

ROBOTIC LATERAL PELVIC LYMPH NODE DISSECTION IN THE CONTEXT OF ABDOMINOPERINIAL RESECTION FOR LOW RECTAL CANCER A TECHNICAL GUIDE

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CASE

In this video we will describe our method for performing a robotic lateral pelvic lymph node dissection in the context of abdomino-perineal resection for low rectal cancer.

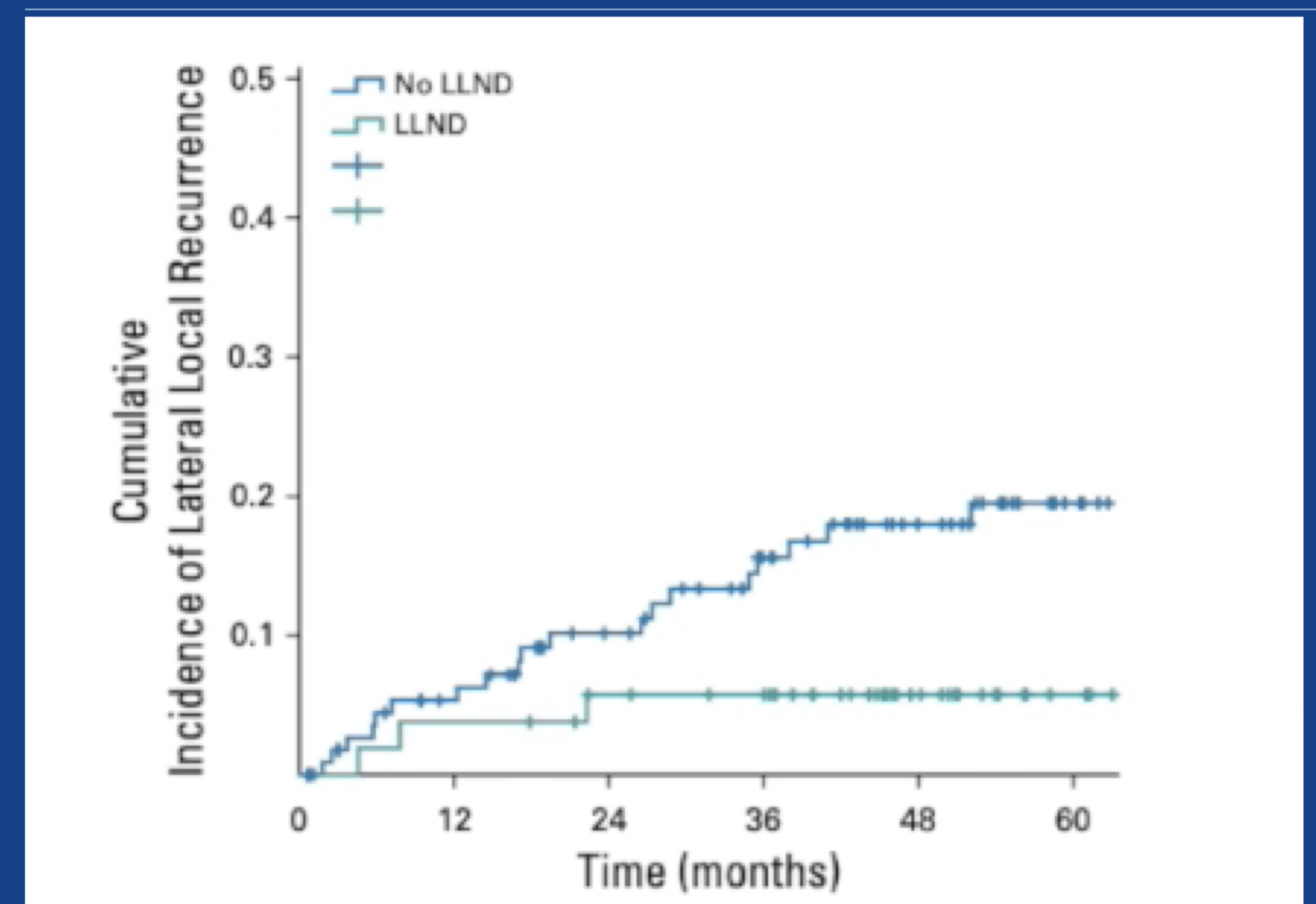
It has been demonstrated that advanced rectal tumors below the peritoneal reflection are at higher risk of spreading to lateral nodes. There is mounting evidence that chemoradiotherapy is not sufficient to prevent lateral node local recurrence.

