

Extragenital Endometriosis

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**NEZHAT'S
HISTORY OF ENDOSCOPY**

A HISTORICAL ANALYSIS OF ENDOSCOPY'S ASCENSION SINCE ANTIQUITY

Camran Nezhat, M.D.

FOURTH EDITION

Nezhat's Video-Assisted
and Robotic-Assisted
Laparoscopy and
Hysteroscopy



EDITED BY: Camran Nezhat,
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CAMBRIDGE

Medicine



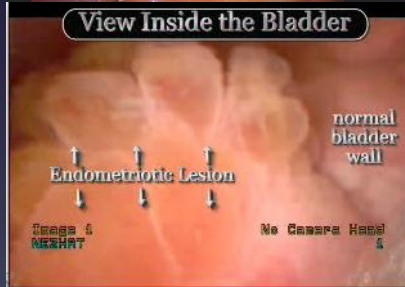
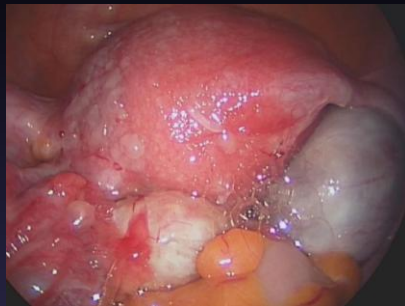
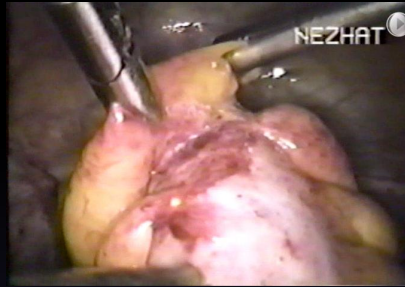


Thank You

Objectives

- Introduce concept of extragenital endometriosis
- Review relevant pathophysiology and anatomy of extragenital endometriosis
- Learn surgical principles related to treatment of extensive extragenital endometriosis

Extragenital Endometriosis



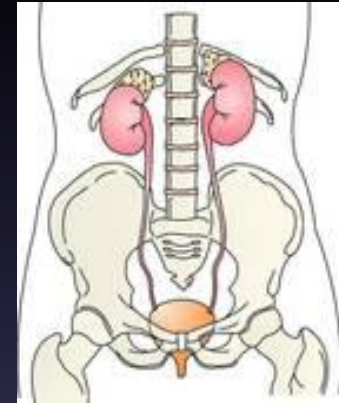
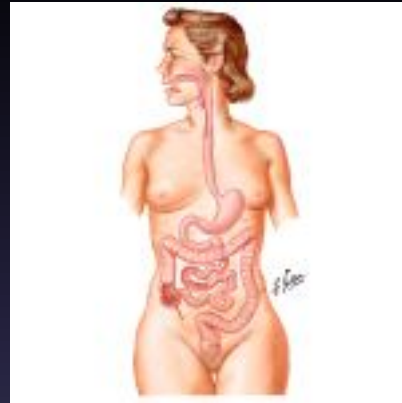
- Occurs in 1-12% of patients with endometriosis
- It can occur in the absence of visible pelvic disease
- Endometriosis has been reported in almost all body structures

Extragenital Endometriosis

- Most common sites

- GI tract

- Urinary tract



- Remote sites:

