formation was discovered 8 years ago, but significantly

enlarged in the last year. The patient complains of discomfort and pain when sitting, lying, as well as when climbing. A hypoesthesia in the right lower limb was observed. Clinical examination revealed soft tissue mass in the right gluteal region measuring 10/8 cm. Contrast-enhanced CT and MRI reveal the passage of the tumor mass from gluteal region through the obturator foramen into the pelvic cavity, nearby to the urinary bladder and rectum, where it measures 10/7 cm (*Figure 1*).



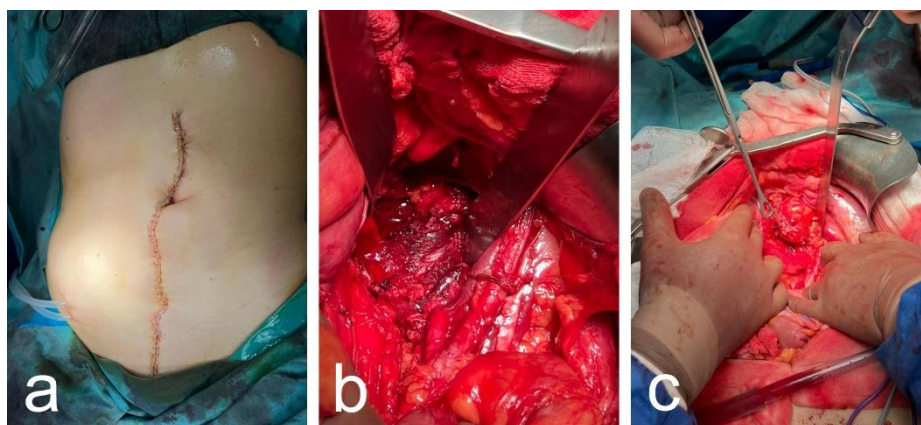
**Figure 1.** a, b) Preoperative CT; c) Preoperative MRI.

No functional abnormalities were detected in the kidneys, urinary bladder, or rectum. After preoperative planning, the patient underwent surgery using a posterior transgluteal approach and an anterior transabdominal approach. Dissection was carried out between the fibers of the gluteus maximus muscle towards the tumor mass, which was circumferentially mobilized. The sciatic nerve was released from partial compression, and the obturator foramen was reached (*Figure 2*).



**Figure 2.** a) Surgical approach; b) Intraoperative photography.

The wound was temporarily closed, and the patient was rotated from supine to prone gynecological position on the operating table. A midline abdominal incision provided access to the pelvis, where the tumor was meticulously dissected from the massive growths towards the surrounding neurovascular and soft tissue structures. The mobilized encapsulated tumor was pulled through the relatively narrow foramen (*Figure 3 and 4*).



**Figure 3.** a) Surgical approach; b,c: Intraoperative photography.



**Figure 4.** Macroscopic appearance.

There were no intraoperative complications, and the postoperative period was uneventful, although sensory disturbances in the right lower limb persisted. The patient was verticalized on the next day after surgery. Postoperative MRI presented the full excision of the tumor (*Figure 5*).

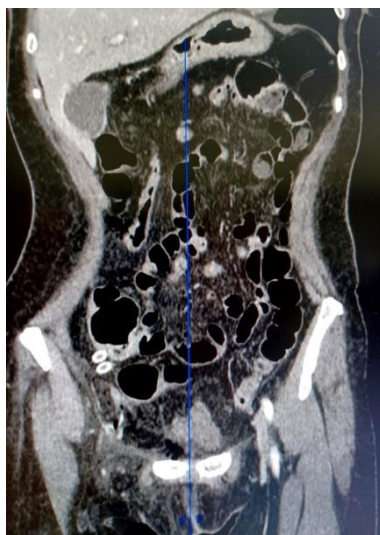


Figure 5. Postoperative MRI.

Histologically, the ALT/WDL was confirmed. Six months postoperatively, there were no clinical or imaging signs for recurrence.

### 3. Discussion and Conclusion

Jauffred et al.<sup>7</sup> analyzed 35 patients with ALT that underwent marginal excision. Recurrences were observed in six of them (17%). Histologically dedifferentiated liposarcoma was identified in three patients with recurrence of ALT. The authors recommend monitoring patients at different intervals.

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