This graph (Figure 1) is taken from a large multi-institutional retrospective study of patients with low T3/4 rectal cancers. Over a 5-year period, nodes greater than 7mm resulted in a 20% recurrence rate with chemoradiotherapy and TME, and only 6% if combined with lateral pelvic lymph node dissection.

We present the case of a 54 year old female who presented with PR bleeding. She underwent a colonoscopy which found a 4cm lesion 3cm from the anal verge which was determined to be an adenocarcinoma. MRI pelvis (Figure 2) showed a T3N1M1 low rectal cancer 3cm from the anal verge, one right mesorectal 6mm node and 5 right extraperitoneal pelvic side wall nodes. The puborectalis was likely involved. No metastasis were identified on staging.

Post-operative pathology revealed a moderately differentiated adenocarcinoma invading the muscularis propria. It was 22mm in maximum dimension and the margins were clear. There was no evidence of malignancy in 6 lateral pelvic lymph nodes.

Fig 1. Lateral Pelvic Lymph node Dissection



SURGICAL TECHNIQUE

TME dissection was completed in a normal fashion using bipolar diathermy scissors and a vessel sealer. Step one is medialisation of the right ureter down to the vesicoureteric junction. Care is taken to preserve the hypogastric plexus. Step two is to expose the external iliac artery and vein.

Step three is to clear the obturator fossa from superior to inferior. Gently dissect around the obturator nerve once identified. The dissection continues along the internal iliac artery and its branches. Once the internal iliac artery is exposed, the proximal extent of the obturator nerve can be dissected. This aids in the removal of all overlying lymphovascular tissue. Step four is to dissect into Alcock's canal and preserve the pudendal vessels.

Figure 6 shows the anatomy post dissection. For adequate lateral pelvic lymph node dissection in rectal cancers, it is important to have clear visualisation of the external iliac artery to its origin, the external iliac vein, the obturator muscle and fascia exposed, obturator nerve intact and without overlying lymphovascular tissue, the lumbosacral trunk and the internal iliac artery.

