

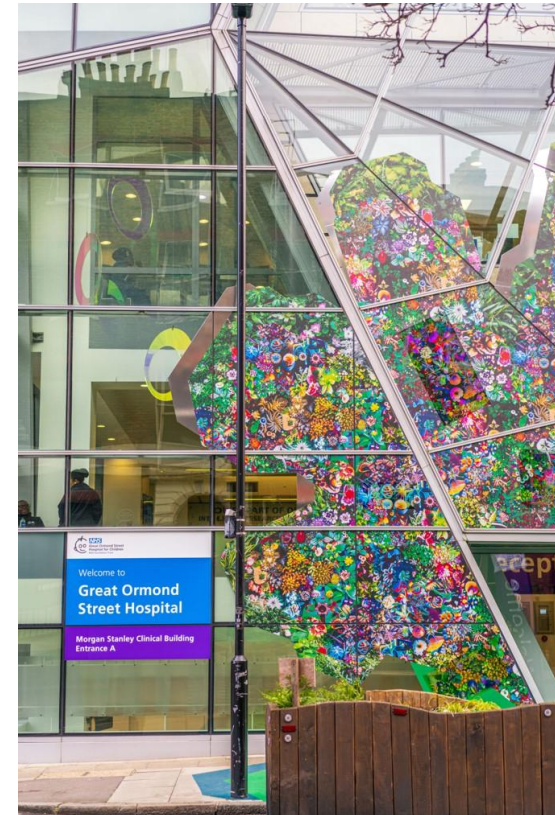


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Paeds Gynae US (@GOSH)

Gorse Leung and Stacey Thomas



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Disclaimer

This presentation is based on research conducted to the best of the presenter's abilities, acknowledging inherent uncertainties and limitations. The findings may be influenced by factors such as data quality, methodology, and interpretation, and do not guarantee real-world accuracy.

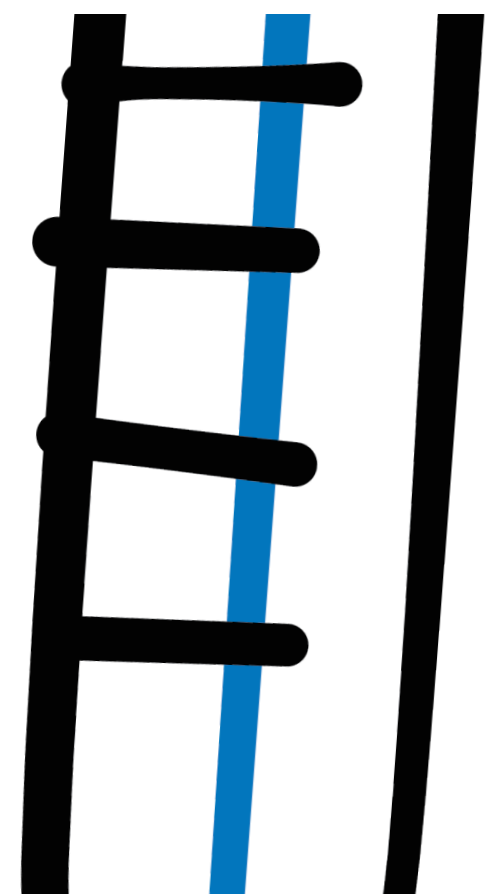
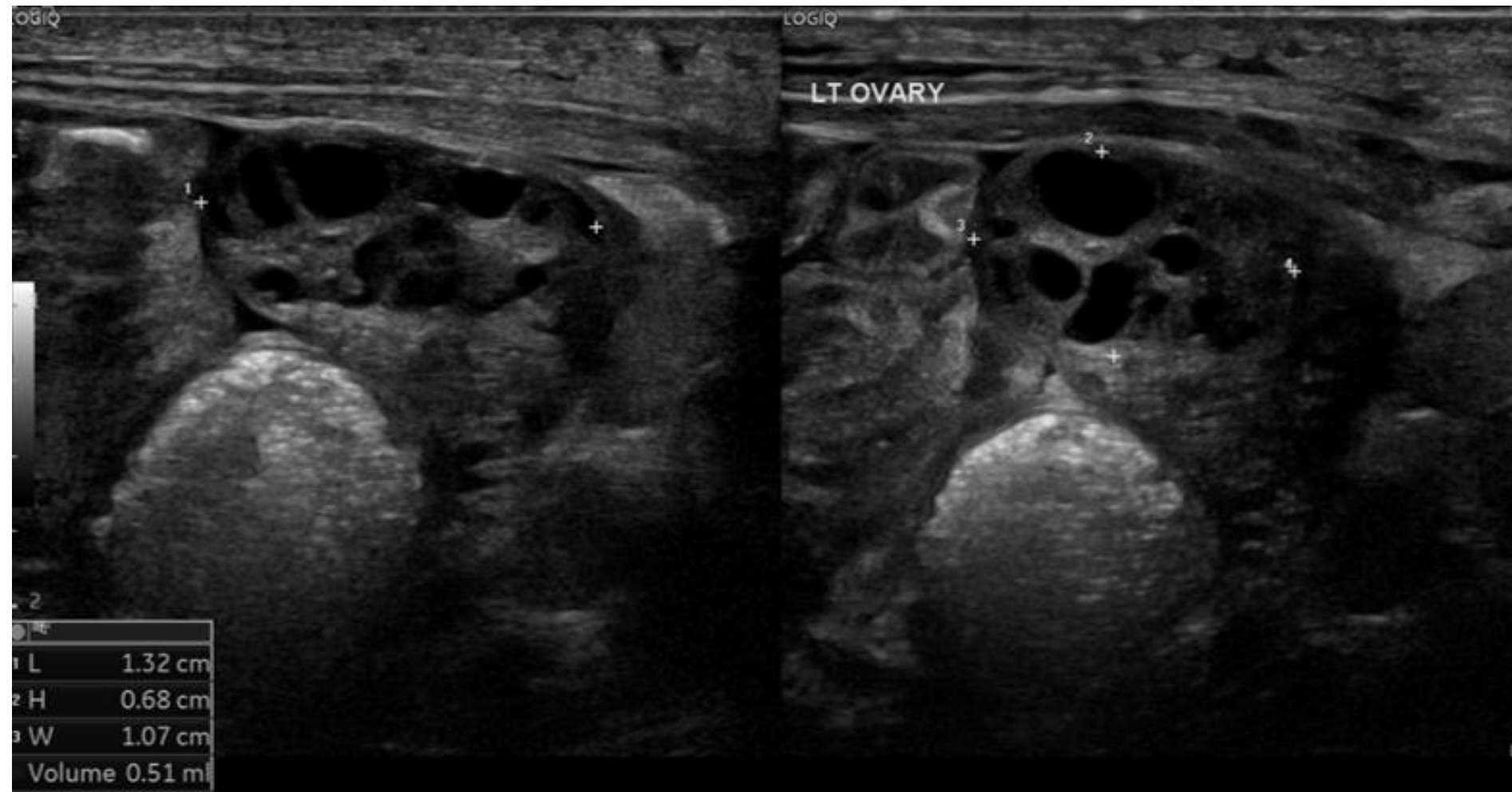
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Practical Considerations



- Full bladder required (generally)
- Transabdominal ultrasound only. Highest frequency transducer if possible
- Typical gynae imaging series (include proximal vaginal vault)
- Check suprarenal spaces
- If Müllerian anomaly present, included renal tracts
- Patience – as long as tolerable (by you and the patient)

Practical Considerations





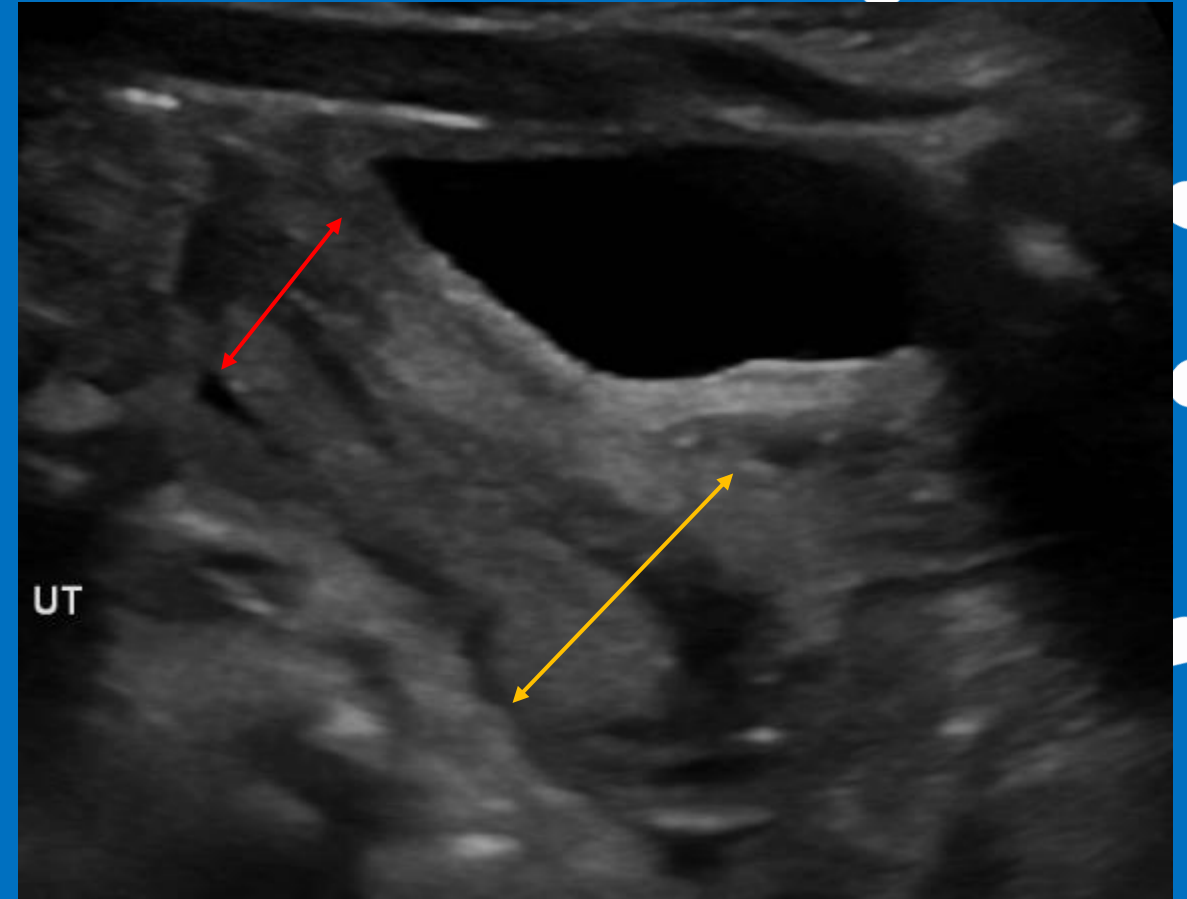
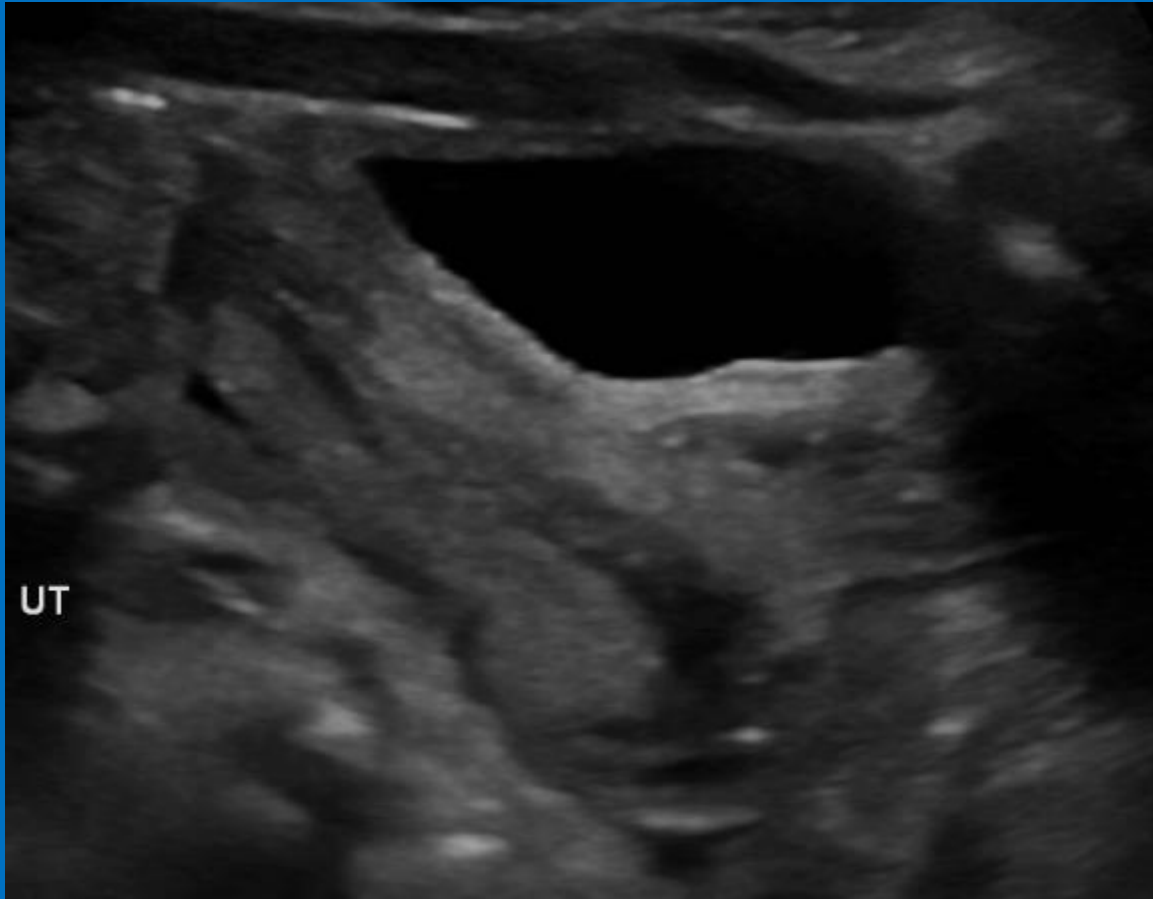
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Ultrasound appearances for age

- Neonatal period (0 – 1 month)



- Fundal to cervical ratio 1:2



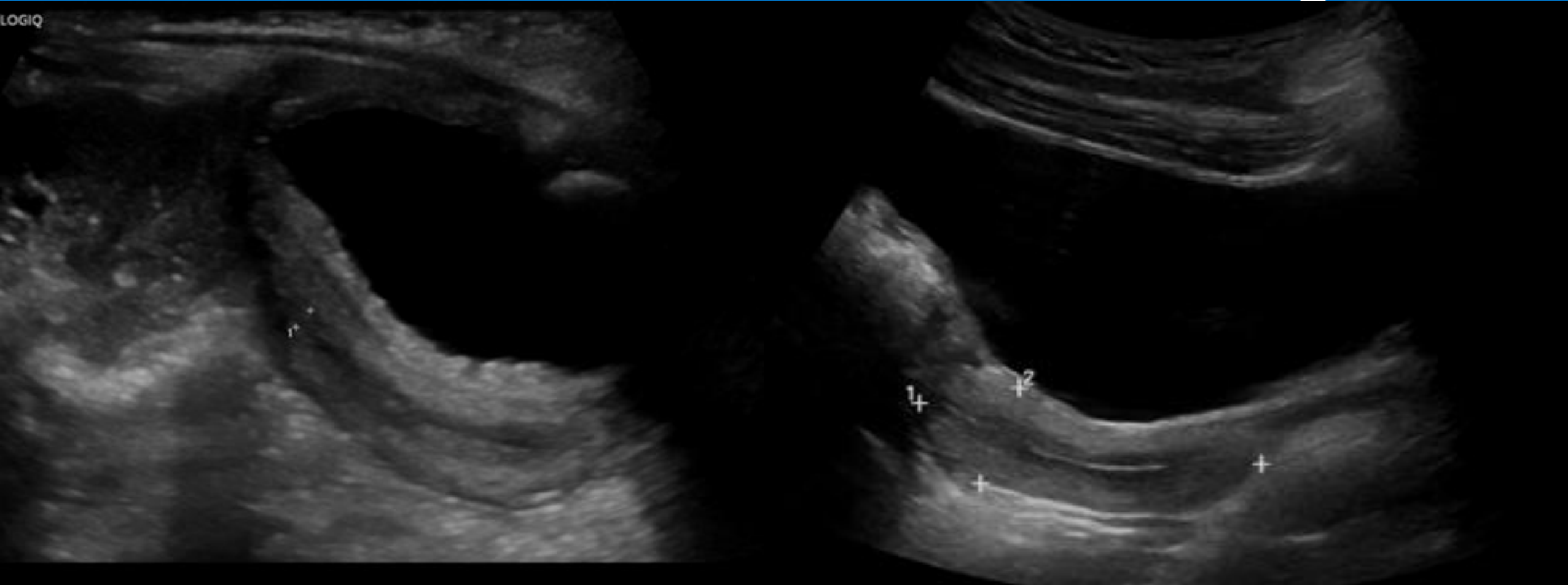
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Ultrasound appearances for age

- Infantile/early childhood (1 month – 4 years)



