



SONOGRAPHY OF THE GRAVID CERVIX: IMAGE GALLERY



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This image gallery is supplementary to the evidence based clinical guideline for sonographers: *Ultrasound assessment of the gravid cervix to assess for risk of preterm birth*. It is designed to aid sonographers in capturing and interpreting sonographic images and making measurements from those images when assessing the gravid cervix.

Transvaginal (TVS) images

Image 1: Schematic representation of cervical length measurement of gravid cervix (adapted from Ultrasound evaluation of the gravid cervix. Obgyn Key; Available from: <https://obgynkey.com/ultrasound-evaluation-of-the-gravid-cervix/>)

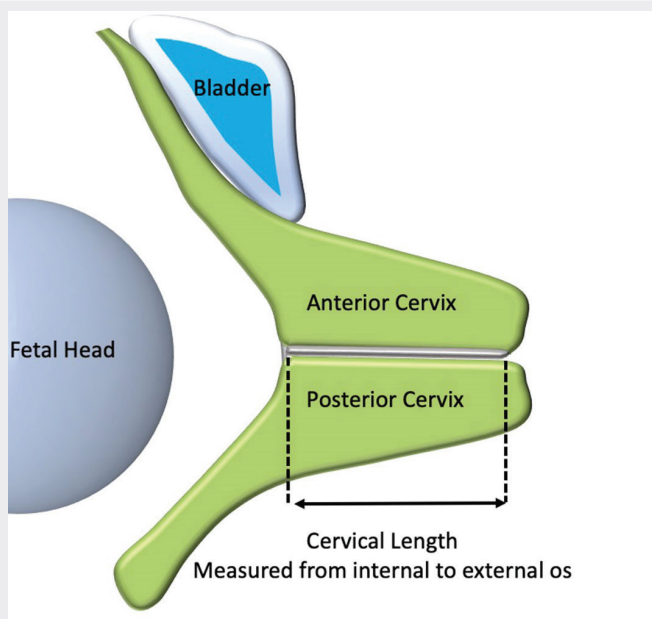


Image 2: Schematic of cervical length measurement of gravid cervix with cerclage (adapted from Ultrasound evaluation of the gravid cervix. Obgyn Key; Available from: <https://obgynkey.com/ultrasound-evaluation-of-the-gravid-cervix/>)

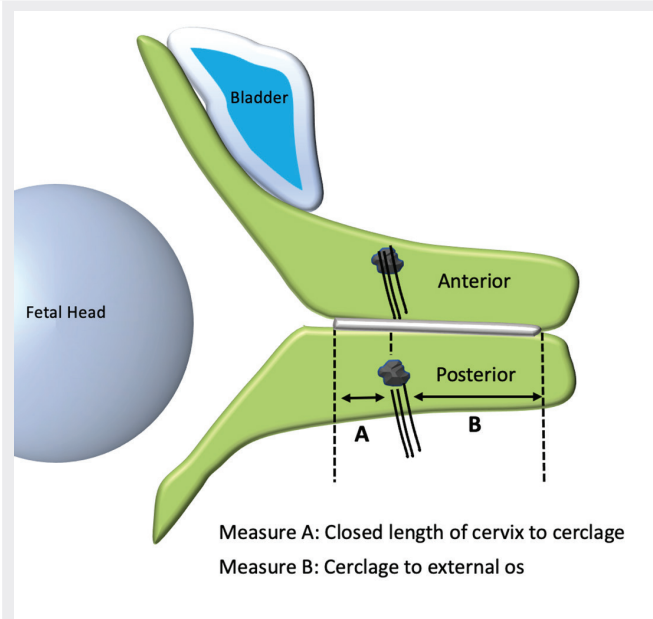


Image 3: Key anatomy of normal cervix.