Fig 2 – MRI showing rectal tumour and lymph nodes

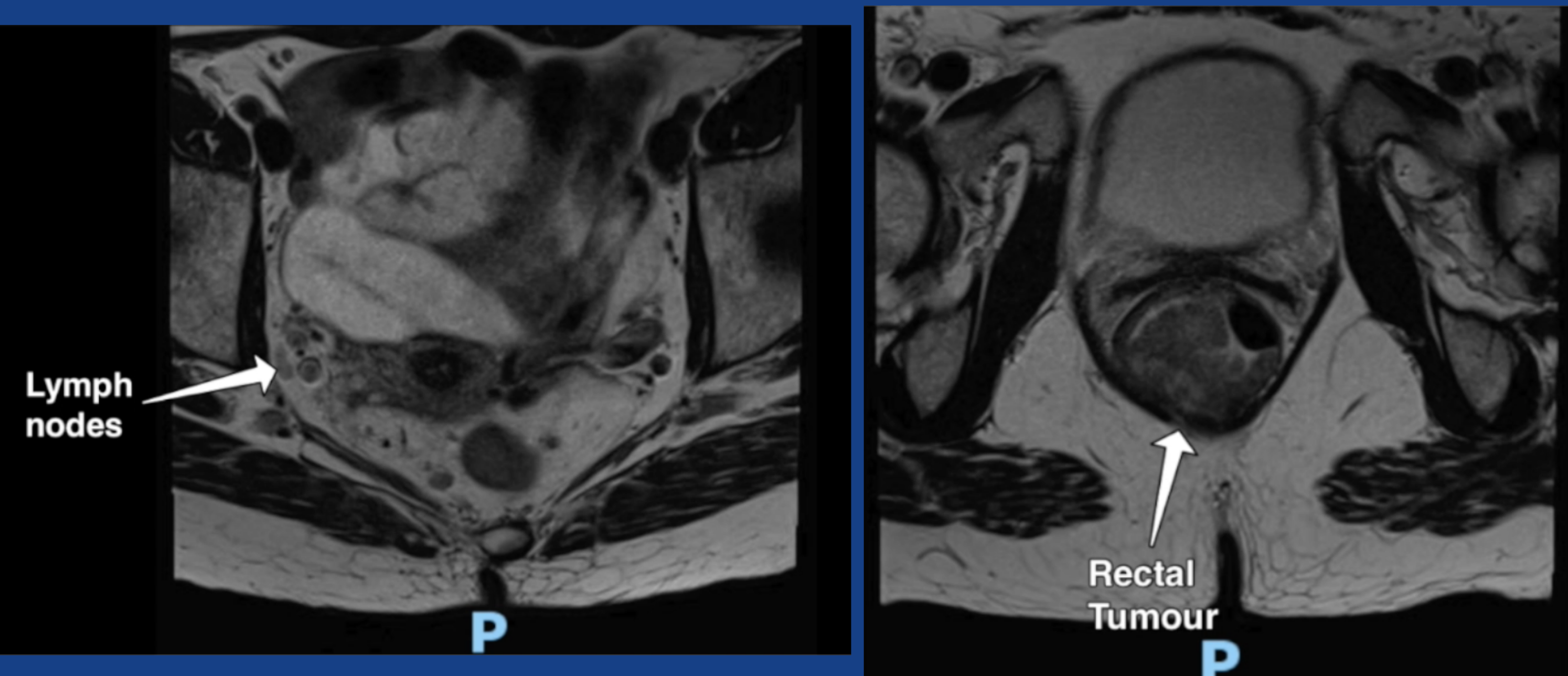


