

How to best manage endometriosis-suspected pain, ovarian cyst, subfertility,

Alan Lam

Associate Professor, Sydney Medical School, Royal North Shore Hospital

Director, Centre for Advanced Reproductive Endosurgery (CARE)

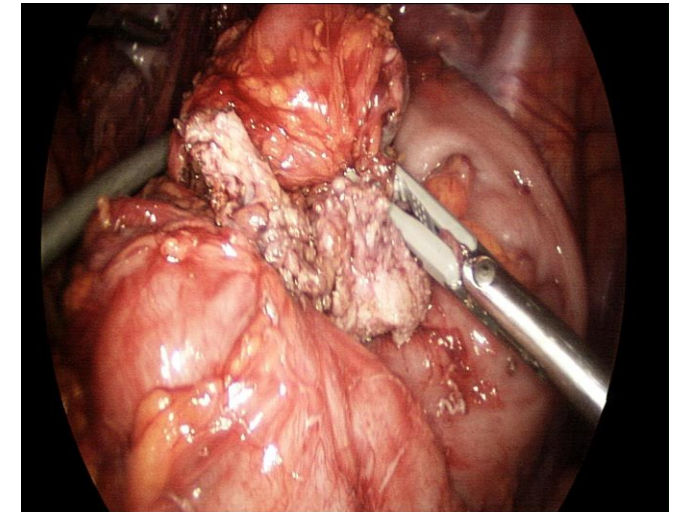
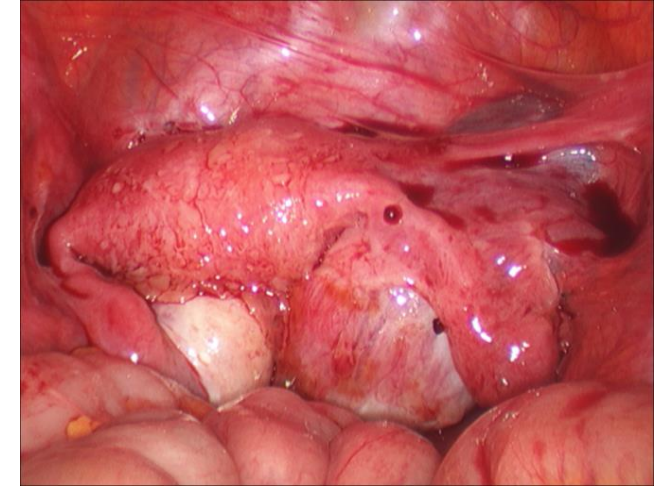
Past President, Australian Gynaecological Endoscopy & Surgery Society (AGES)

Past Board , World Endometriosis Society (WES)

Endometriosis

- Oestrogen-dependent inflammatory disease
- Characterized by lesions of endometrial-like tissue outside of the uterus
- Endometriosis affects
 - 6 to 10% of women of reproductive age
 - 50 to 60% of women and teenage girls with pelvic pain,
 - up to 50% of women with infertility
- Onset after menarche, generally inactive after menopause
- Unpredictable natural history

(Guidice L. N Engl J Med 2010;362:2389-98.)





(Picture: Liberty Antonia Sadler)

<https://metro.co.uk/2017/03/08/what-is-it-really-like-to-live-with-endometriosis-6-women-share-their-stories-6493996/>

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How to best manage endometriosis-suspected pain

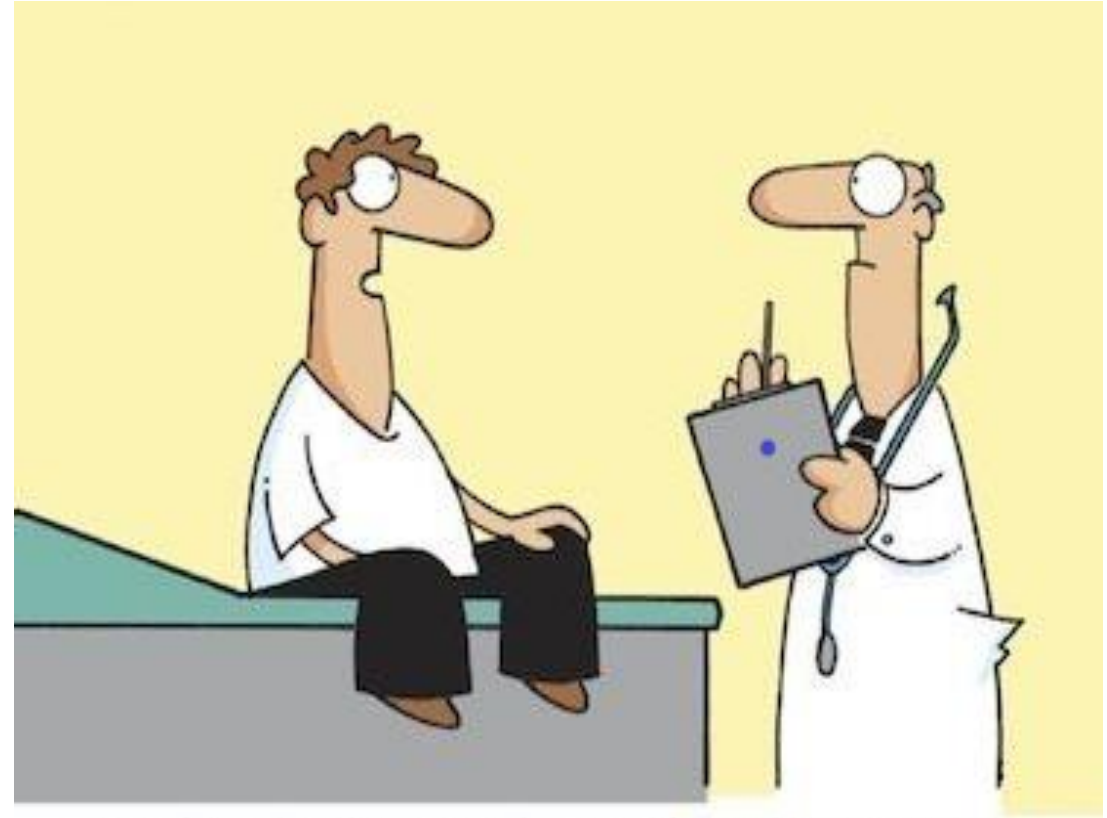
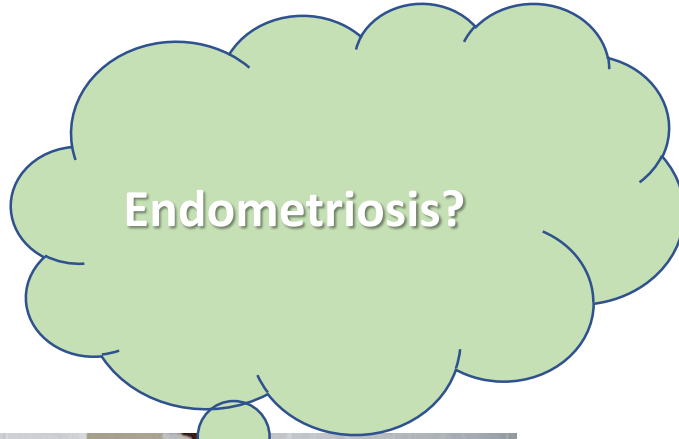
Case 1 – endometriosis-suspected pain

- Grace, 21 yo university student, presents with painful and heavy periods dating back to her menarche at 13.