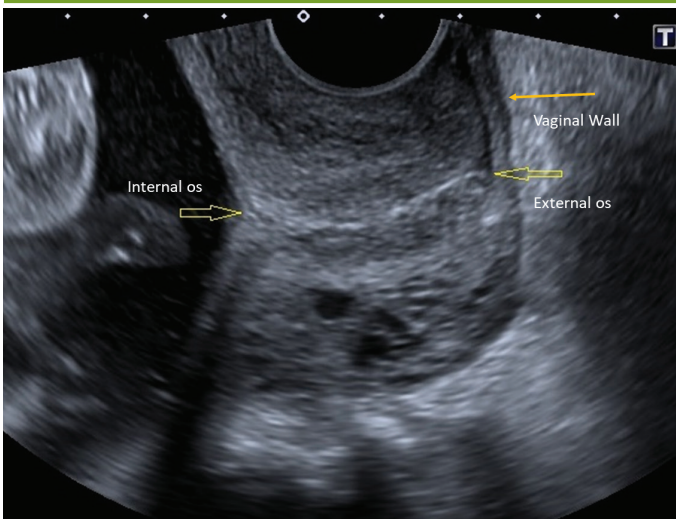
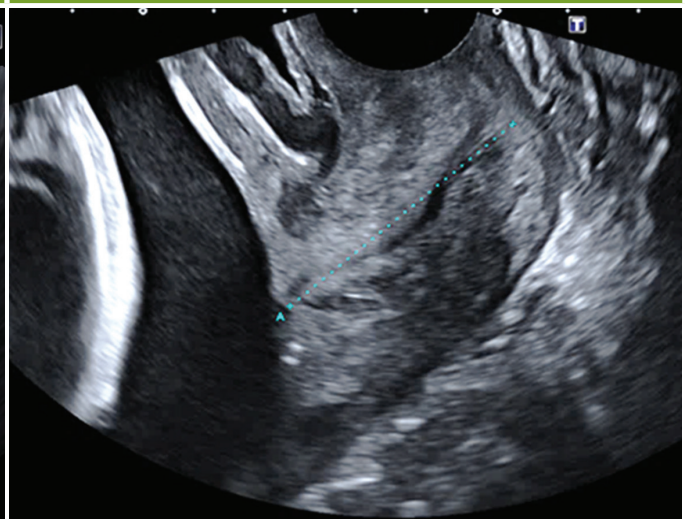


Image 4: Cervix of normal length (with measurement).



Transvaginal (TVS) images

Image 5: Image of short cervix (with measurement, demonstrating amniotic sludge on the posterior wall of the opened cervix).

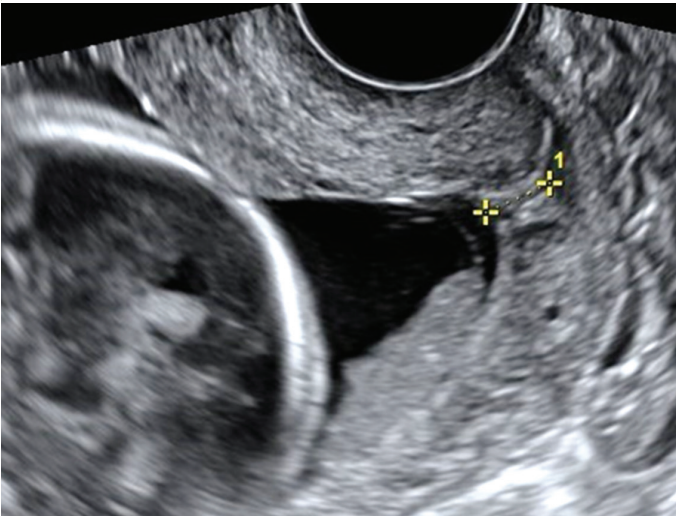


Image 6: Image of short cervix (with measurement).

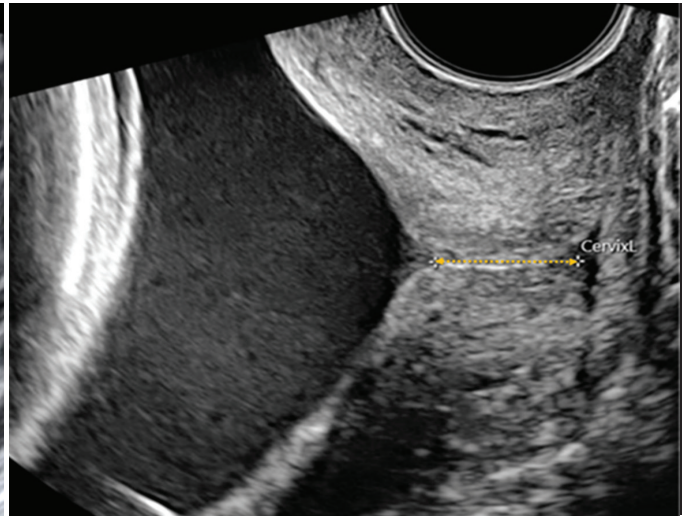


Image 7: Image of short cervix (with measurement and demonstrating Y shaped funnelling).



