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ROBOTIC ABDOMINOPERINEAL RESECTION & POSTERIOR VAGINECTOMY

A TECHNICAL GUIDE

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CASE

In this video, we describe our method for performing a robotic abdominoperineal resection (APR) and posterior vaginectomy.

We present the case of a 56 year old female who presented with 12 months of PR bleeding. She was diagnosed with T4N0 SCC. She underwent chemoradiotherapy to which she had a complete clinical response. At 12 month follow up, the patient was found to have a recurrent anal mass that was ulcerated and fistulating with the vagina. MRI confirmed a T4N0 lesion. After Multi-Disciplinary-Meeting discussion, it was decided that she would undergo a robotic APR and posterior vaginectomy.

She was discharged Day 10 post op and there were no short or long-term complications. Pathology revealed a T4N0Mx moderately differentiated squamous cell carcinoma. Of the 27 lymph nodes dissected, zero were positive. There was extensive perineural invasion however no lymphovascular invasion and the specimen was well clear of margins (Figure 7).

Fig 1. MRI revealed T4N0 lesion fistulating with the vagina

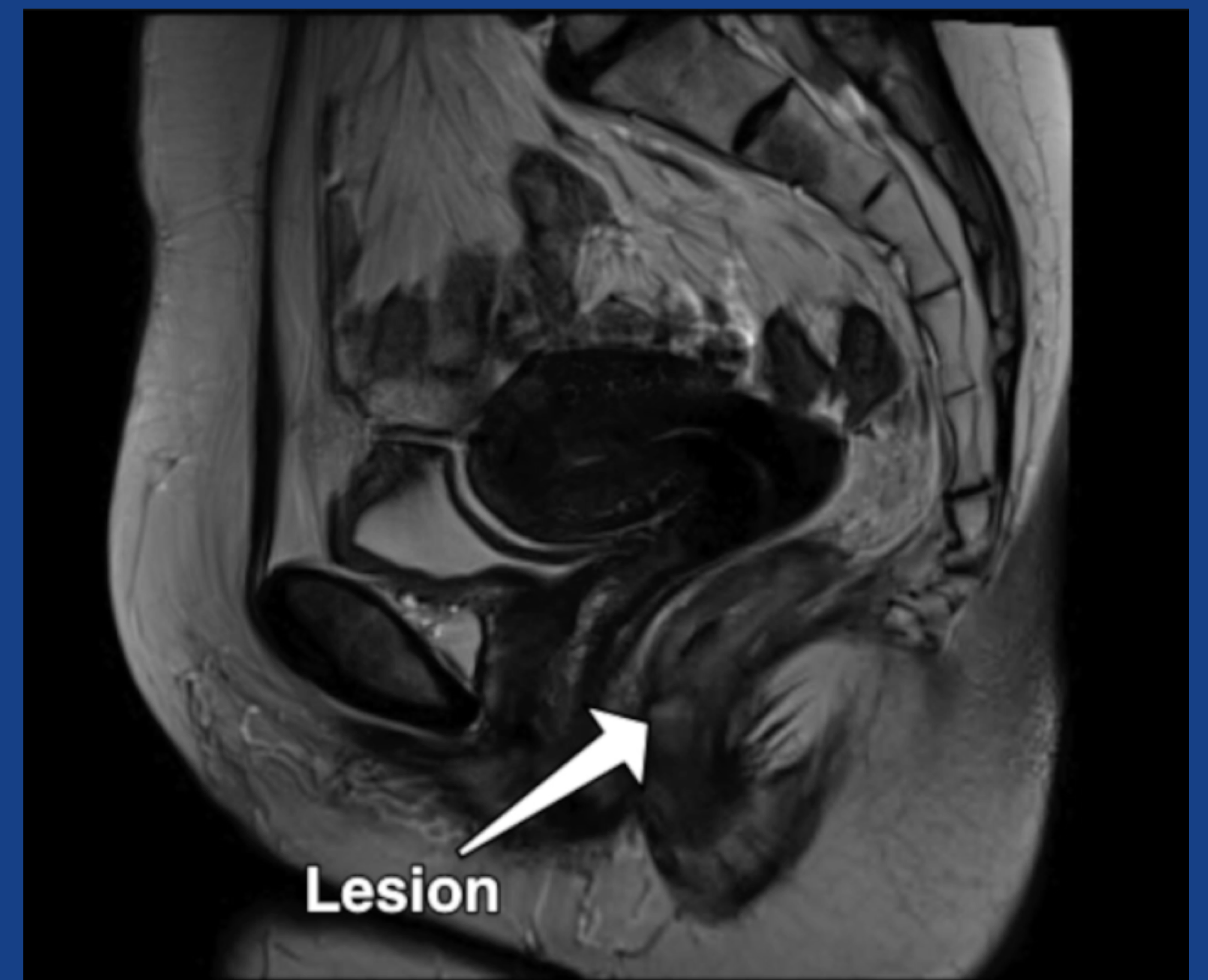
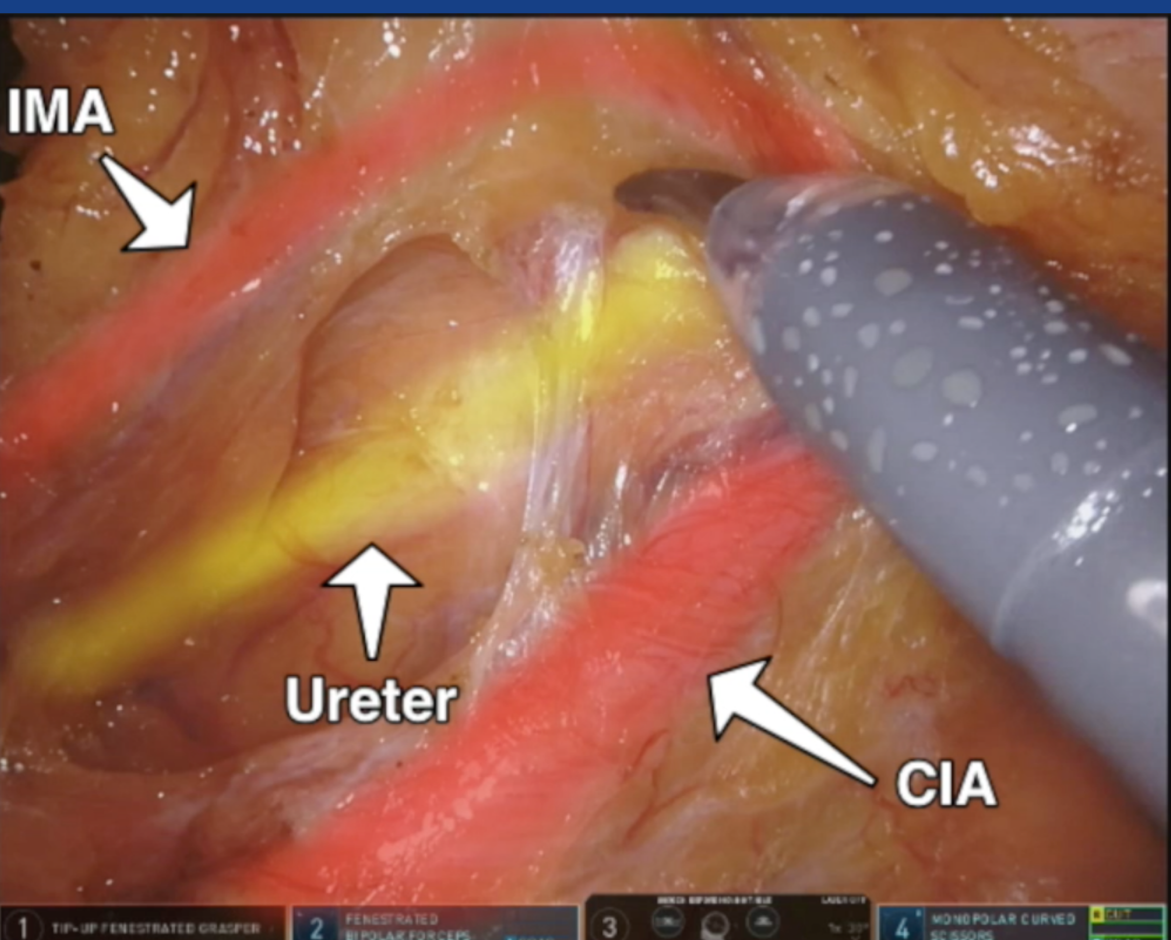