Despite trying several OCPs since age 15, including trial of continuous OCP regime, there has been no discernible improvement.

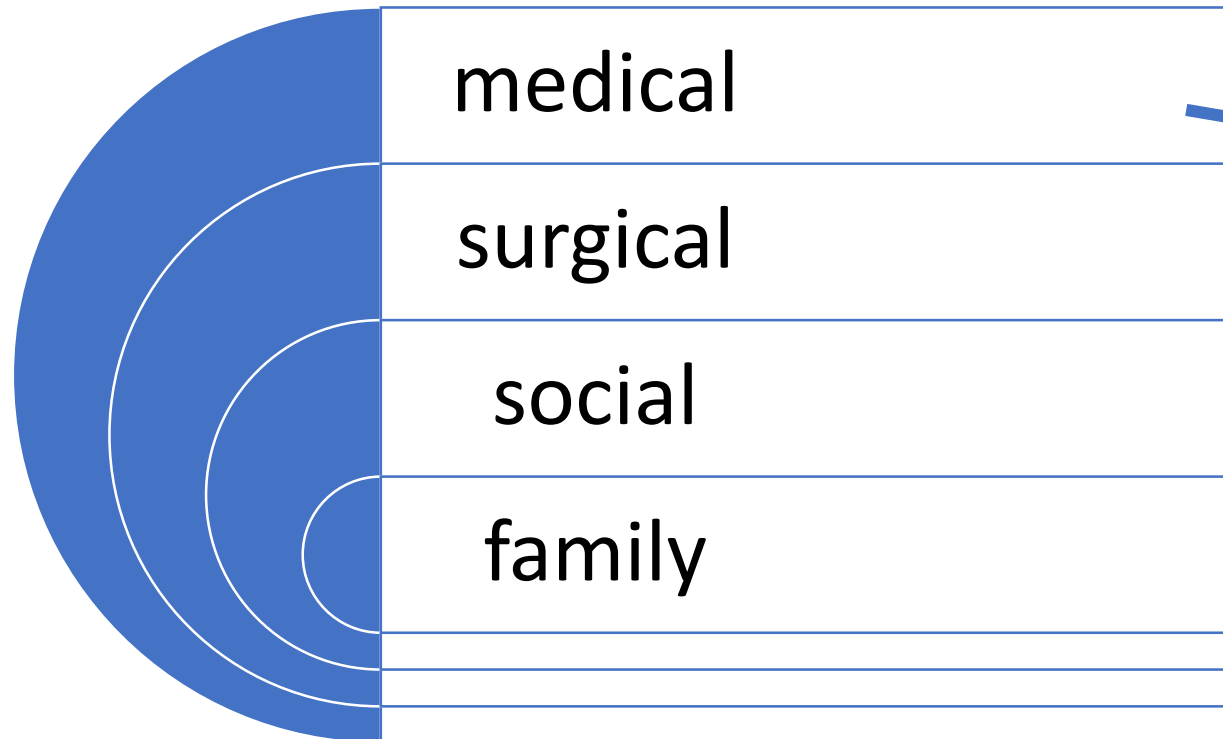


How to evaluate Grace?



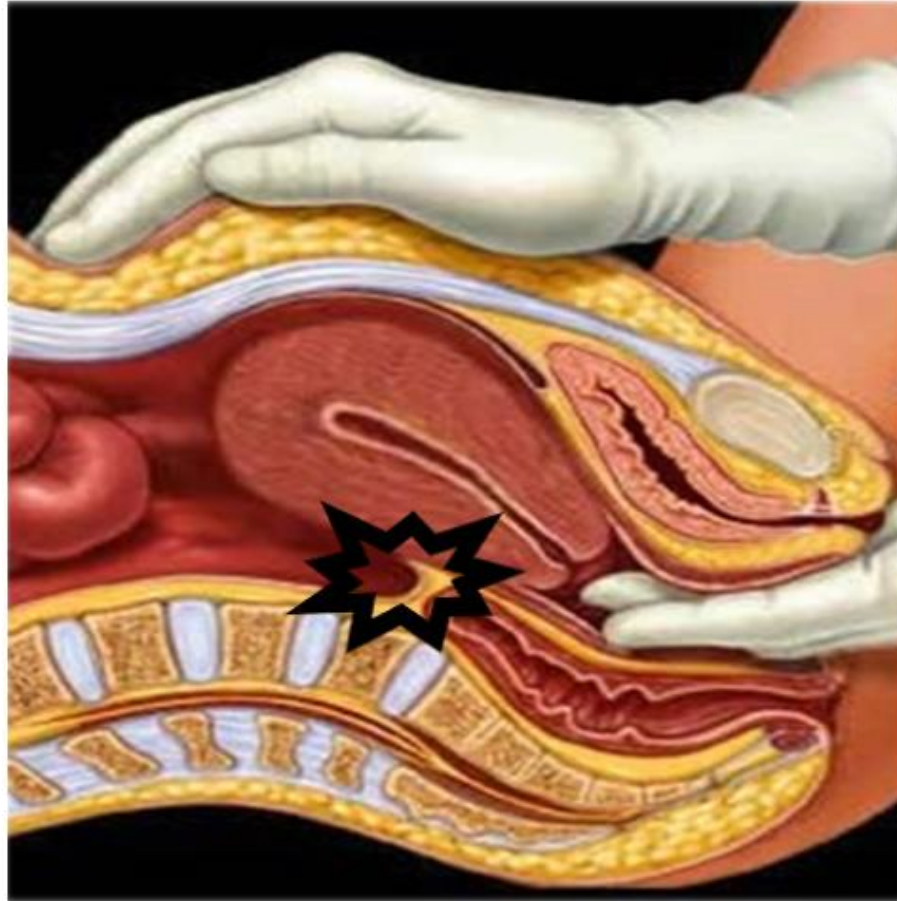
**"I already diagnosed myself on the Internet.
I'm only here for a second opinion."**

What questions to ask Grace?



