

# Derin İnfiltratif Endometriozis

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# Endometriosis

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graph TD; A[Endometriosis] --> B[Peritoneal]; A --> C[Ovarian]; A --> D[Derin infiltratif]; D --> E[Anterior Mesane]; D --> F[Posterior]; F --> G[P1-Uterosakral ligament]; F --> H[P2-Vajinal]; F --> I[P3-İntestinal]; I --> J[P3a-Sadece bağırsak ( V+/V- )]; I --> K[P3b-Birden çok sayıda lokalize];
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**Peritoneal**

**Ovarian**

**Derin  
infiltratif**

**Anterior  
Mesane**

**Posterior**

**P1-Uterosakral ligament**

**P2-Vajinal**

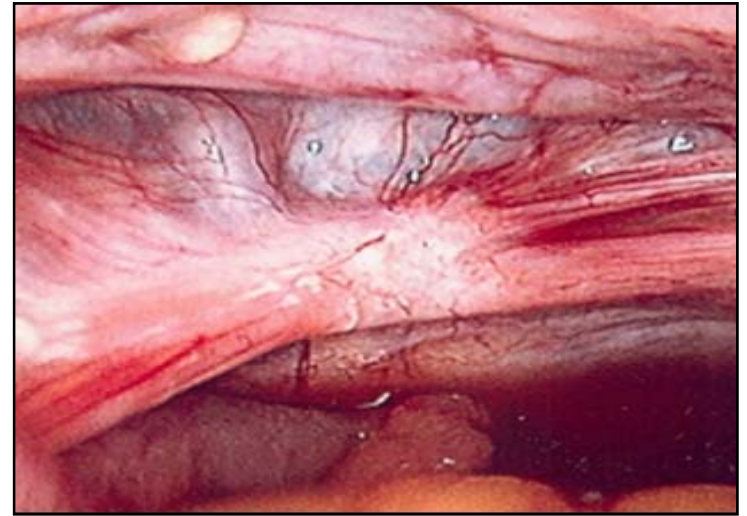
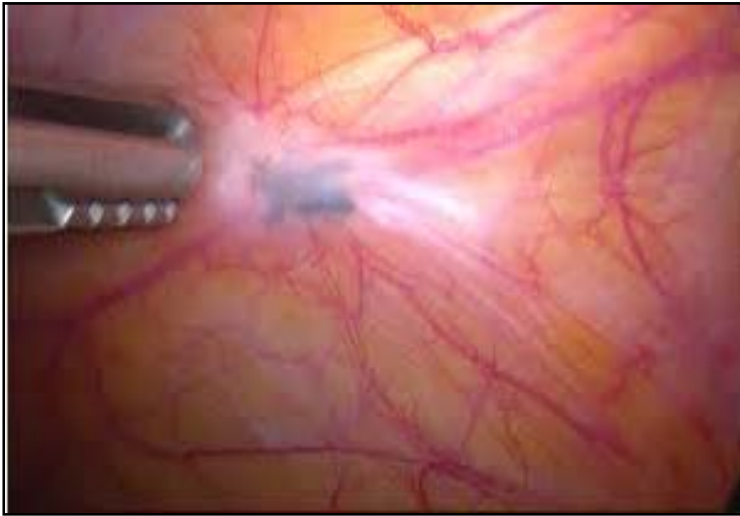
**P3-İntestinal**

**P3a-Sadece bağırsak ( V+/V- )**

**P3b-Birden çok sayıda lokalize**

# Endometriozis

- Doğurganlık yaşındaki kadın %5-15
- İnfertil hastalar %20-48
- Hormonal tx ve NSAID cevap vermeyen kronik pelvik ağrıda % 70



# Derin İnfiltratif Endometriozis

Retroperitoneal boşluk veya pelvik organ duvarlarına 5 mm'den daha fazla penetrasyonu olan endometriotik lezyonlar olarak tanımlanır