Image 8: Image of short cervix (with measurement and demonstrating U-shaped funnelling).

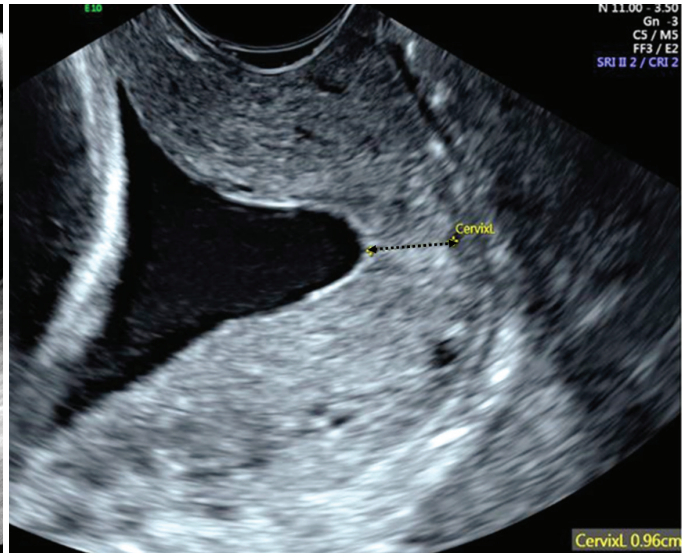


Image 9: Image of short cervix (demonstrating U-shaped funnelling)

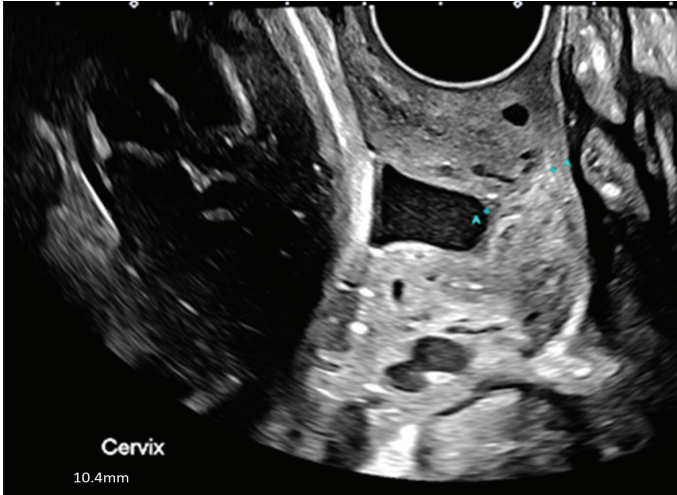


Image 10: Example of dilated cervix with funnelling (u-shaped, with sludge and no measurable cervix).

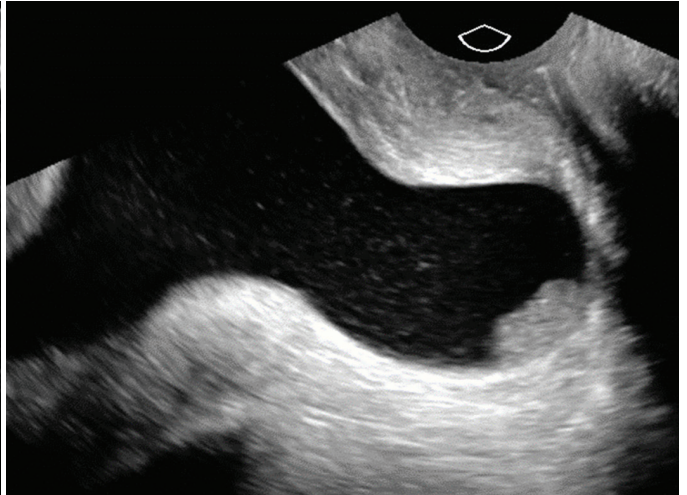


Image 11: Example of funnelling (v-shaped).