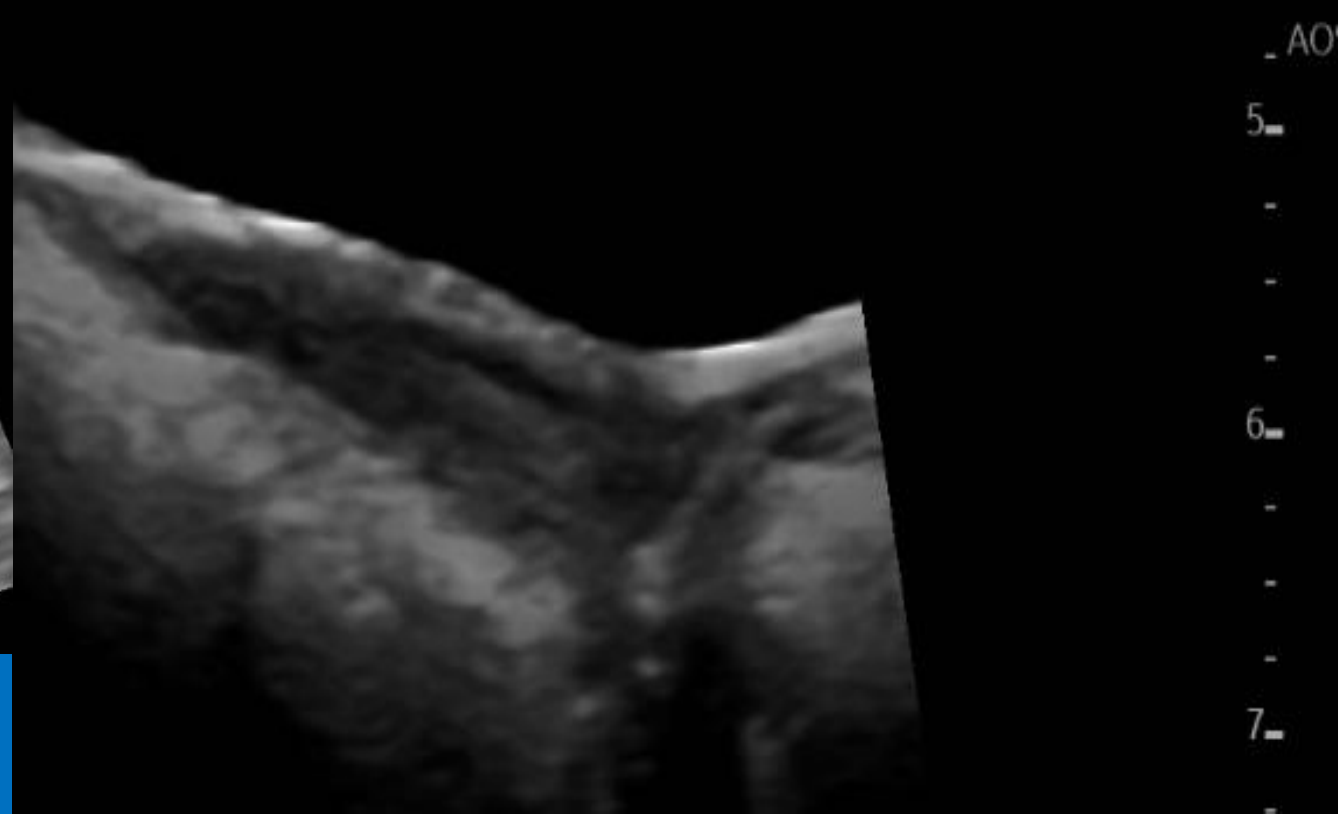
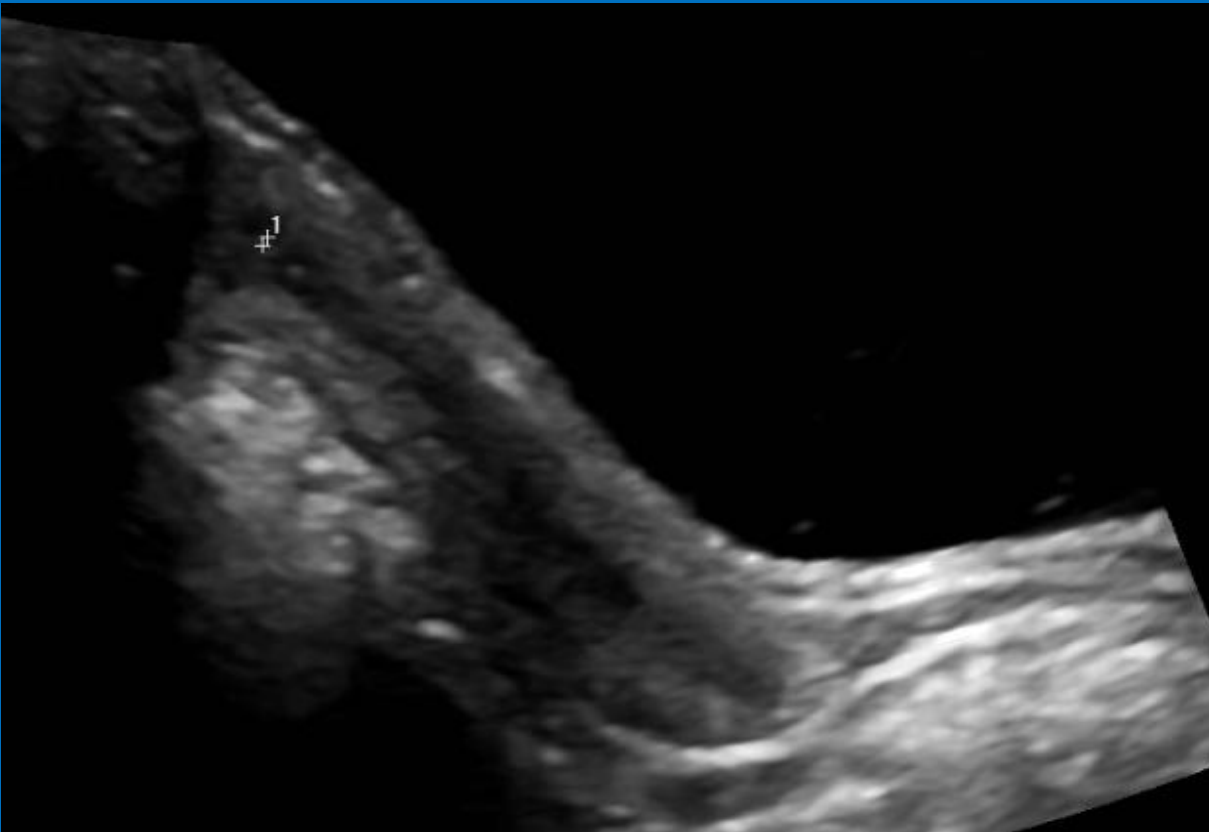
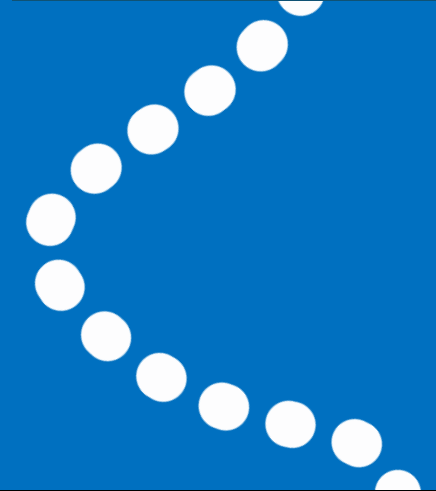
- Tubular

- Fundal to cervical ratio 1:1

Ultrasound appearances for age

- Prepubertal period (4 – 8 years)

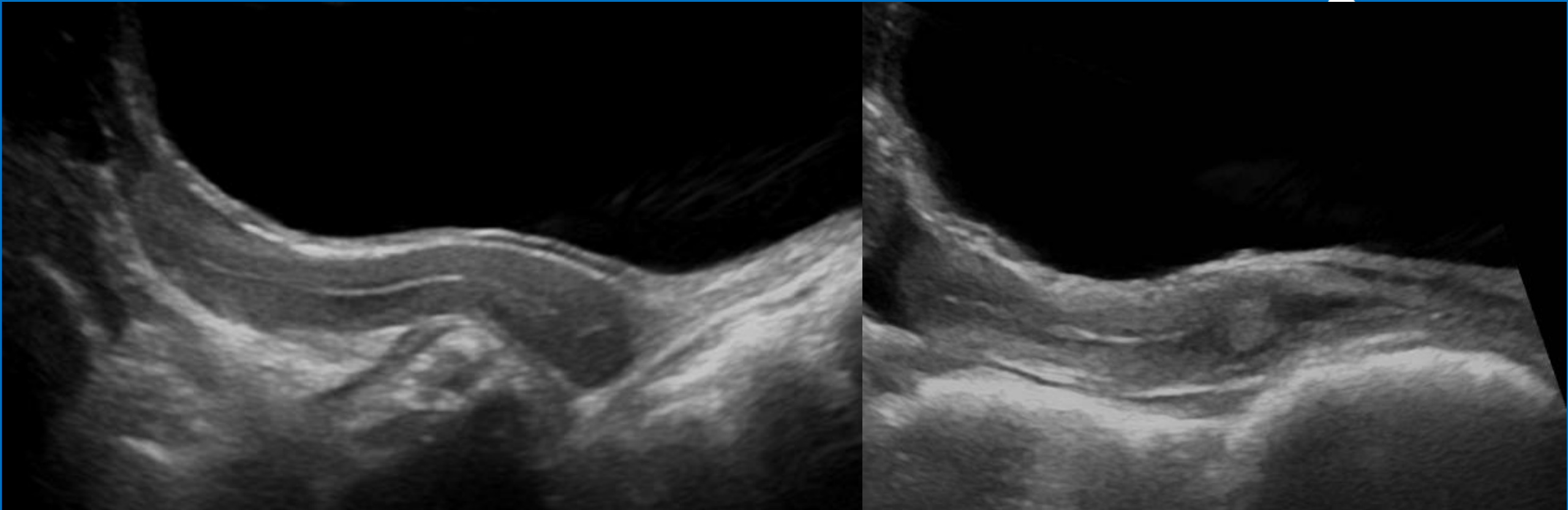
- Fundal to cervical ratio 1:1



- Remains tubular- sometimes thicker cervix

Ultrasound appearances for age

- Peripubertal period (~8 – 10 years)
 - Increasing length and fuller fundus





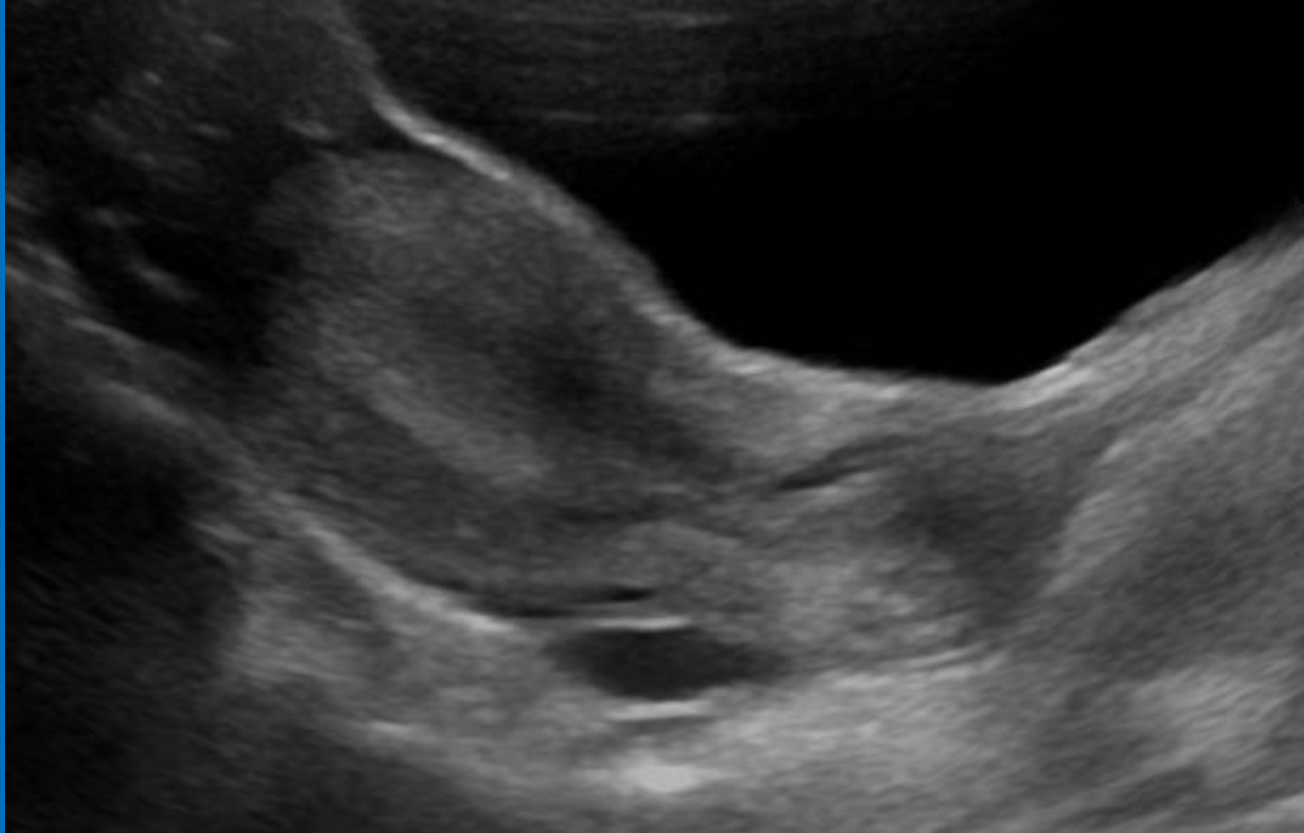
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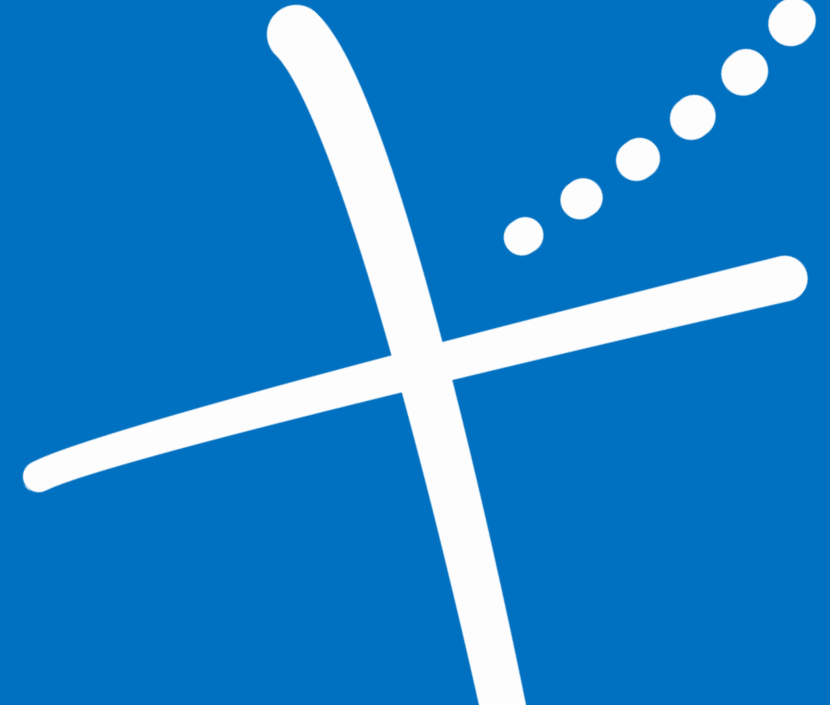
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Ultrasound appearances for age

- Pubertal period (~10+ years)