- Lungs

- Skin

- Nervous system

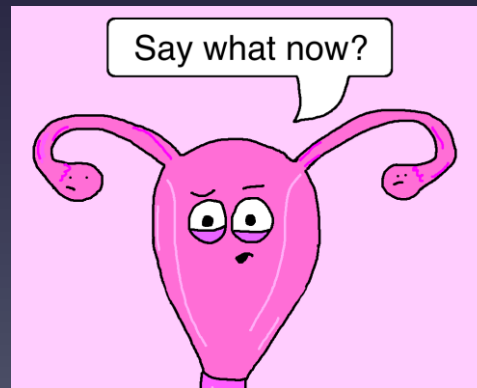
- Retinal

- Adrenal gland

Symptoms

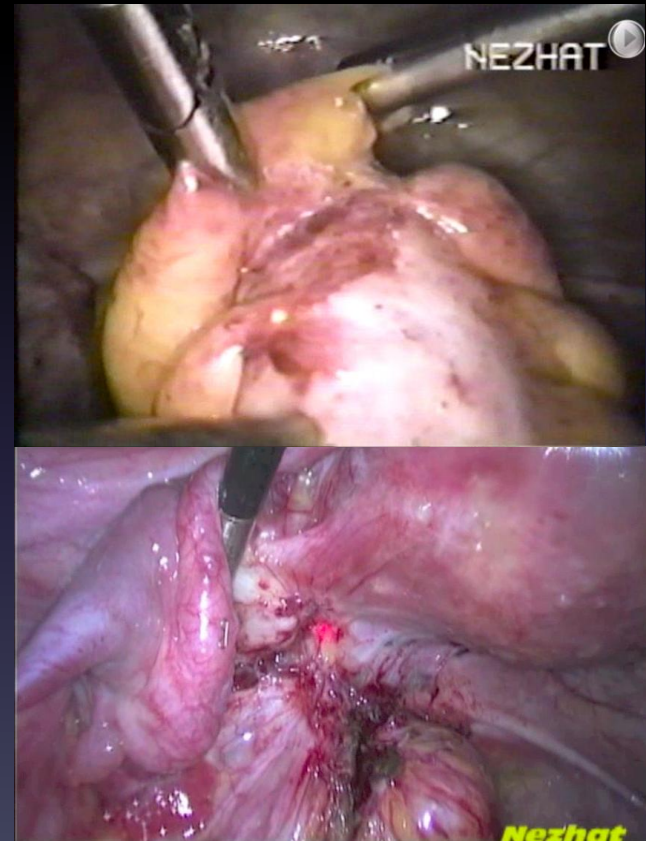
- Pain
- Bleeding
- Organ dysfunction
- Diverse and puzzling resulting from functioning endometrial tissue or scarring in the affected site

Relation to the menstrual cycle offers a clue to the diagnosis



Common sites of bowel involvement

- Rectosigmoid (51%)
- Appendix (15%)
- Small bowel (14%)
- Rectum (14%)
- Cecum and colon (5%)