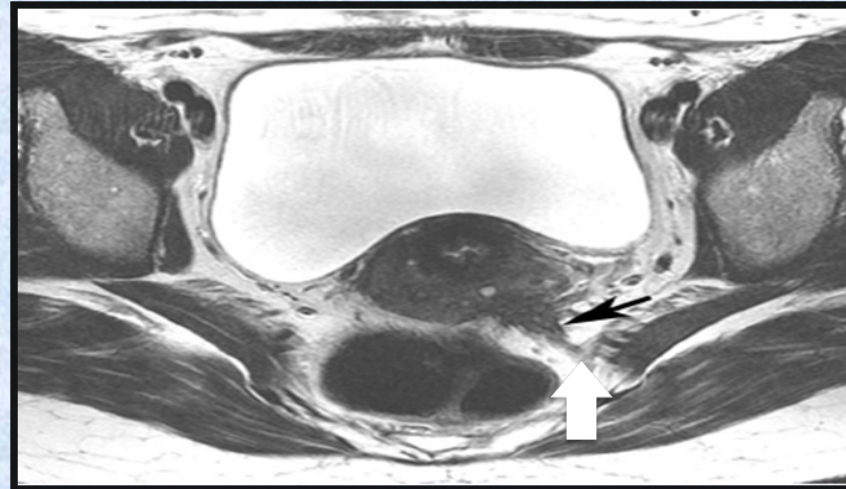
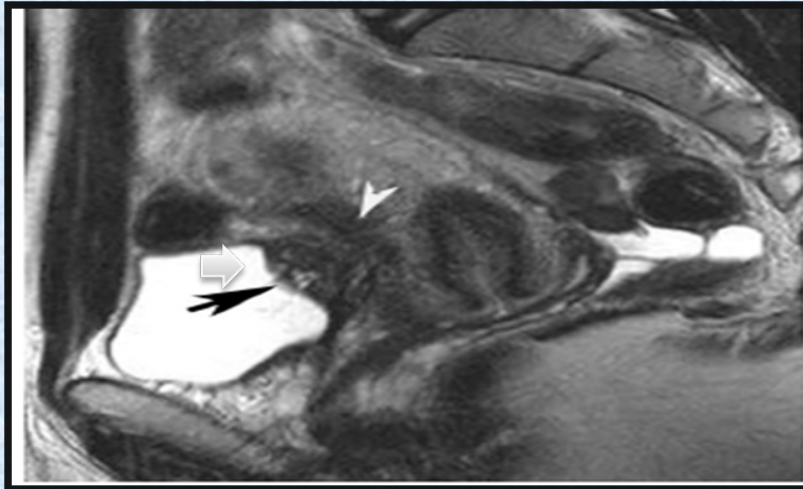
## Douglas-anatomik ölçümler

	Derinlik (cm)	Volume (ml)
Normal pelvis	5.5±0.8	65.8±10.9
Endometriozis		
*Derin lezyon yok	5.3±0.8	67.2±18.1
*Derin lezyon var	3.6±1.6	41.6±19.3



# Teşhis

- Hikaye
- Klinik muayene
- Görüntüleme
  - Transvajinal ultrasonografi
  - Transrektal ultrasonografi
  - MRI



Yaş	Pelvik ağrı (n=180)	İnfertilite (n=20)
Semptomların başlangıcı	20.5 (14.0-27.5)	23.5 ( 20.0-25.5)
Teşhis	33.0 ( 20.0-34.0)	30.0 (20.9-32.0)
Semptom başlangıcından teşhise kadarki gecikme (yıl)	7.4*	4.0*

\*  $p<0.01$

Arruda, Hum Reprod (2003)

# Semptomlar

Ağrı



*(Semptomlar DİE anatomik lokalizasyonuna göre)*

- **Pelvik pleksus:** Dismenore, derin disparöni ,nonsiklik pelvik ağrı
- **Intestinal:** Diskezi, tenesmus, kanama
- **Mesane:** Sistit semptomları, kanama
- **Üreter:** Ağrı, hidronefroz

İnfertilite

# Fizik muayene ve görüntüleme

**TABLE 7**

**Comparison of the sensitivity, accuracy, LR<sup>+</sup>, and LR<sup>-</sup> of physical examination, TVS, RES, and MRI compared to surgical and pathologic findings.**