Fig 2 – Skeletonise IMA



SURGICAL TECHNIQUE

Step one is medial to lateral pelvic dissection. Key landmarks here are the inferior mesenteric artery, the common iliac artery and the ureter.
Step two is a lateral to medial pelvic dissection. Once we are confident of the anatomy and course of the ureter, we return to the medial aspect of the dissection and skeletonise the inferior mesenteric artery (Figure 2).
Step three is suspension of the uterus with a 0-prolene suture on a straight needle (Figure 3).
Step four is the TME dissection (Figure 4). In this case where there is known rectovaginal involvement, we aim to dissect as low as possible with the posterior and lateral dissection before approaching the anterior plane. We dissect through levator ani and into the ischioanal fossa (Figure 5).
Step five is dissection of the vagina (Figure 6). A vaginal probe is placed into the vagina to determine the level of the cervix. The posterior fornix of the vagina is then opened. An energy device is used to dissect the vaginal wall towards the perineal dissection with the aim of staying below the cervix and excising the vagina en-bloc with the rectum.

Fig 3 – Suspension of uterus

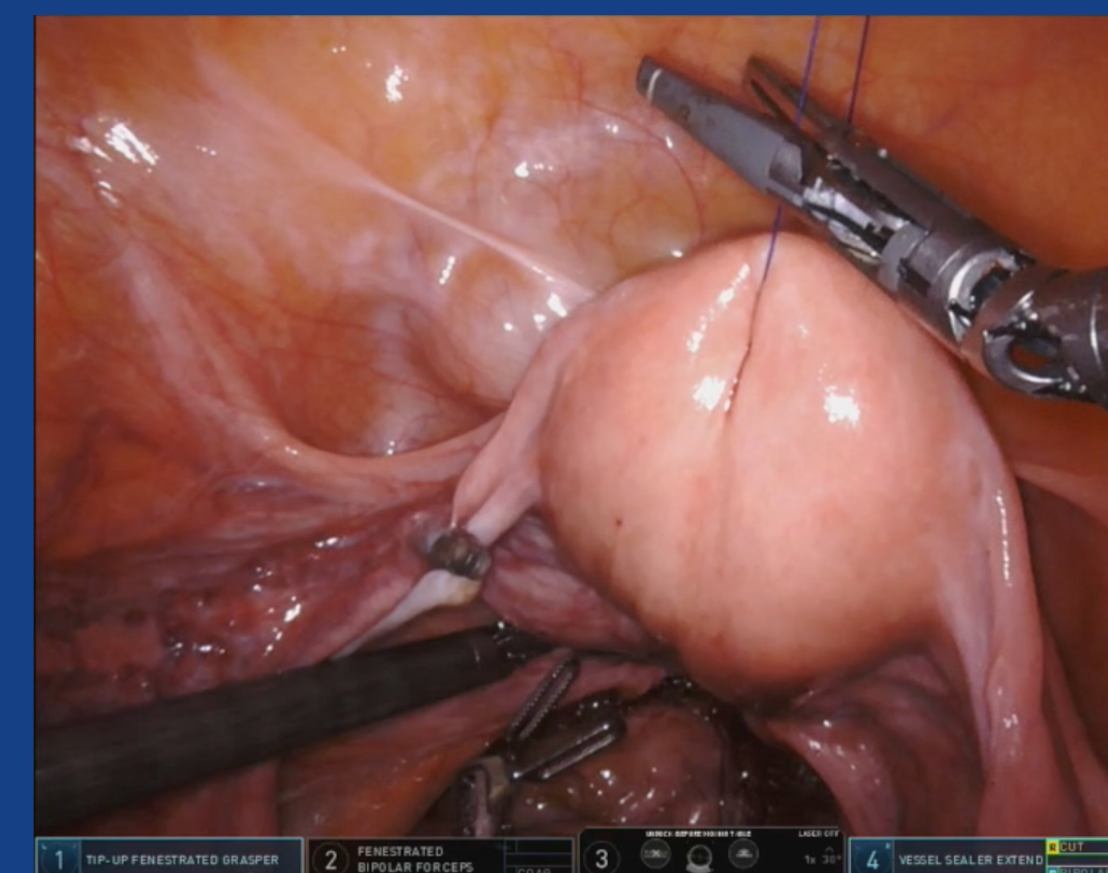


Fig 4 – TME dissection

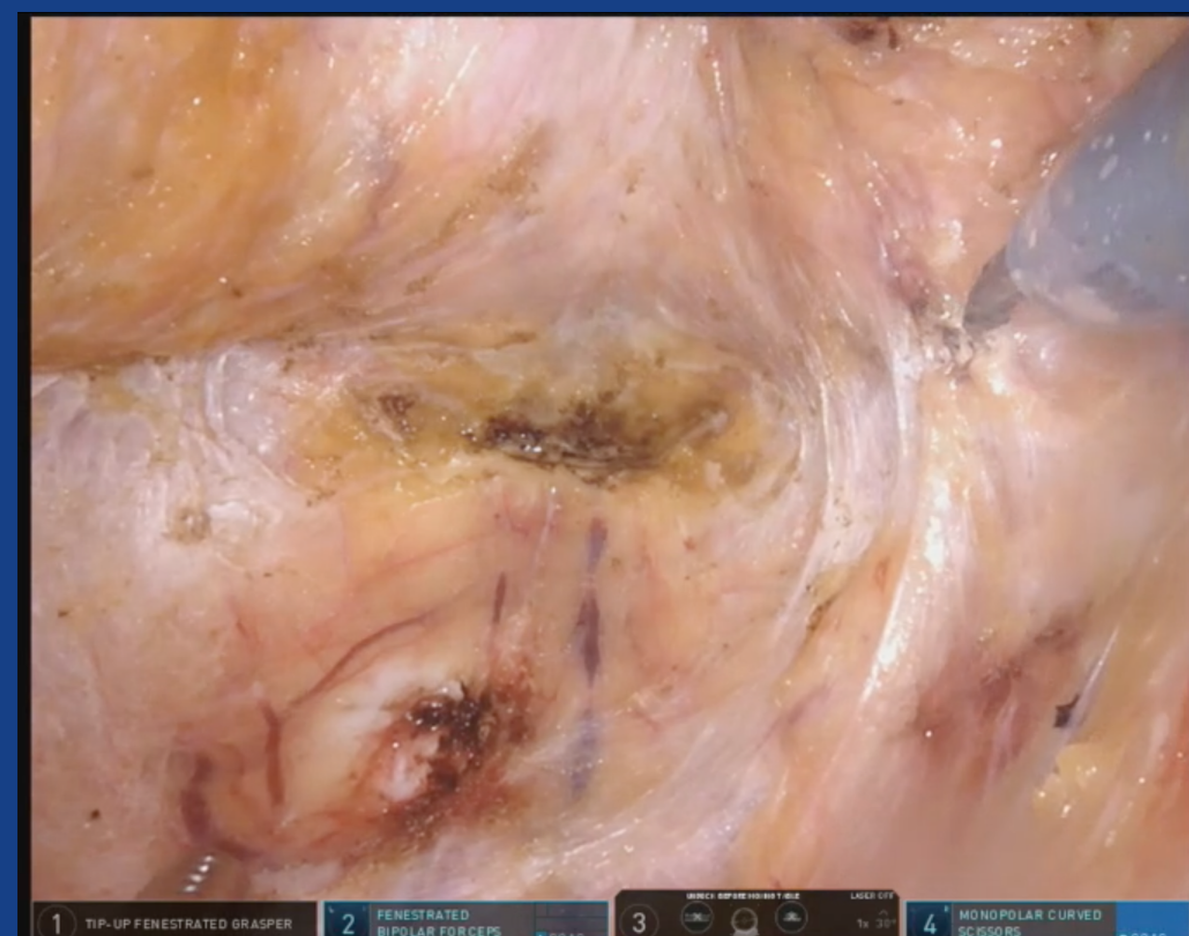


Fig 5 – Dissection through levator ani and into the ischioanal fossa

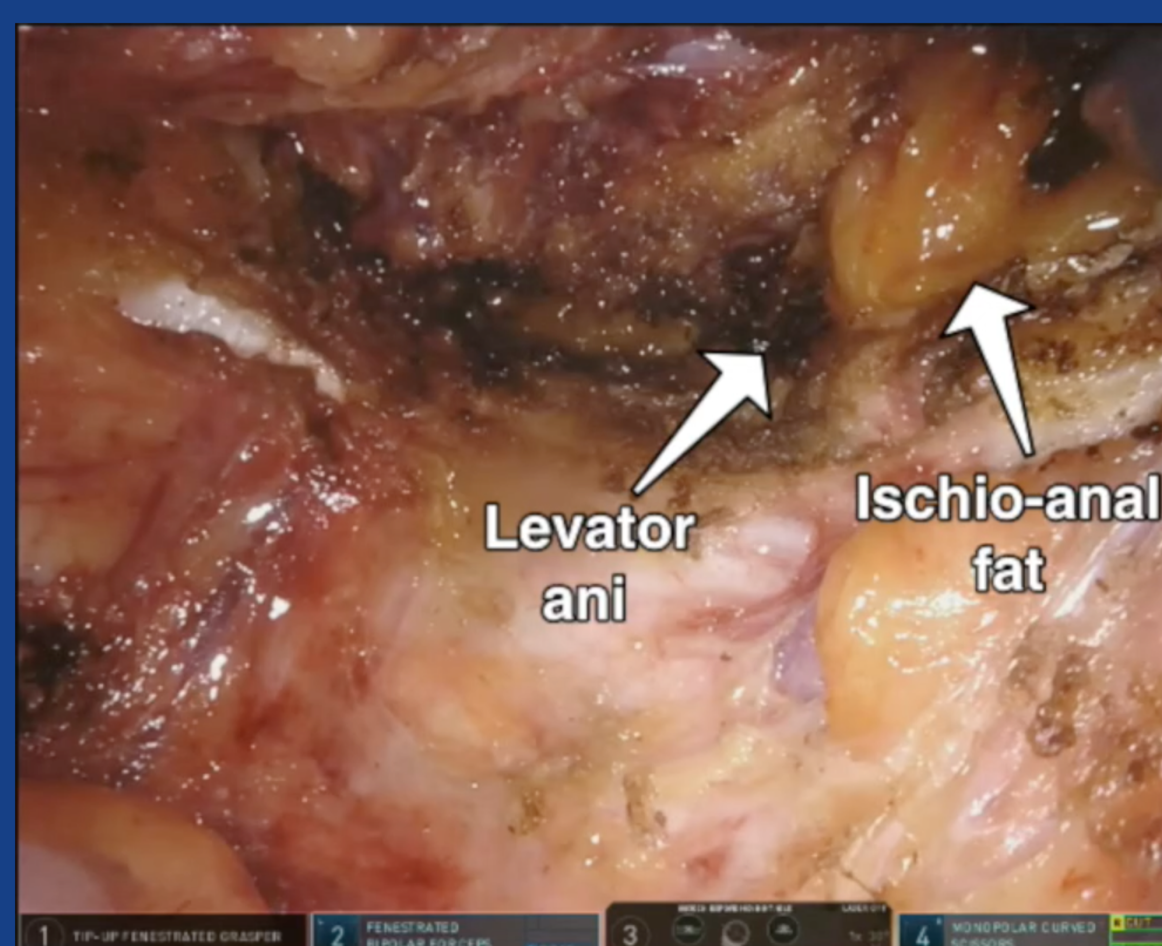


Fig 6 – Dissection of posterior vaginal wall

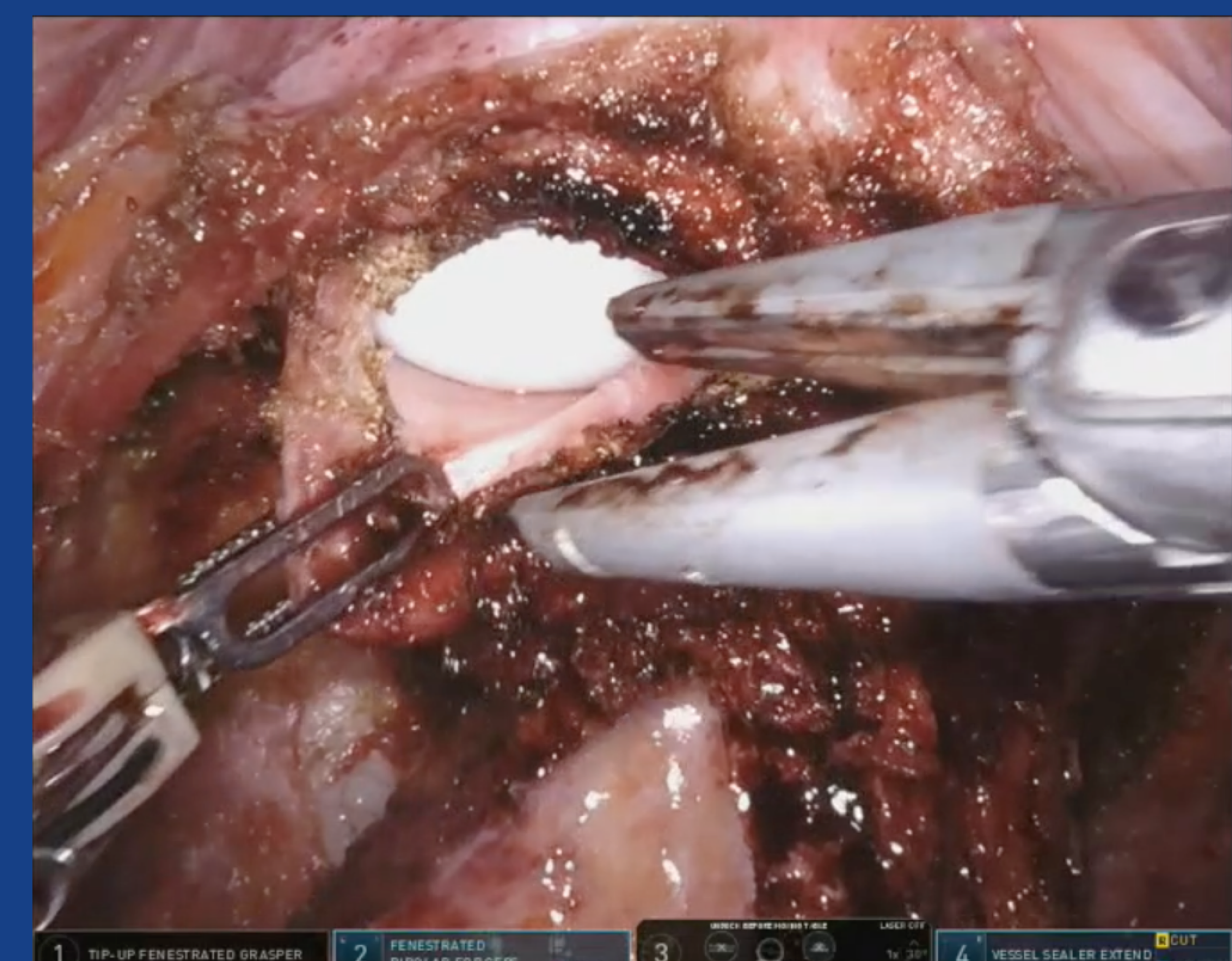


Fig 7 – Specimen