- Painful period 8/10,
- Low back pain 8/10,
- Increased bowel frequency and painful bowel movements during menstruation,
- Dyspareunia 2/10
- Regular cycle
- Heavy period

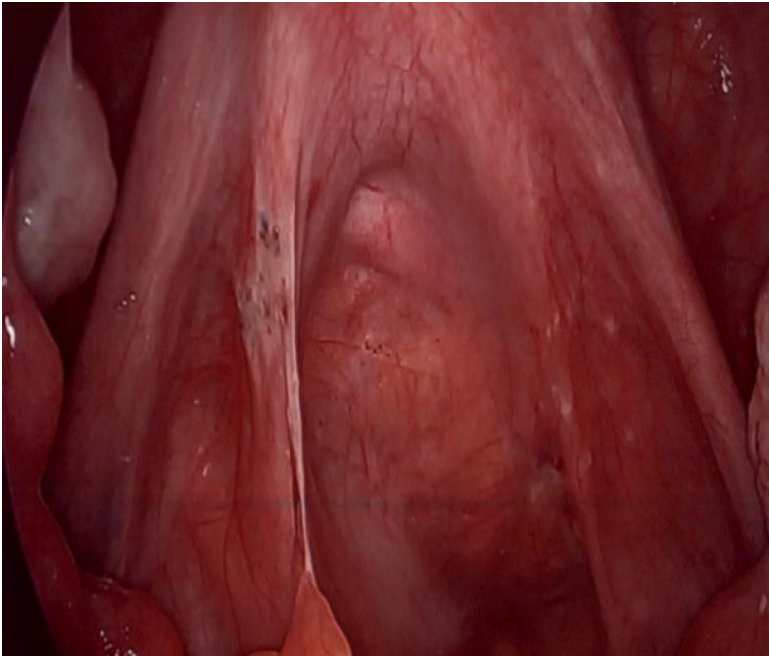
What to look for on examination?



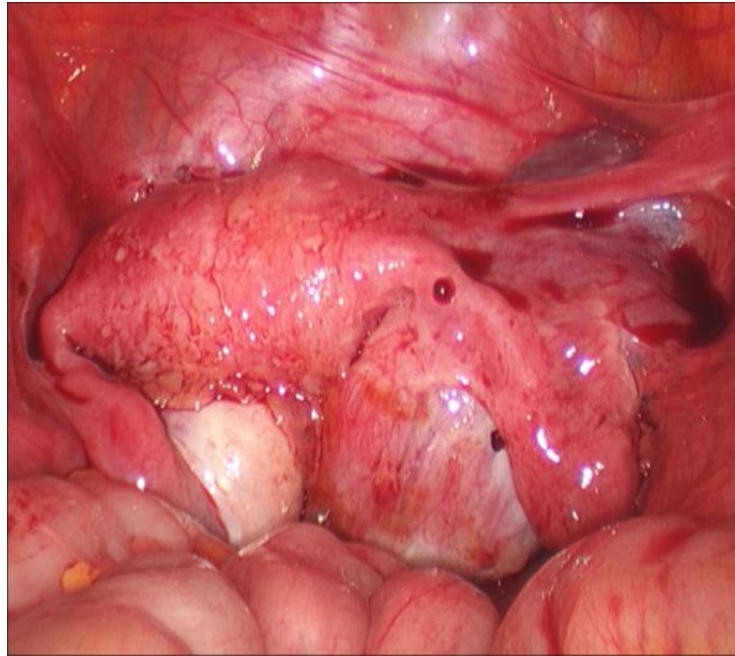
- Pelvic examination
 - Uterine axis: anteverted vs **retroverted**
 - Uterine mobility: mobile vs **immobile**
 - Tenderness: no vs **yes**
 - Nodularity: no vs **yes**

