

Adenomyosis – getting the diagnosis right



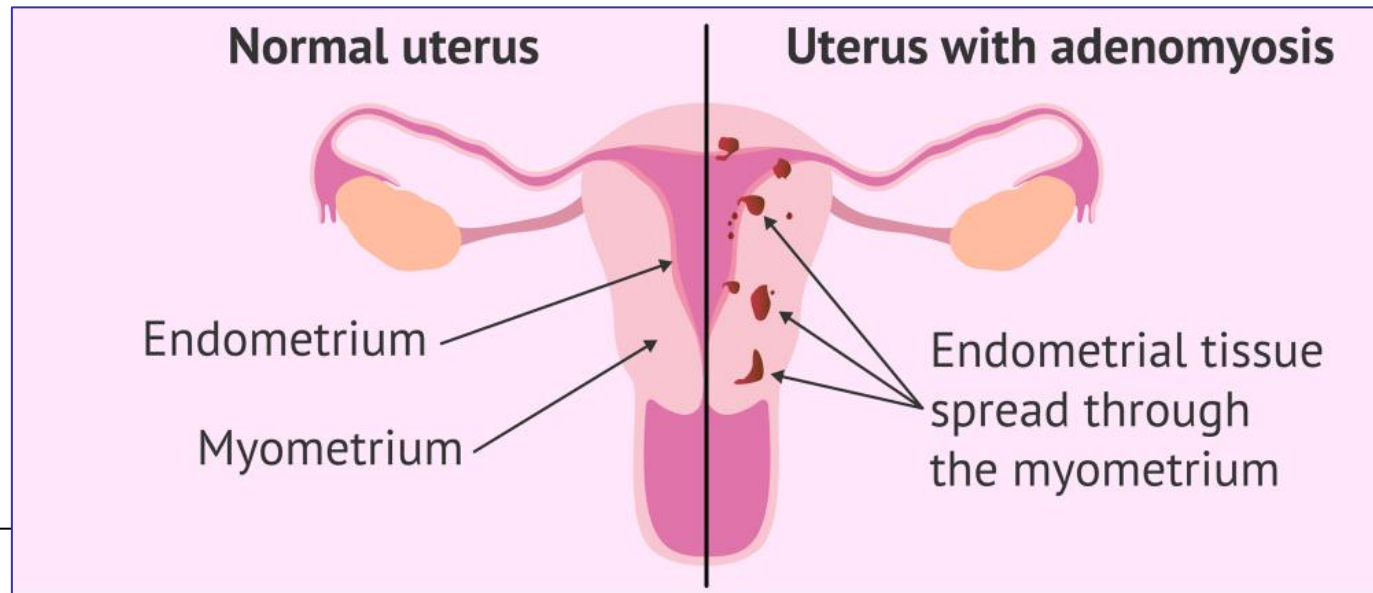
**Evelina
London**

Alison Smith

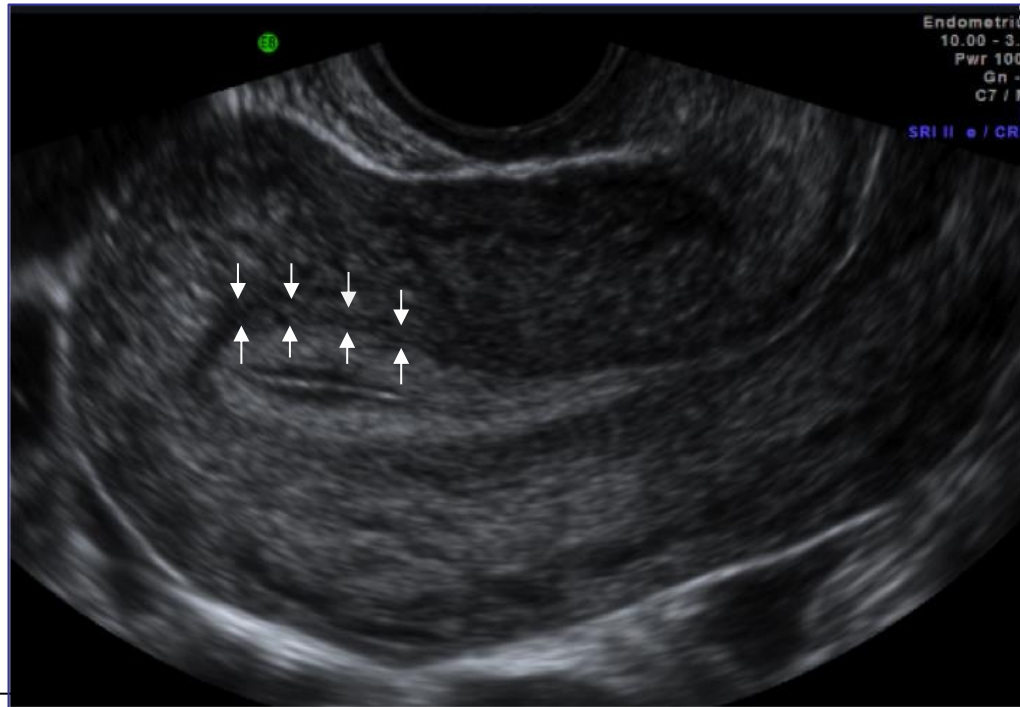
Tutor Sonographer, Women's Health

What is adenomyosis?

- Benign inflammatory condition
- Clinical symptoms – abnormal uterine bleeding, chronic pelvic pain & infertility



Junctional zone (inner myometrium/ sub-endometrial/ endomyometrial junction)