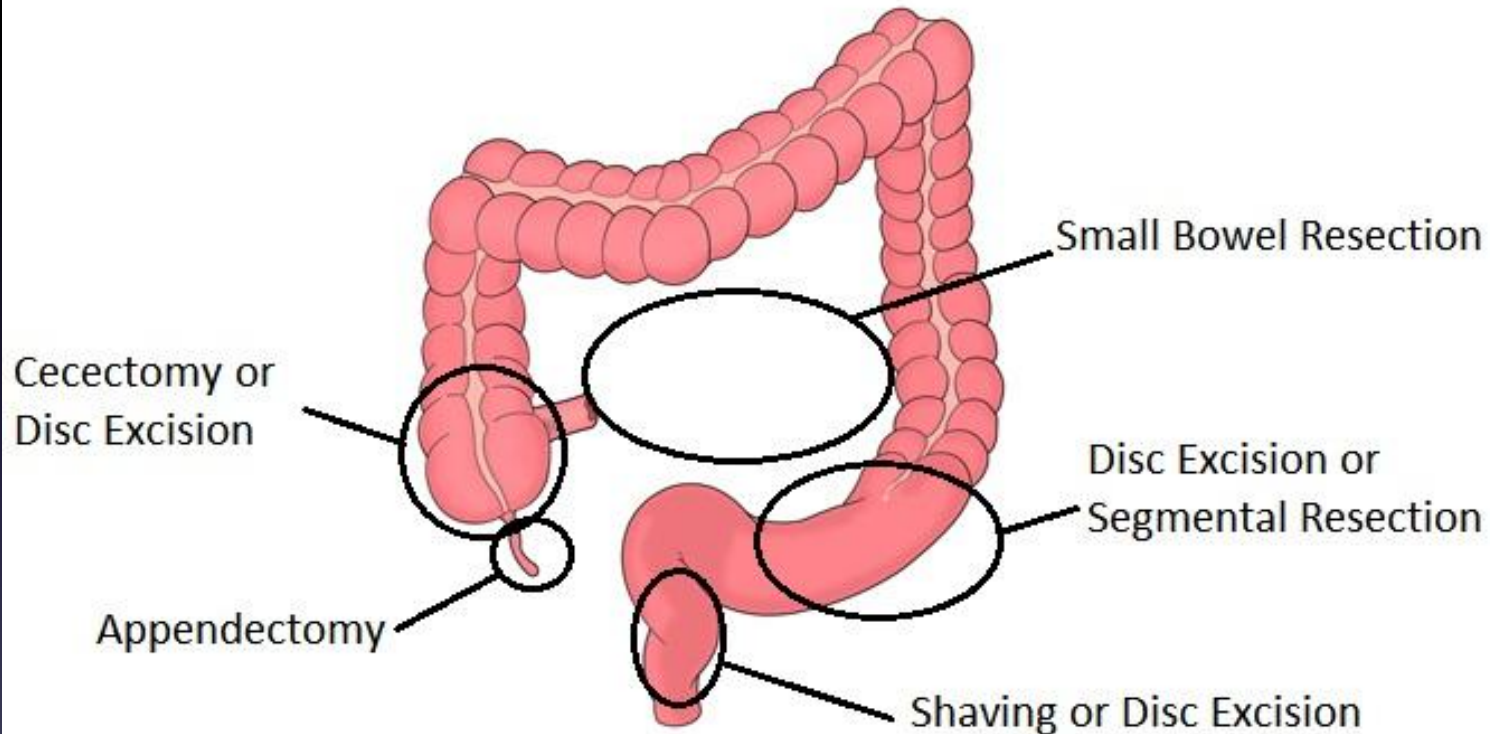


Multiorgan Endometriosis



Bowel Endometriosis

Treatment Based on Location of Endometriosis in the Bowel



Urinary Tract Endometriosis

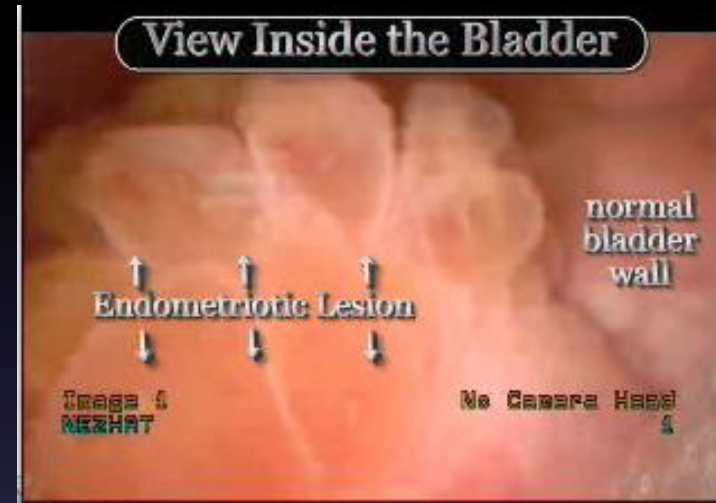
- Presents in about 20% of women with endometriosis
- Symptoms include frequency, urgency, dysuria, and hematuria



Nezhat et al. Nezhat's Endometriosis: Advanced Management and Surgical Techniques, 4th edition. Cambridge University Press: 2013.