Image 12: Example of funnelling (v-shaped).



Image 13: Example of amnio-chorionic separation prolapsing into the open cervical canal.

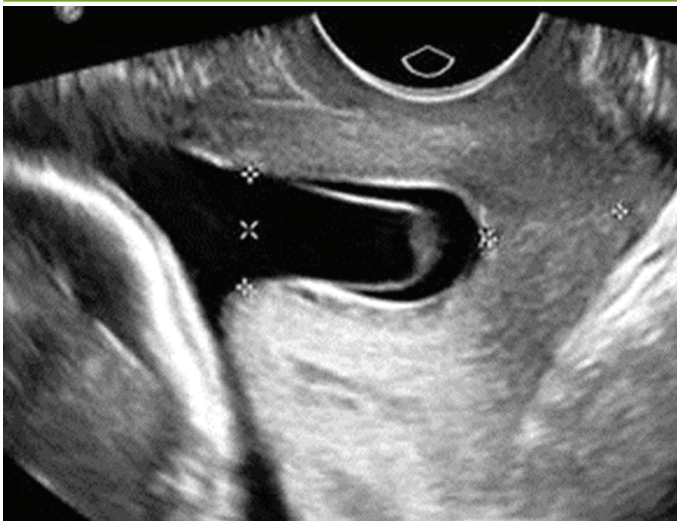


Image 14: Example of endocervical canal dilation with prolapsing membranes and no measurable cervix.

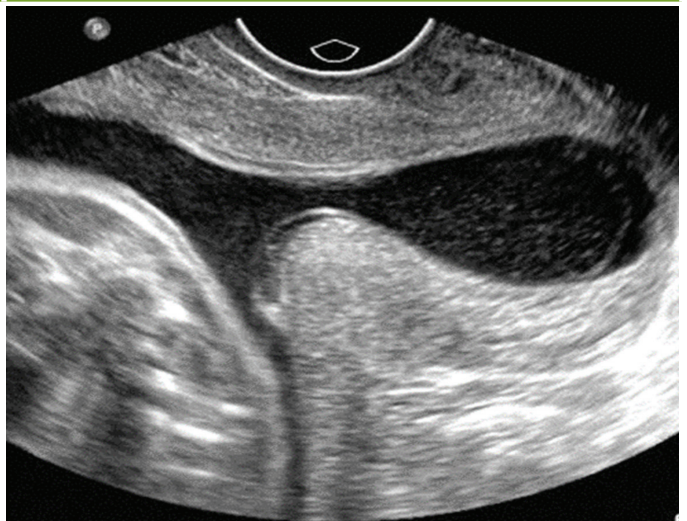


Image 15: Short cervix and membranes bridging the funnelling part of the cervix.

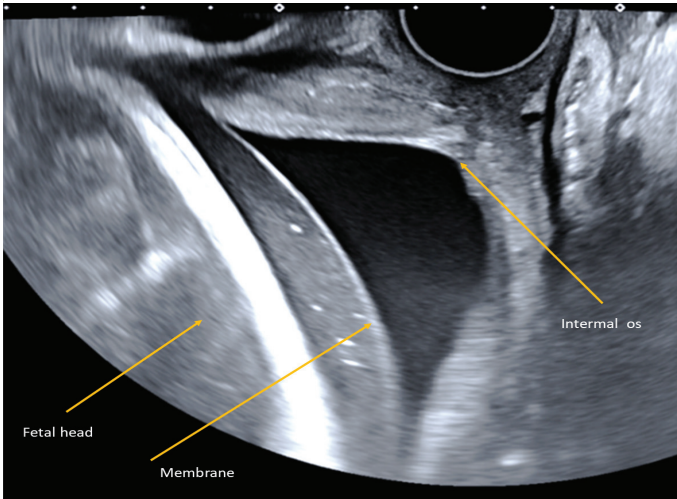


Image 16: Long closed cervix and placenta praevia.