Diagnosis & classification

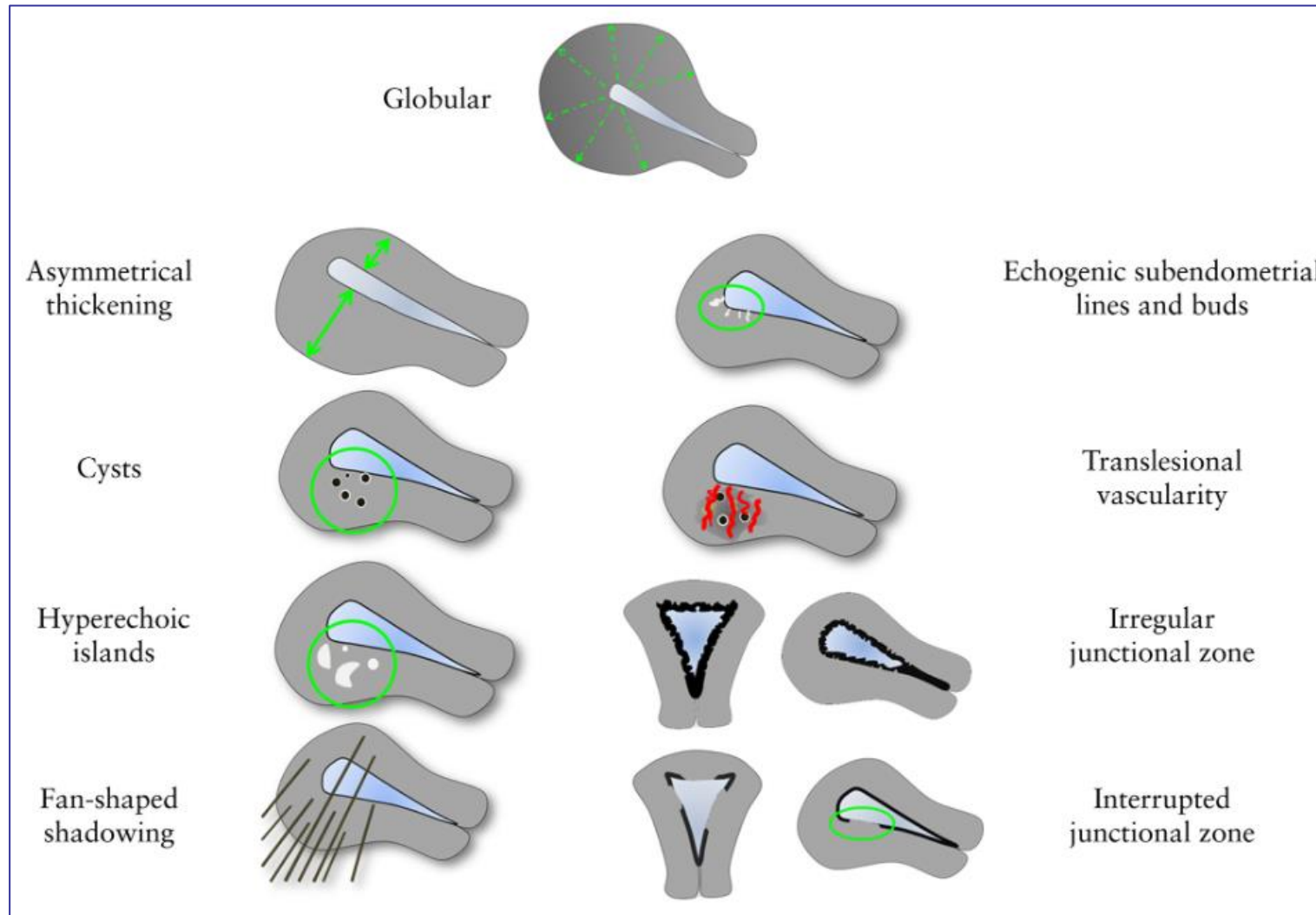
- Histopathology
- MRI
- Ultrasound



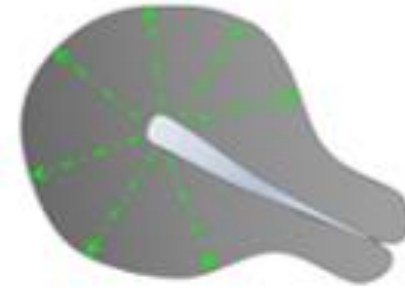
Ultrasound diagnosis

- Ultrasound features
- Suggested reporting phrases
- Tips & tricks

Ultrasound diagnosis of adenomyosis



Globular

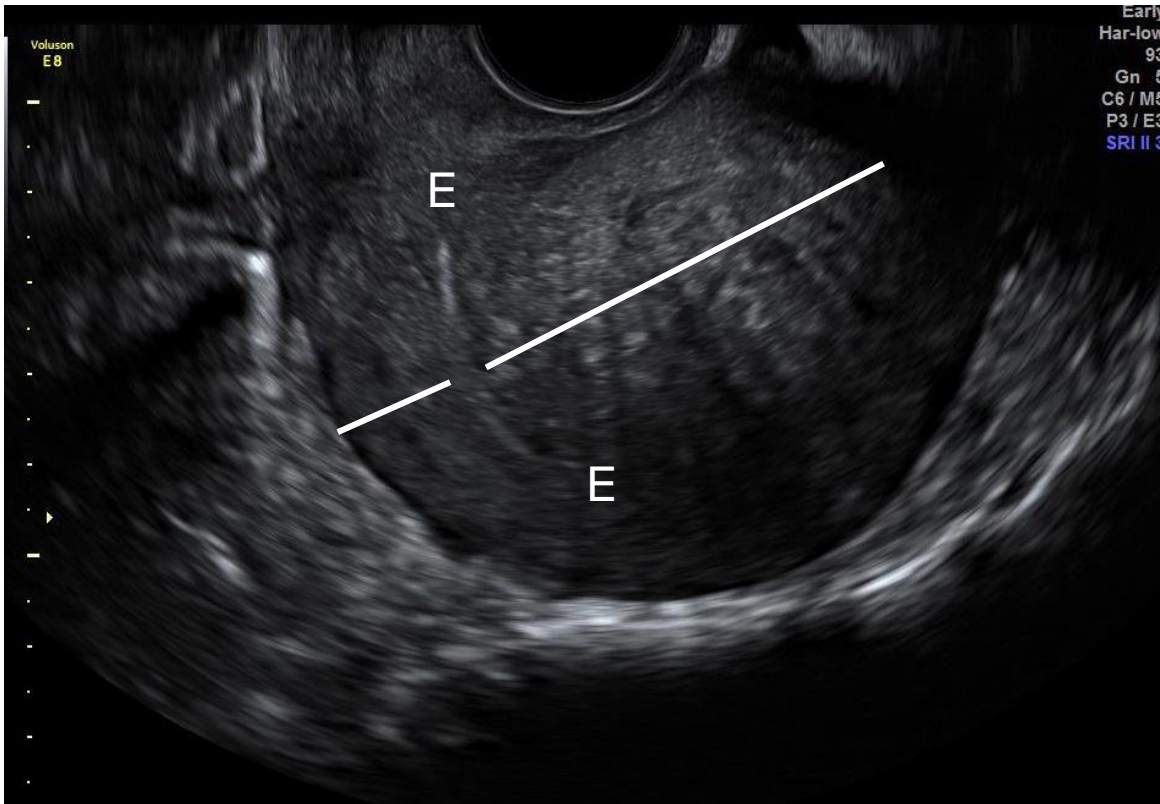
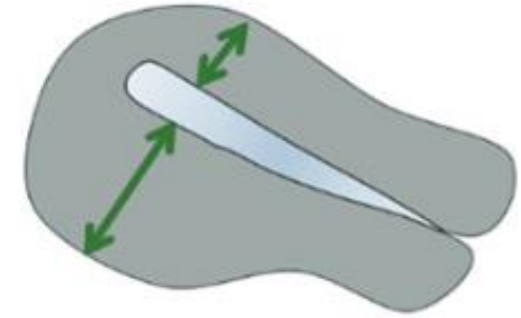