Bladder Endometriosis

- Most common site of genitourinary tract endo
- Pathological confirmation is crucial
 - 1 out of 15 cases of deeply infiltrating bladder endo was adenocarcinoma

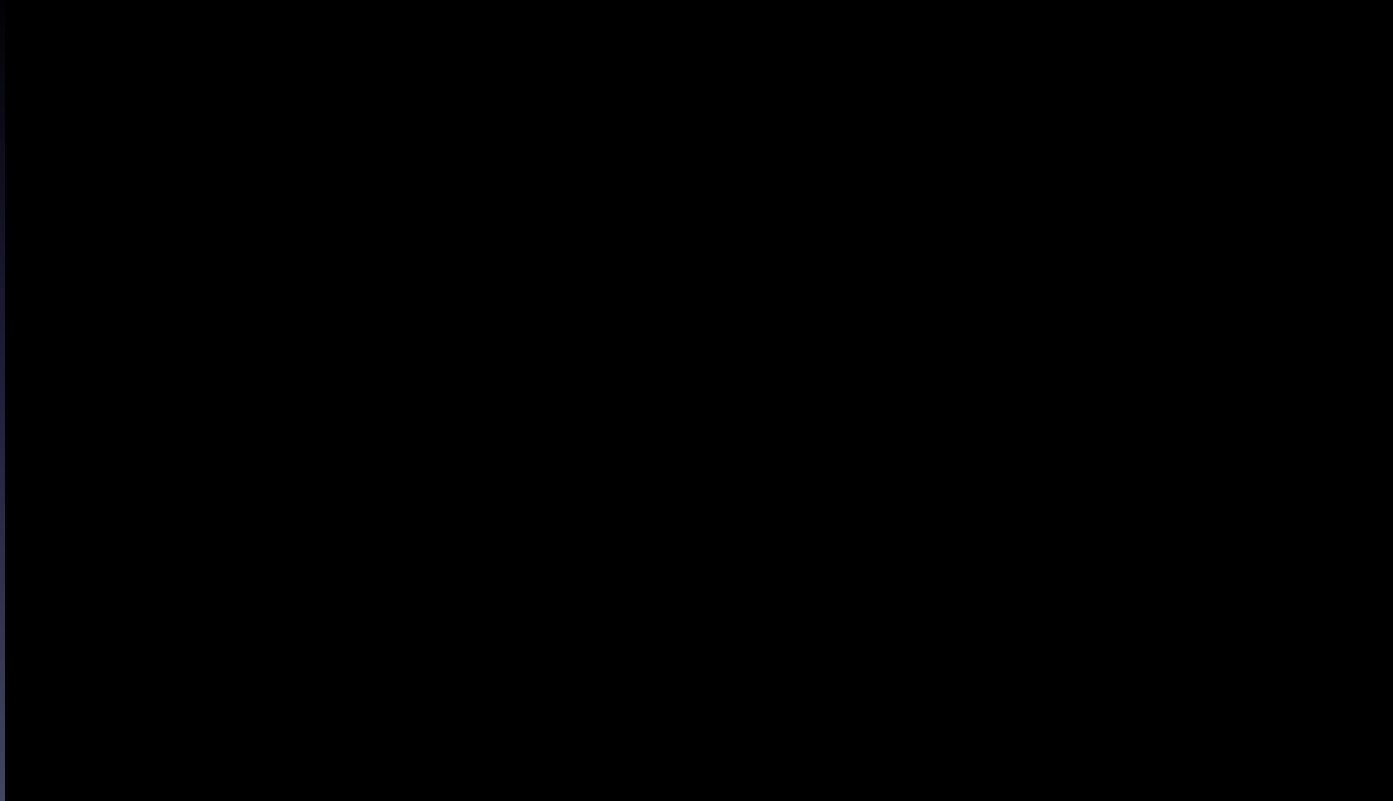


Nezhat et al. Fertil Steril Oct 2002;78(4):872-5.

Nezhat et al. Nezhat's Endometriosis: Advanced Management and Surgical Techniques, 4th edition. Cambridge University Press: 2013.