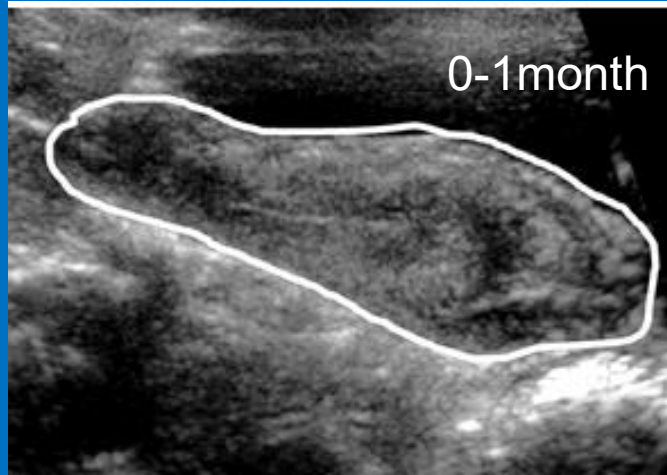


- Pear shaped with ovarian follicular activity



Uterine Development

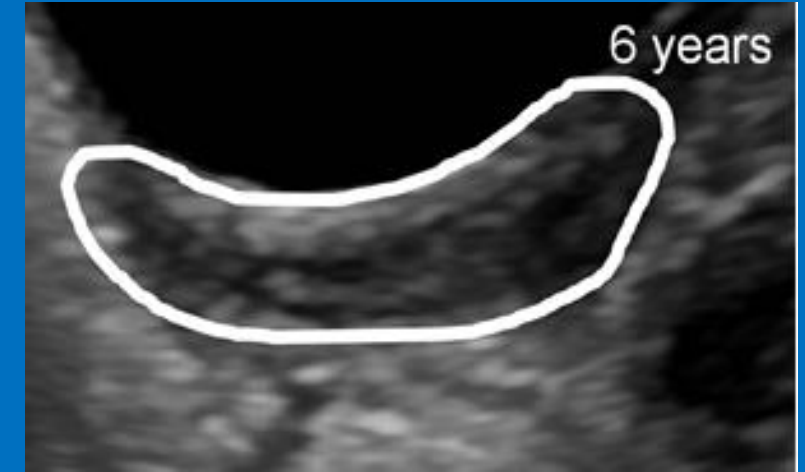
Neonatal



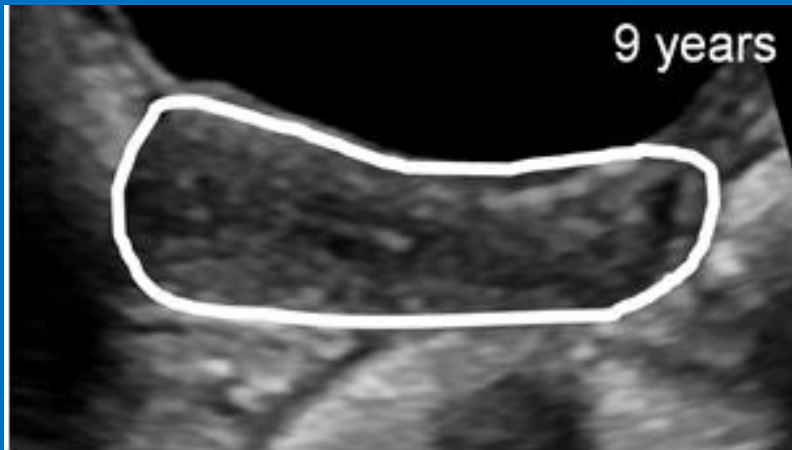
Infantile



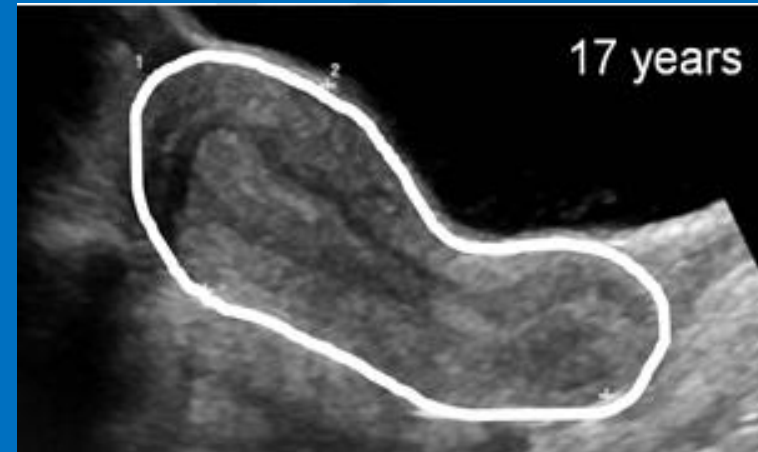
Pre-pubertal



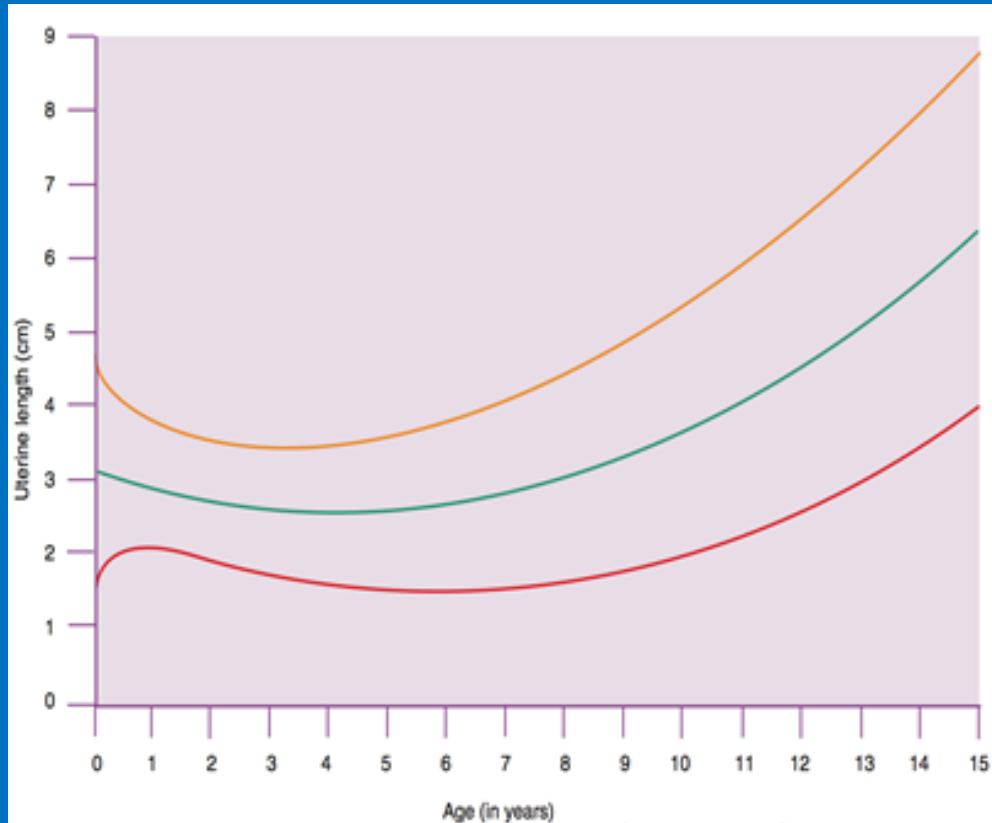
Peri-pubertal



Pubertal

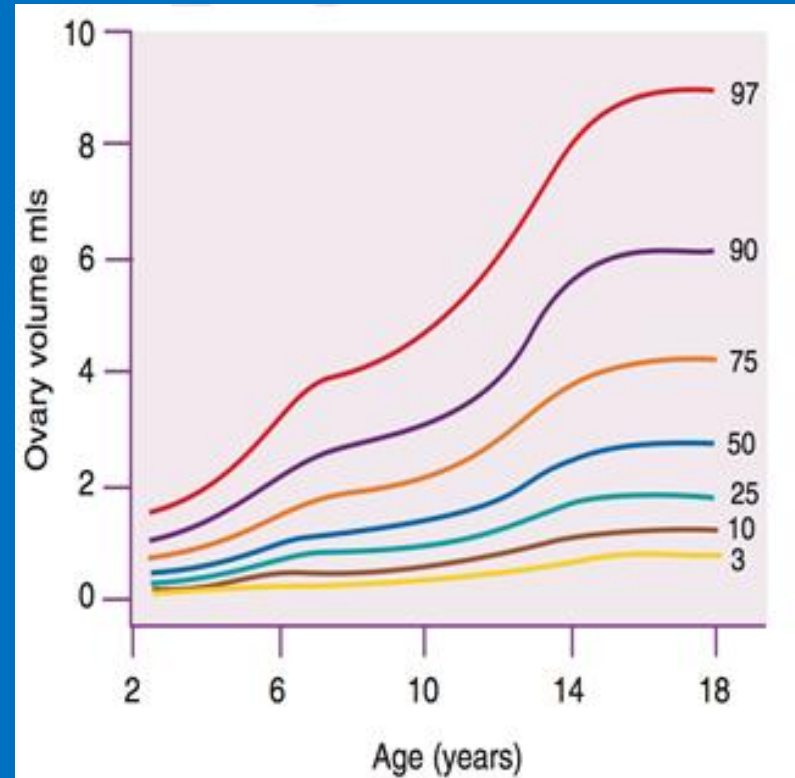


Uterine and Ovarian growth charts



Uterine length VS age (3rd, 50th and 90th centile)

Griffin IJ, Cole TJ, Duncan KA, et al. Pelvic ultrasound measurements in normal girls. *Acta Paediatr* 1995; 84:536-543



Ovarian size VS age

Bridges NA, Cooke A, Healy MJR, et al. Standards for ovarian volume in childhood and puberty. *Fertility & Sterility* 1993; 60:456-460

Some Clinical Indications for Paeds Pelvic US

- RIF pain/? Appendicitis
- Palpable mass
- Precocious puberty
- Anorexia
- Amenorrhoea
- ?PV loss
- Congenital adrenal hyperplasia (CAH)
- Cloaca
- WNT4 deficiency – syndrome of Mullerian aplasia and hyperandrogenism
- Differences in Sex Development (DSD) – 45 X (Turners syndrome – Monosomy X or Mosaicism) or 47 XXY (Klinefelter syndrome), 46 XX or 46 XY





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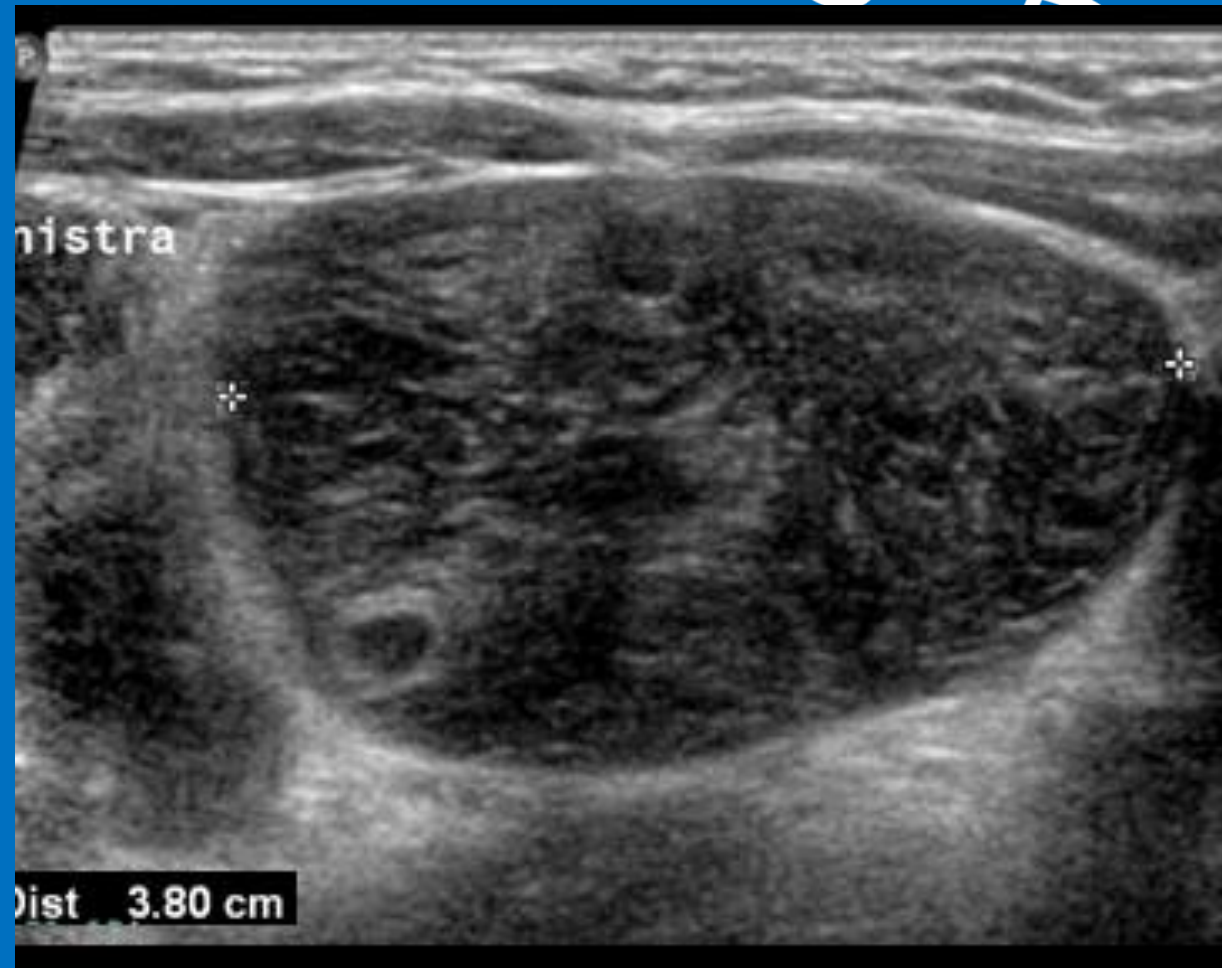
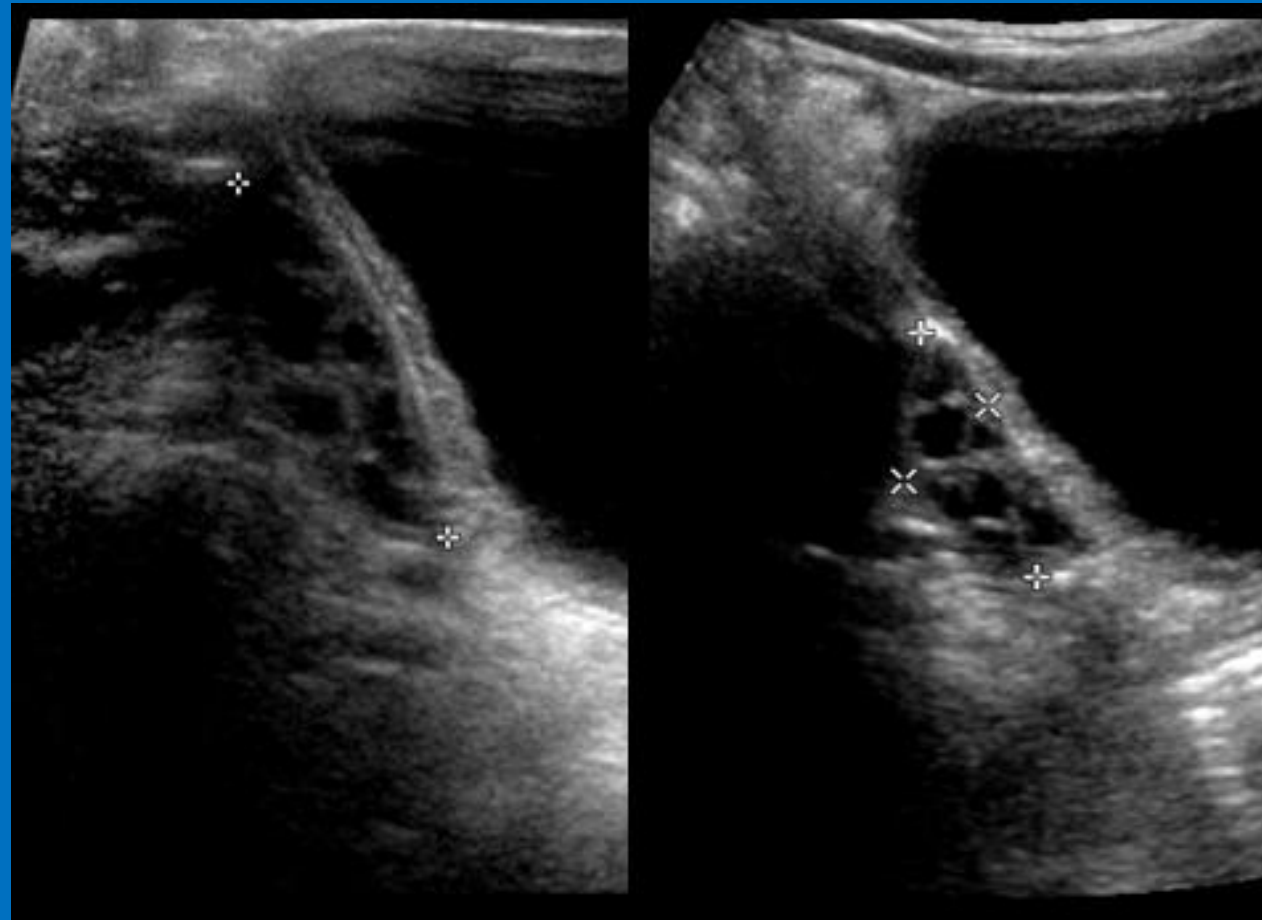
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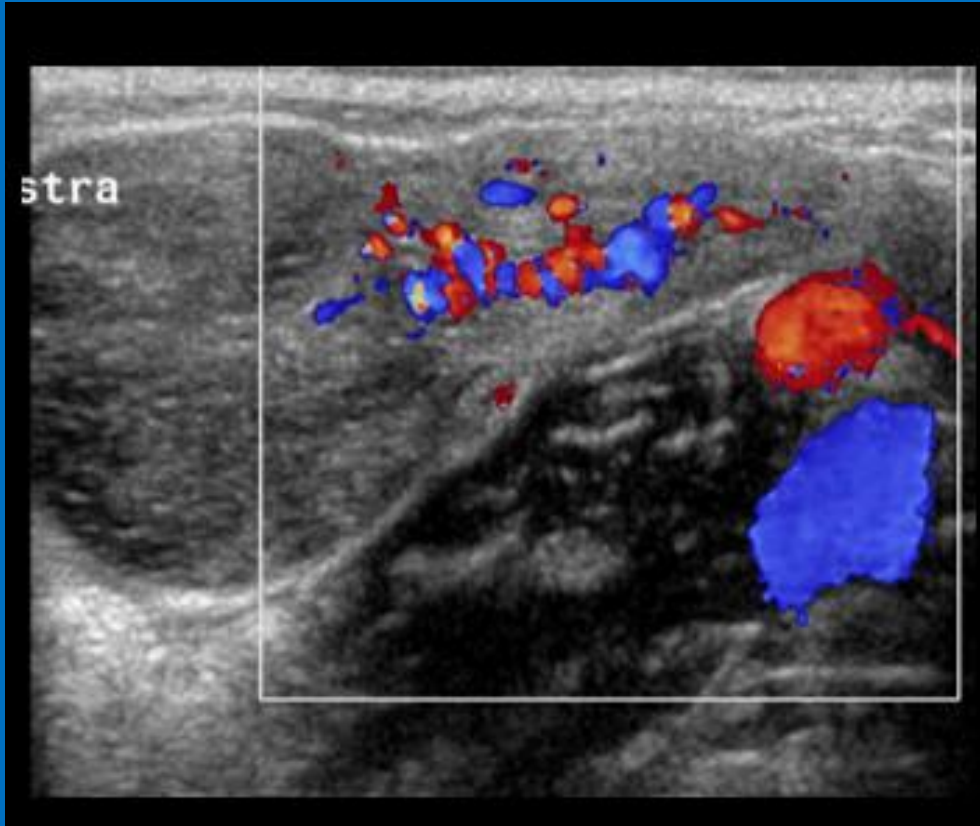
Interesting Cases