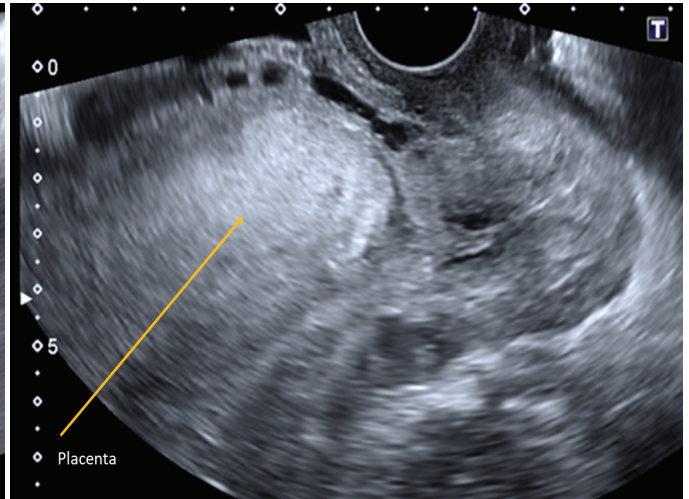


Image 17: Examples of lower uterine contractions.

Note: to confirm a uterine wall contraction it should be visualised over time to see it change.

Image 17a:

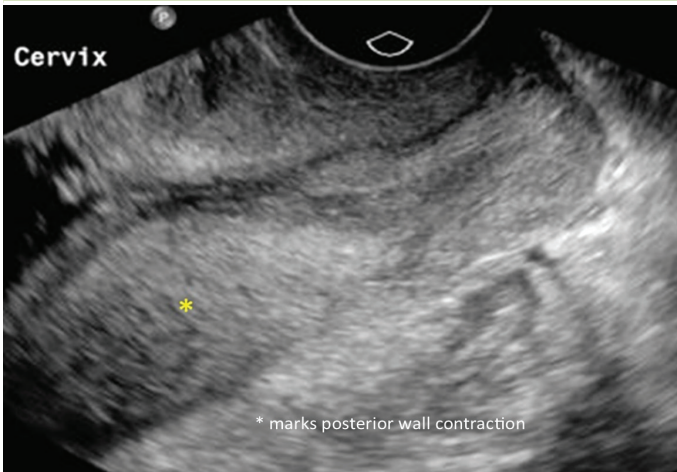


Image 17b:



Image 18: Comparison images. Left: elongation of the cervical length by too much transducer pressure compressing the anterior portion of the cervix. Right: Correct transducer pressure, the anterior and posterior portions of the cervix being similar widths.

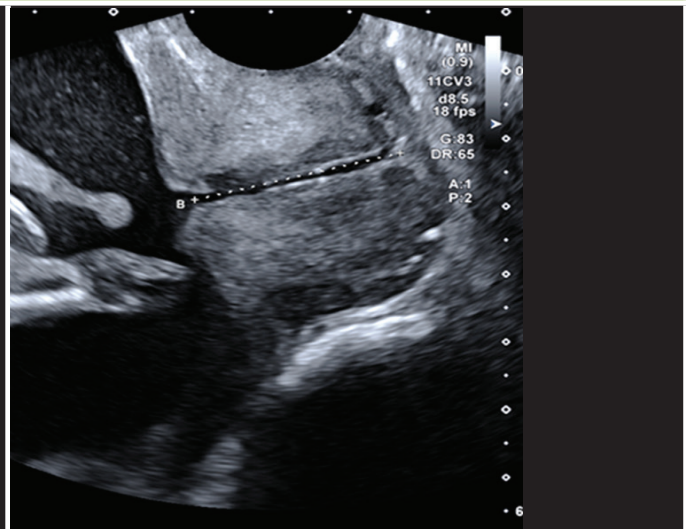
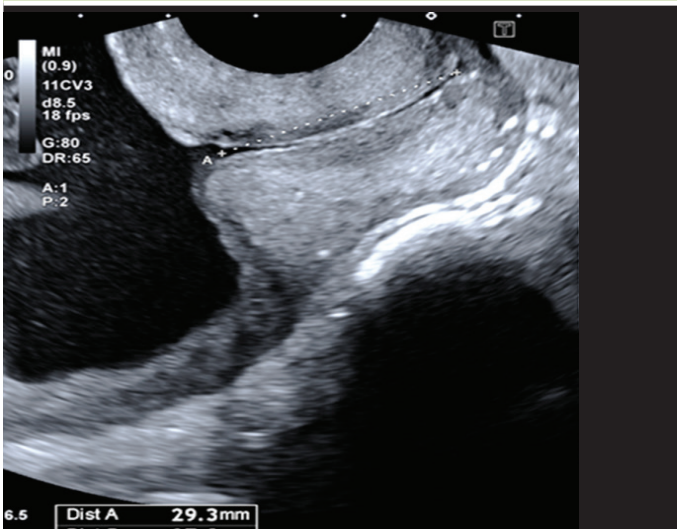


Image 19a: Examples of cerclage in-situ.