Types of Endometriotic lesions

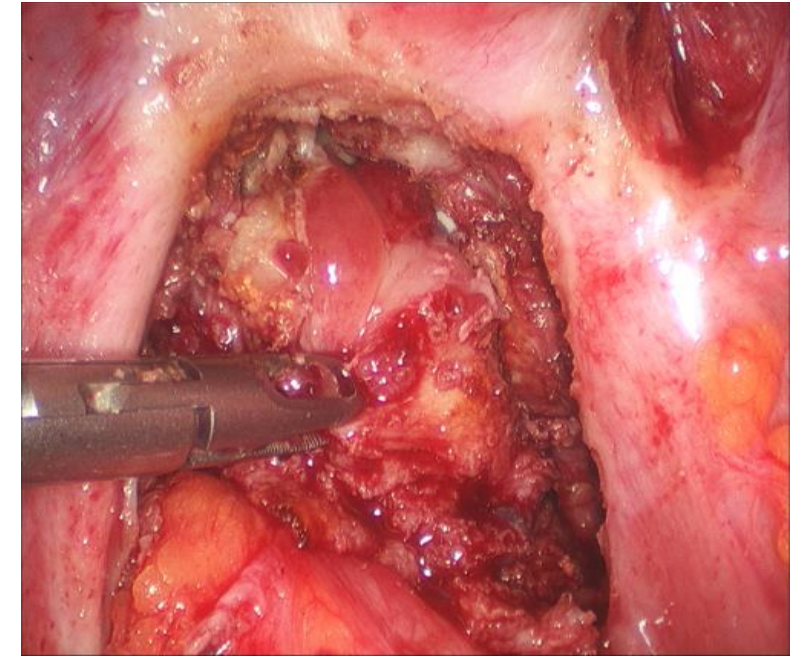
Peritoneal implants



Endometrioma



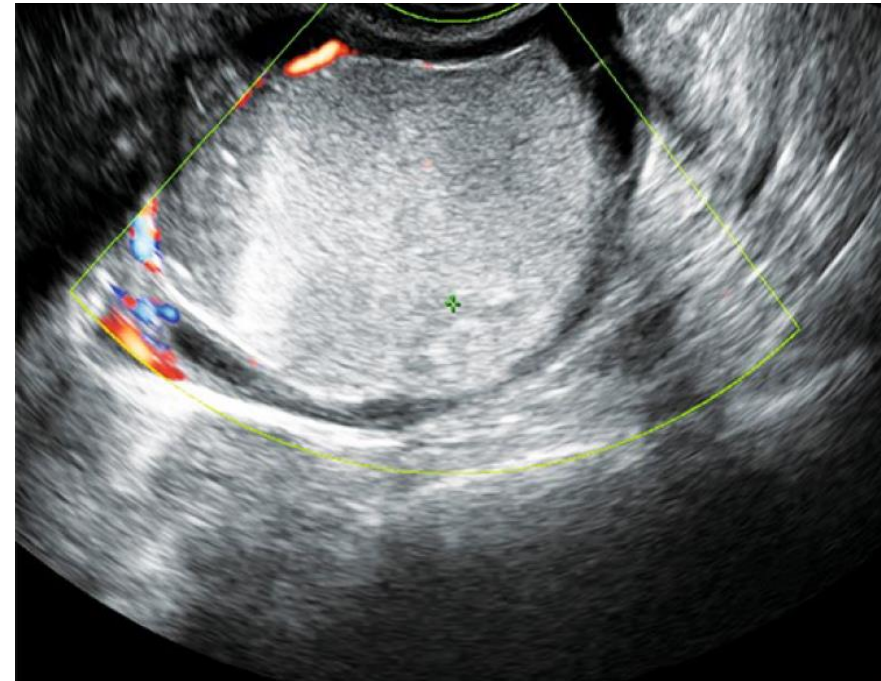
Deep infiltrative nodule



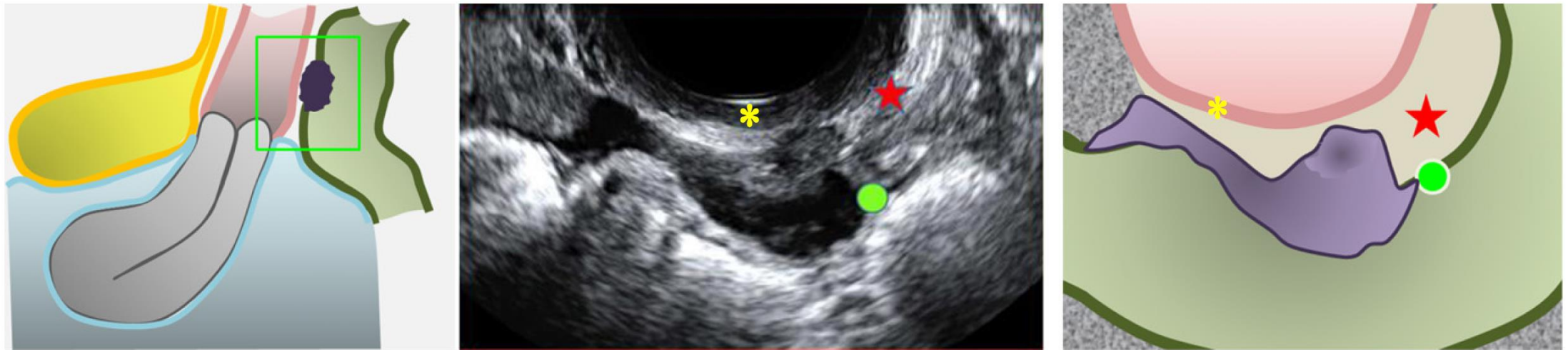
What imaging tests to consider?

- Transvaginal ultrasound (TVS)

- first-line test
- reliably identify or exclude **endometrioma**
- If DDx is haemorrhagic cyst, repeat TVS within 8 weeks
- Poor detection of peritoneal implants



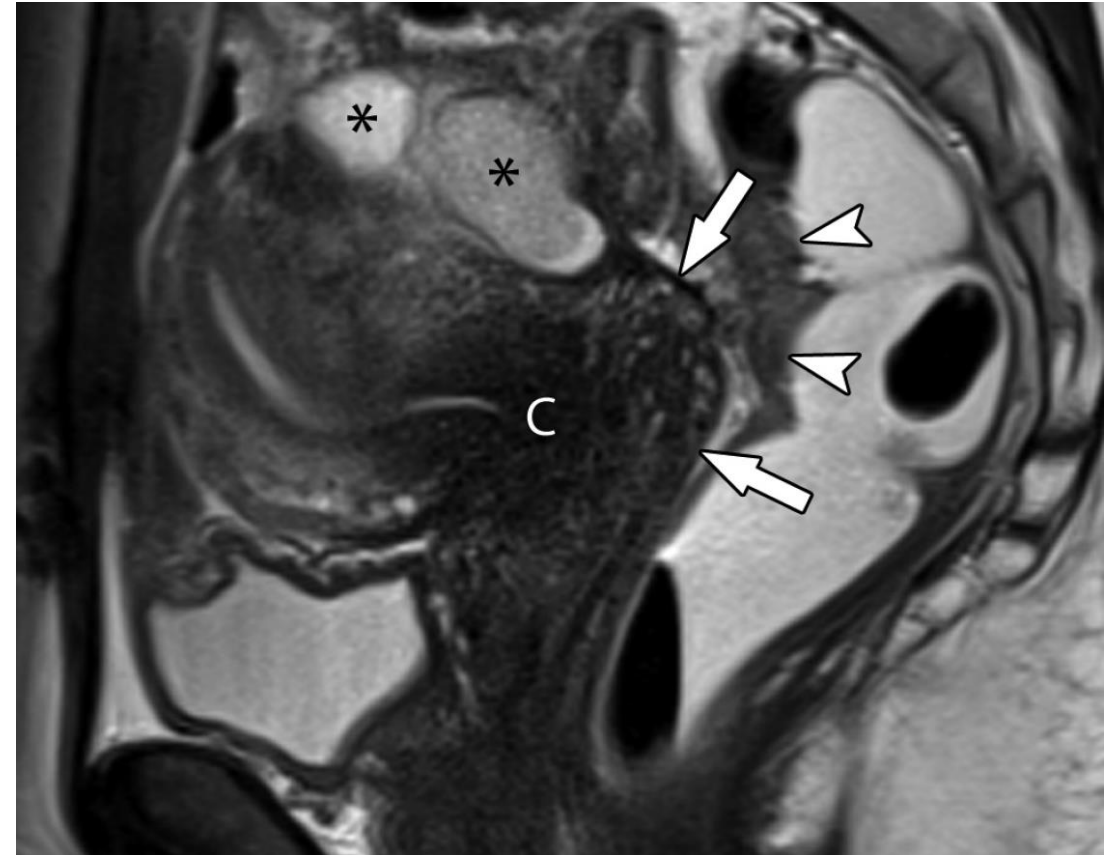
Sonographic evaluation of the pelvis in women with suspected deep endometriosis