2 yr old female, hx of abdominal pain with previous US showing left ovarian mass

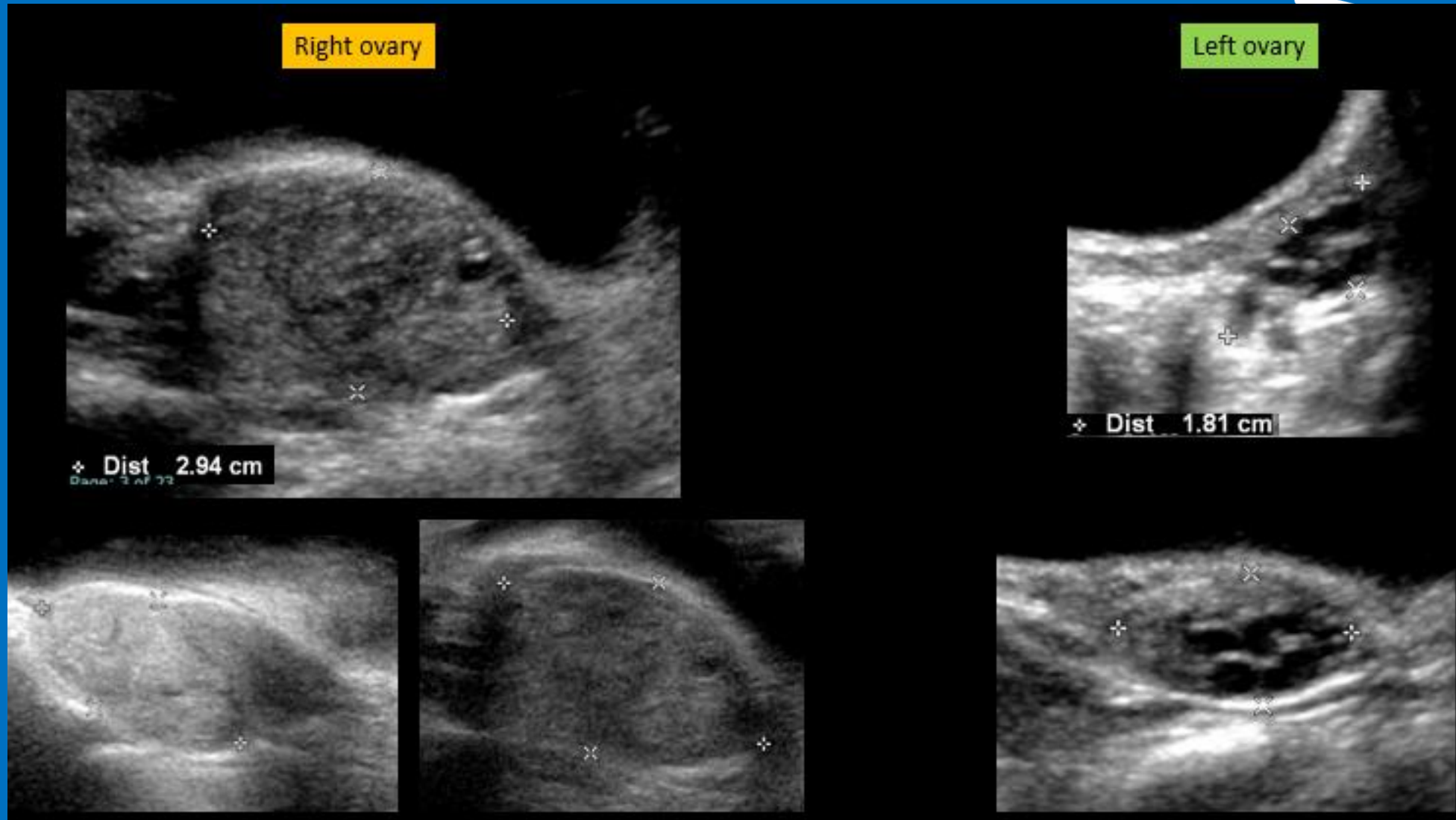


2 yr old female, hx of abdominal pain with previous US showing left ovarian mass



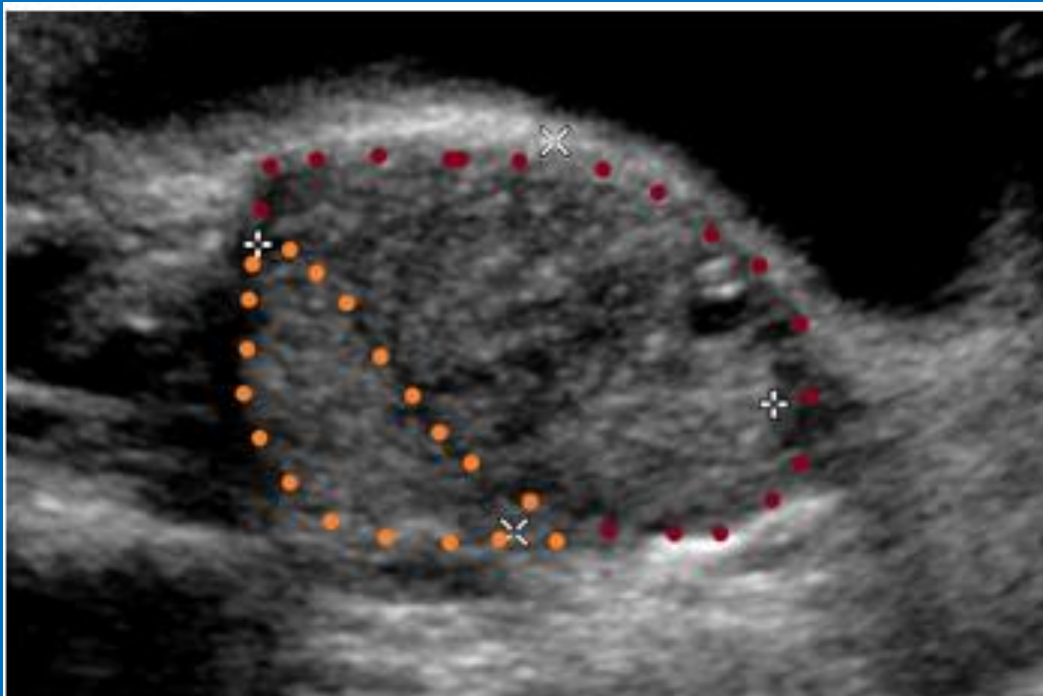
- Lymphatic obstruction – oedematous stroma
- Venous obstruction – reduced/absent venous flow
- Arterial obstruction – reduced/absent arterial flow

5 yr old female ? Appendicitis



5 yr old female ? Appendicitis – (Cine)

- Twisted pedicle
- Torted ovary





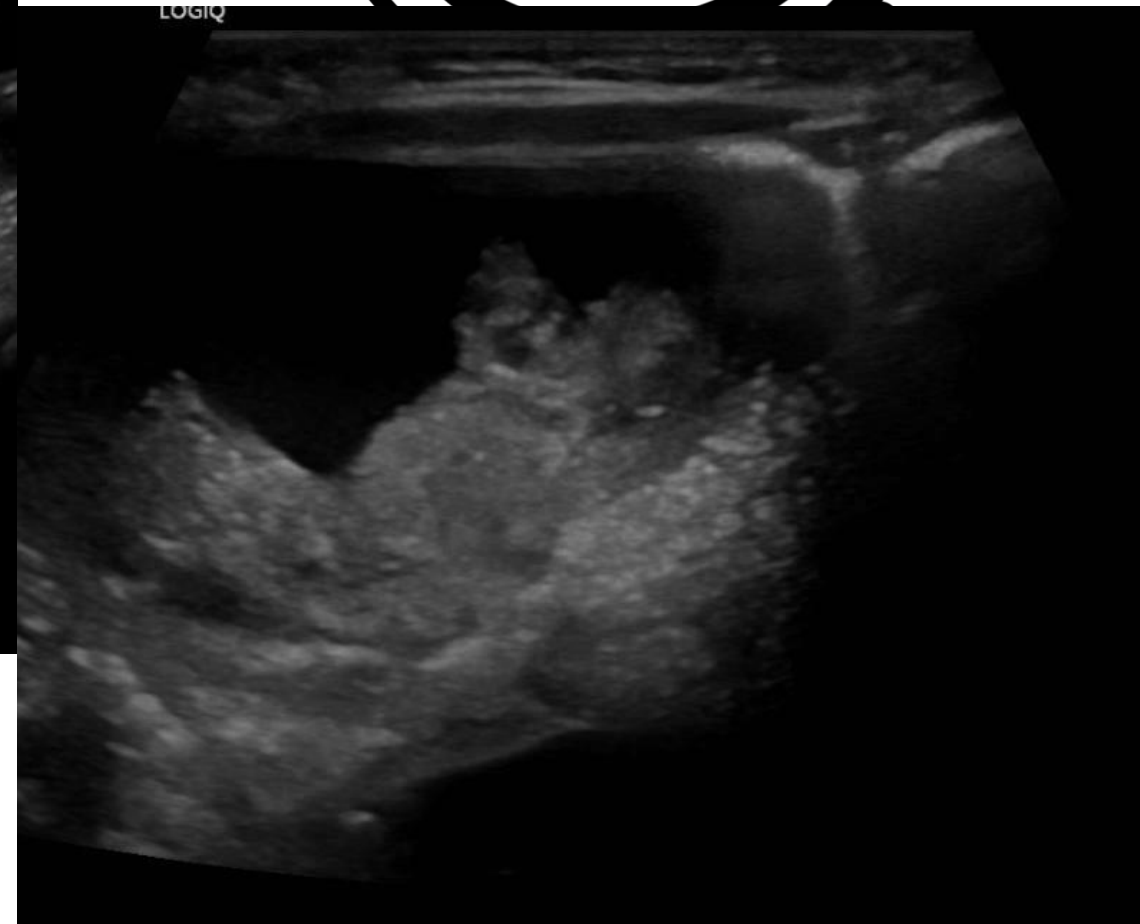
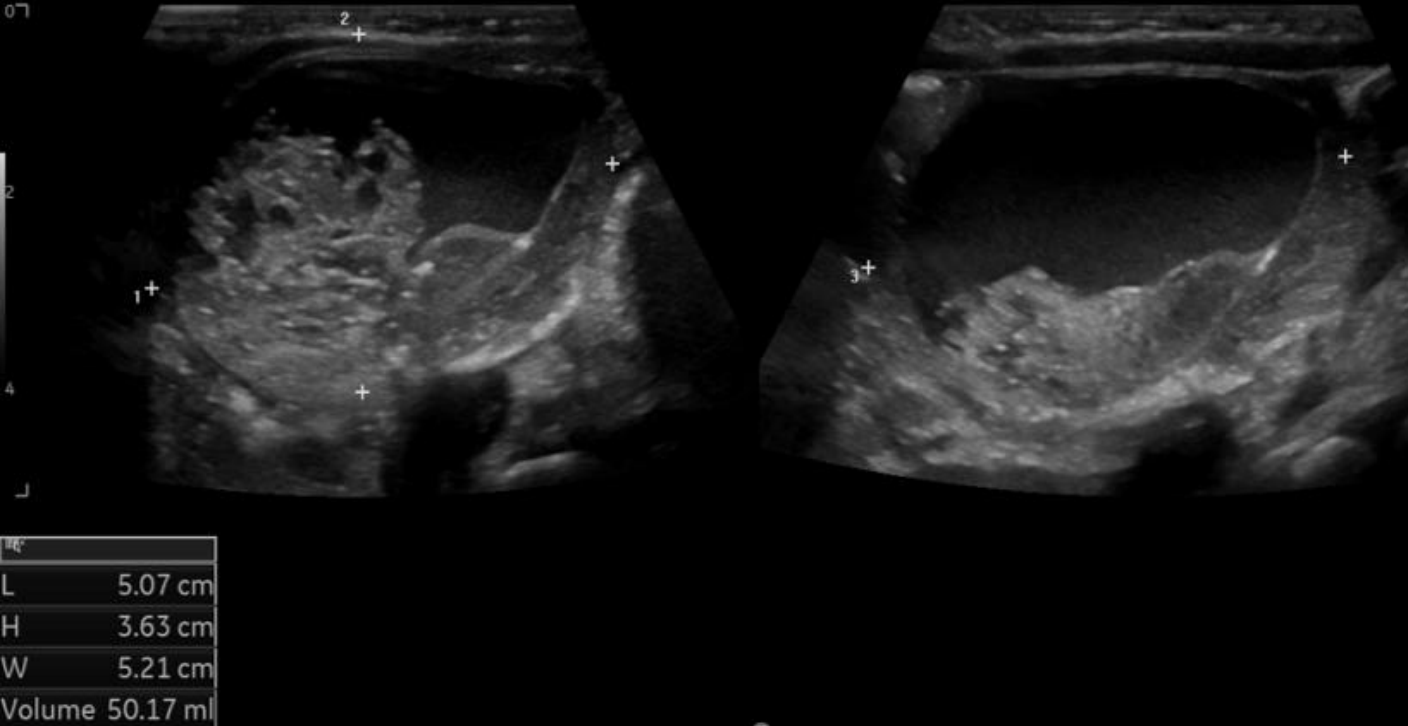
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6-week-old female, RIF cyst – (Cine)



RT ADNEXA



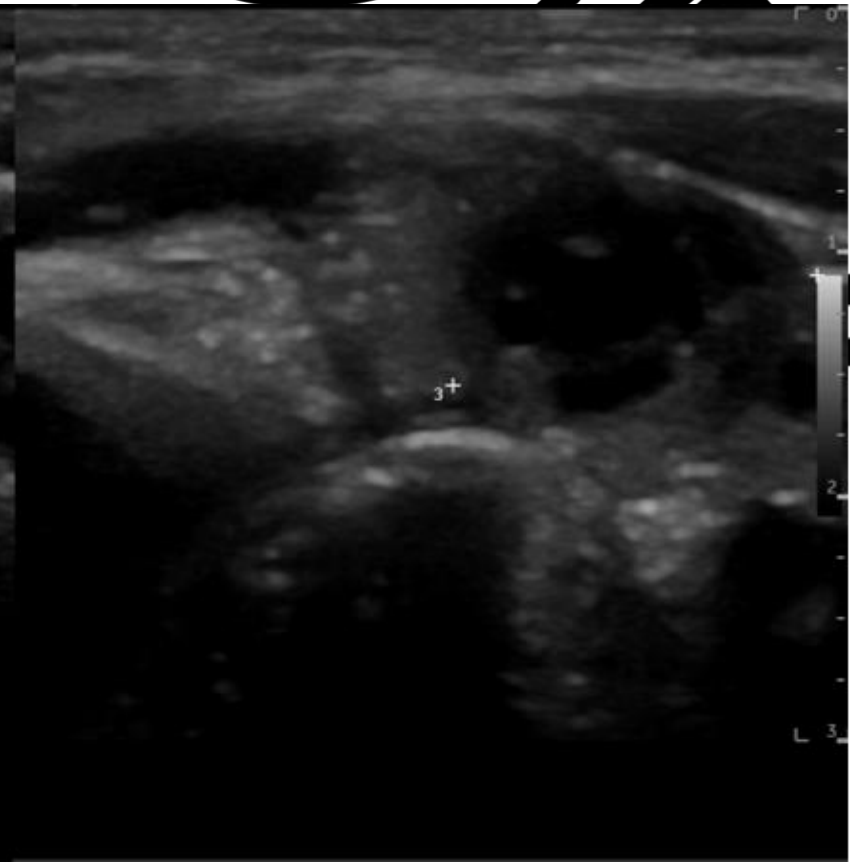
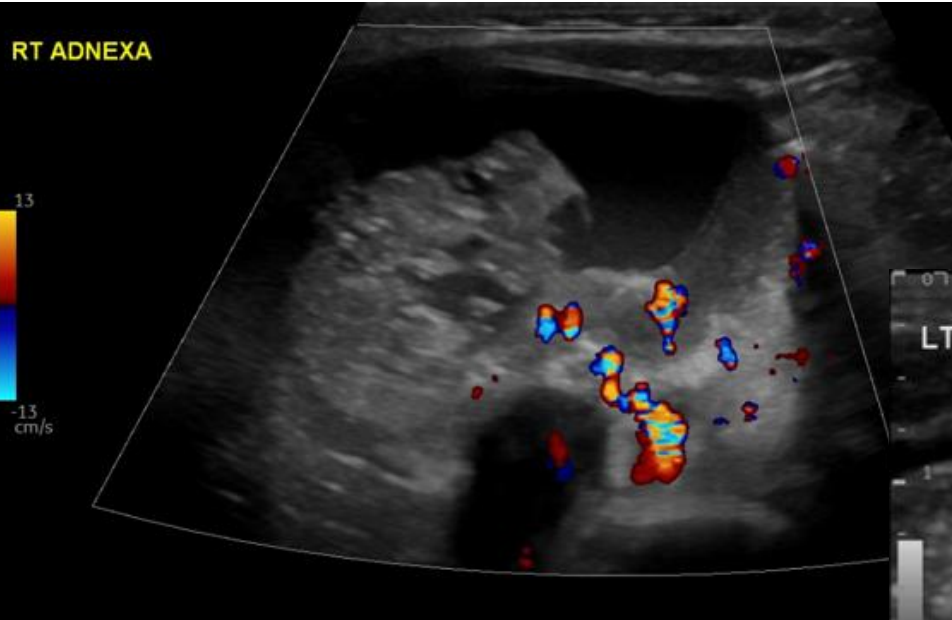


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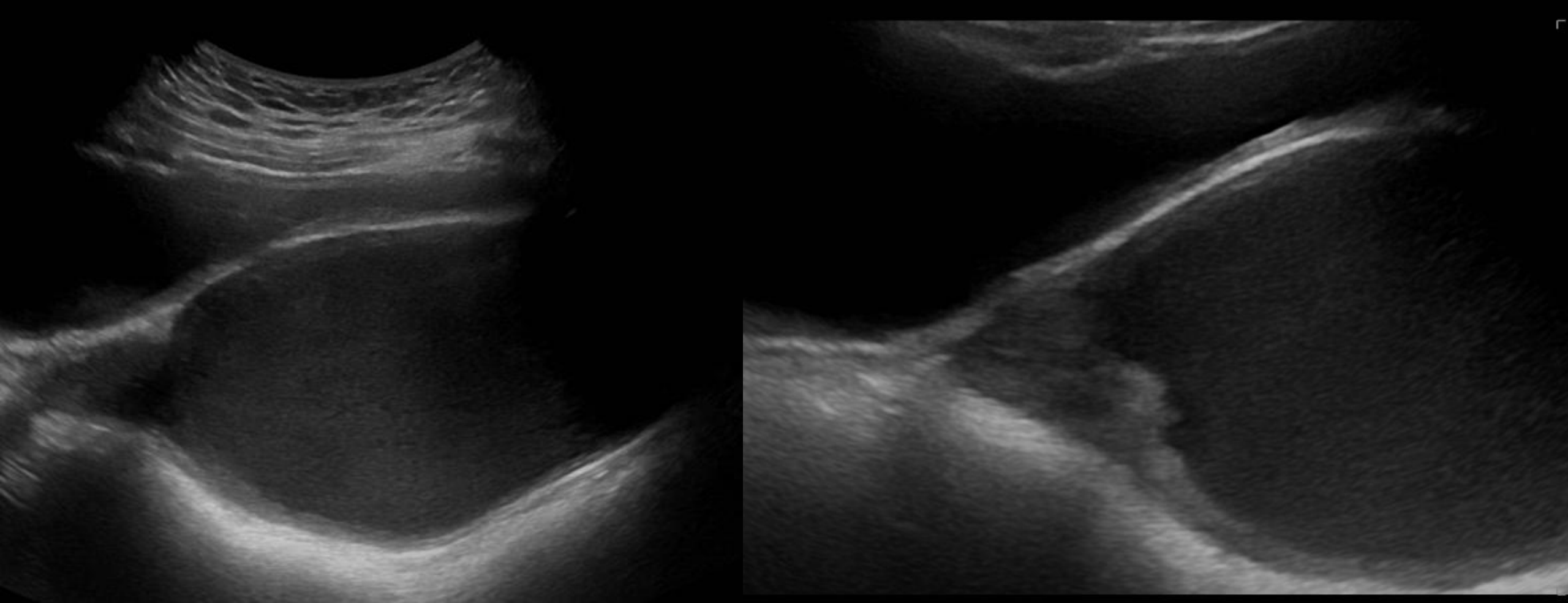
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6-week-old female, RIF cyst

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12 yr old, primary amenorrhoea