Test		PE	TVS	RES	MRI
USLs	Sensitivity	0.73 (0.63–0.82)	0.78 (0.69–0.87)	0.48 (0.37–0.59)	0.84 (0.77–0.92)
	Diagnostic accuracy	0.74 (0.64–0.82)	0.77 (0.69–0.86)	0.47 (0.36–0.56)	0.85 (0.77–0.92)
	LR <sup>+</sup>	3.3 (0.95–11.1)	2.34 (0.93–5.96)	0.86 (0.45–1.06)	7.59 (1.19–48.3)
	LR <sup>-</sup>	0.34 (0.22–0.58)	0.32 (0.18–0.60)	1.16 (0.73–3.91)	0.18 (0.10–0.31)
Vagina	Sensitivity	0.50 (0.32–0.68)	0.47 (0.29–0.65)	0.07 (0–0.16)	0.80 (0.66–0.94)
	Diagnostic accuracy	0.75 (0.66–0.84)	0.79 (0.71–0.88)	0.70 (0.60–0.79)	0.84 (0.76–0.91)
	LR <sup>+</sup>	3.88 (1.85–8.11)	9.64 (3.00–31.0)	—	5.51 (2.94–10.3)
	LR <sup>-</sup>	0.57 (0.40–0.83)	0.56 (0.40–0.70)	0.93	0.23 (0.11–0.48)
RV septum	Sensitivity	0.18 (0–0.41)	0.09 (0–0.26)	0.18 (0–0.41)	0.55 (0.16–0.75)
	Diagnostic accuracy	0.87 (0.80–0.94)	0.88 (0.81–0.95)	0.86 (0.79–0.93)	0.94 (0.87–0.98)
	LR <sup>+</sup>	4.91 (0.92–26.2)	7.36 (0.50–109.5)	3.68 (0.76–17.8)	44.18 (4.73–286.8)
	LR <sup>-</sup>	0.85 (0.64–1.13)	0.92 (0.76–1.11)	0.86 (0.65–1.14)	0.46 (0.32–0.95)
Intestine	Sensitivity	0.46 (0.34–0.58)	0.94 (0.88–1.00)	0.89 (0.83–0.98)	0.87 (0.79–0.96)
	Diagnostic accuracy	0.54 (0.44–0.65)	0.96 (0.91–1.00)	0.89 (0.86–0.97)	0.87 (0.83–0.95)
	LR <sup>+</sup>	1.67 (0.87–3.19)	—	12.89 (3.54–51.8)	12.66 (3.31–48.37)
	LR <sup>-</sup>	0.75 (0.54–1.03)	0.06	0.12 (0.05–0.22)	0.14 (0.07–0.26)

Note: PE = physical examination; TVS = transvaginal sonography; RES = rectal endoscopic sonography; MRI = magnetic resonance imaging; USLs = uterosacral ligaments; RV septum = rectovaginal septum; LR<sup>+</sup> = positive likelihood ratio; LR<sup>-</sup> = negative likelihood ratio.

Bazot, TVS, RES, and MRI for surgery in deep endometriosis. *Fertil Steril* 2008.