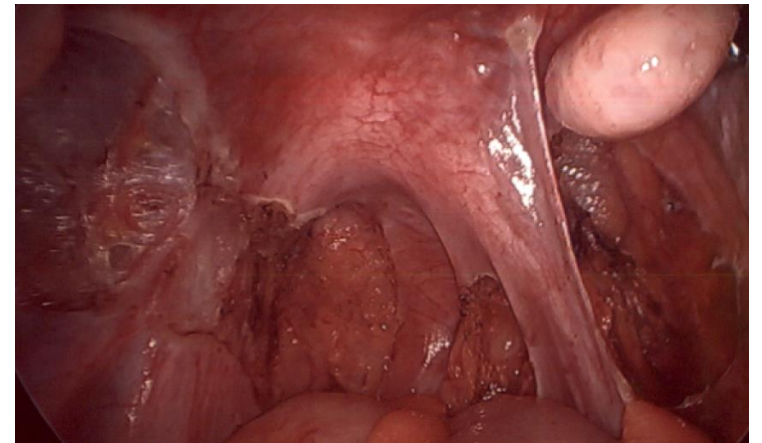
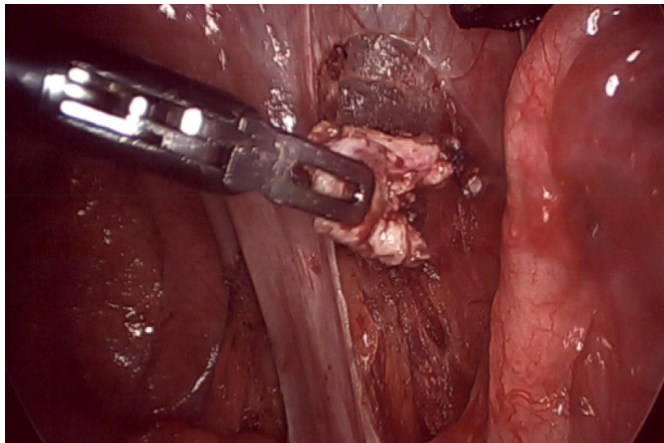
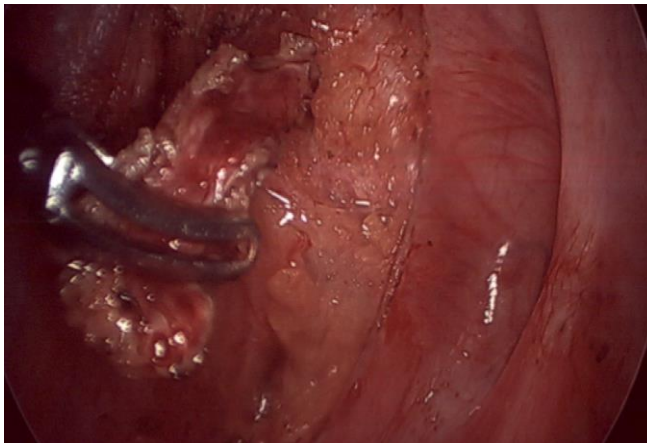
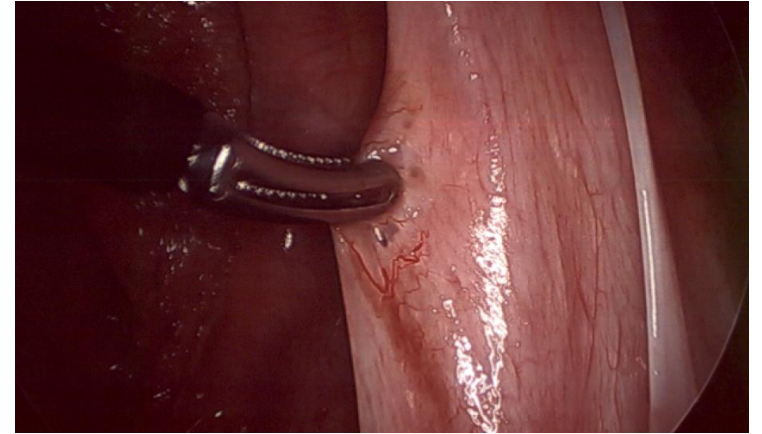
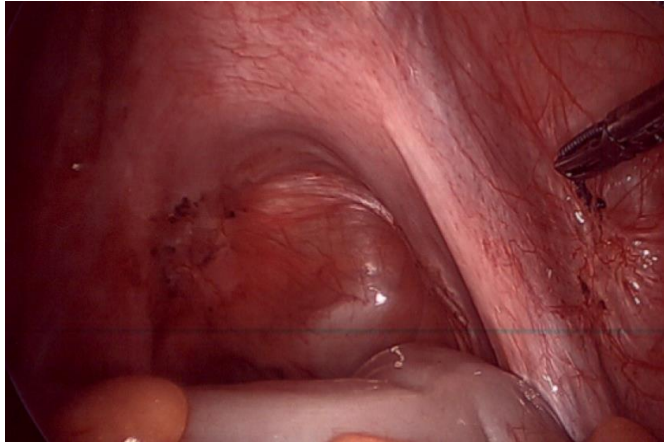
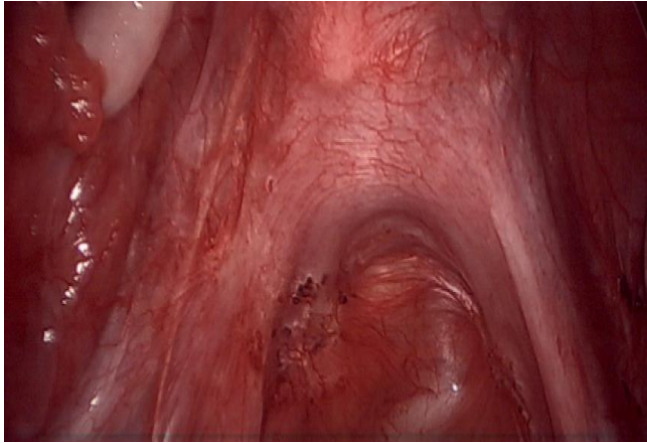
- In specialised imaging centre, TV scan results in high sensitivity (91%) and specificity (98%) for detecting and ruling out **deep** endometriosis

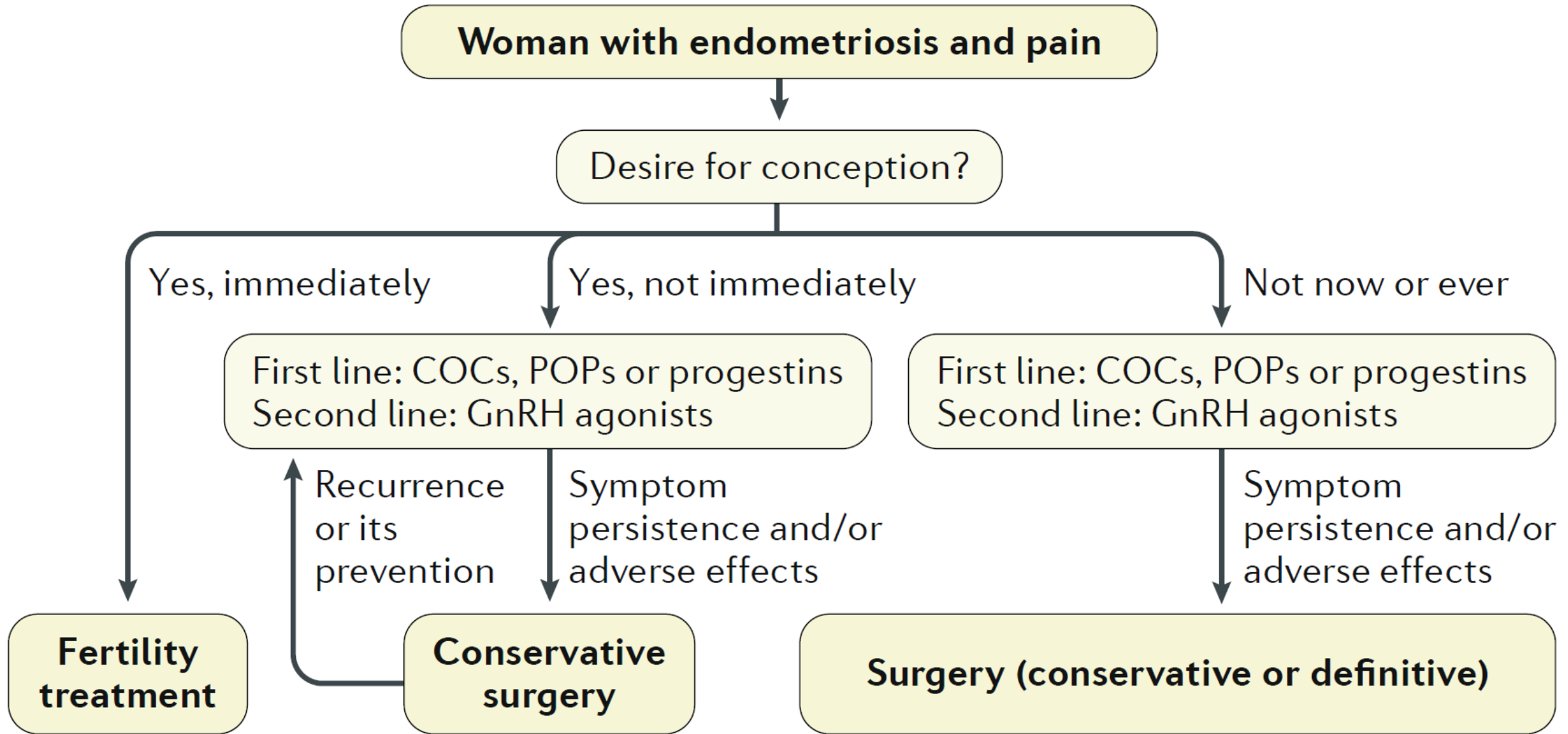
What is the role of MRI?