Image 19a:

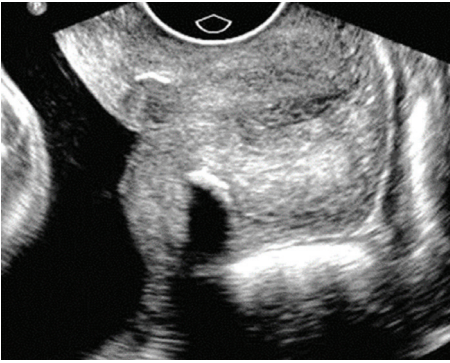


Image 19b:

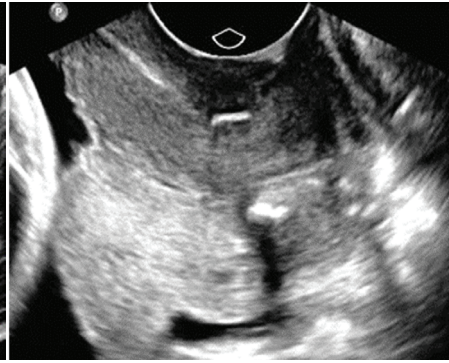


Image 19c:

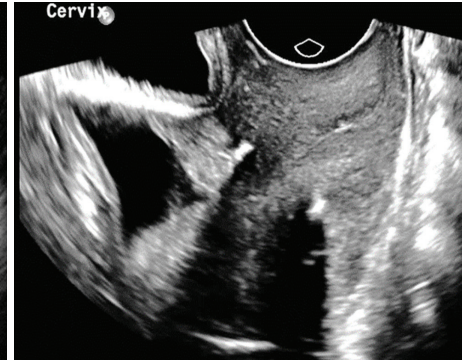


Image 20: Variations of normal cervix

Image 20a: Mucous plug.

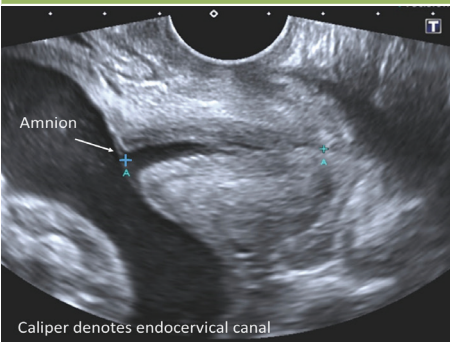


Image 20b: Cervix with hypoechoic glandular tissue



Image 20c: Cervix with hypoechoic glandular tissue.

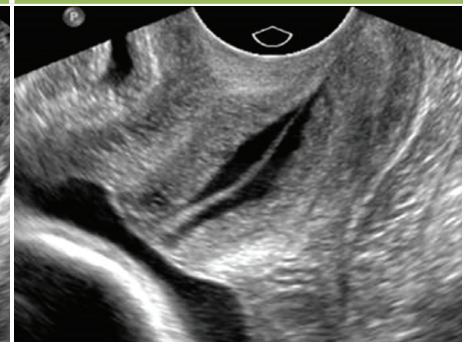


Image 21: Dynamic cervix visualised over 3-5 minutes.

Image 21a: Long, closed cervix.

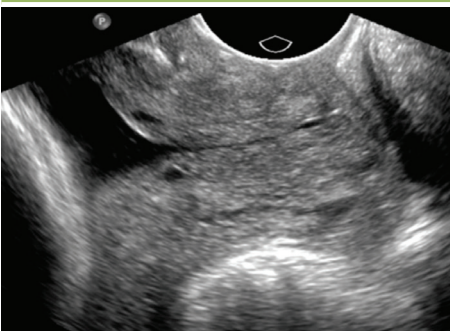


Image 21b: Funnelling and slight opening of internal os.