**n=92**



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# Sınıflama

- rASRM
  - Keckstein- ENZIAN skor 2003
  - Chapron 2003
-

## Enzian score

- a** • Cul de sac  
• Vagina



**E 1a**  
Isolated nodule of the  
pouch of Douglas



**E 2a**  
Infiltration of the upper third  
of the vagina



**E 3a**  
Infiltration of the middle part  
of the vagina



**E 4a**  
Infiltration of the uterus and/or the  
lower third of the vagina



**FA**  
Adenomyosis uteri

**FO** – Other locations

- b** • Uterosacral ligament (USL)  
• Cardinal ligament



**E 1b**  
Isolated nodule < 1 cm from  
the USL



**E 2b**  
Infiltration of the USL > 1 cm



**E 3b**  
Infiltration of the cardinal liga-  
ment (without ureterohydro-  
nephrosis)



**E 4b**  
Infiltration of the cardinal liga-  
ment to pelvic side wall and/or  
ureterohydronephrosis



**FB**  
Deep infiltration of the bladder



**E 1bb**  
Bilateral infiltration  
of the USL



**E 2bb**  
Bilateral



**E 3bb**  
Bilateral



**E 4bb**  
Bilateral



**FU**  
Ureteral infiltration  
(intrinsic)

- c** • Bowel, rectum  
• Rectosigmoid



**E 1c**  
Isolated nodule in the retrovaginal  
space



**E 2c**  
Infiltration of the rectum < 1 cm



**E 3c**  
Infiltration of the rectum < 1 – 3 cm  
without stenosis



**E 4c**  
Infiltration of the rectum > 3 cm and/o  
rectal stenosis



**FI**  
Intestinal infiltration (other site than  
rectum or sigmoid)

# Chapron 2003

**Table V.** Deeply infiltrating endometriosis (DIE) classification: proposition for surgical procedure

DIE classification	Operative procedure
A: Anterior DIE	
A1: Bladder	Laparoscopic partial cystectomy
P: Posterior DIE	
P1: Uterosacral ligament	Laparoscopic resection of USL
P2: Vagina	Laparoscopically assisted vaginal resection of DIE infiltrating the posterior fornix
P3: Intestine	
Solely intestinal location	
Without vaginal infiltration (V-)	Intestinal resection by laparoscopy or by laparotomy
With vaginal infiltration (V+)	Laparoscopically assisted vaginal intestinal resection or exeresis by laparotomy
Multiple intestinal location	Intestinal resection by laparotomy

USL = uterosacral ligament.

Chapron (2003)

# ***TEDAVİ***

***Derin infiltratif endometriozisin tedavisi cerrahi olup***

***amaç tüm odakların çıkartılmasıdır***

***DIE periservikal dokudan başlayıp uterusu, overleri, rektumu, ureteri, mesaneyi, vajinal duvarı ve nörovasküler kökleri içine alan multifokal bir klinik tablodur***

## **Konservatif Cerrahi**

- Vajen, Rektovajinal septum, Sakrouterin ligament
- Üreter
  - Üreterolisiz, rezeksiyon
- Mesane
- Sistoskopi- rezeksiyon
- Rektum-Rektosigmoid-Ince barsak
  - Mukoza koruyucu rezeksiyon”shaving”
  - Disk rezeksiyon
  - Segmental rezeksiyon;

## **Nonkonservatif cerrahi**

- TAH BSO HRT
- Radikal cerrahi , tüm odakların çıkartılması, HRT



## **DIE lezyonlar**

*Multifokal*

*Yerleşim yerleri*

## **Hastanın özellikleri**

*Yaşı*

*Gebelik arzusu*

*Geçirilmiş cerrahi hikaye tx*

*Medikal tx hikaye*

# **Cerrahi Kararı**

## **Cerrahin deneyimi**

*DIE*

*laparoscopi*

*laparotomi*

## **İntestinal DIE özellikleri**

*Lokalizasyon, derinlik,  
sayı, adezyon varlığı vb*

# DIE konservatif cerrahi planı

- Laparoskopik explorasyon
- Adezyolizis
- Endometrioma eksizyonu
- Overlerin pelvis yan duvarına tesbiti
- Üreterlerin ve uterin damarların diseksiyonu
- Hipogastrik pleksüs izolasyonu
- Oblitere Cull de sac mobilizasyonu
- Sakrouterin-vaginal nodül eksizyonu
- Rektosigmoid rezeksiyonu; shaving-disc rezeksiyon-segmental rezeksiyon
- Üreter diseksiyonu-anastomoz

# İntestinal DIE cerrahisi

## Radikal cerrahi

### Kolorektal rezeksiyon

Laparotomi  
Laparoskopi  
Vajinal  
Kombine  
≥3cm tek lezyon  
≥%50 barsak duvarını  
≥3 muskuler tabakayı  
infiltrate eden lezyon

## Konservatif cerrahi

- Shaving tekniği
- Disk rezeksiyon



- Nodül eksizyonu → morbidite ↓
- Rezeksiyon → Sindirim sistemi komplikasyonları ↑  
( anastomoz dehissensi, fistül, diare, konstipasyon)  
Üreteral hasar  
Pelvik pleksüs hasarı; nörojenik mesane, üriner retansiyon
- Rekürrens açısından nodül eksizyonu ile, rezeksiyon arasında anlamlı fark yok



n=41 rektal endometriozis  
Follow-up 26±13 (12-53 ay)