Endometriosis of Bladder

Shaving Technique



Bladder Endometriosis

- Within the bladder, endometriotic lesions are generally found in the trigone, dorsal wall, or at the ureterovesical junction



Segmental Bladder Resection



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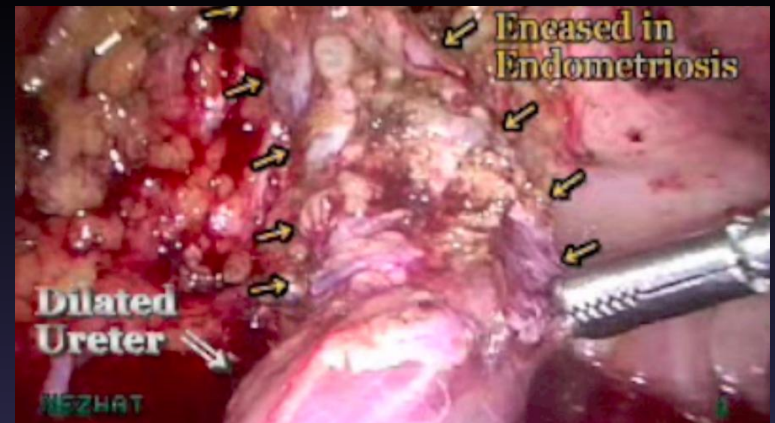
- Endo of genitourinary tract is common, however, it causes compression and obstruction in <1%
- Ureteral endometriosis is rare < 0.3% of all endometriotic lesions
- Predominantly unilateral, with left ureter affected more commonly than the right

Veeraswamy A, et al. Extragenital endometriosis. Clin Obstet Gynecol. P 53(2): 449 --466. (2010)

Nezhat et al. Nezhat's Endometriosis: Advanced Management and Surgical Techniques, 4th edition. Cambridge University Press: 2013.

Laparoscopic Treatment of Ureteral Endometriosis

- Ureterolysis
- Vaporization and excision of endometriosis
- Ureterotomy or segmental ureteral resection
- Retrograde internal ureteral stent
- One layer repair (4-0 Polydioxanone)
- Postoperative ureterogam



Nezhat et al. Nezhat's Endometriosis: Advanced Management and Surgical Techniques, 4th edition. Cambridge University Press: 2013.

Ureter Endometriosis



Robotic Assisted Uterolysis



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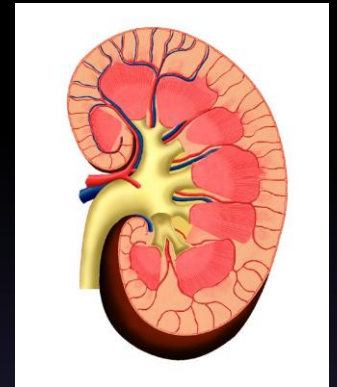
- Ureteroneocystotomy with a psoas bladder hitch must be carried out when the deep infiltrating lesions are extensive or invade the ureteric wall.

Ureteroureterostomy



Renal Endometriosis

- Involvement of the kidney has been infrequently reported.
- Diagnosis has been made with
 - IVP
 - CT scan
 - MRI
- In the absence of a biopsy, there is no accurate pre-op method to exclude malignancy.
 - Majority of patients are treated with nephrectomy.
- There has been no report of regression of renal endometriosis with GnRH agonist therapy



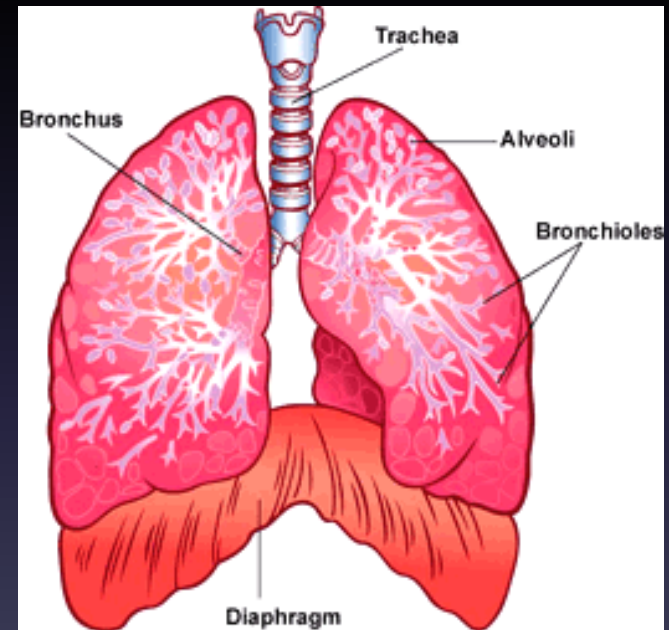
Thoracic Endometriosis Syndrome (TES)