- Excellent for assessing the extent of **deep** endometriosis
- Diagnostic accuracy is at least as good as that of transvaginal or transrectal ultrasound
- **Better** for assessment of **multi-focal and multi-organ deep** endometriosis: bladder, rectum, posterior fornix, ureter



Grace had laparoscopic excision and Mirena

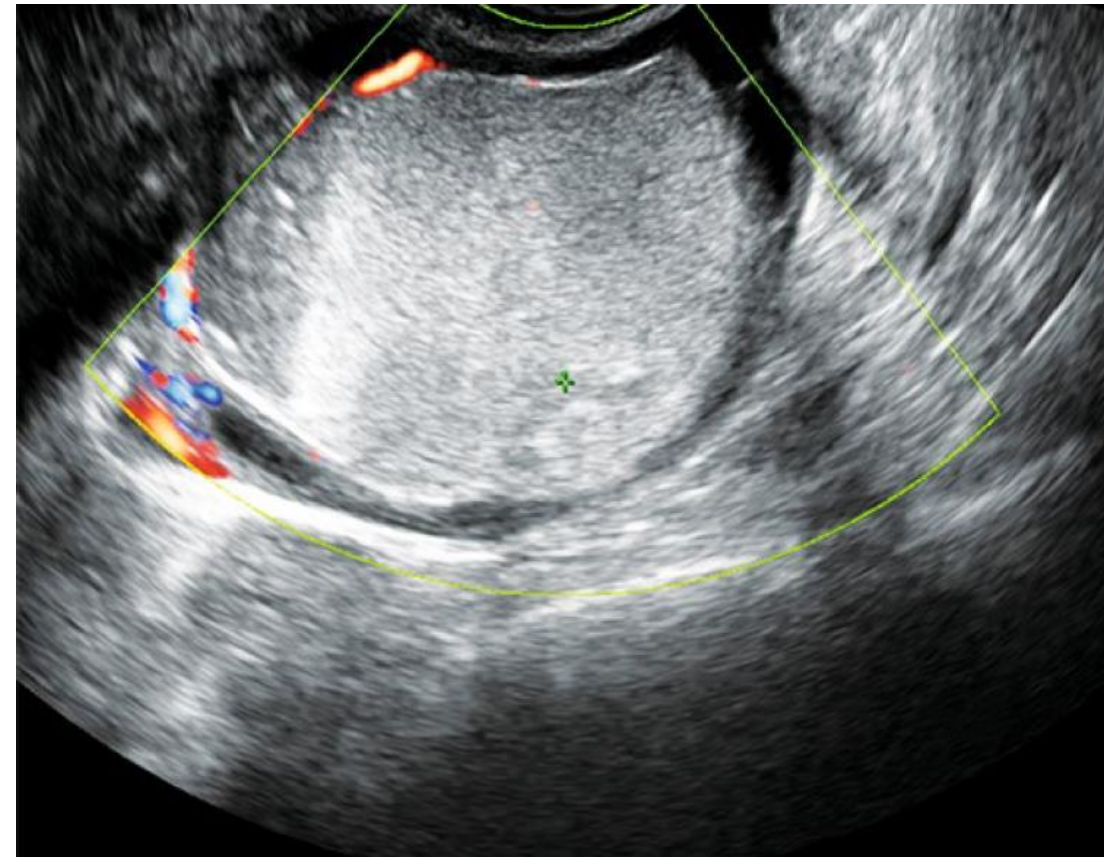




How to best manage endometriosis-suspected ovarian cyst

Case 2 – endometriosis-suspected cyst

- Grace, a 29 yo GoPo, is still single
- She has
 - regular 4/28 cycle
 - mild dysmenorrhoea,
 - mild dyspareunia,
 - no dyschezia
- After sudden, acute onset of pelvic pain over the weekend, she presented to you
- A TV scan reported 8 cm right ovarian complex cyst, most likely an endometrioma, but malignancy cannot be excluded



What questions to consider with Amanda?

- What additional investigations should be done?
 - Other imaging modalities?
 - Any blood tests?



YOUR MEDICAL DIAGNOSIS OPTIONS

BY A DOCTOR

PROS: FREE MAGAZINES.
MOSTLY ACCURATE.

CONS: HARD TO GET AN
APPOINTMENT.

BY YOURSELF, VIA THE INTERNET

PROS: CONVENIENT.

CONS: OH MY GOD, YOU'RE
GONNA DIE!!!

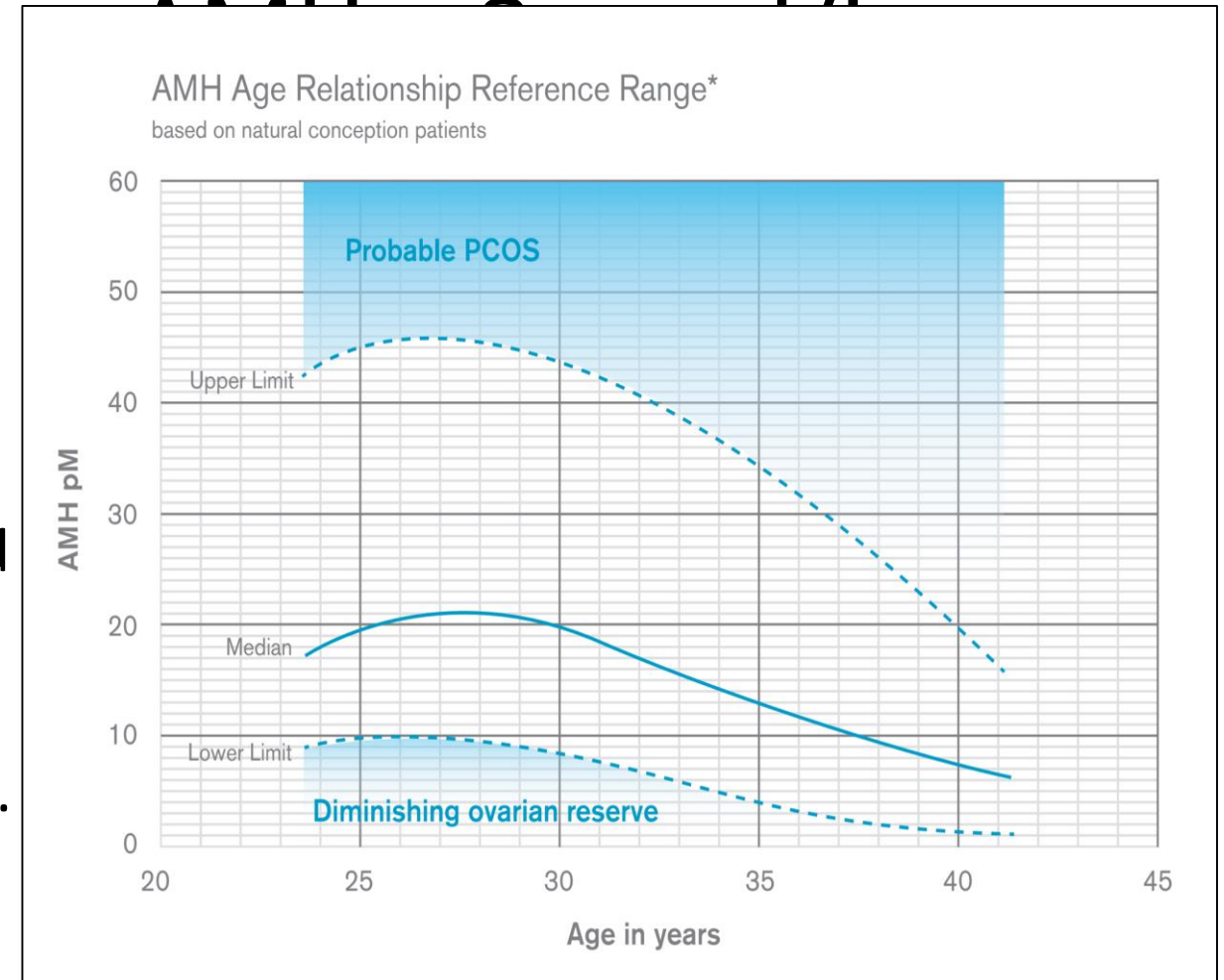
What additional investigations should we advise her to have?