TV scan - LS anteverted uterus

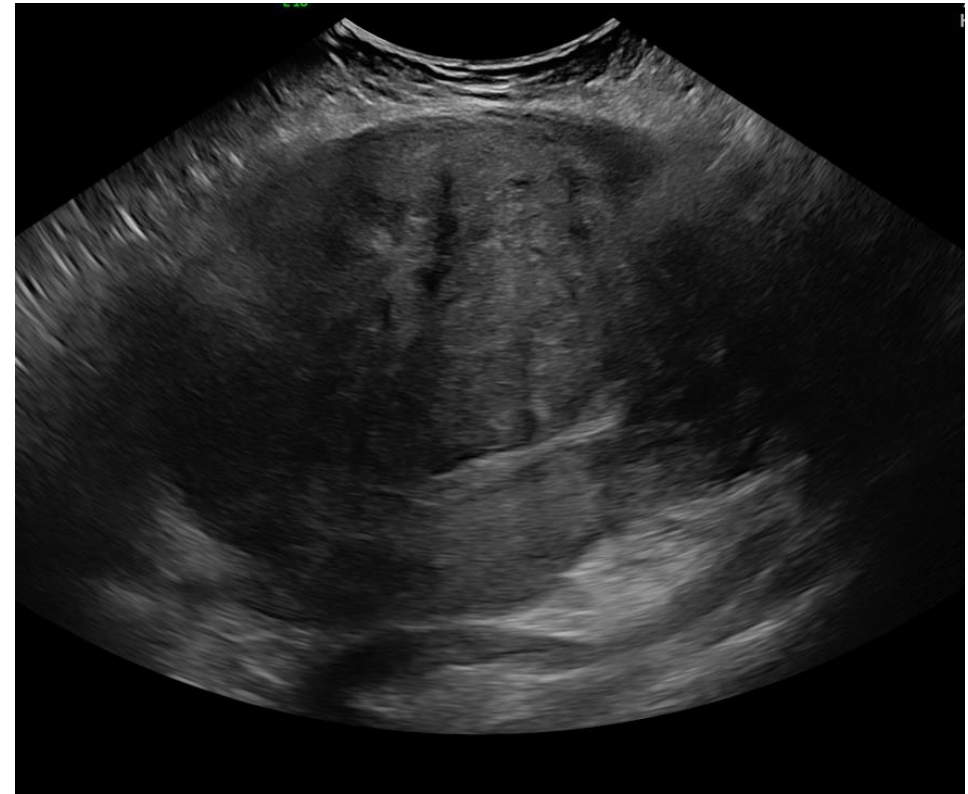


TV scan - LS retroverted uterus

Asymmetrical myometrial thickening

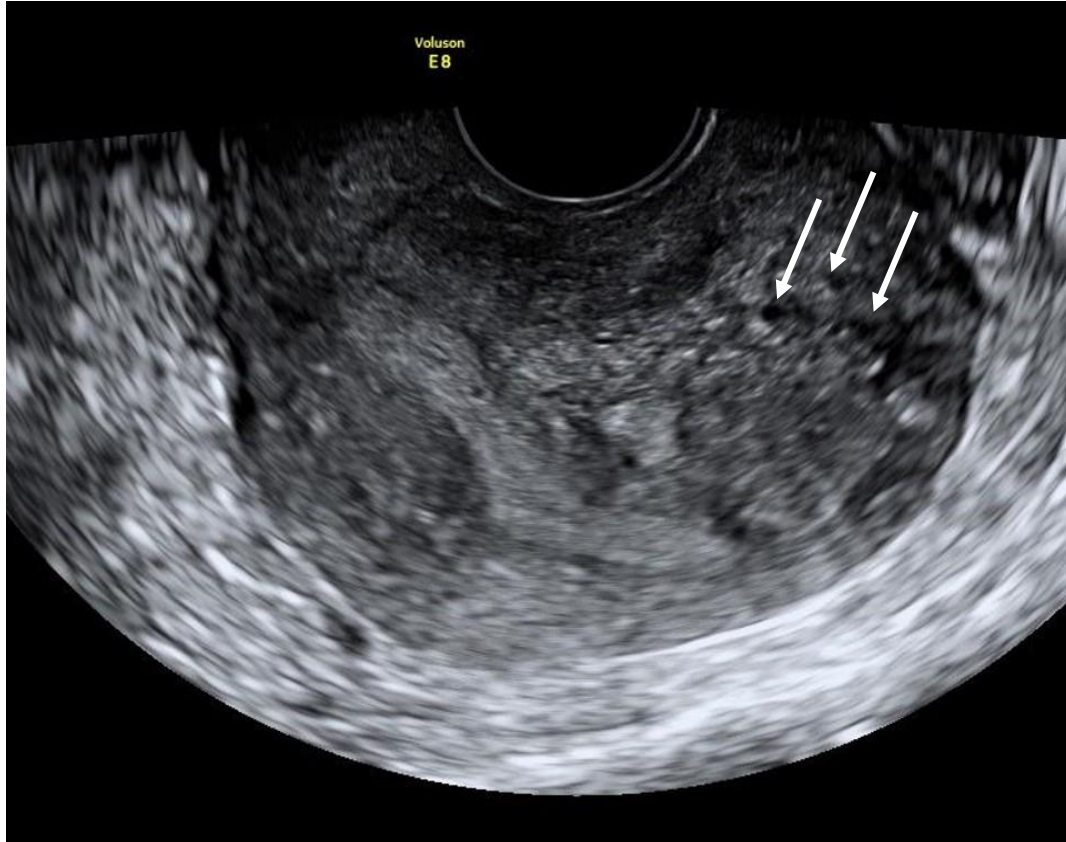
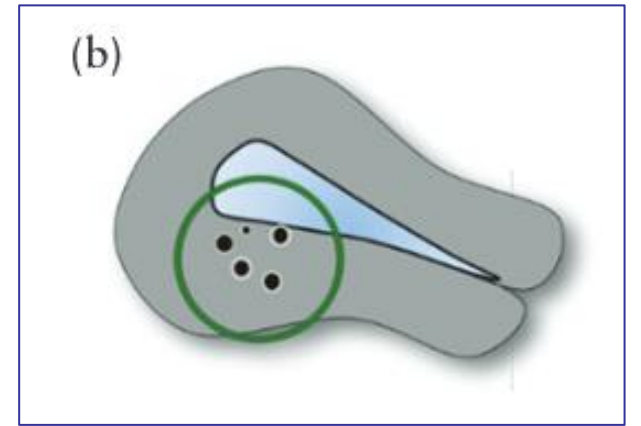


TV scan - LS retroverted uterus

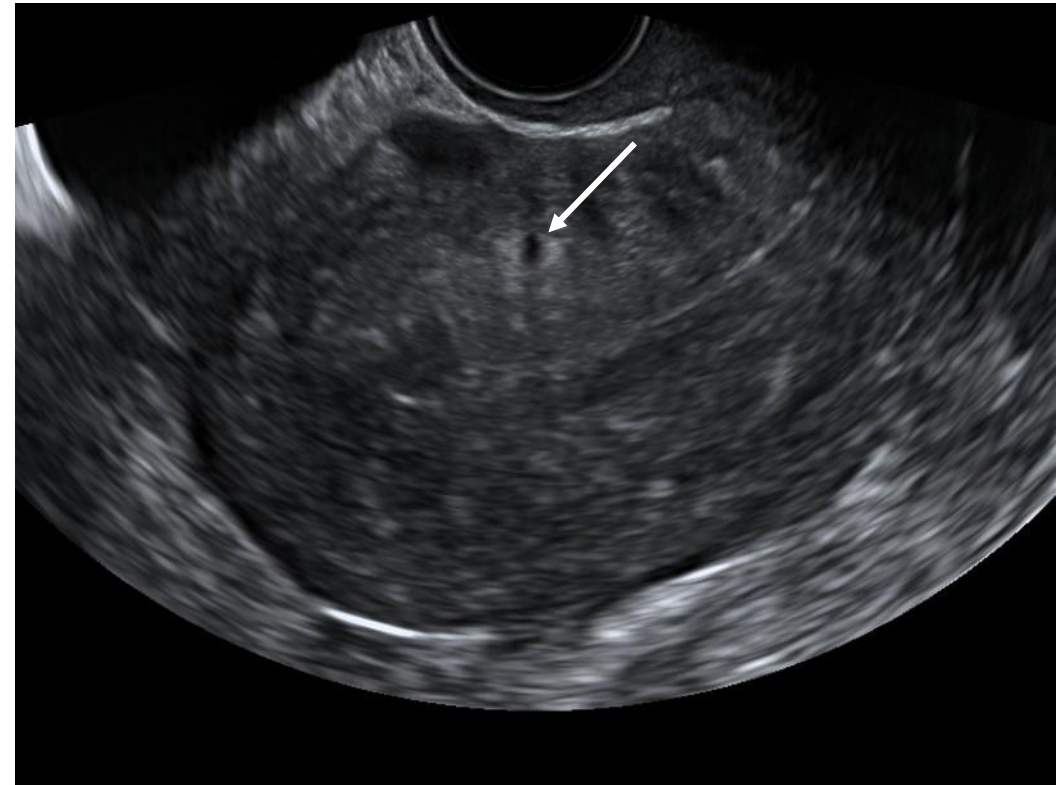


TA scan - LS axial uterus

Myometrial cysts

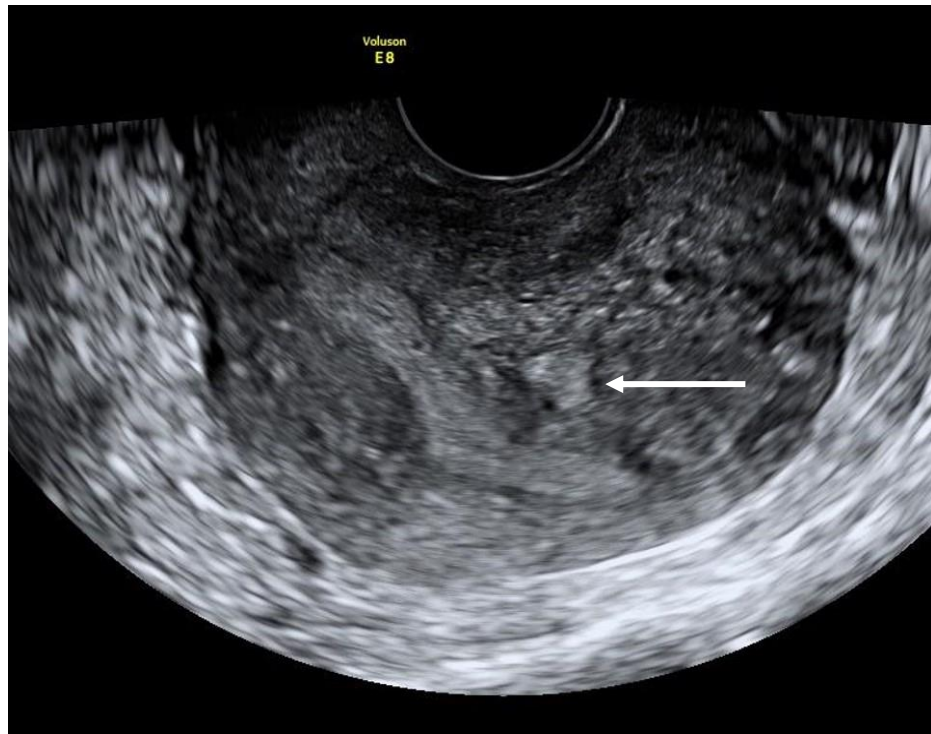
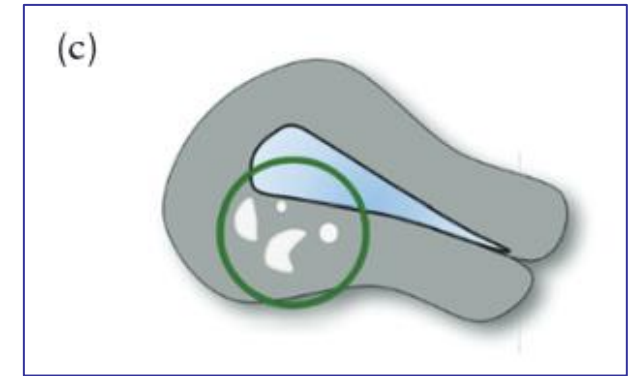