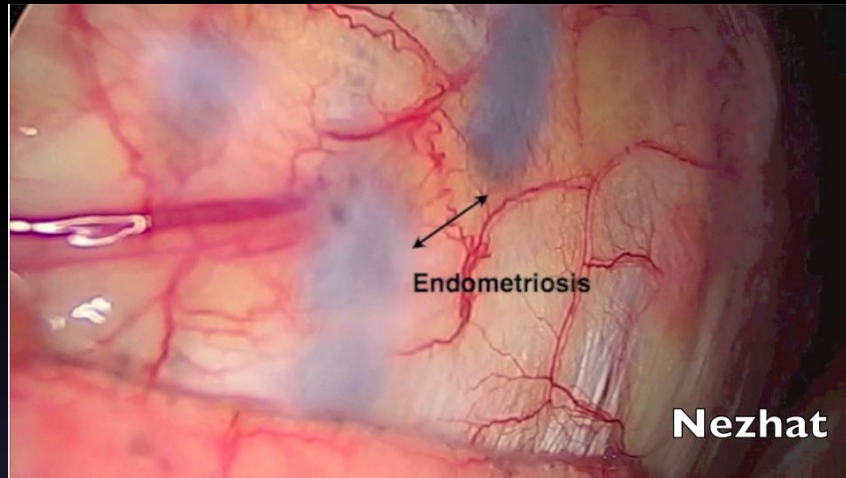
- Rare disorder characterized by the presence of functional endometrial tissue in the pleura, the lung parenchyma, and the airways.

Thoracic Endometriosis

- 4 Main Clinical Entities
 - Catamenial pneumothorax (CP)
 - Catamenial hemothorax (CHt)
 - Catamenial hemoptysis (CH)
 - Lung nodules



Clinical Entities of TES



- Catamenial pneumothorax is the most frequent presentation of TES
- Occurring in approx 80% of the cases

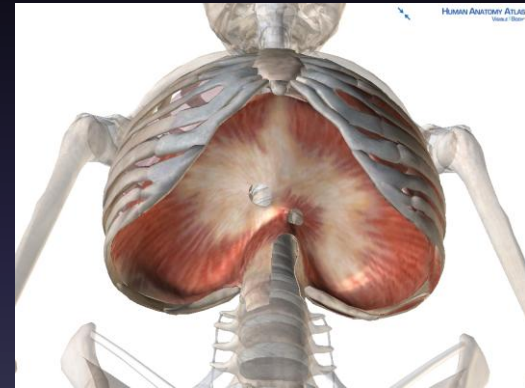
Veeraswamy A, et al. Extragenital endometriosis. Clin Obstet Gynecol. P 53(2): 449 --466. (2010)

Clinical Entities of TES

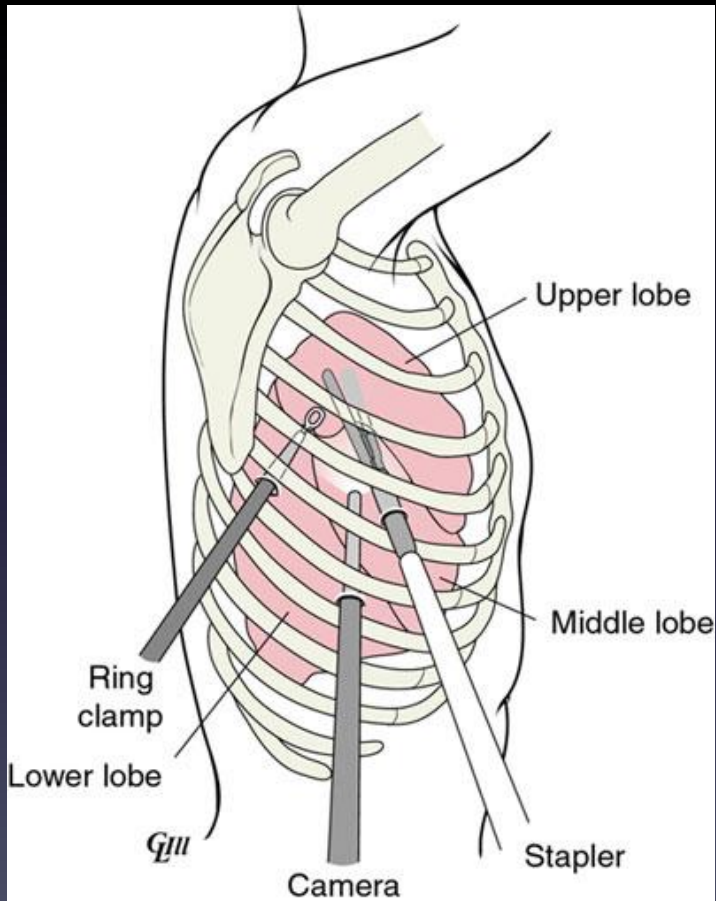
- Catamenial hemothorax 14%
- Catamenial hemoptysis 5%
- Least common are endometriotic lung nodules