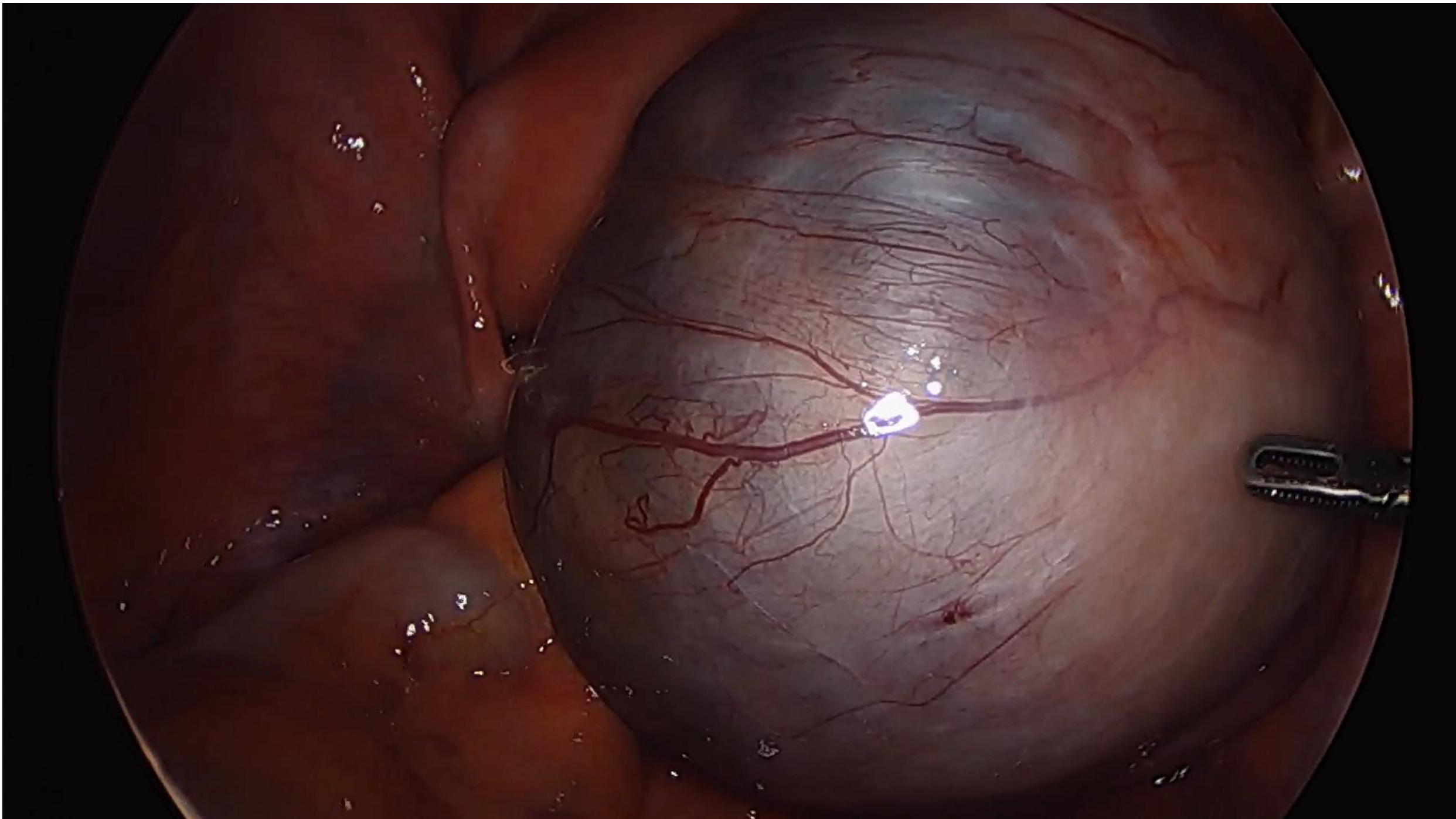
- CA-125? other tumour markers?
 - may be elevated in endometriosis,
 - not recommended for diagnostic purposes because of poor sensitivity and specificity
 - should be considered if ultrasound detects endometrioma +/- atypical features
- Baseline AMH?
 - Ovarian endometriomas per se may damage ovarian reserve
 - Cystectomy of endometriomas may cause damage to ovarian reserve
 - Great risk of damage in case of
 - Bilateral endometriomas
 - Cyst size >7 cm
 - Low preoperative serum AMH level

The impact of endometrioma and laparoscopic cystectomy on ovarian reserve and the exploration of related factors assessed by serum anti-Mullerian hormone. Chen Y et al. J Ovarian Reserve Research 2014.

How best to manage Amanda's endometriosis-suspected endometriotic cyst

- CA-125 of 120 U /ml
- AMH of 10 pmol/L
- Endometrioma are rarely the only manifestation of endometriosis and are often indicative of more-extensive and often deep endometriosis
- Endometrioma kept in place during ART can become infected, rupture and limit the accessibility to follicles
- A large international pooled analysis quantified a 50% greater risk overall (relative risk (RR) of 1.46. (Pearce, C. L. et al. 2012).