**n=25 (%61) segmental rezeksiyon**  
n=13 (%52) >3 gaita/gün  
n=3 ciddi konstipasyon

**n=16 (%39) nodül eksizyonu**  
n=3 (%19) >3 gaita/gün



Semptom free probability

Semptom free	Segmental	Nodül eksizyonu
Dismenore	%80	%62
Disparoni	%65	%81
NCCPP	%43	%69

n=500 (<40 yaş) DIE  
Laparoskopik shaving tekniği  
Ortalama follow-up 3.1 (2-6) yıl

- Rektal perforasyon n=7 (%1.4)
- Üreter yaralanması n=4 (%0.8)
- >300 ml kan kaybı n=1 (%0.2)
- Üriner retansiyon n=4 (%0.8)

- Doğal gebelik n=221 (%57)
- IVF n=107

Rekürrens % 8  
Hamile kalanlarda % 3.6  
Kalmayanlarda % 15

# DIE pre ve post op objektif ağrı skoru değerlendirilmesi

	n	Dismenore	Disparoni	NCCPP
Anaf (2001)	26	<0.0001	<0.001	<0.001
Wright (2001)	28	<0.0001	<0.0001	<0.0001
Redwine (2001)	67	<0.0005	<0.0005	<0.0005
Abbott-Garry (2003)	135	<0.0001	<0.0001	<0.0001
Thomassin-Darai (2004)	27	<0.0001	<0.0002	<0.001
Chopin-Chapron (2004)	152	<0.001	<0.001	<0.001

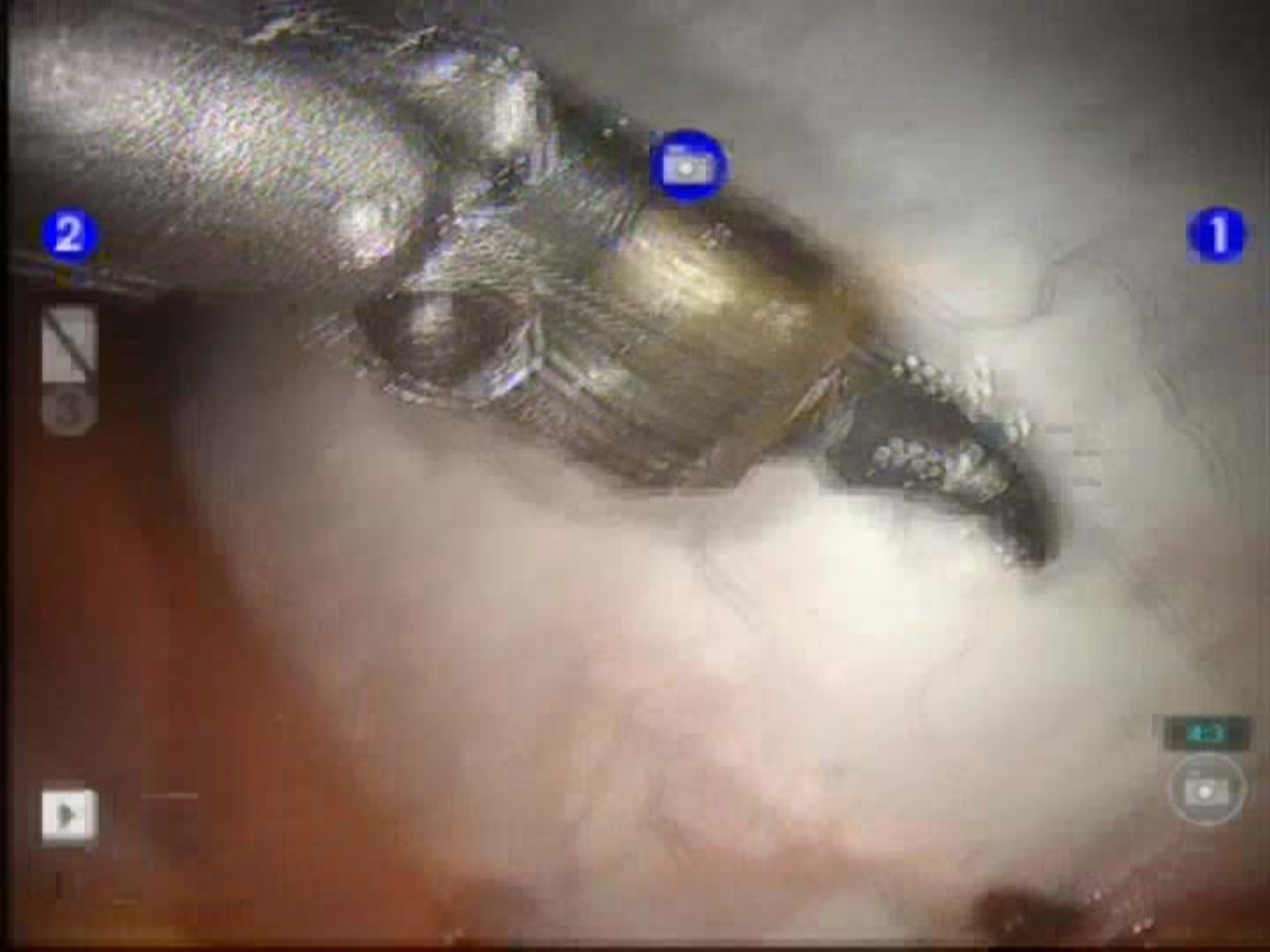
**TABLE 2****Intra- and postoperative complications in patients undergoing laparoscopic excision of severe endometriosis.**