Diagnosing TES

- Diagnostic tests that help rule out malignancy, infection, and other pathologies
 - Chest radiograph
 - CT
 - MRI
 - Thoracentesis
 - Bronchoscopy
- However, limited diagnostic yield for TES
 - Variable and inconsistent findings



Video-assisted thoracoscopic surgery



- At present gold standard for both definitive diagnosis and surgical treatment of catamenial pneumothorax

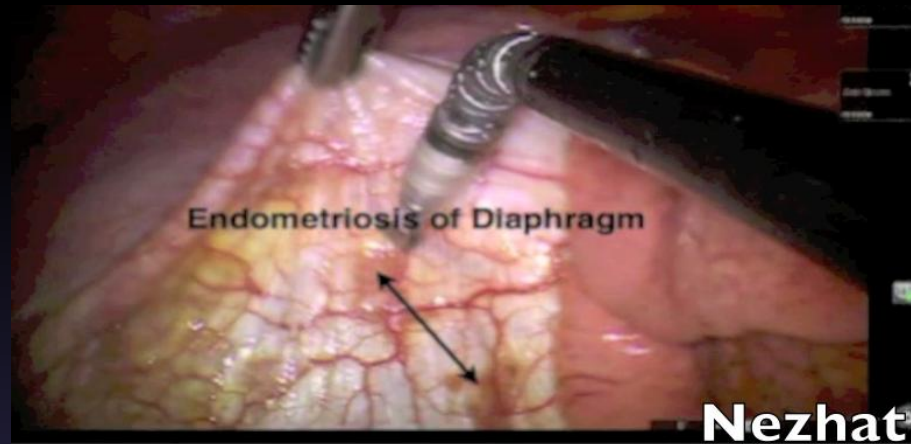
Thoracic Endometriosis



Lesions of TES

- Diaphragmatic abnormalities 38.8%
- Endometriosis of visceral pleura 29.6%
- Bullae, blebs, and scarring 23.1%