Fig 3 – Step 1

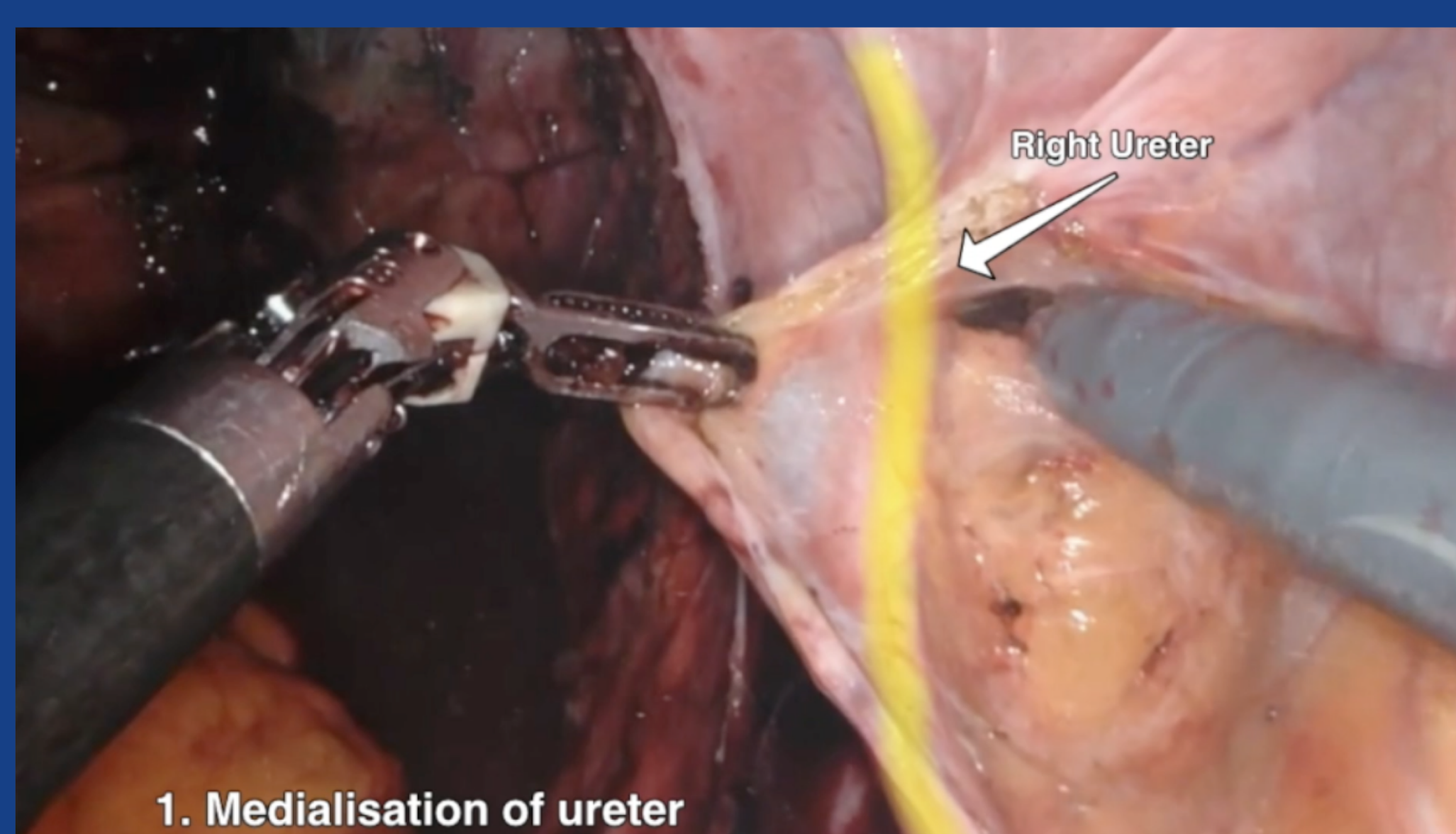


Fig 4 – Step 2