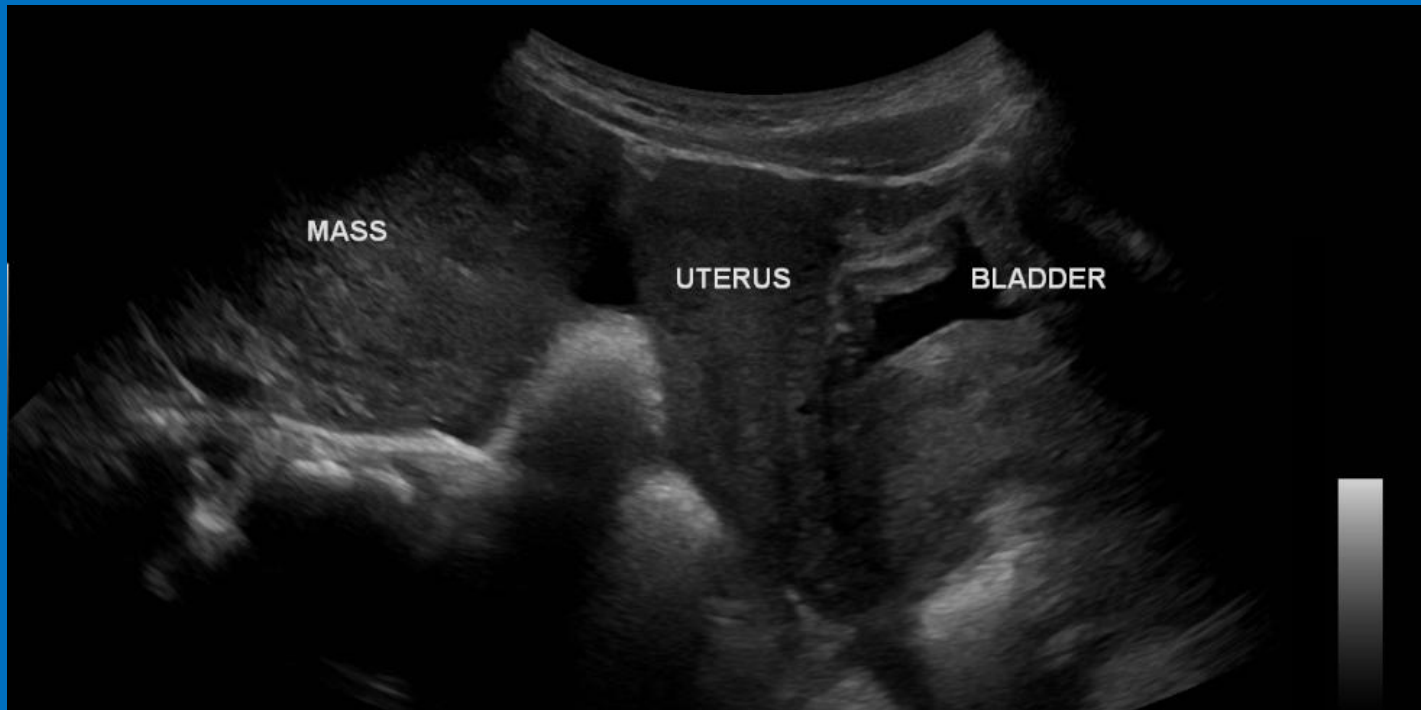
13 yr old female – hx of RIF pain ? Appendicitis/? ovarian torsion– (Cine)



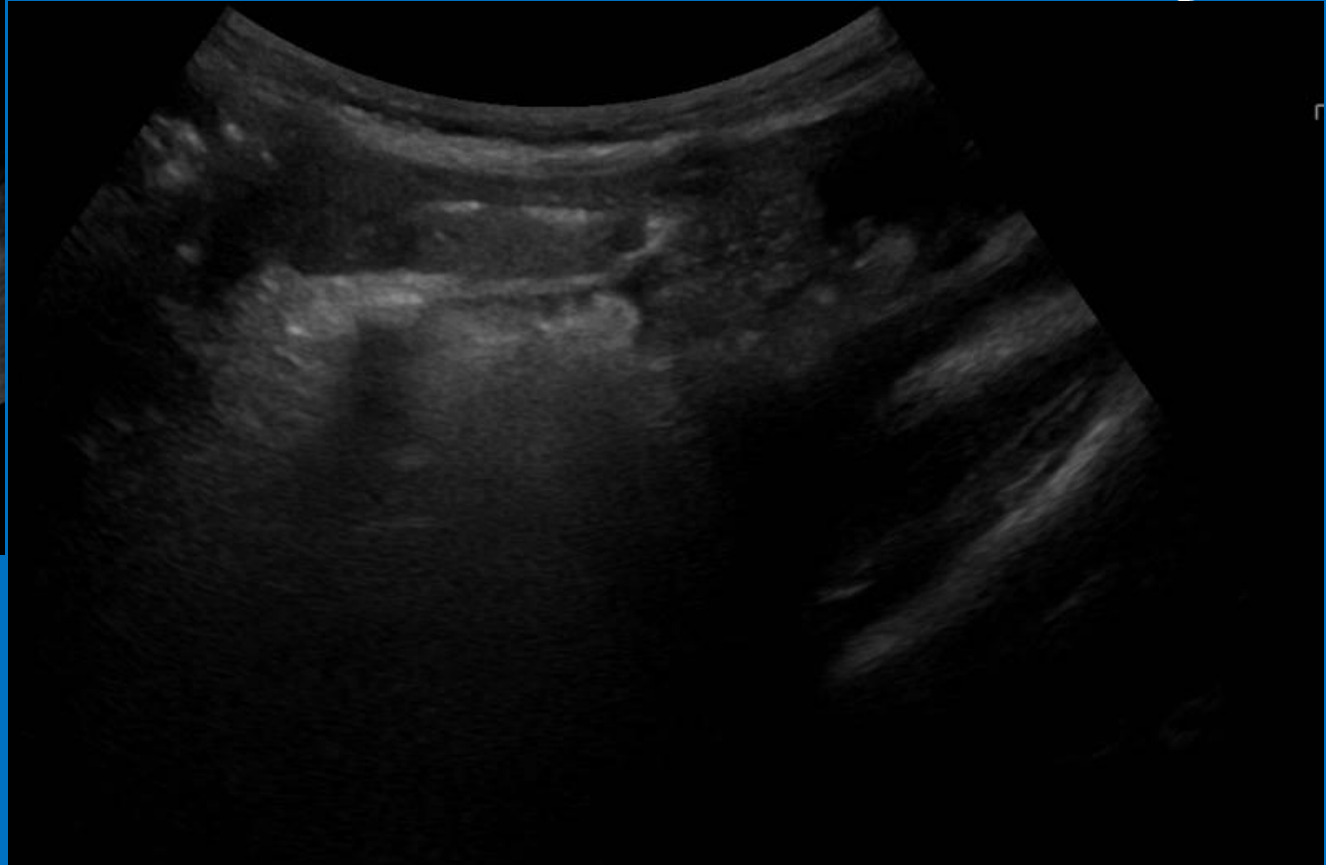
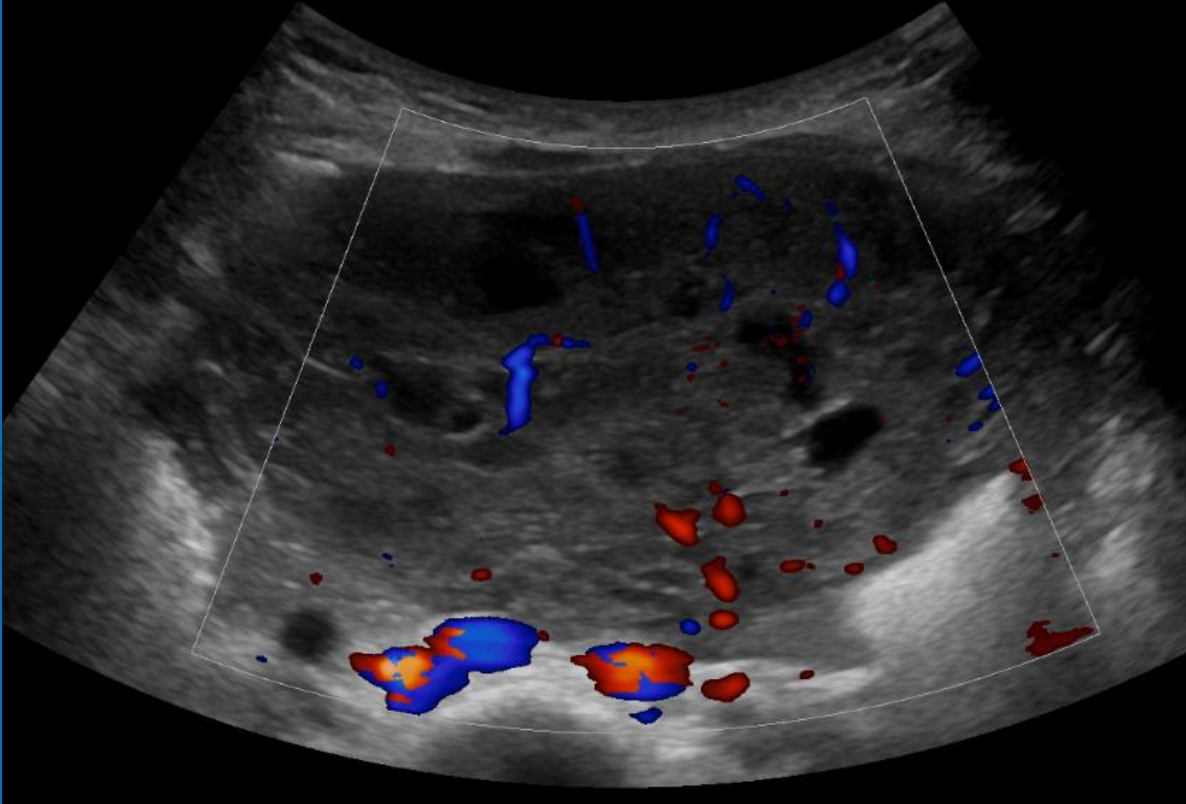
- No menarche



2 yr old female, hx of vaginal discharge and pubic hair growth

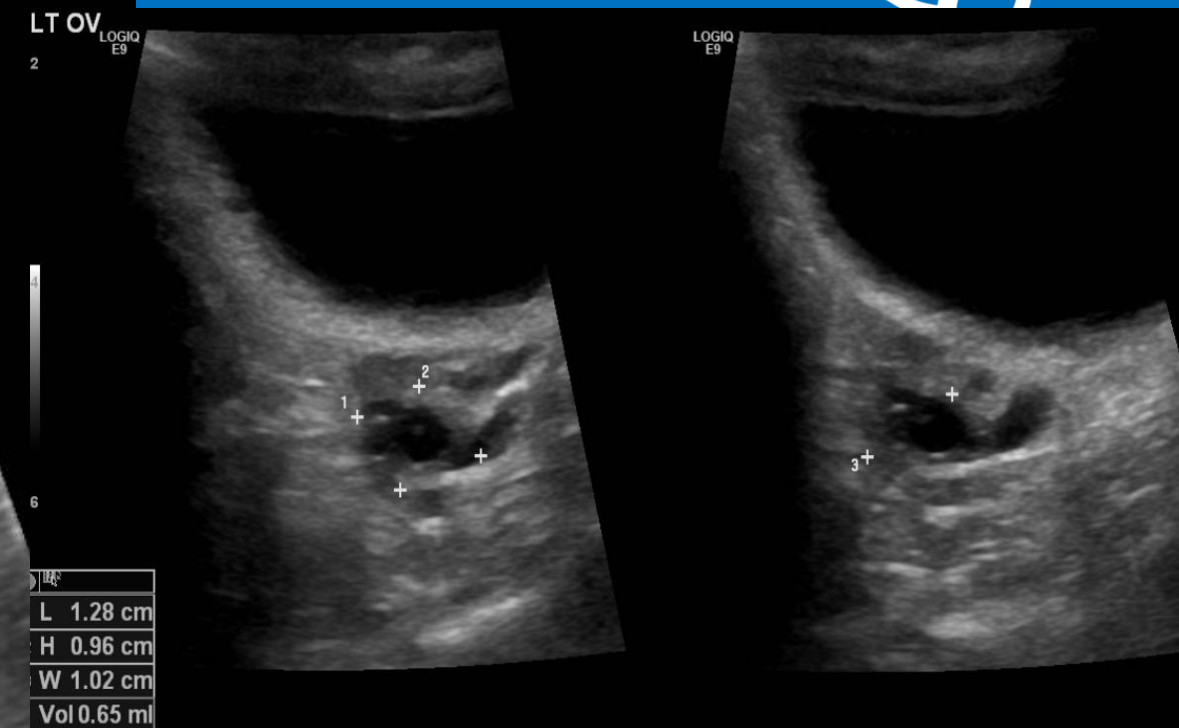
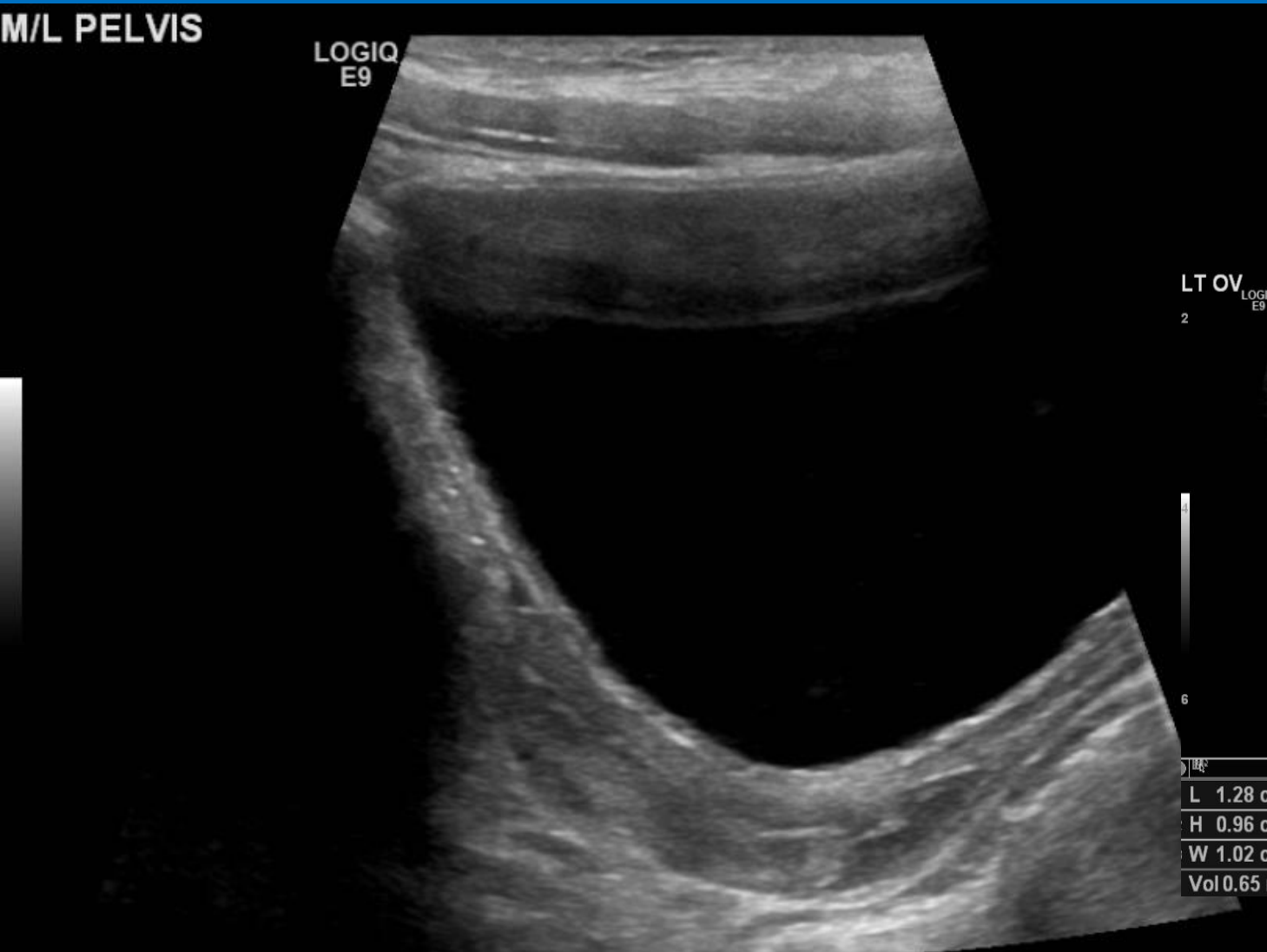


2 yr old female, hx of vaginal discharge and pubic hair growth – (Cine)



- Juvenile Granulosa Cell tumour
- Large hormonally active mass

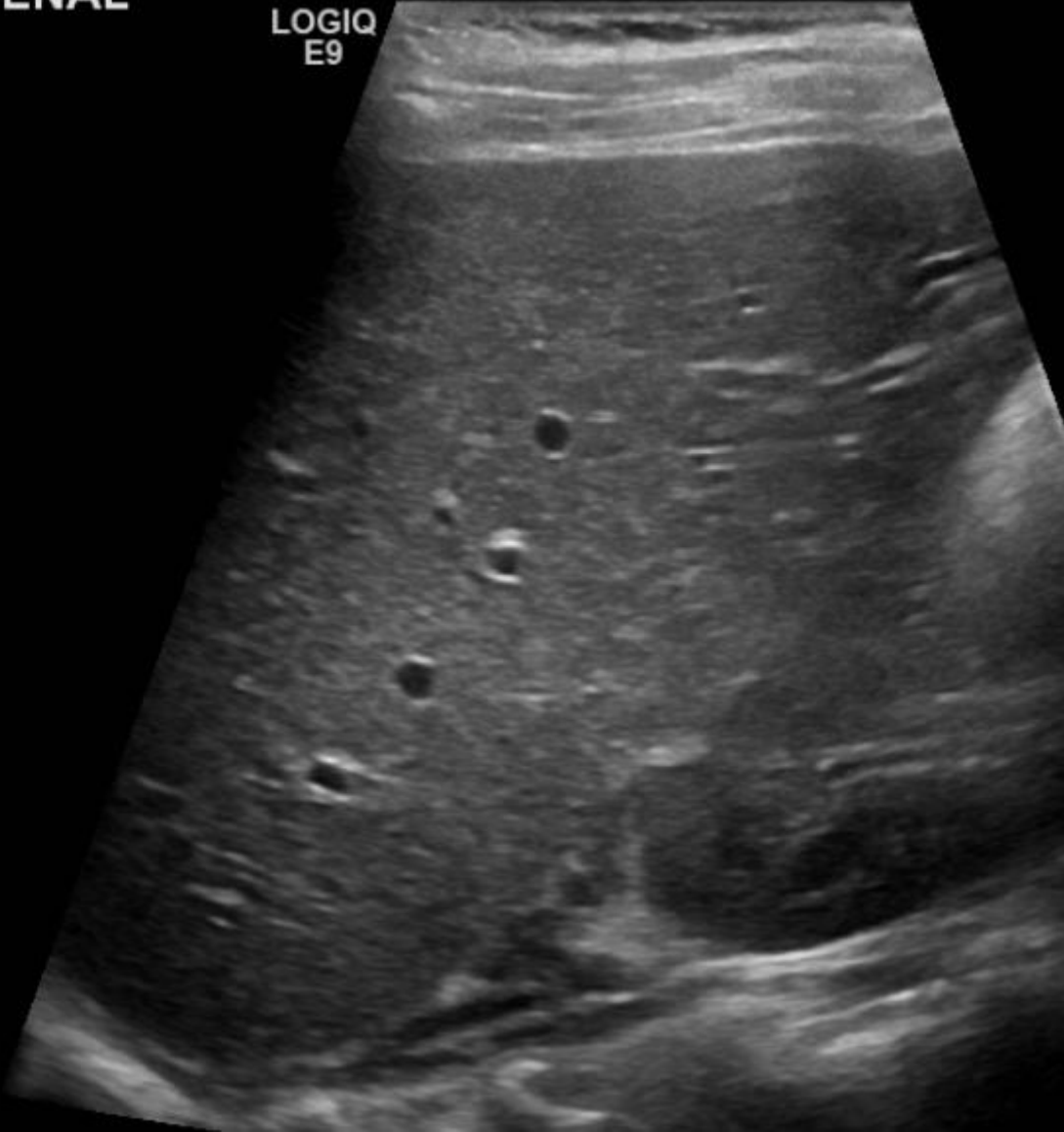
? CAH in 12 yr old boy (international patient)