Endometriosis of the Diaphragm

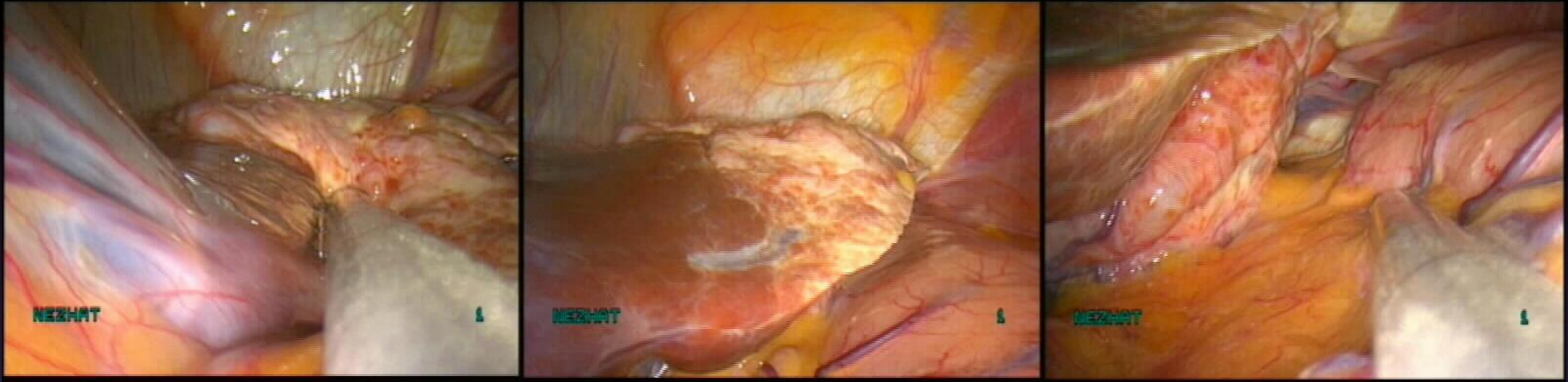


- The abdominal diaphragm can be involved with endometriosis
- Diagnosis and treatment is possible with videolaparoscopy

Diaphragm Endometriosis

I. Repair of diaphragmatic defect in a patient with catamenial pneumothorax

Liver Endometriosis



- Extremely rare entity
- Difficult to diagnose
- First described in 1986 by Finkel et al

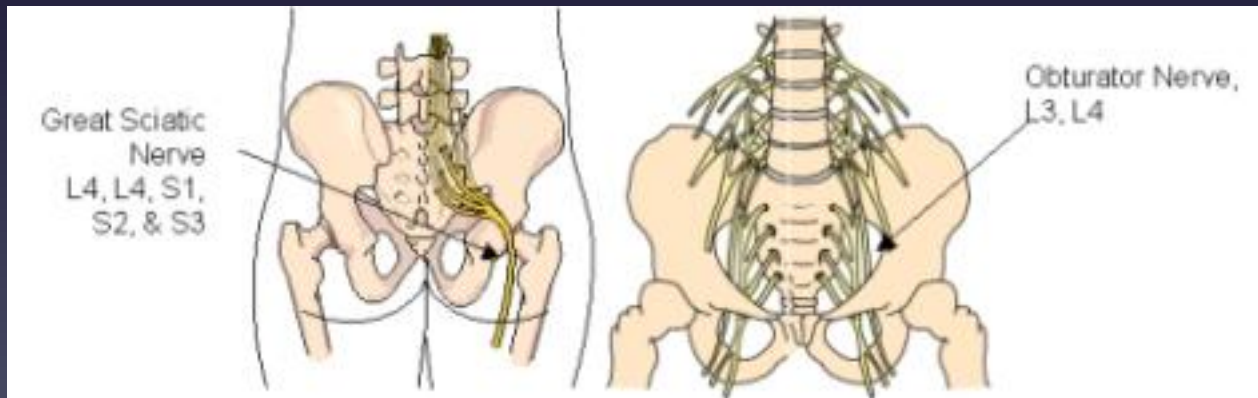
Endometriosis of Liver: Treatment

- 15 cases reported in the literature were treated by laparotomy
- Report of 2 cases treated laparoscopically

Nezhat C et al. Laparoscopic management of hepatic endometriosis: report of two cases and review of the literature. JMIG. 2005 ;12:196-200.

Other Extrapelvic Sites

- Cutaneous
 - Abdominal wall
- Nervous System
 - Nerves in or near pelvis
 - Sciatic Nerve
 - Obturator Nerve



Other Extrapelvic Sites

- Pancreatic endometriosis has been reported in 2 patients
- One patient with isolated omental endometriosis
- Vaginal endometriosis
- Cervical endometriosis
- Vulvar, perineal, and perianal

6th annual seminar on
Minimally Invasive Gynecologic Surgery
with hands-on workshop on laparoscopic suturing and knot-tying

December 11-12, 2014
The Roosevelt Hotel,
New York City, NY

Thank You

www.nezhat.org