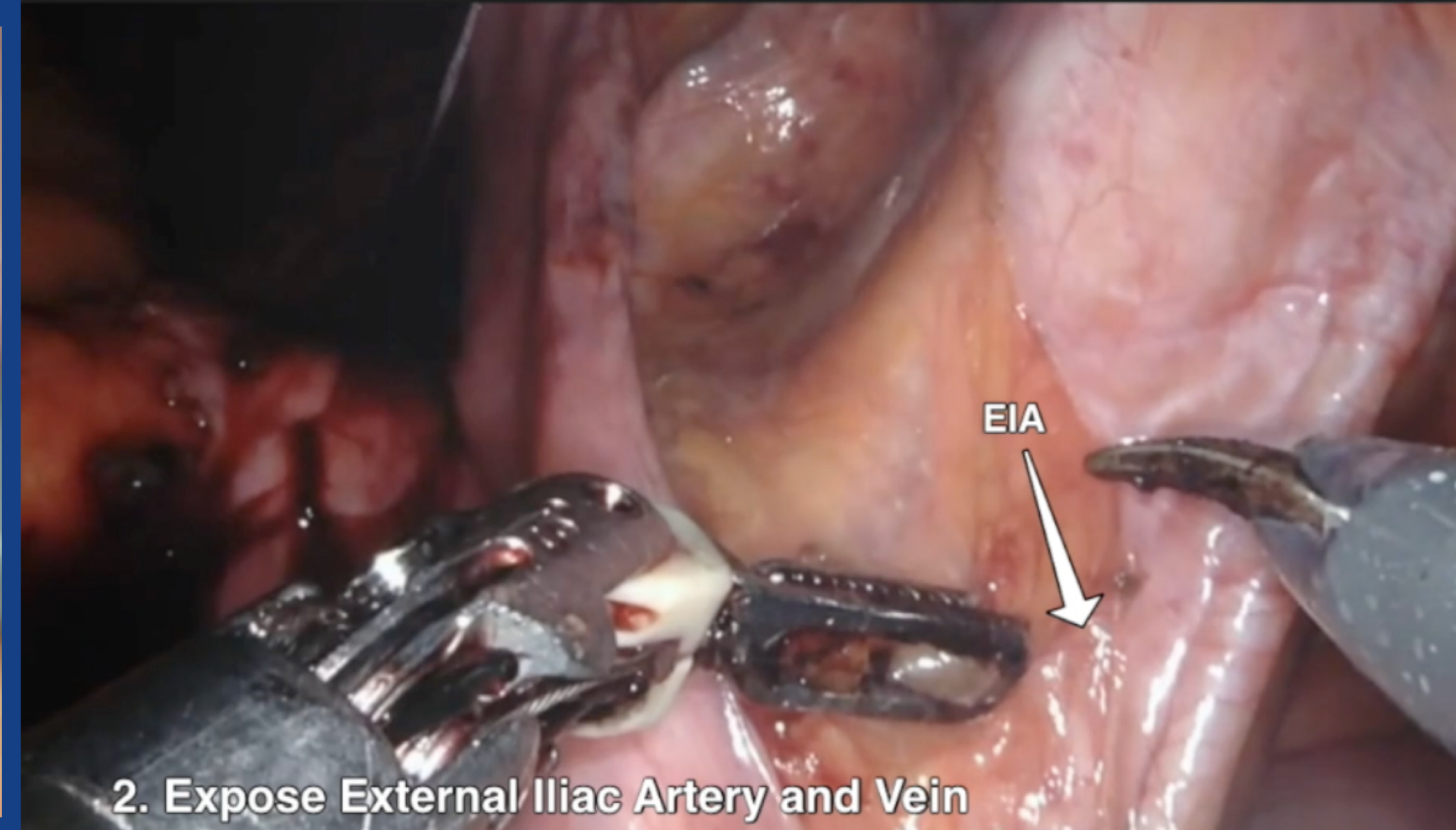


Fig 5 – Step 3

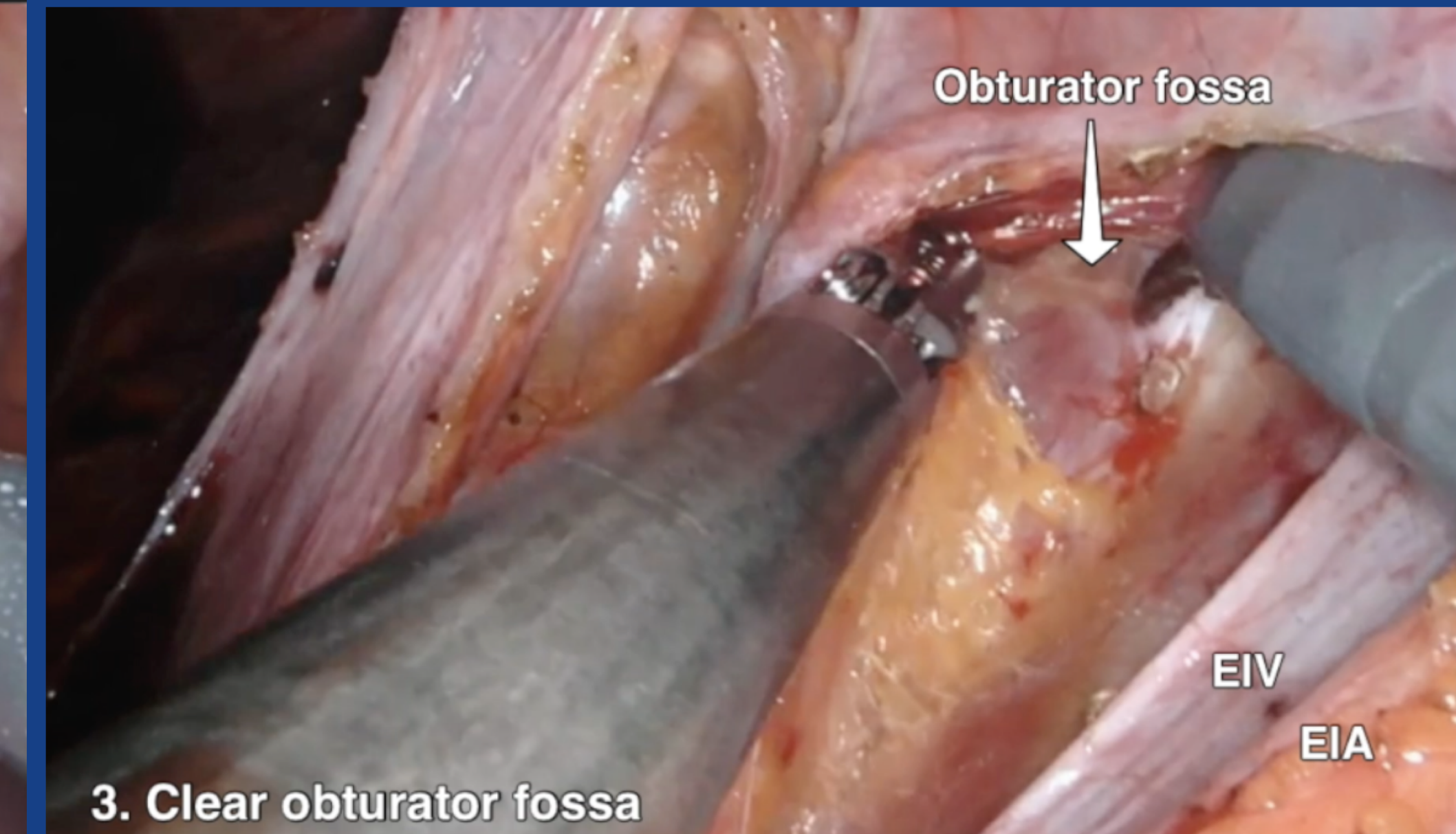