TV scan - LS retroverted uterus

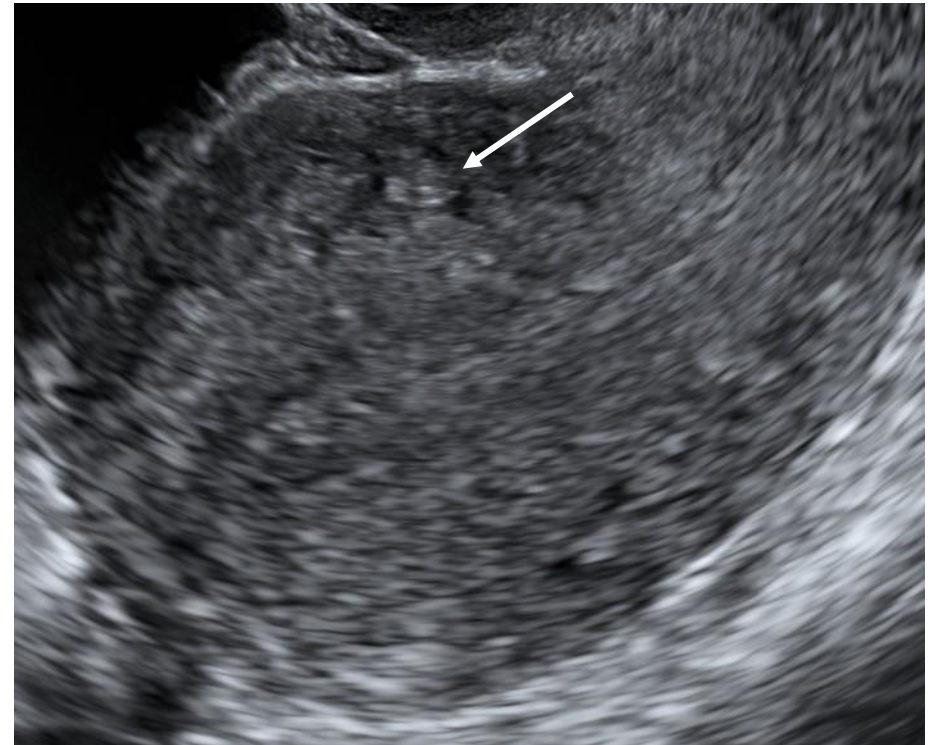


TV scan - LS anteverted uterus

Hyperechoic islands

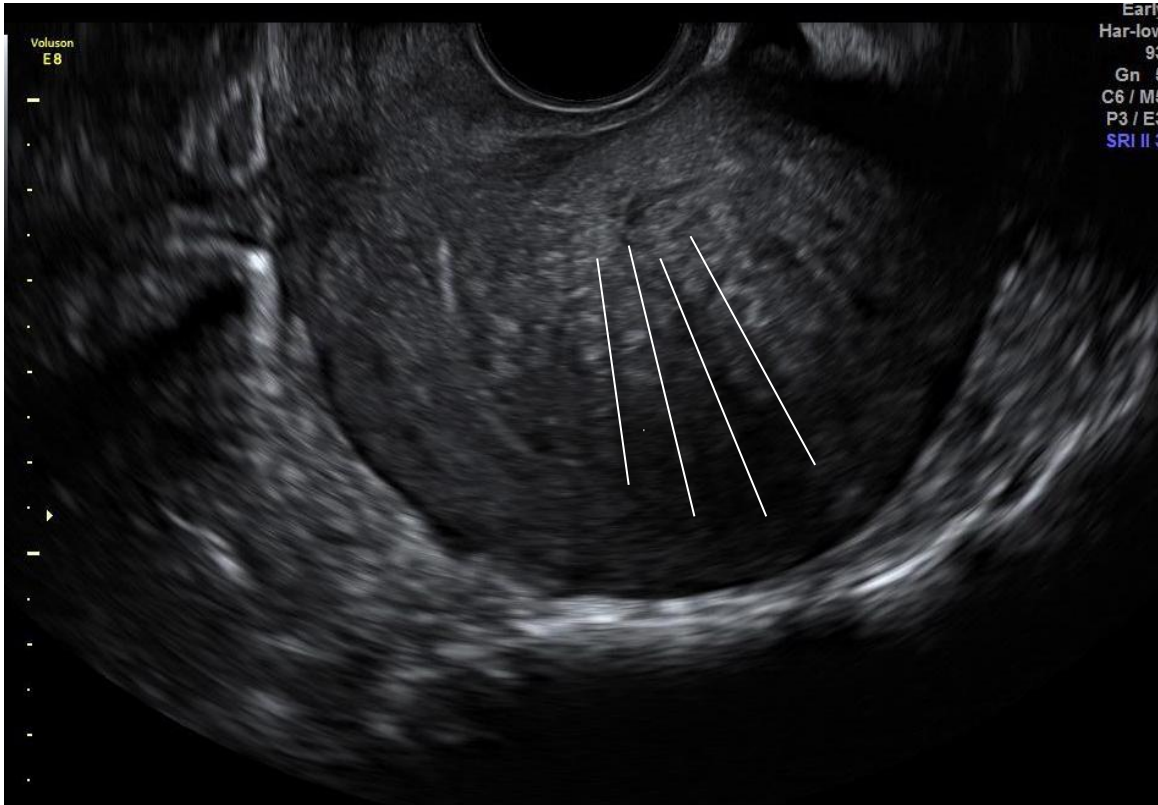
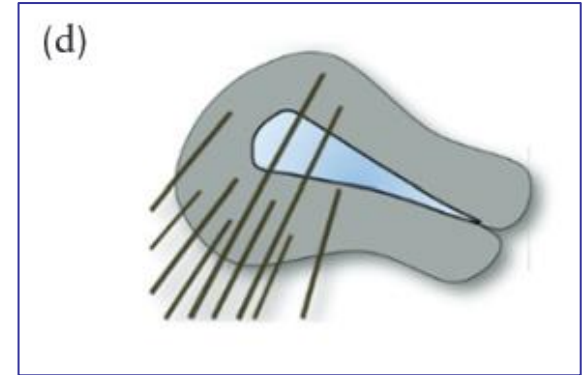