? CAH in 12 yr old boy (international patient)

RT ADRENAL

LOGIQ
E9

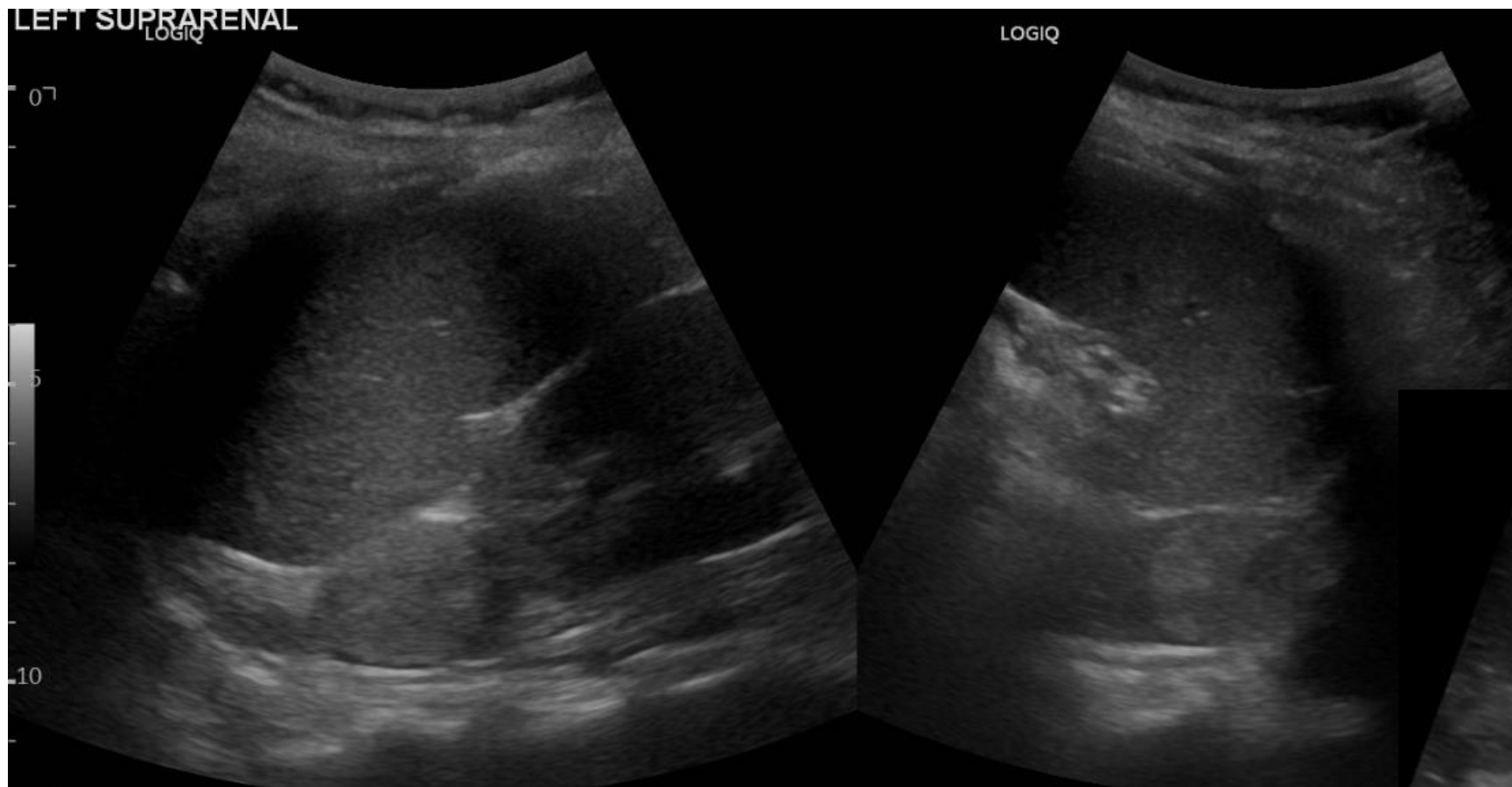


LT ADRENAL

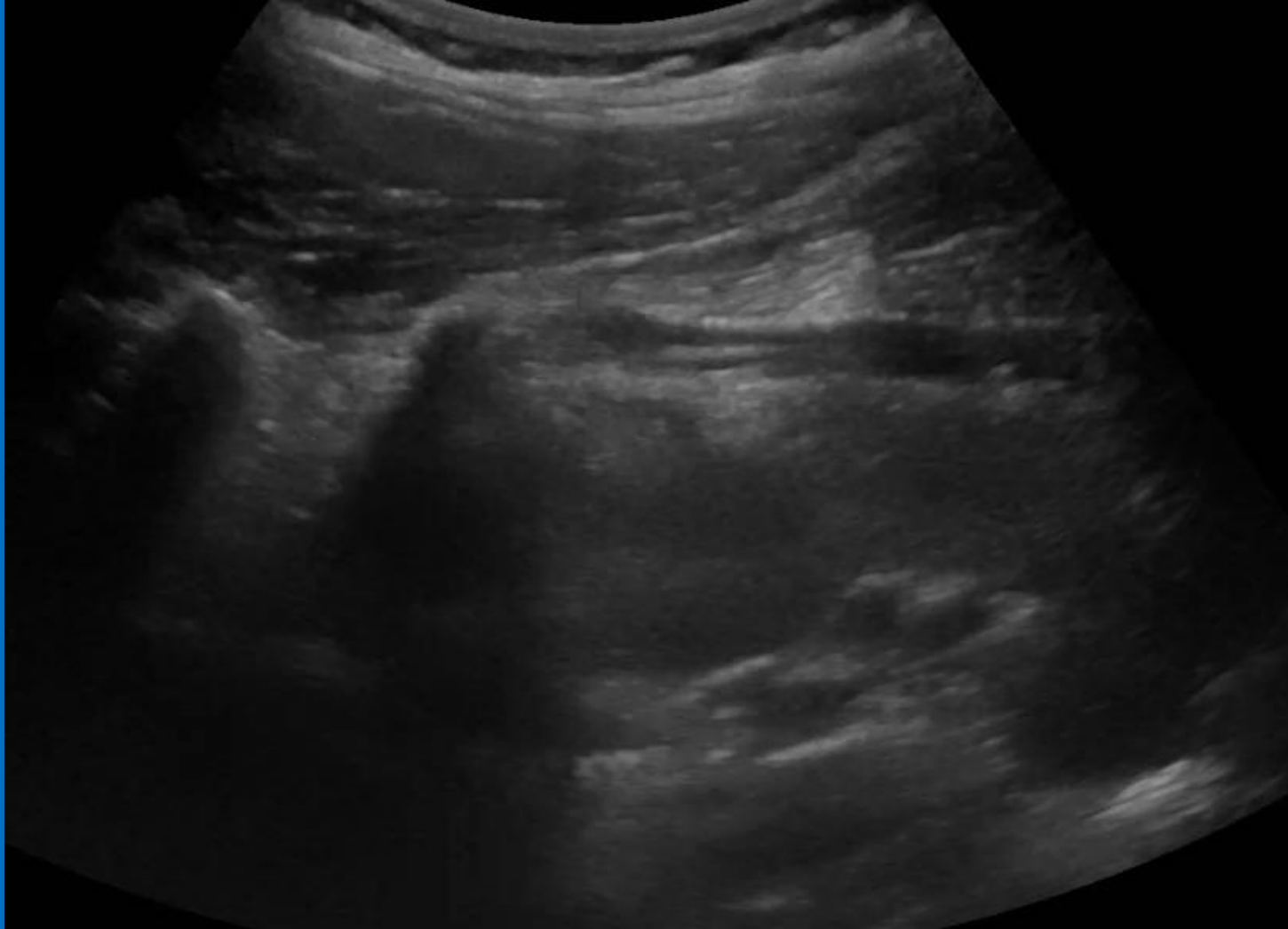
LOGIQ
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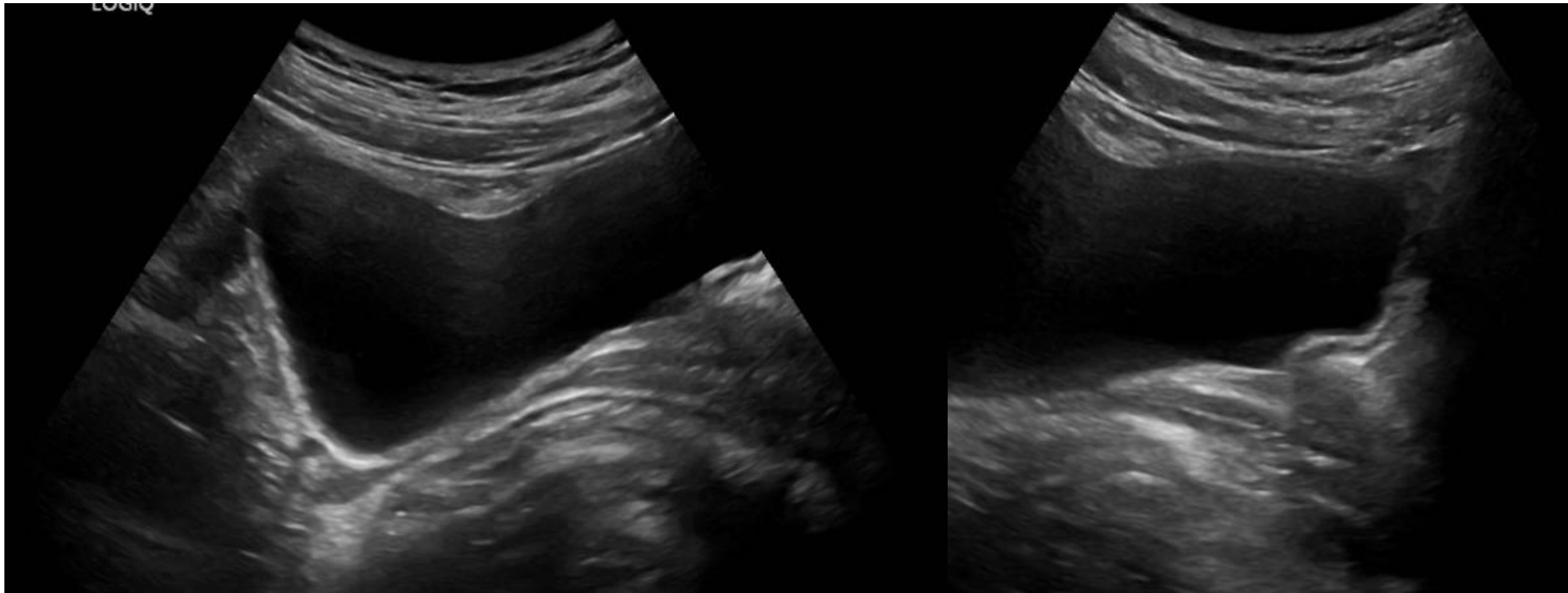
9 yr old girl, CAH and advanced bone age



9 yr old girl with CAH and advanced bone age- (Cine)

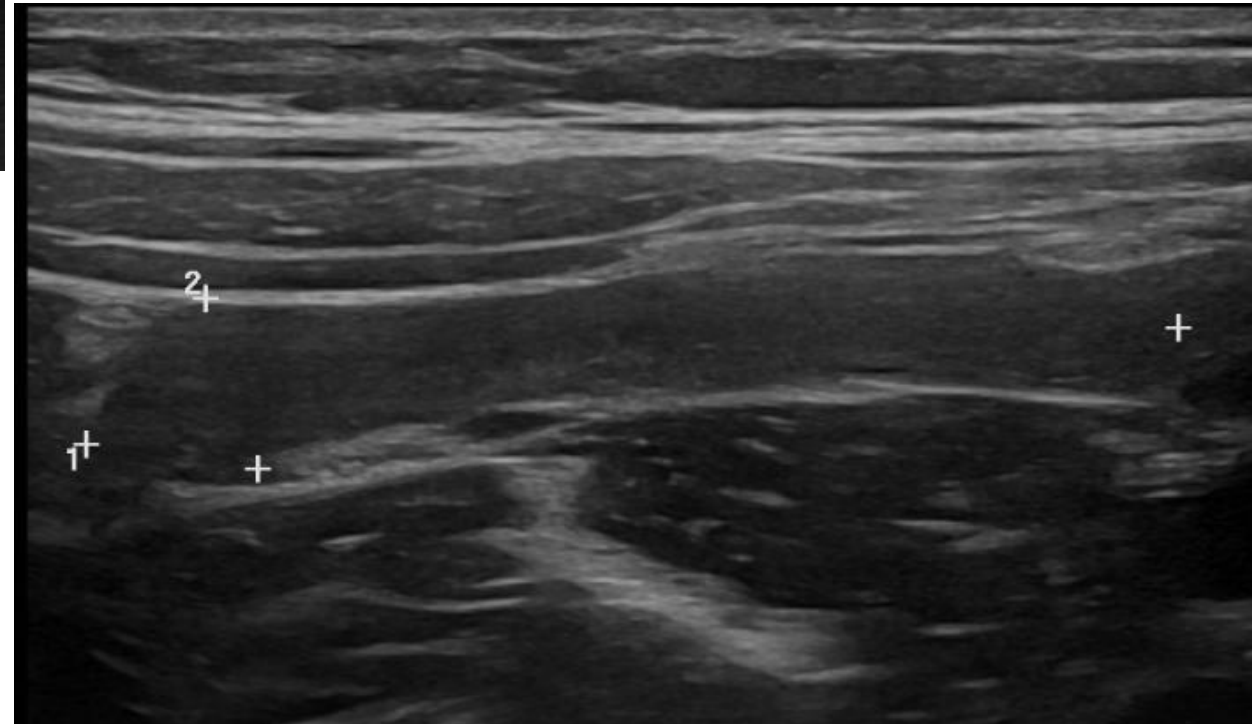


CAIS (Complete Androgen Insensitivity Syndrome)- (Cine)

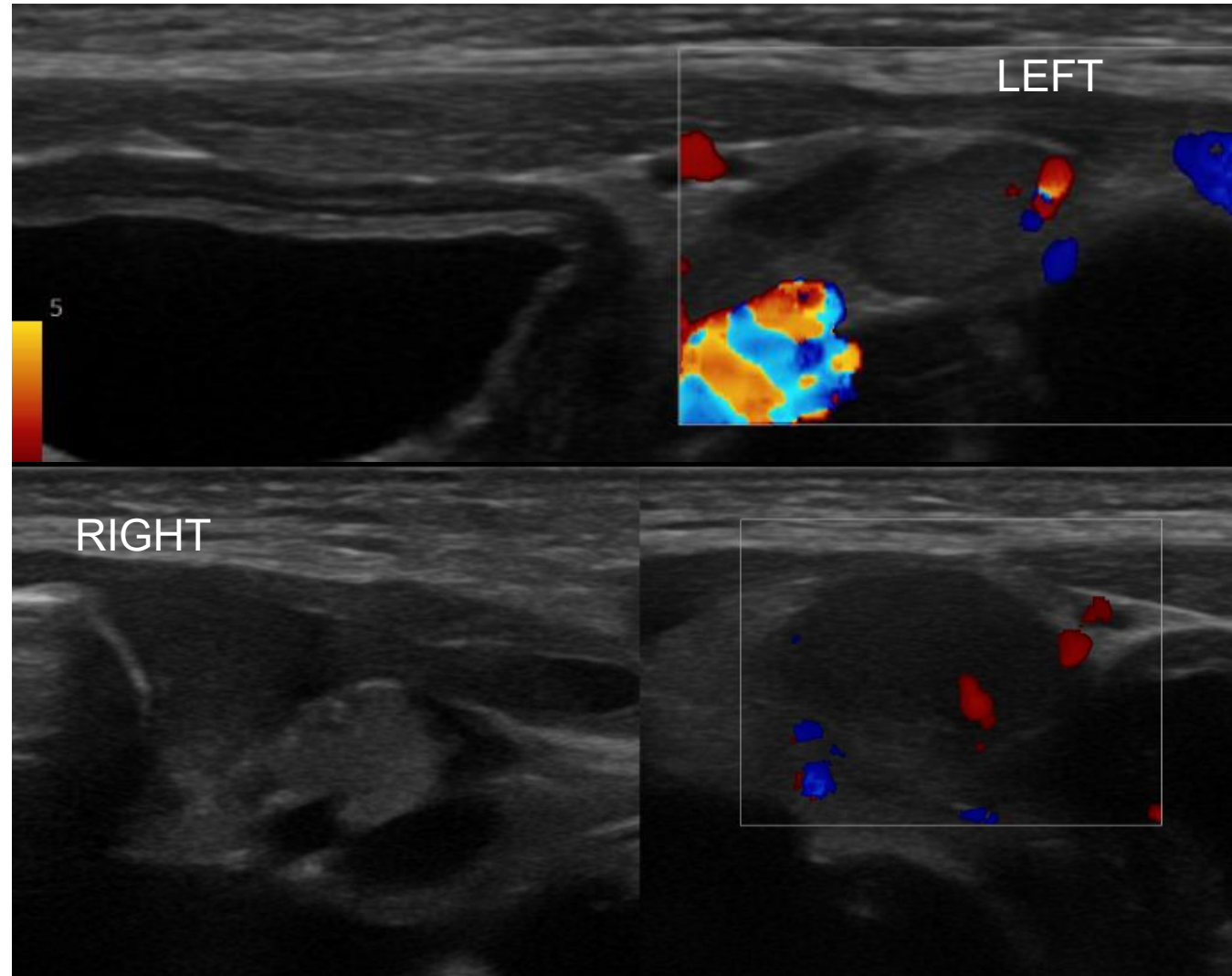
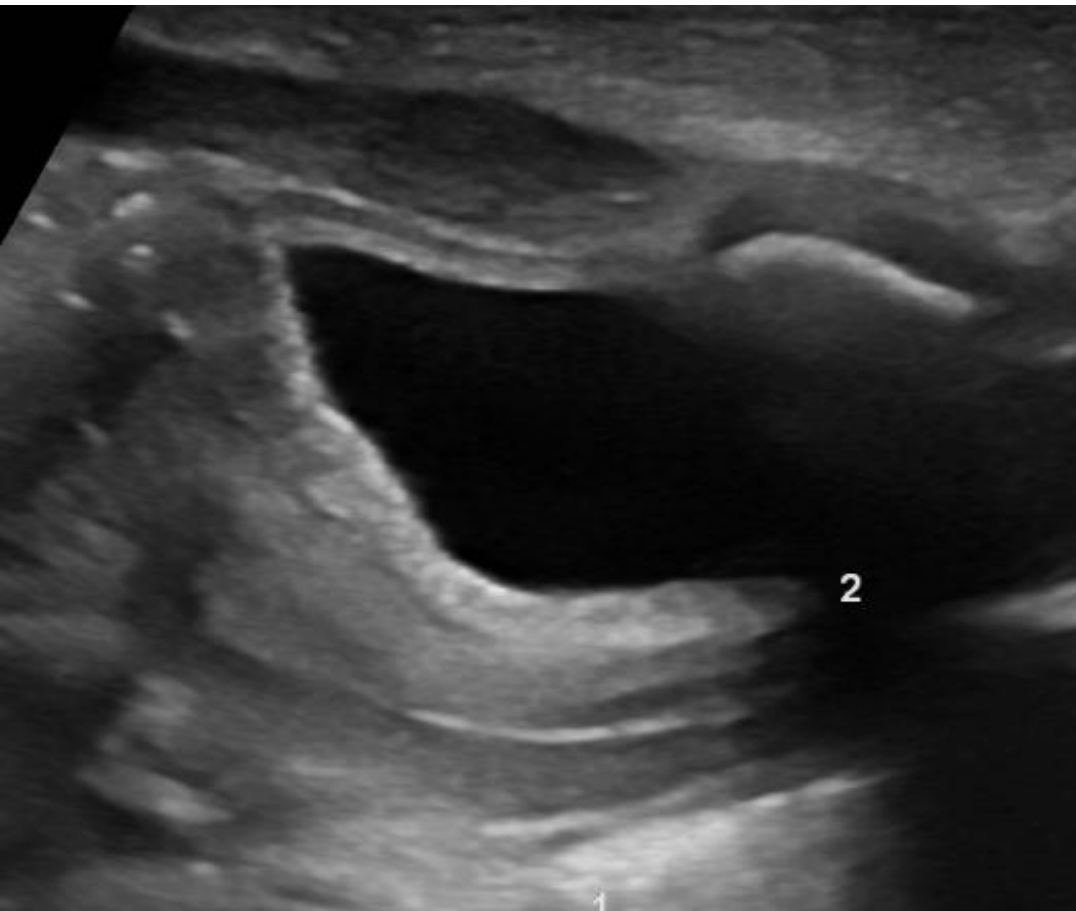