Parameter	Radical surgery (no bowel)	Nonradical surgery	Radical with colorectal surgery
Cases (n)	765	162	436
Intraoperative blood loss (mL)	233 ± 78	233 ± 53	310 ± 116
Operation time (min)	180 ± 26	156 ± 21	264 ± 45
Intraoperative complications			
Total	9 (1.2)	2 (1.2)	15 (3.4)
Abdominal wall hematoma	2 (0.3)	0 (0.0)	0 (0.0)
Internal hemorrhage	1 (0.1)	2 (1.2)	5 (1.1)
Accidental bowel perforation	1 (0.1)	1 (0.6)	5 (1.1)
Ureteral injury	2 (0.3)	0 (0.0)	2 (0.5)
Bladder perforation	2 (0.3)	1 (0.6)	2 (0.5)
Uterine perforation	1 (0.1)	1 (0.6)	1 (0.2)
Postoperative complications (within 1 wk)			
Total	175 (22.7)	55 (34.0)	287 (65.8)
Complex	39 (5.1)	13 (8.0)	67 (15.4)
Abdominal wall hematoma	20 (2.6)	4 (2.5)	4 (0.9)
Blood loss >3 g/dL Hb	38 (5.0)	14 (8.6)	64 (14.7)
Pyrexia	15 (2.0)	8 (4.9)	28 (6.4)
Cystitis	6 (0.8)	0	2 (0.5)
Retention of urine	16 (2.1)	7 (4.3)	51 (11.7)
Reoperation for hemorrhage	7 (0.9)	3 (1.9)	13 (3.0)
Reoperation for bowel fistula	2 (0.3)	0	5 (1.1)
Pain >5 for >24 h	8 (1.0)	0	4 (0.9)
Adynamic ileus	3 (0.4)	0	7 (1.6)
Mechanical bowel obstruction	1 (0.1)	0	2 (0.5)
Other	20 (2.6)	6 (3.7)	40 (9.2)
Postoperative complications (within 1 m)			
Total	130 (17.0)	20 (12.3)	101 (23.2)
Retention of urine	12 (1.6)	13 (8.0)	14 (3.2)
Cystitis	20 (2.6)	2 (1.2)	10 (2.3)
Constipation	10 (1.3)	2 (1.2)	17 (3.9)
Abdominal wall hematoma	3 (0.4)	3 (1.9)	2 (0.5)
Bowel fistula	0	0	16 (3.7)
Vaginal fistula	2 (0.3)	0	1 (0.2)
Ureteral stenosis	1 (0.1)	0	1 (0.2)
Peritonitis	1 (0.1)	0	2 (0.5)
Peritoneal effusion	1 (0.1)	0	1 (0.2)
Other	80 (10.5)	0	37 (8.5)

*Note:* Values are mean ± SD or number (percentage). Nonradical surgery means incomplete removal of endometriosis, which was not necessarily bowel localizations (e.g., bladder, uterosacral ligaments).