TV scan - LS retroverted uterus

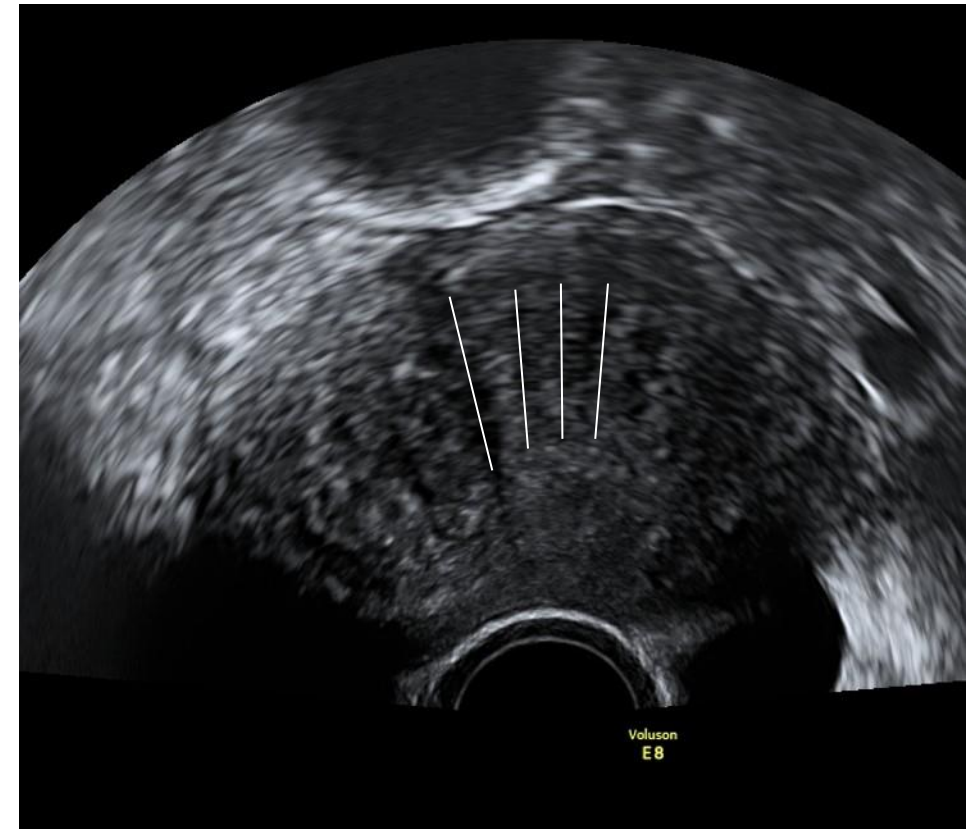


TV scan - LS anteverted uterus

Parallel shadowing (fan-shaped/ rain forest)

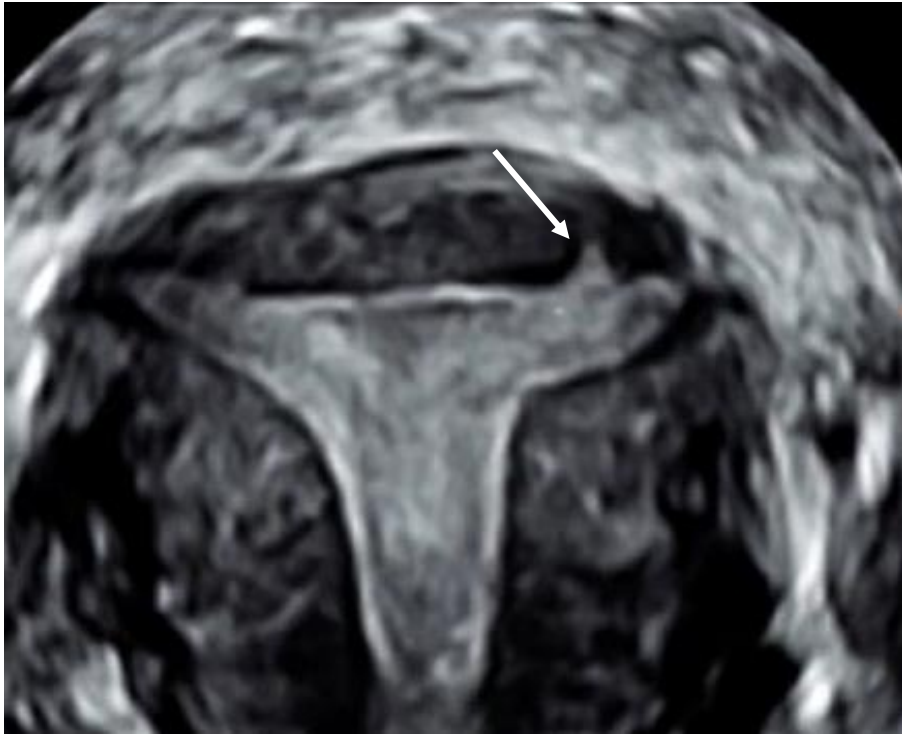
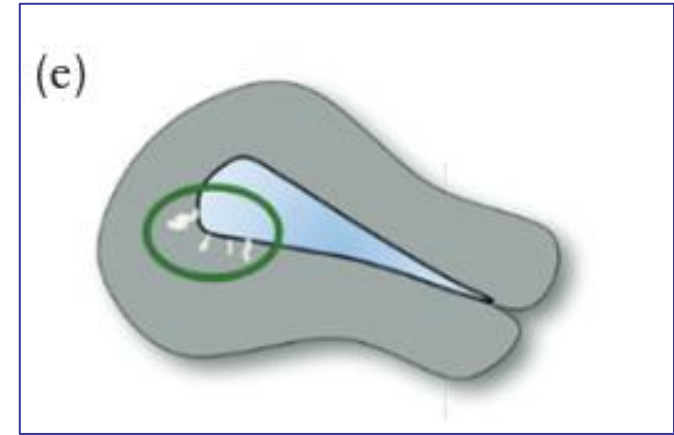


TV scan LS retroverted uterus

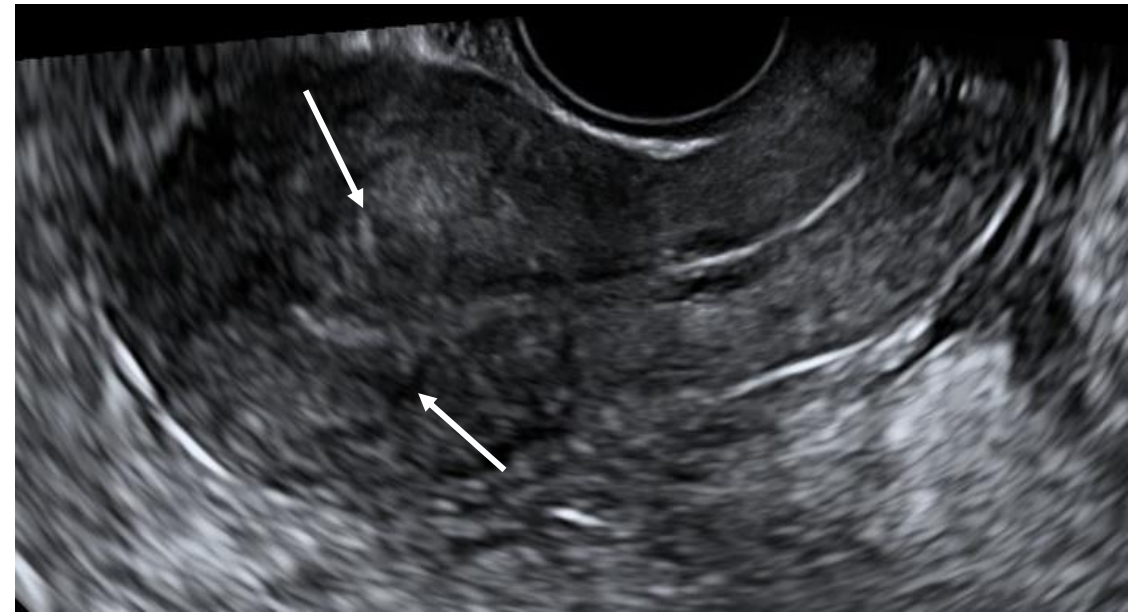


TV scan TS uterus

Linear Striations (sub-endometrial lines/ buds)