CAIS (Complete Androgen Insensitivity Syndrome)

- Inguinally located

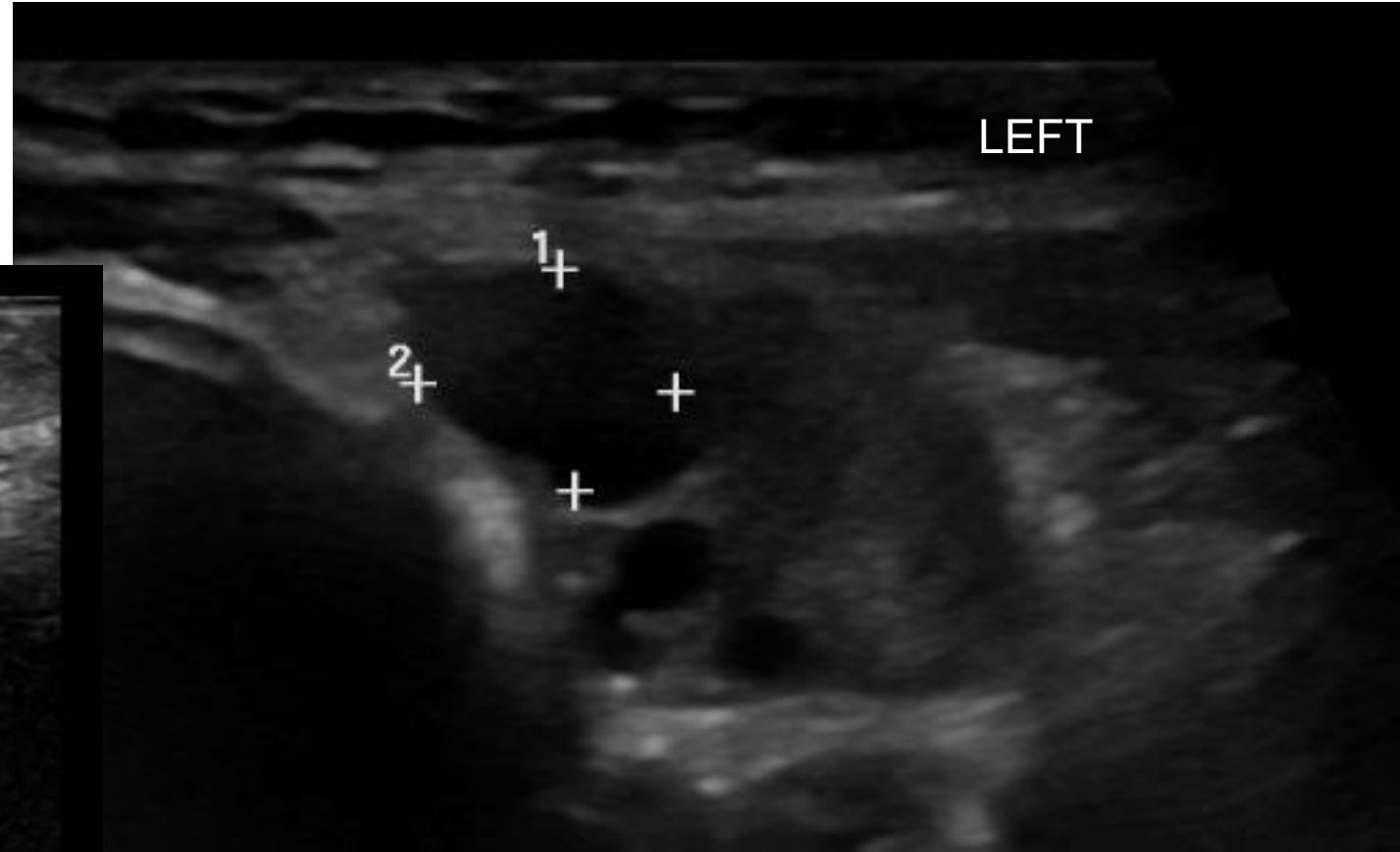
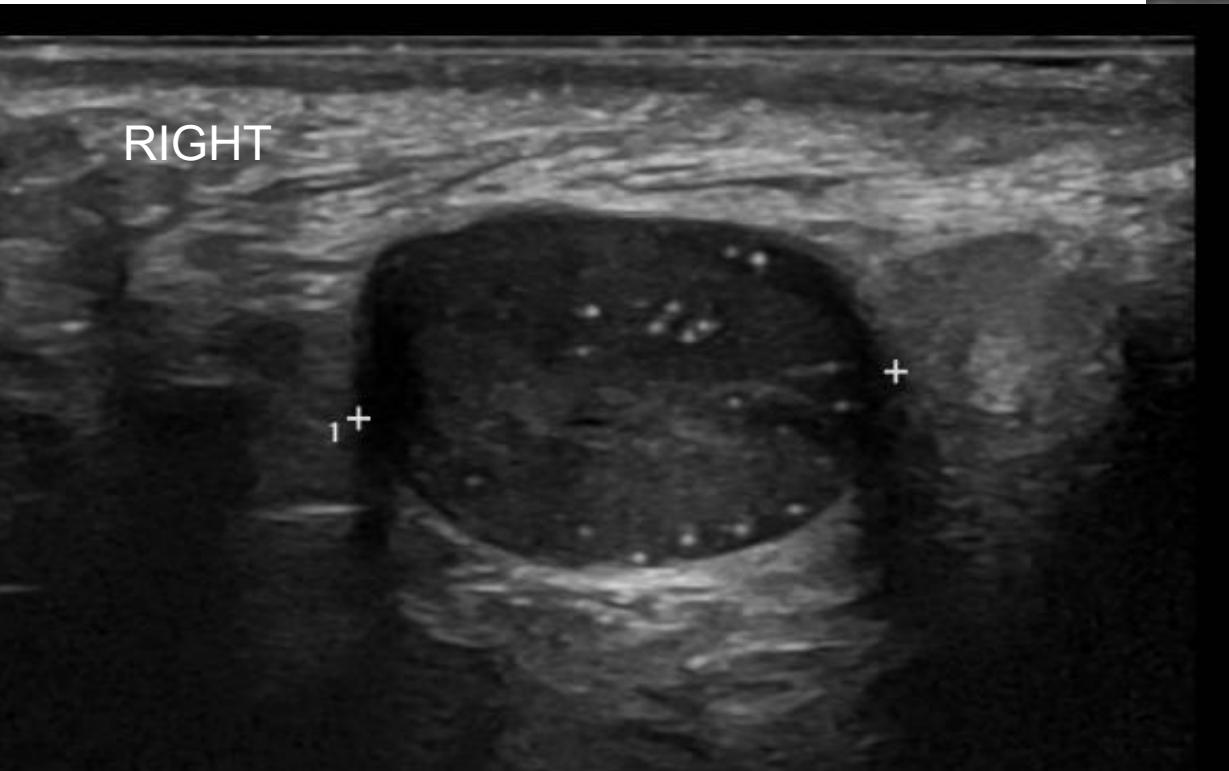


7-day old child with atypical genitalia (large phallus/clitoromegaly), no palpable gonads- looks like a virilised girl. DSD with Turners spectrum, awaiting genetics



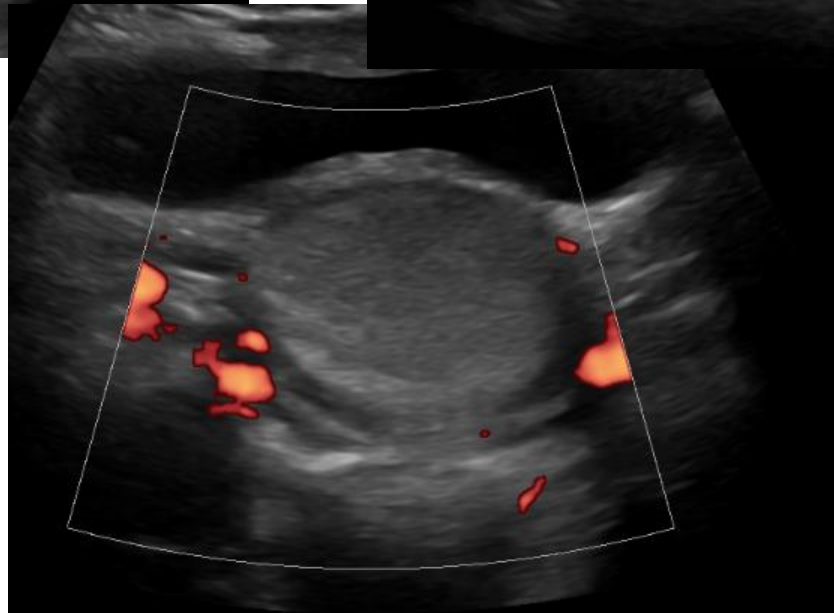
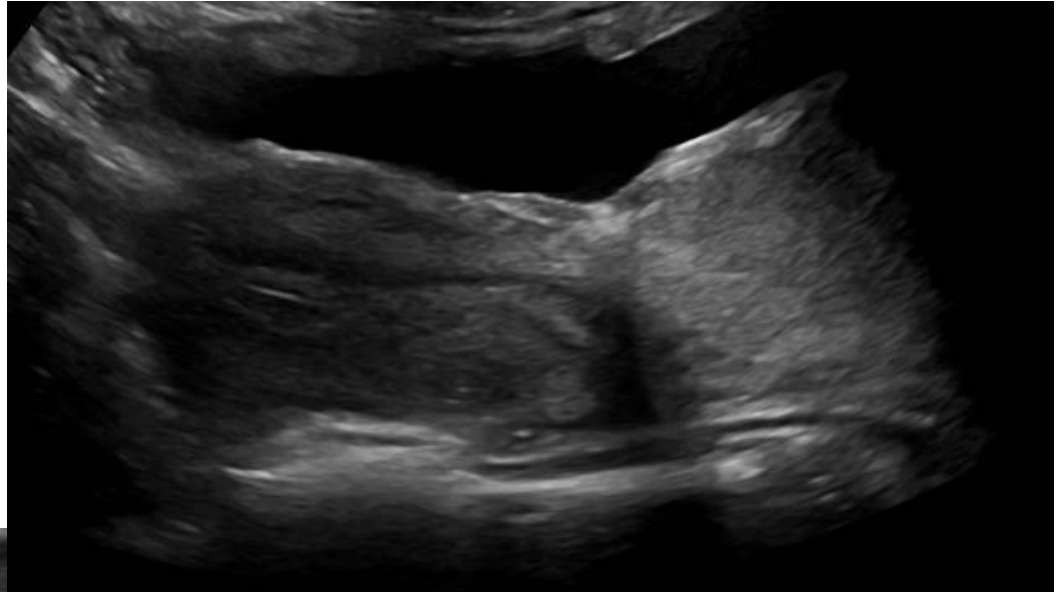
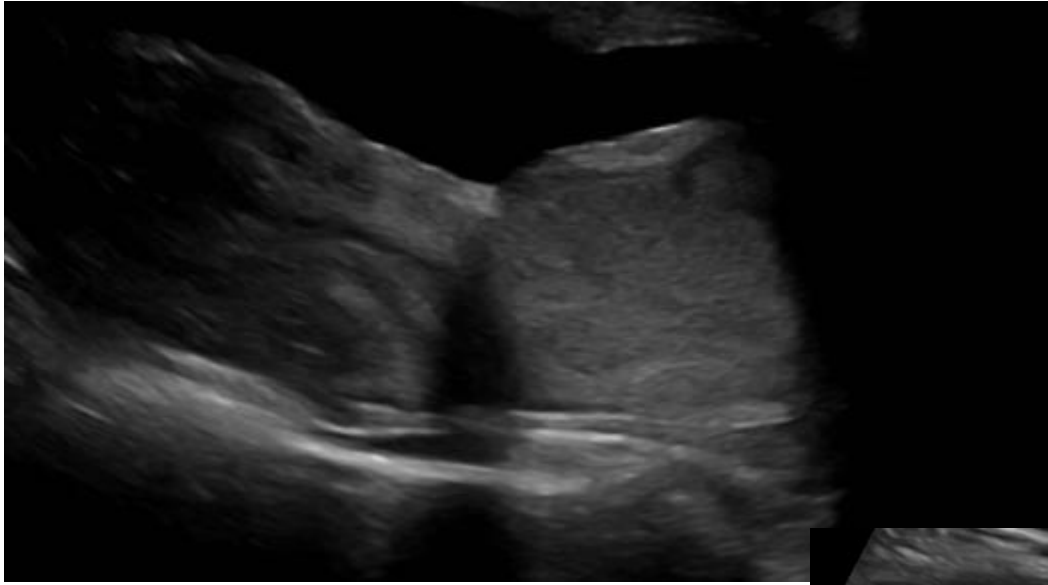
7-day old child with atypical genitalia (large phallus/clitoromegaly), no palpable gonads- looks like a virilised girl. DSD with Turners spectrum, awaiting genetics

