

# COMPLETE RESECTION OF THE OBTURATOR INTERNUS MUSCLE THROUGH ANTERO-INFERIOR PELVIC EXPOSURE

MATTHIAS WALDNER<sup>3</sup>, JAN PLOCK<sup>3</sup>, KUNO LEHMANN<sup>3</sup>, BRUNO FUCHS<sup>1-4</sup>  
Sarcoma Service

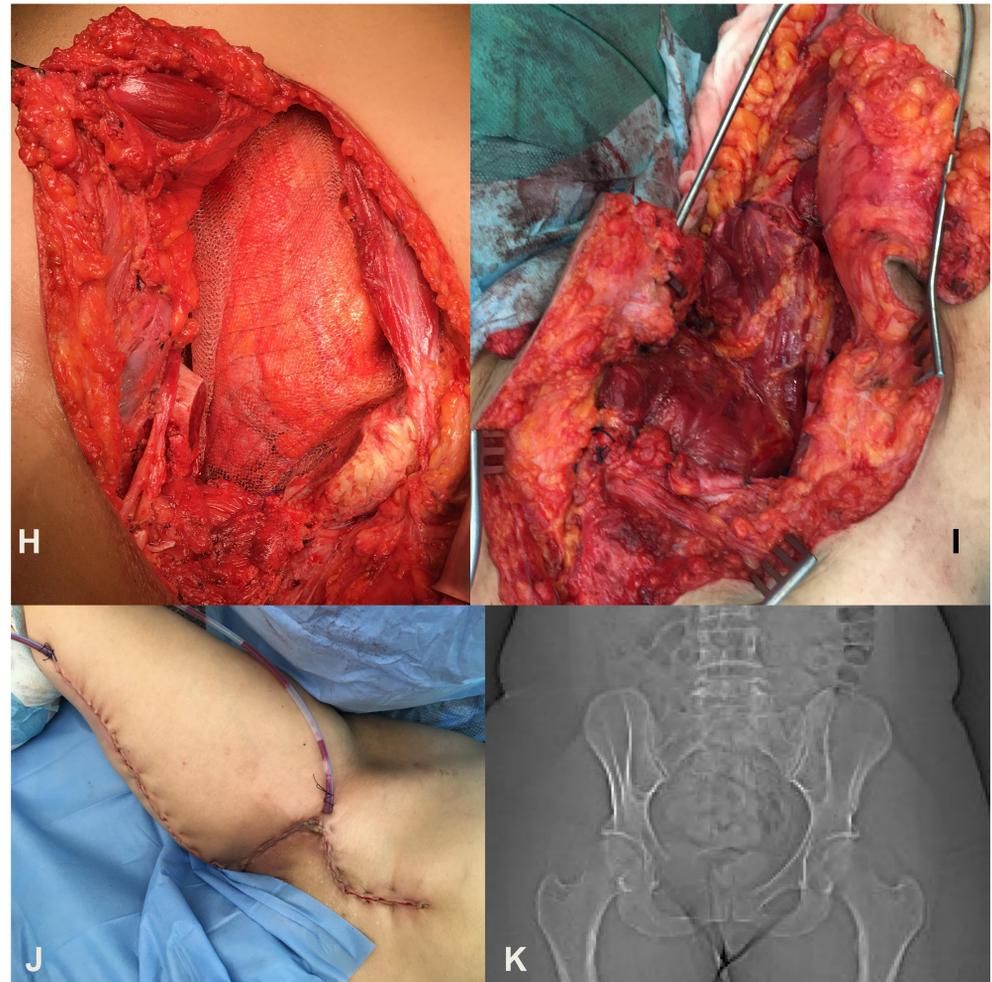
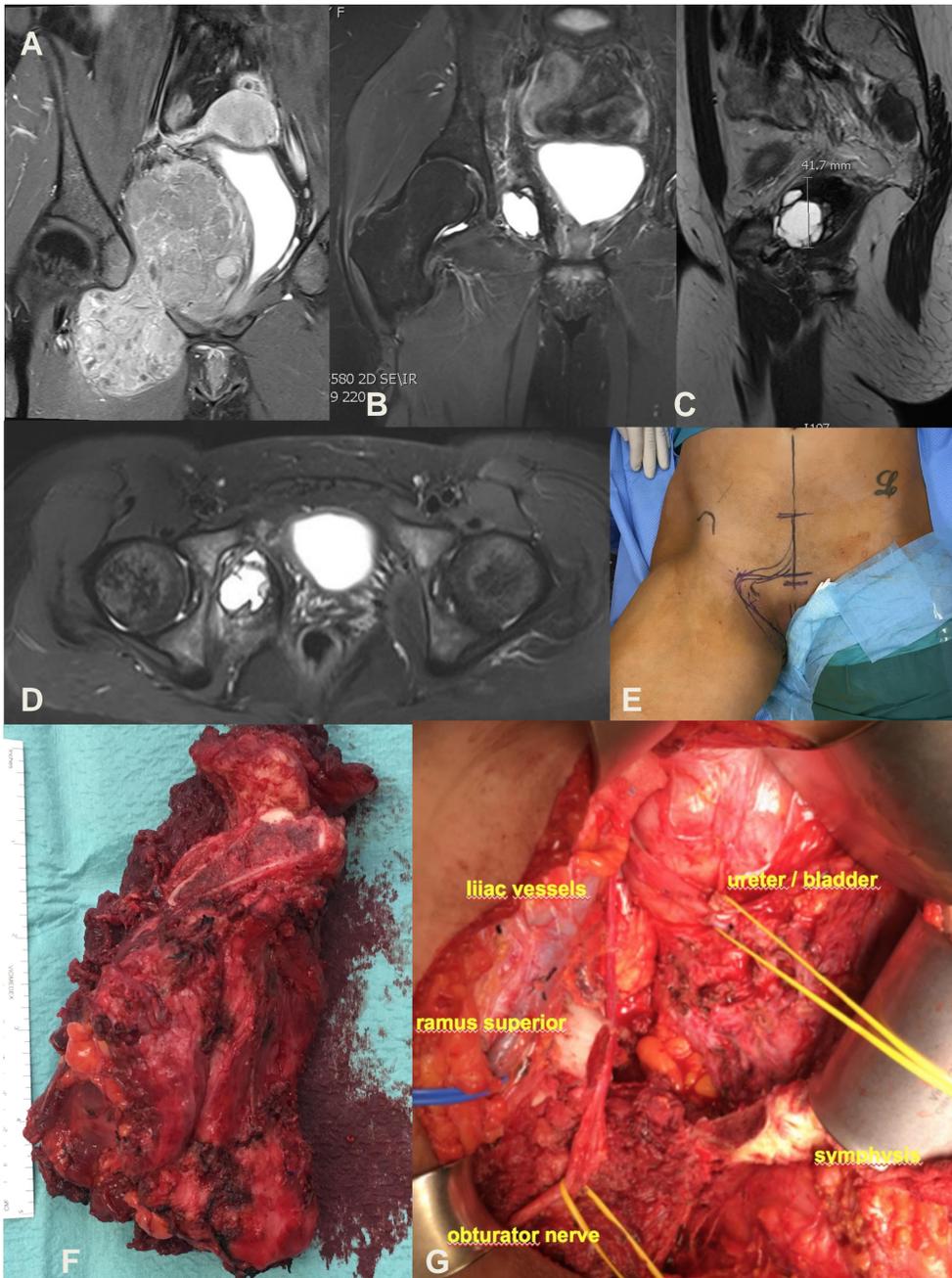
Cantonal Hospitals Winterthur<sup>1</sup> & Luzern<sup>2</sup>, University Hospital<sup>3</sup> / Kinderspital Zurich<sup>4</sup>  
www.SARCOMA.SURGERY / www.SWISS-SARCOMA.NET