Fig 6 – Dissection along IIA

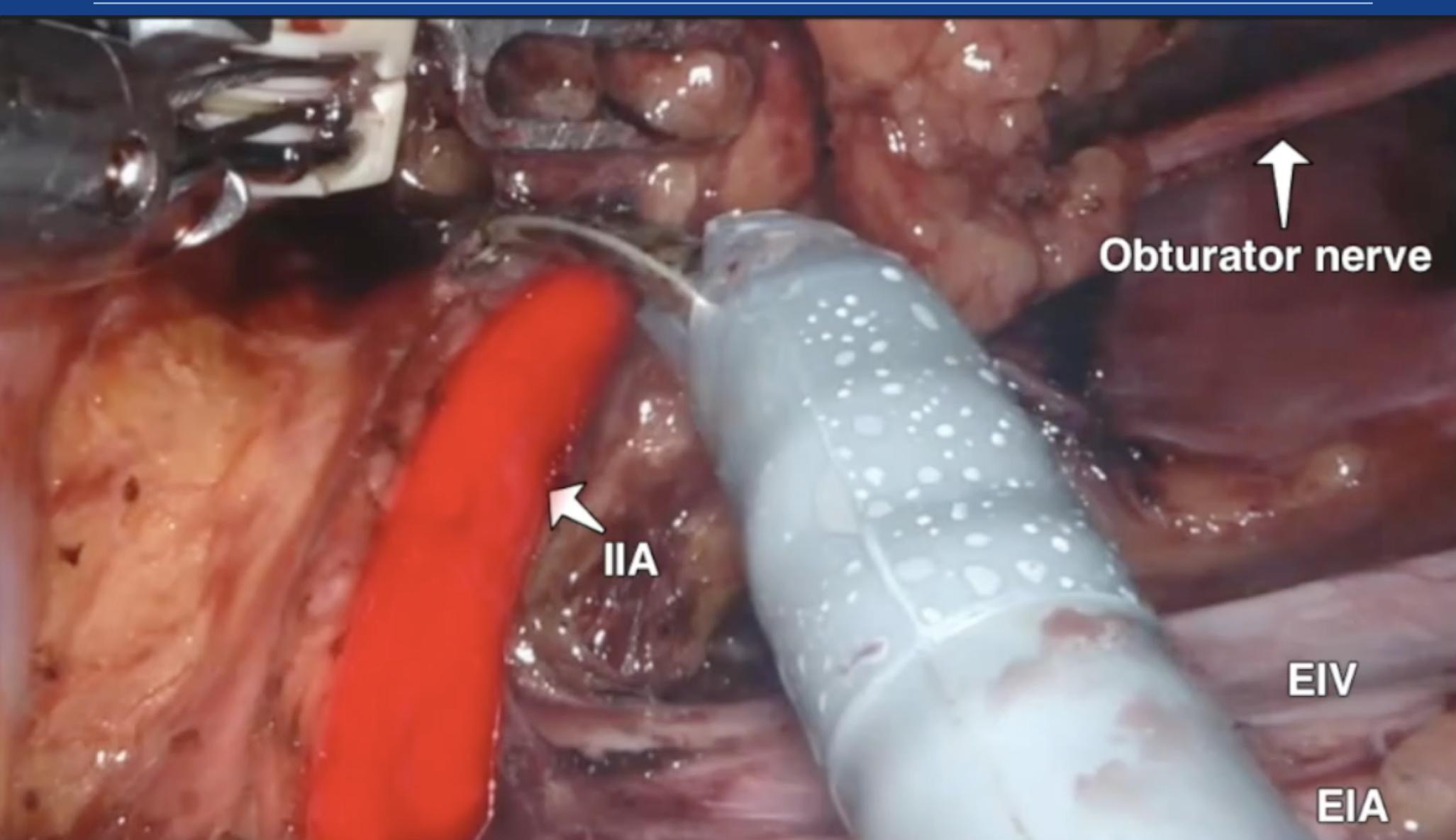