***1.5 years later ***



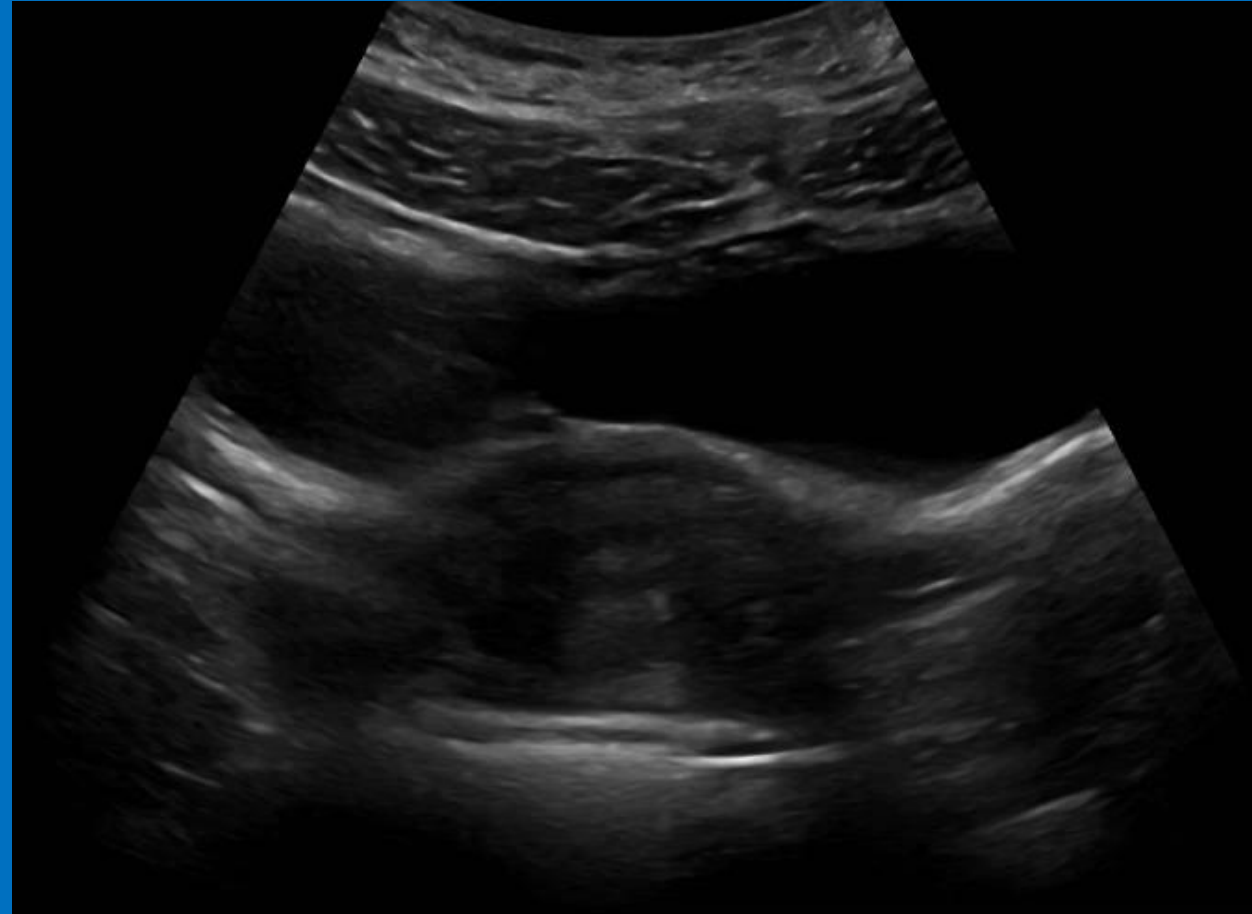
- **TURNERS with MOSAIC KARYOTYPE**

?bladder neck/paravaginal mass

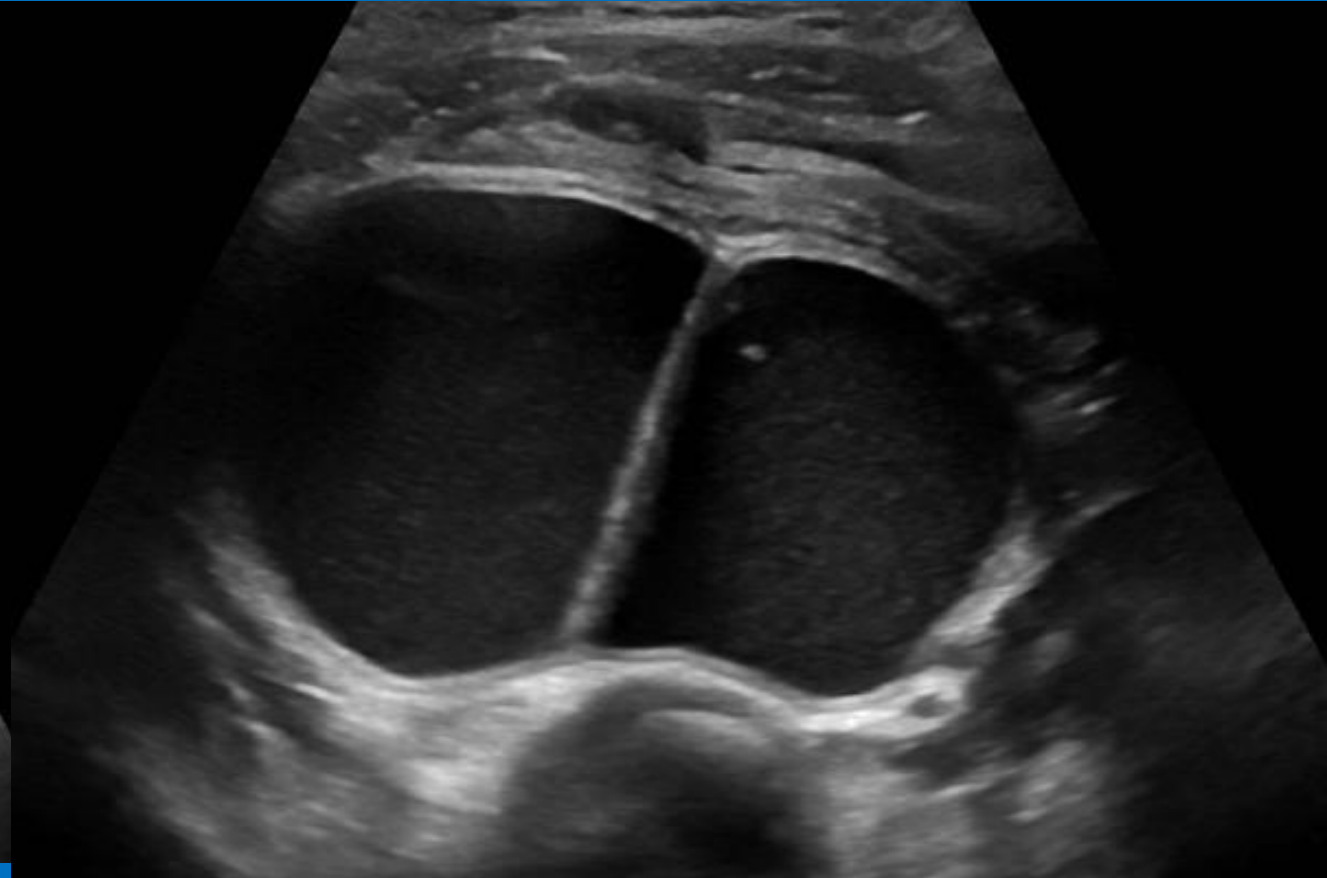
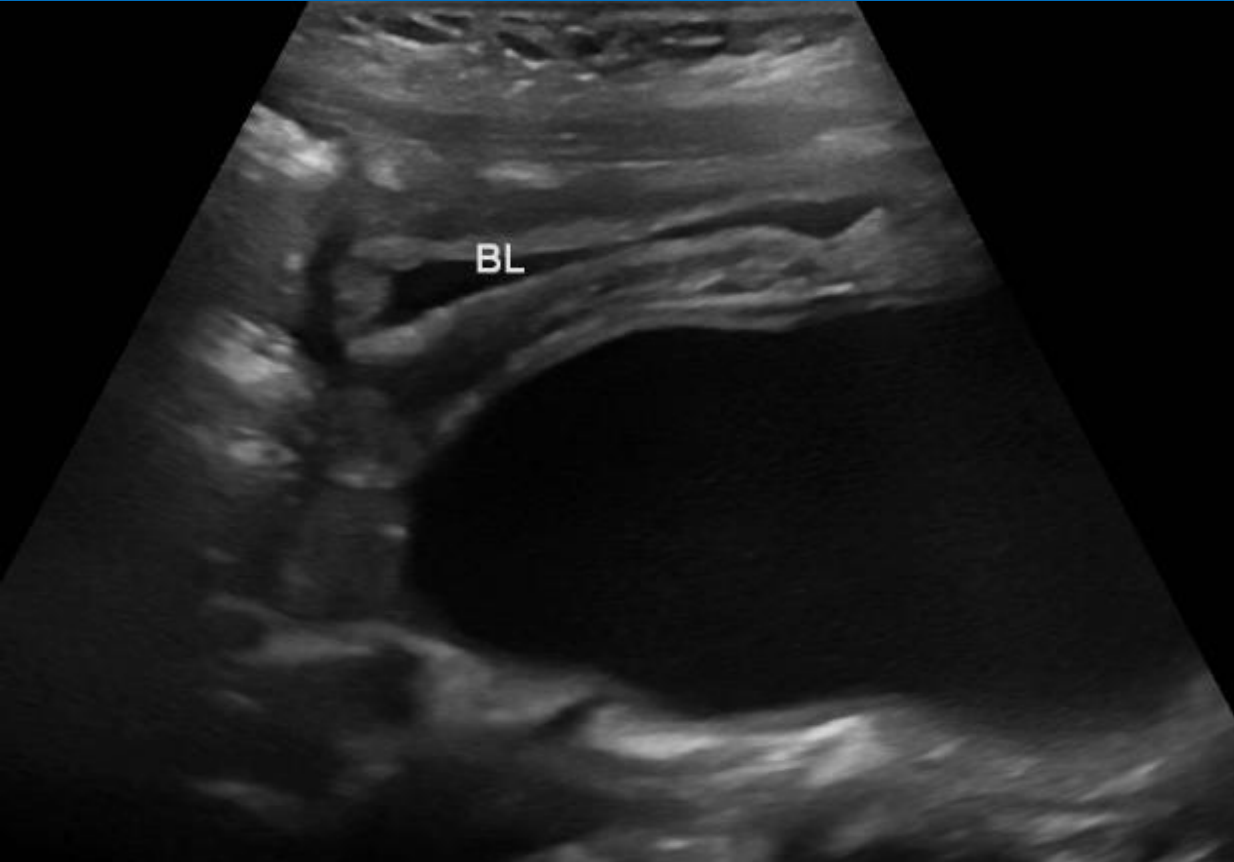


?bladder neck/paravaginal mass- (Cine)

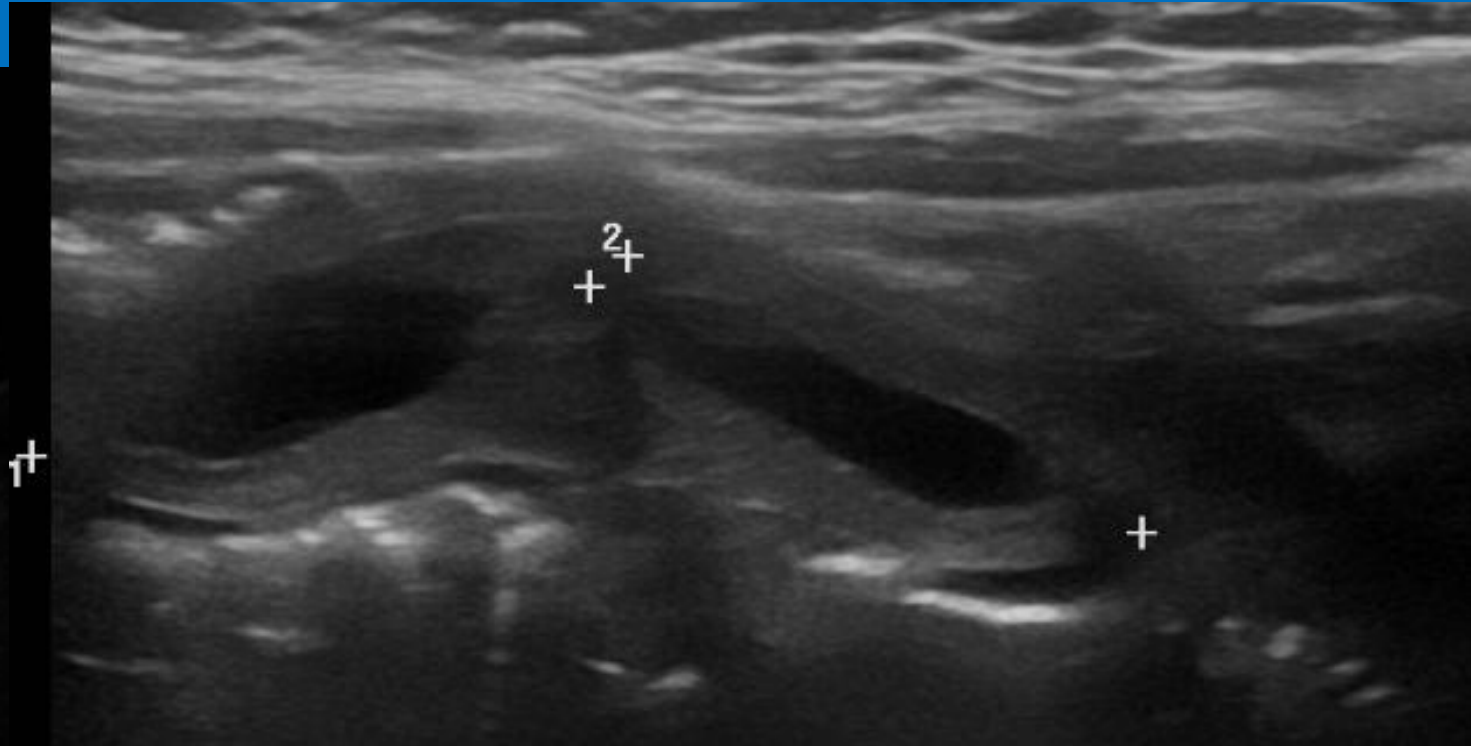
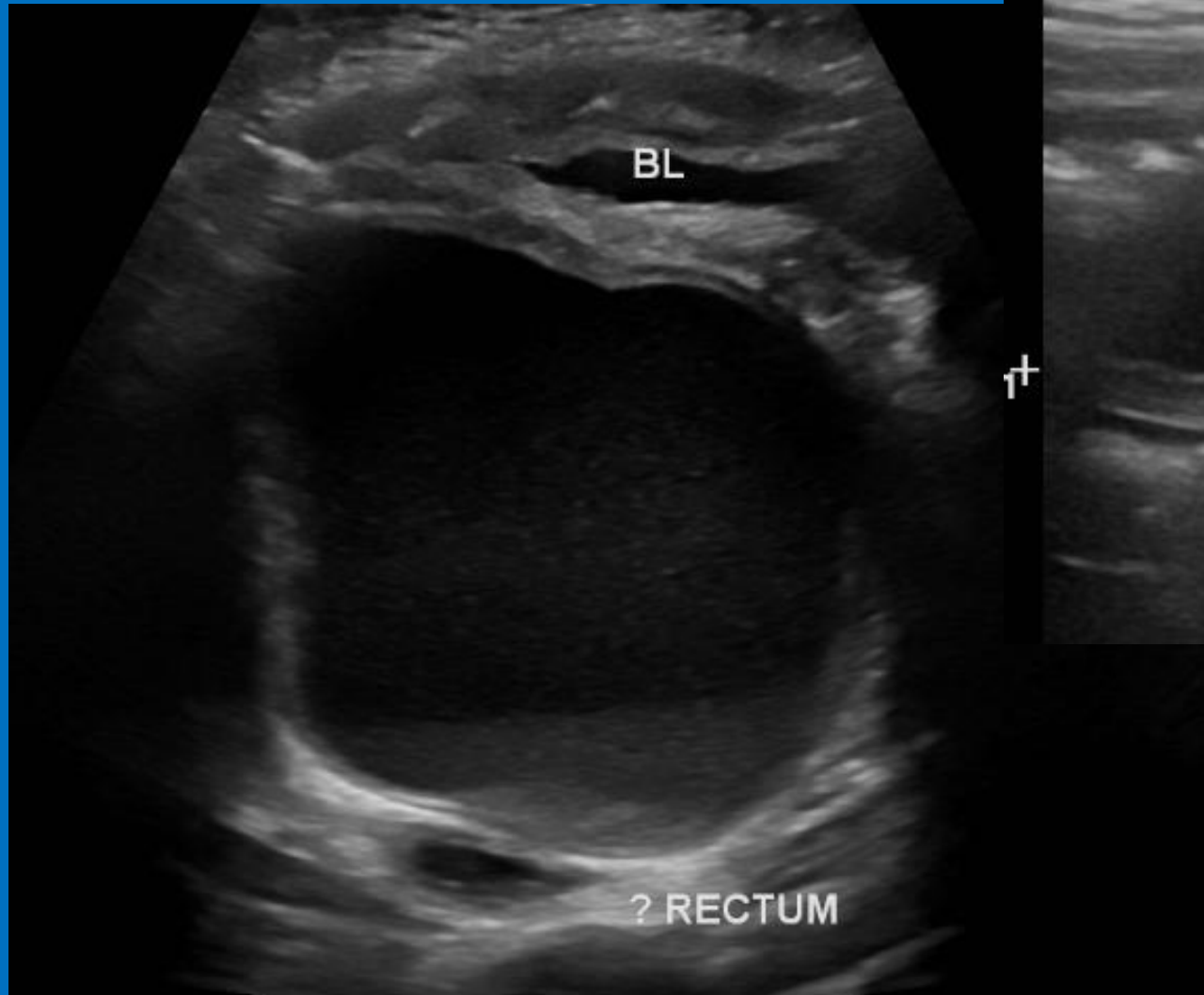
- Bladder neck Deflux



1 yr old girl, Cloaca and Mullerian duplication



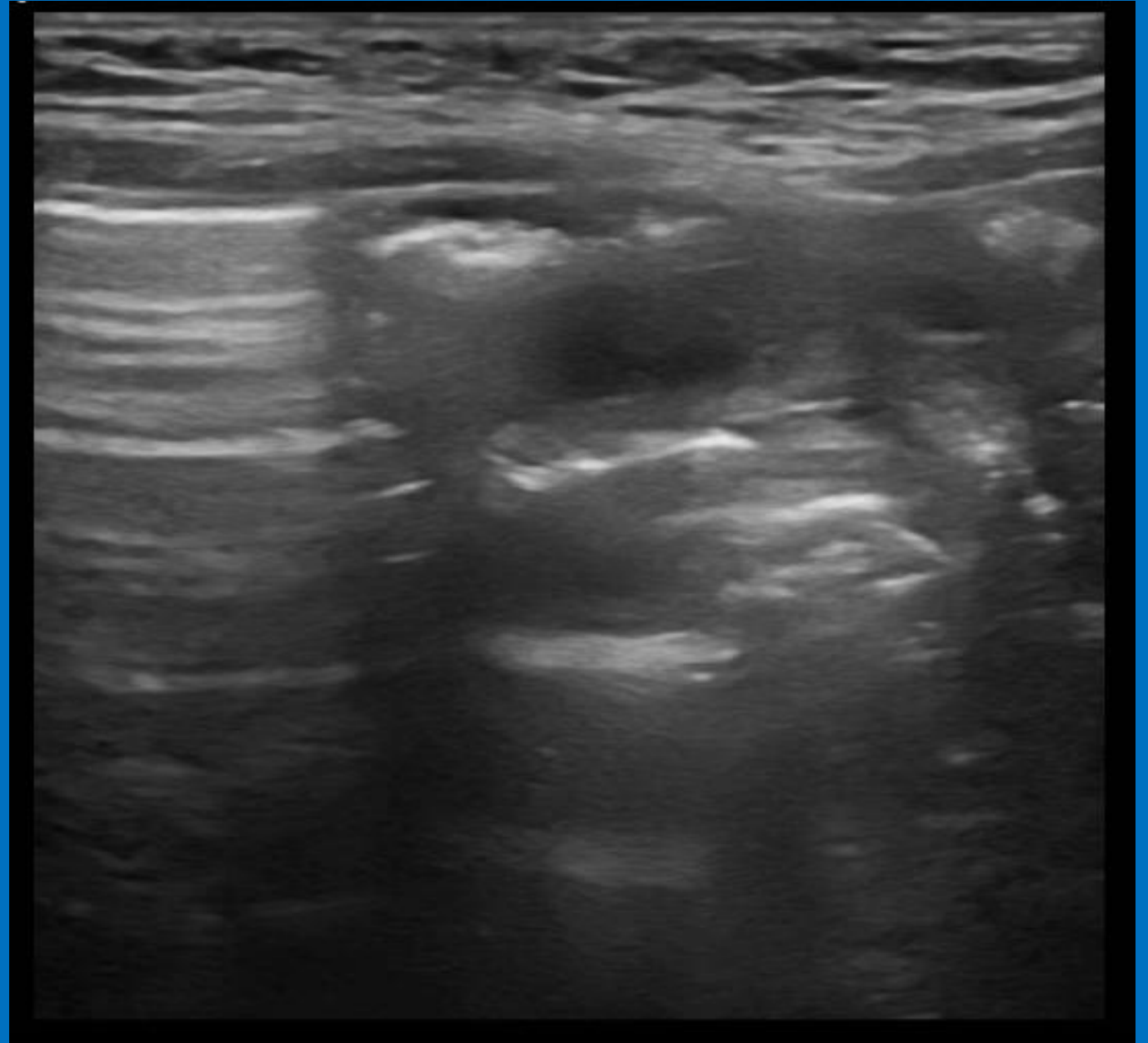
1 yr old girl, Cloaca and Mullerian duplication



1 yr old girl, Cloaca and Mullerian duplication- (Cine)



- Hydrometrocolpos with didelphic uterus and septated Vagina



- Difference in technique/transducers
- Stages of uterine development
- Presence of arterial flow within a suspected torted ovary does not exclude torsion. This can be intermittent. Always correlate clinically!
- Be methodical. Extend the scan if necessary
- Patience is key (full bladder too)

Thank you for listening!

- Contact us on:

- Gorseley.Leung@gosh.nhs.uk

- Stacey.Thomas@gosh.nhs.uk