How to best manage endometriosis-suspected subfertility

Case 3 – endometriosis-suspected subfertility

- Grace is now 32, GoPo.
- Married to Peter for 3 years
- The couple have been trying to conceive for 18 months
- Her cycle remains regular, with heavy menstruation
- Her previous symptoms have recurred, including:
 - Painful period 8/10,
 - Low back pain 8/10,
 - Increased bowel frequency and painful bowel movements during menstruation,
 - Dyspareunia 2/10

Simplified algorithm for management of endometriosis-associated infertility. According to guidelines of the American Society for Reproductive Medicine and the European Society of Human Reproduction and Embryology

Endometriosis. Zondervan K et al. Nat Rev Dis Primers. 2018

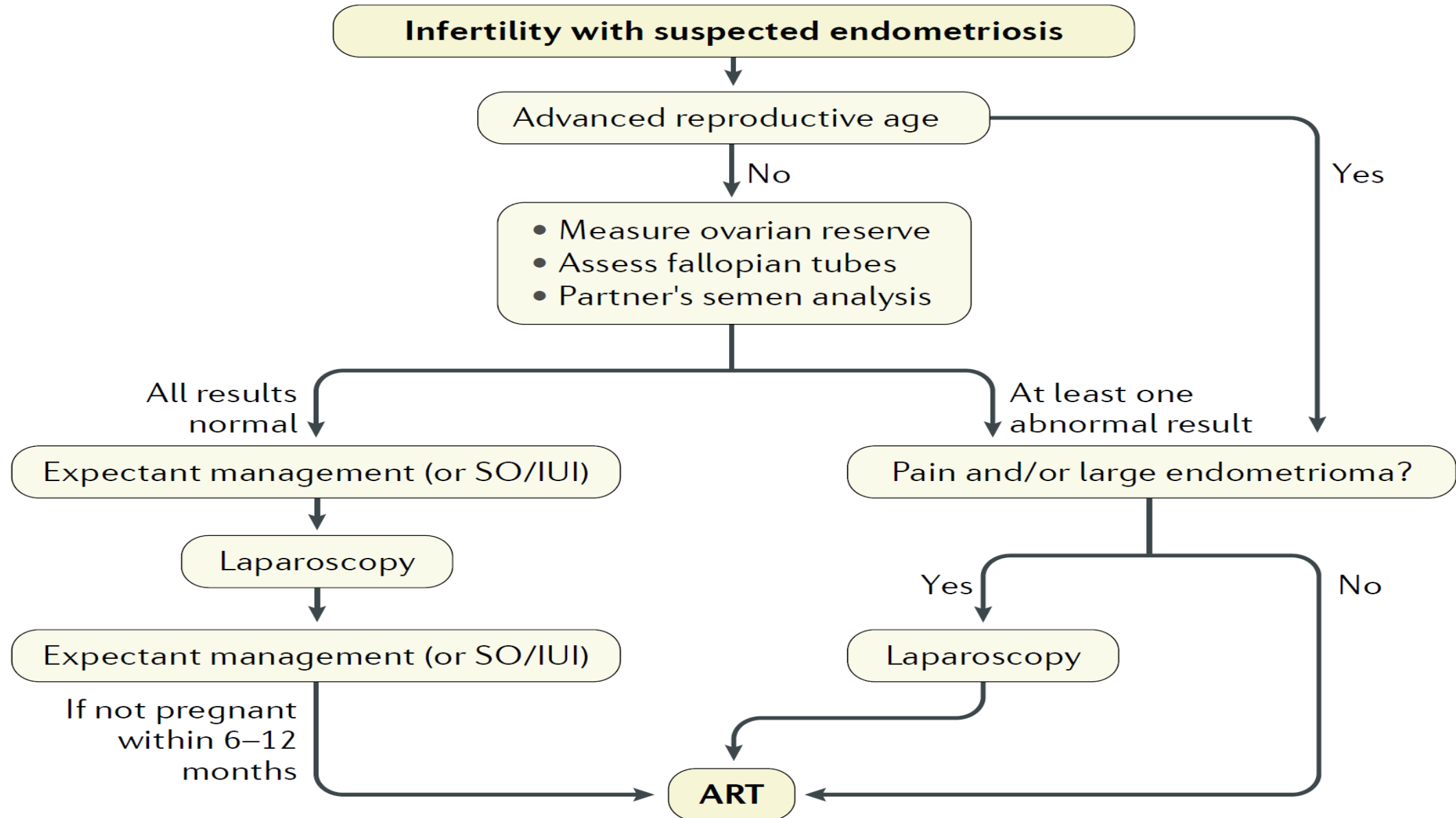


Table 2. Major Guidelines from Professional Societies for the Diagnosis and Management of Endometriosis-Related Pain and Infertility.*

Condition

Recommendation

Giudice L. N Engl J Med 2010;362:2389-98.

Pain†

Diagnosis

Surgery is the preferred method for the diagnosis of pelvic pain and a pelvic mass (e.g., endometrioma), but it is not required before initiating empirical therapy, after consideration of other conditions in a differential diagnosis. There should be a low threshold for the evaluation of endometriosis in adolescents because the diagnosis is often missed in this age group.

Treatment

Initial treatment is a trial of nonsteroidal antiinflammatory drugs and hormonal therapy (combined oral contraceptives). All hormonal drugs that have been studied (combined oral contraceptives, progestins, GnRH agonists, and danazol) are similarly effective, but their side effects and costs differ. If a GnRH agonist is used, estrogen–progestin add-back therapy is recommended; GnRH agonists are not recommended for adolescents because of their effects on bone. The levonorgestrel intrauterine system is effective in selected patients. Laparoscopic uterosacral nerve ablation is not effective.

Infertility

Diagnosis

Both the male and female partner should undergo a full evaluation.

Treatment

Superovulation with intrauterine insemination provides a benefit. Ovarian suppression is not effective in promoting spontaneous pregnancy. The use of a GnRH agonist for 3–6 mo before in vitro fertilization and surgical ablation of endometriosis for stage I or II disease are beneficial. Excision of endometriomas >3 cm in diameter is of benefit, although there is potential for diminished ovarian reserve.

References

1. Giudice L. Endometriosis. *N Engl J Med* 2010;362:2389-98.
2. Chen et al. The impact of endometrioma and laparoscopic cystectomy on ovarian reserve and the exploration of related factors assessed by serum anti-Mullerian hormone: a prospective cohort study. *Journal of Ovarian Research* 2014, 7:108.
3. Zondervan K. et al. Endometriosis. *Nat Rev Dis Primers*. 2018.
4. Schneider C. et al. MRI technique for the preoperative evaluation of deep infiltrating endometriosis: current status and protocol recommendation. *Clinical Radiology* 2016; 71: 179-194.
5. Guerriero S et al. Systematic approach to sonographic evaluation of the pelvis in women with suspected endometriosis, including terms, definitions and measurements: a consensus opinion from the International Deep Endometriosis Analysis (IDEA) group. *Ultrasound Obstet Gynecol* 2016; 48: 318–332.
6. Pearce, C. L. et al. Association between endometriosis and risk of histological subtypes of ovarian cancer: a pooled analysis of case–control studies. *Lancet Oncol.* **13**, 385–394 (2012).