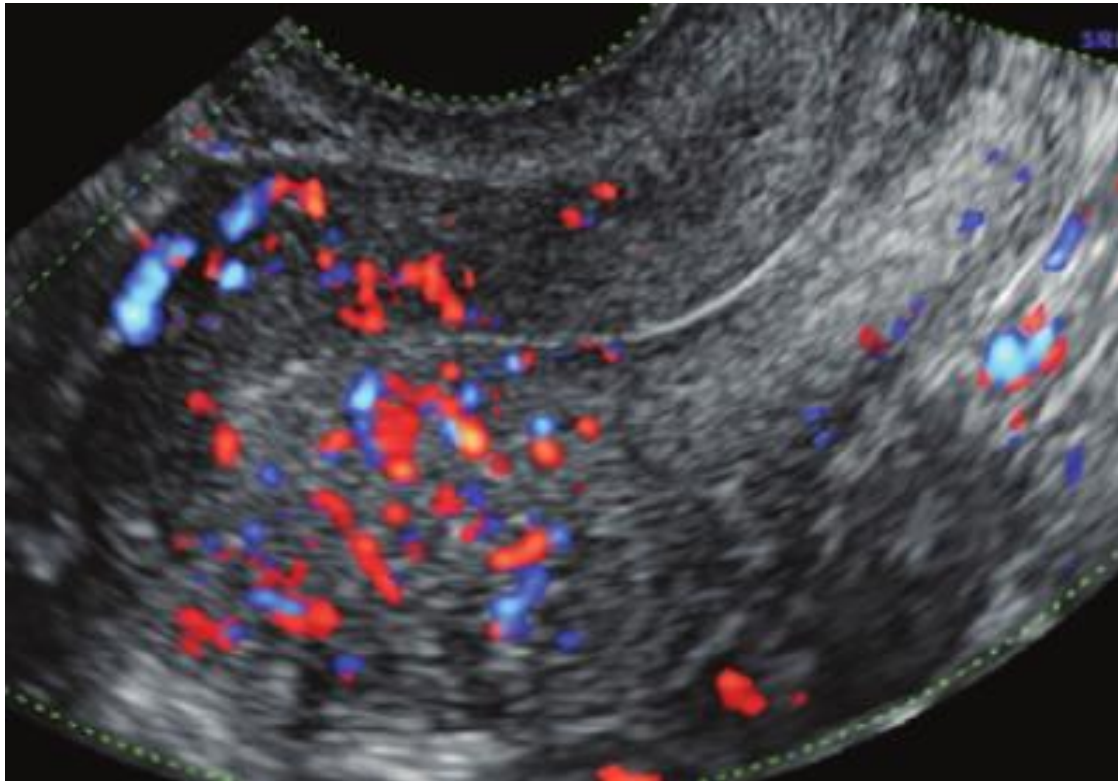


TV scan – 3D coronal view

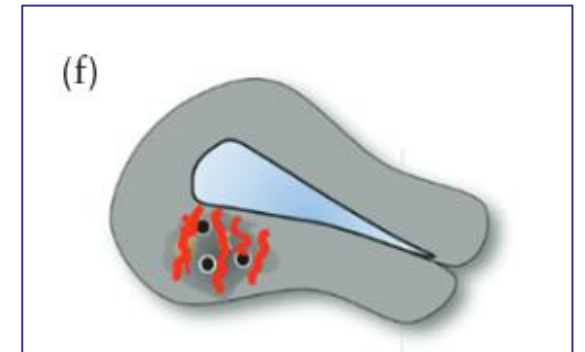


TV scan - LS anteverted uterus

Trans-lesional vascularity

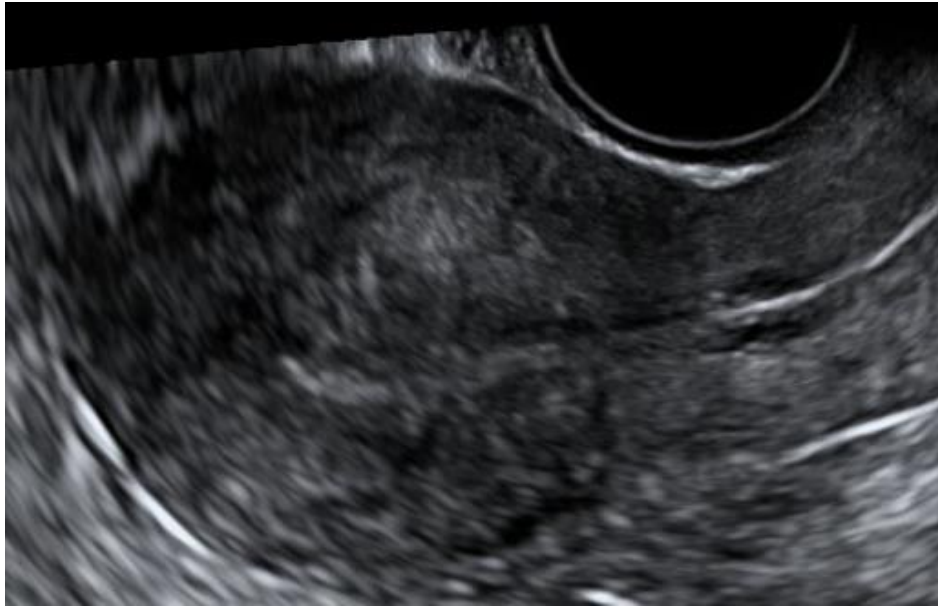


TV scan - LS anteverted uterus

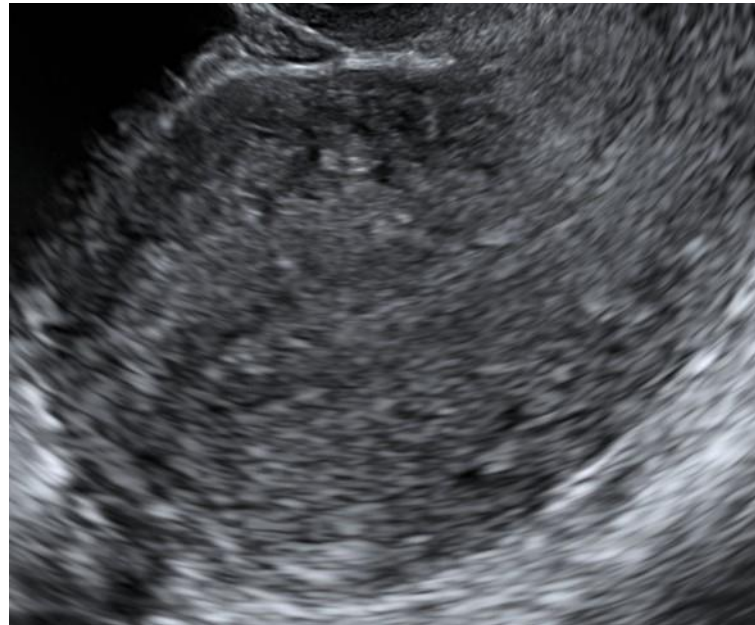
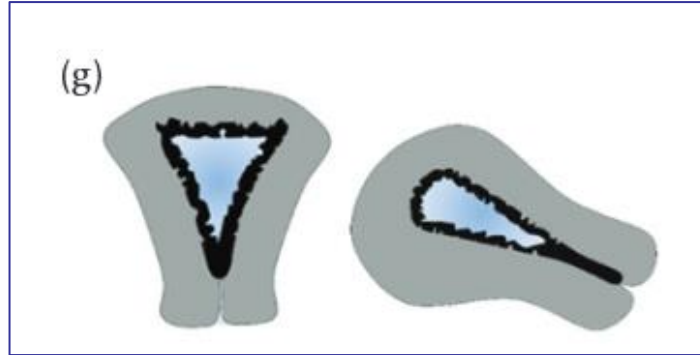


- Vessels perpendicular to endometrium, crossing the lesion (rather than circumferential)
- Power Doppler more sensitive to small vessels with low blood flow velocities

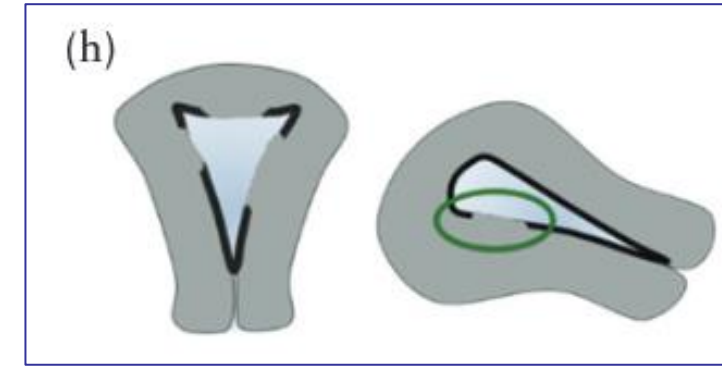
Ill defined endometrial – myometrial interface