Fig 7 – Step 4

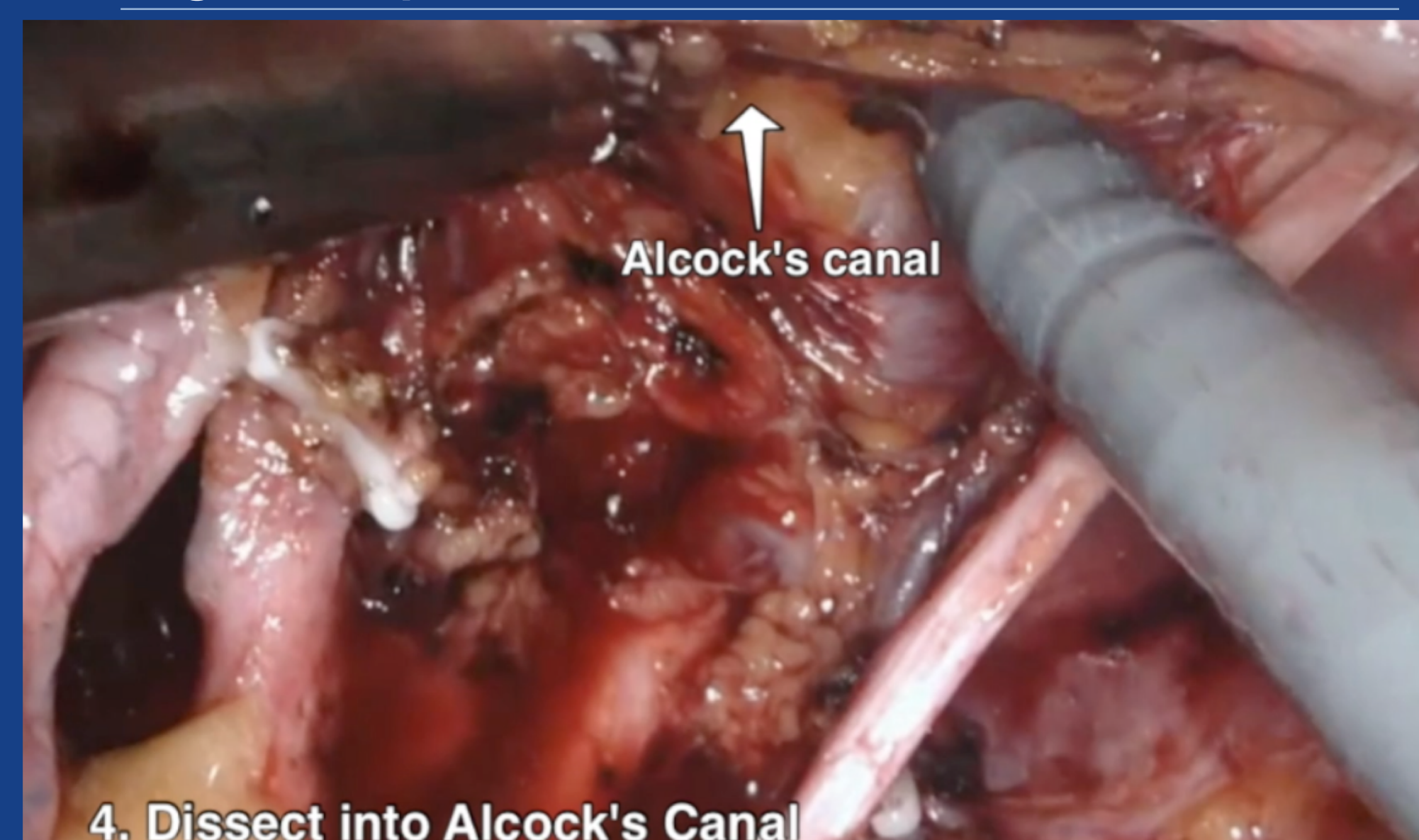


Fig 6 – Anatomy post dissection