## INTRODUCTION

Tumor lesions in the deep soft tissues of the pelvis, specifically when located within the obturator internus muscle, are surgically difficult to approach. From the lateral as well as the inferior side, the bony pelvis is an unsurmountable hindrance. From anteriorly, the inferior border of the obturator internus muscle with its pudendal neurovascular bundle within the Alcock canal, is located in the depth of the pelvis in close proximity to the iliac vessels and nerves, as well as the bladder and ureter such that it can not be safely controlled.

## PATIENT & METHODS

We herein report on a 30 year old female patient who was diagnosed with a large pendulum mass through the right foramen obturatorium, mainly located within the obturator internus and externus muscles (A-D). A biopsy revealed an extraskeletal Ewing's sarcoma, reason why the patient underwent preoperative chemotherapy, as well as postoperative chemo-radiotherapy. The tumor responded very well to neoadjuvant chemotherapy, and its size reduced greatly to 50mm located within the obturator internus muscle.



## RESULTS

We performed an abdominal midline incision, extended over the pubic bone along the inferior pubic ramus towards the ischial tuberosity, and from there to the medial thigh (E-J). Within the pelvis, the iliac vessels, obturator and femoral nerves were dissected and protected. Outside the pelvis, the origin of the adductors were dissected en bloc while saving the extrapelvic parts of the obturator neurovascular bundle. Then, the superior ramus of the pubic bone was osteotomized, which allowed safe access to the inferior aspect of the obturator internus muscle to be prepared up to the ischial spine. No reconstruction of the pubic ramus was performed (J-K). An abdominal protection net was placed to prevent hernias, and a pedicled gracilis flap was used to account for the soft tissue resection. The wound healed uneventfully, and adjuvant therapy was continued three weeks postoperatively. At 1 year follow-up, the patient remains disease free and is not restricted in her daily activities.

## CONCLUSION

Wide exposure of the lower pelvis, specifically along the obturator internus muscle, can be achieved through resection of the superior ramus of the pubic bone.

## HIGHLIGHTS:

The lower pelvis can be accessed through resection of the superior ramus, the latter can be fixed if not involved by tumor.