*Minelli. Laparoscopy for severe endometriosis. Fertil Steril 2010.*





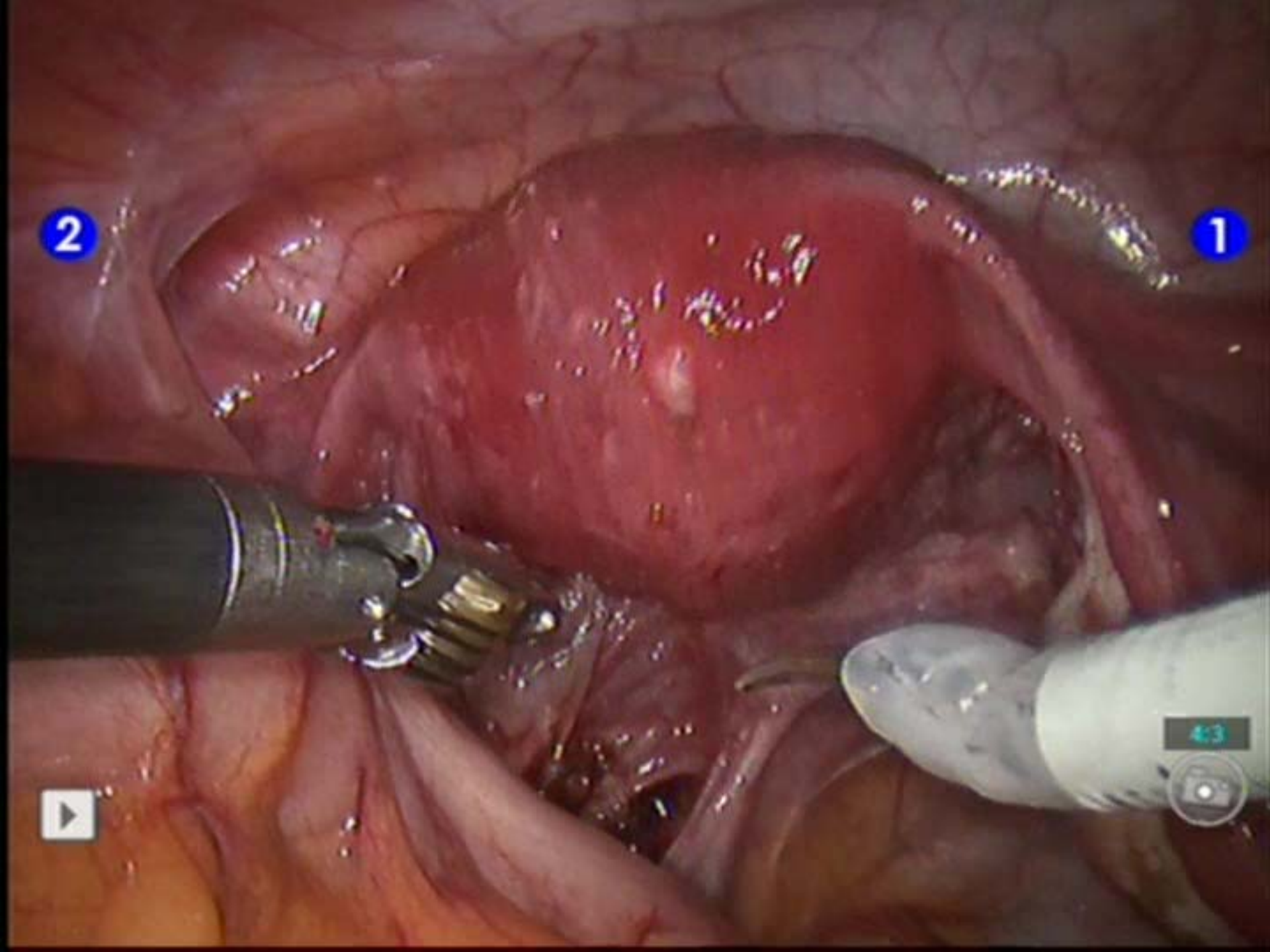
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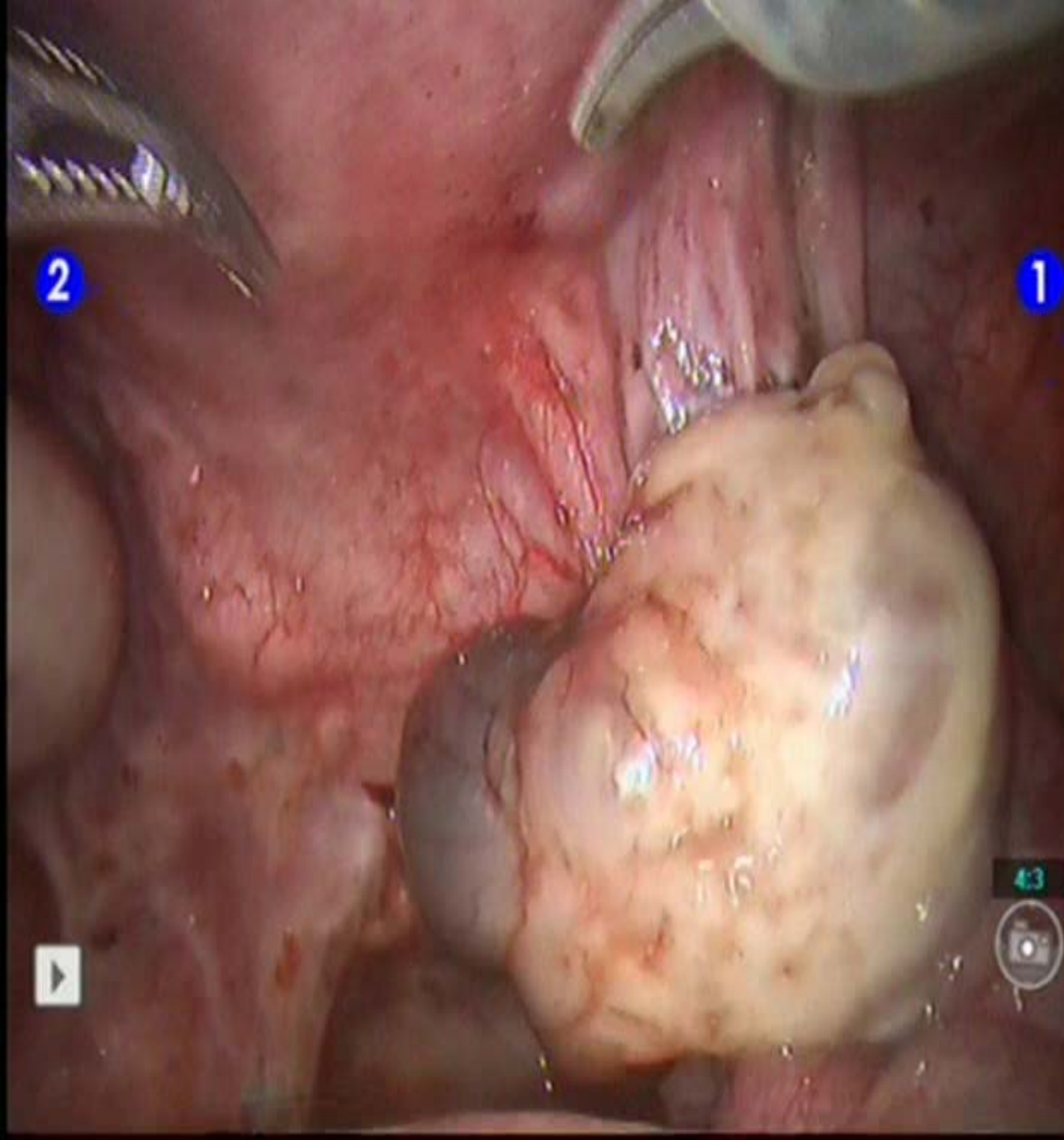
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1. ulusal  
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10-12 Mart 2011  
Marriott Hotel Asia, İstanbul



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