TV scan - LS anteverted uterus



TV scan - LS anteverted uterus

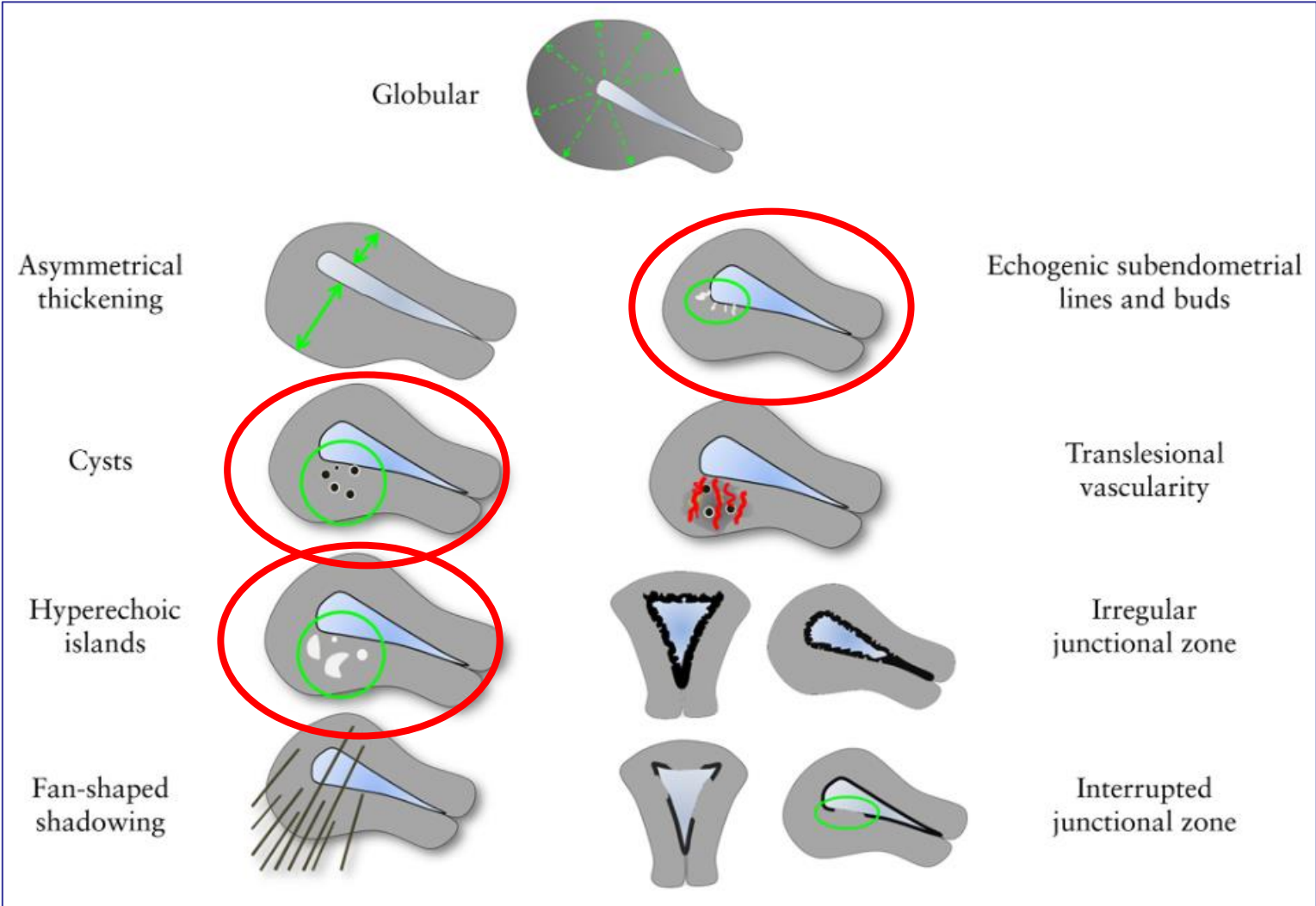


- Regular/ irregular
- Interrupted
- Not visible
- Or combination of above

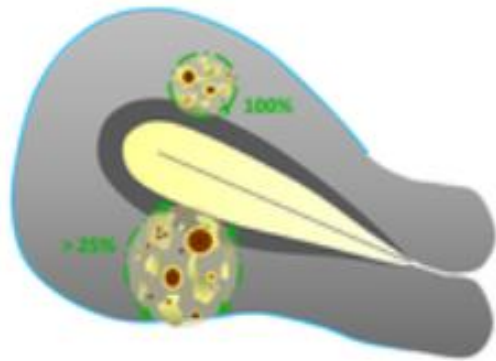
Direct & indirect U/S features of adenomyosis

- Direct features indicate presence of ectopic endometrial tissue in the myometrium
- Indirect features are secondary to the presence of endometrial tissue in the myometrium (muscular hypertrophy) & artefacts e.g. shadowing

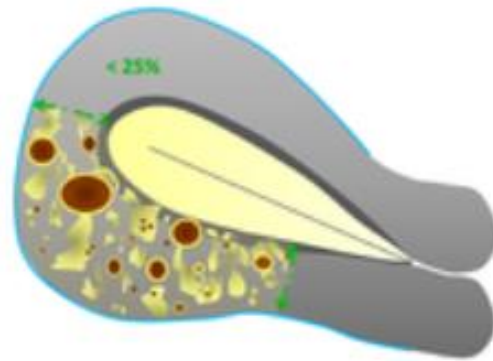
Direct & indirect U/S features of adenomyosis



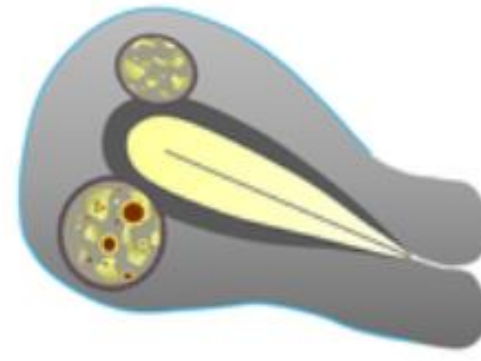
Focal v diffuse adenomyosis



Focal adenomyosis



Diffuse adenomyosis



Adenomyoma

- Location
- Extent
- Uterine layer involvement

How good is TVS?

- TVS highly operator dependant
- ‘In hands of experienced investigators has an adequate diagnostic accuracy in suspected cases’
- In some cases of adenomyosis the ultrasound appearances are normal
- Some or all of features can be present (no correlation with severity of disease)
- MRI should be used when TVS is inconclusive (multiple fibroids)

Suggested reporting phrases

(Clinical Indication – abnormal uterine bleeding, chronic pelvic pain & infertility).

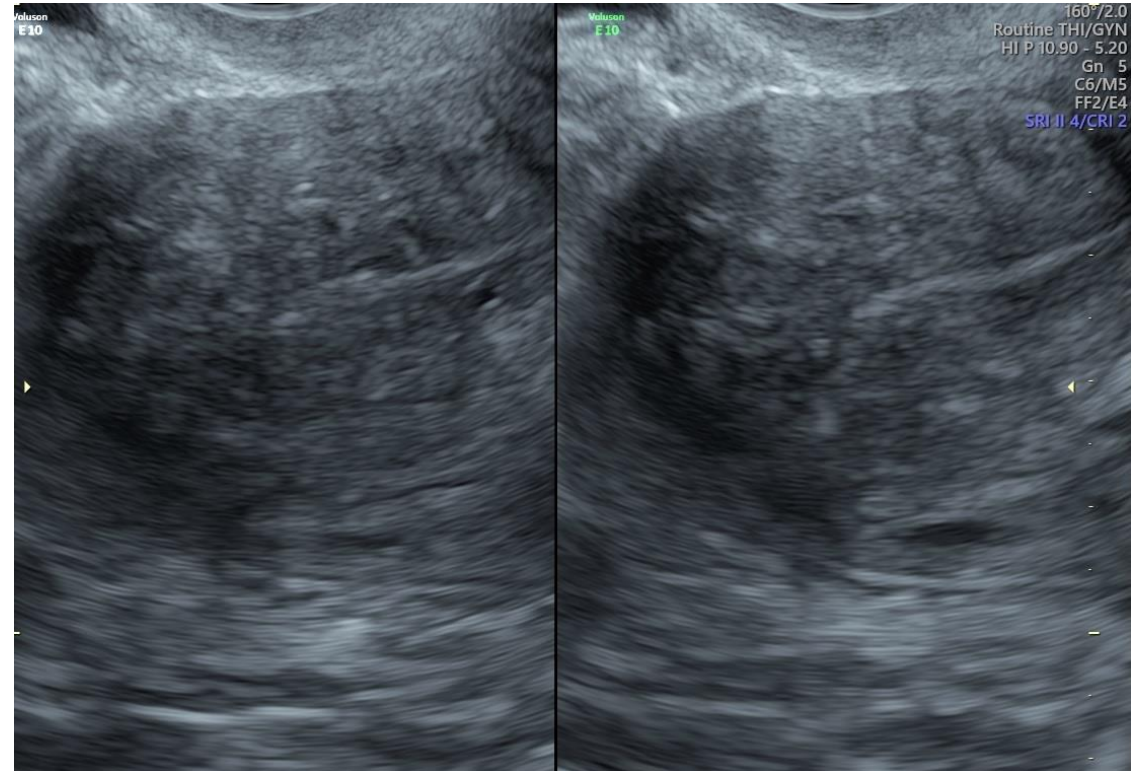
In presence of endometriomas/ hx

‘The uterus was globular in shape. The myometrium was asymmetrically thickened, had cysts, echogenic islands, sub-endometrial lines and parallel shadowing. There were focal disruptions of the endometrial myometrial junction (*delete as required*)

These findings were typical of adenomyosis’.

Case report - DUB

- The myometrium is heterogenous in echotexture in keeping with ~~fibroid change~~
- Two discrete fibroids reported



Case report – DUB – 1 year later

The myometrium was asymmetrically thickened (posterior > anterior), there are myometrial cysts, echogenic islands and focal disruptions of the endometrial-myometrial junction. These findings were typical of adenomyosis.

Two discrete fibroids seen.

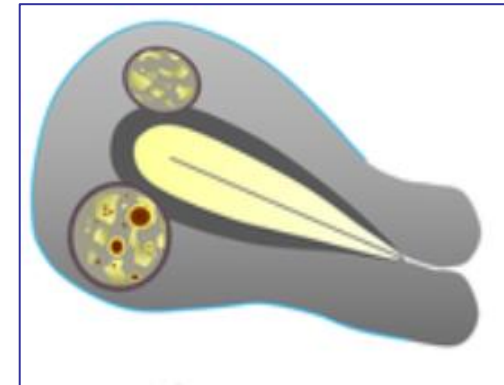


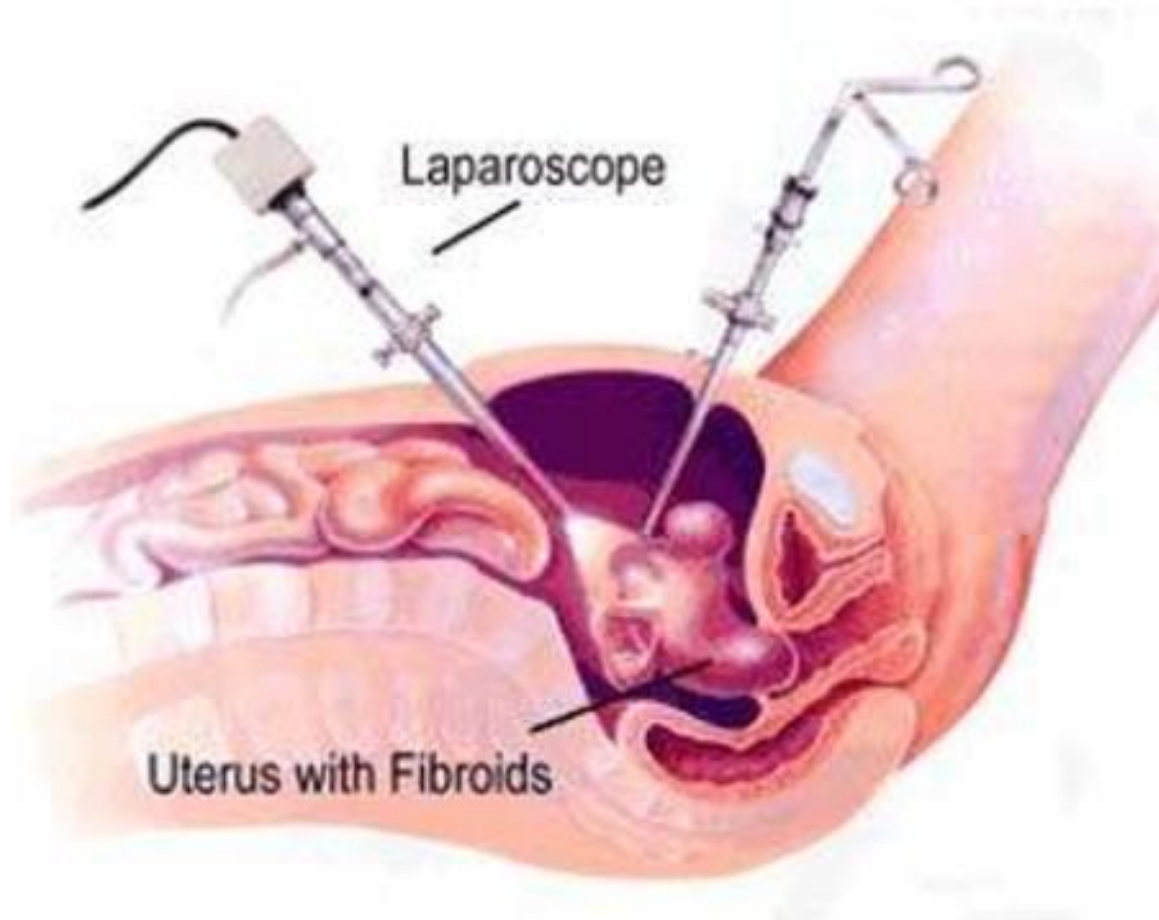
Tips & Tricks

adenomyoma v fibroid

- Focal adenomyosis well demarcated surrounded by hypertrophic myometrium
- Colour Doppler - trans-lesional vascularity rather than circumferential

*Fibroids over reported
Adenomyosis under reported*



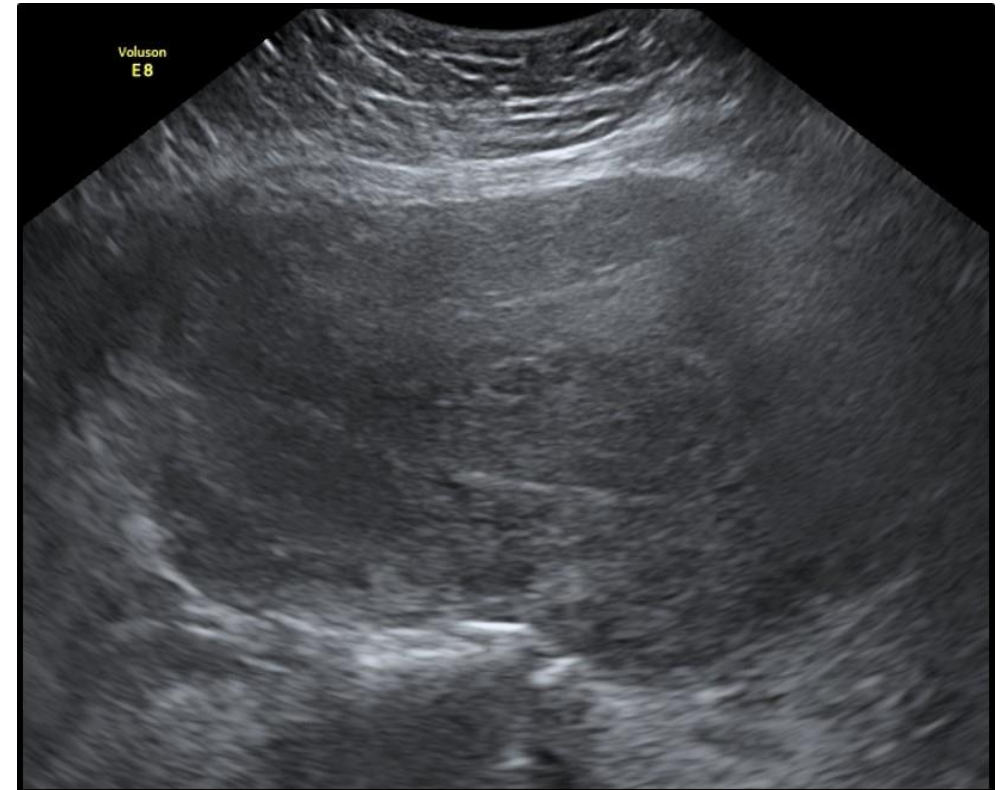


There is no surgical procedure for adenomyosis !

Tips & Tricks

TA scan

- In case of hypertrophic myometrium uterus will be enlarged (penetration or abdominal setting)
- Axial uterus
- Endometrium assessment



Summary

- Adenomyosis under diagnosed
- Differentiate from fibroids
- Think about the features (MUSA), write a clinically useful report
- Avoid the term 'fibroid change'





References

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