Image 21c: Open cervix, no closed measurable length.



Image 22: Polyp within cervix.

Image 22a: Longitudinal image of cervix, arrows denote polyp

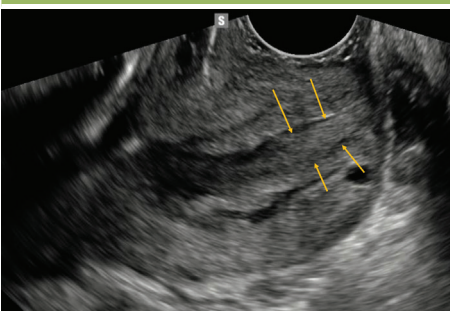


Image 22b: Longitudinal image of cervix, colour Doppler in polyp.

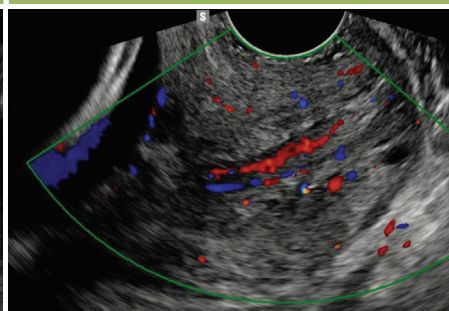


Image 22c: Transverse image of cervix demonstrating polyp.

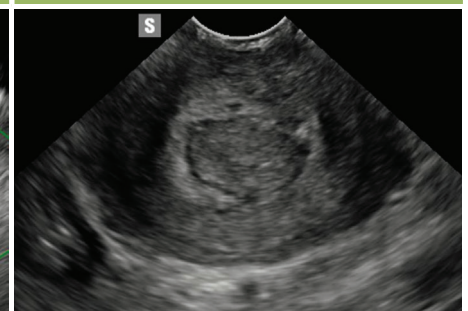


Image 23: Long closed cervix with Nabothian cysts.

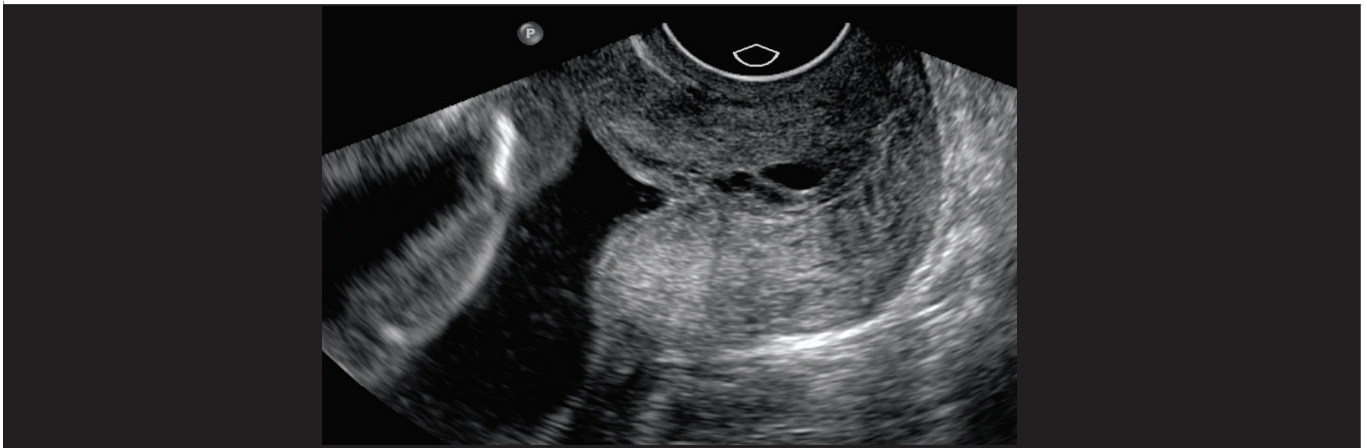


Image 24: TVS examples of undeveloped/immature lower uterine segment in early pregnancy with cervix orientated parallel to vagina. Transabdominal (TAS) images are provided for comparison.

Image 24a: TVS

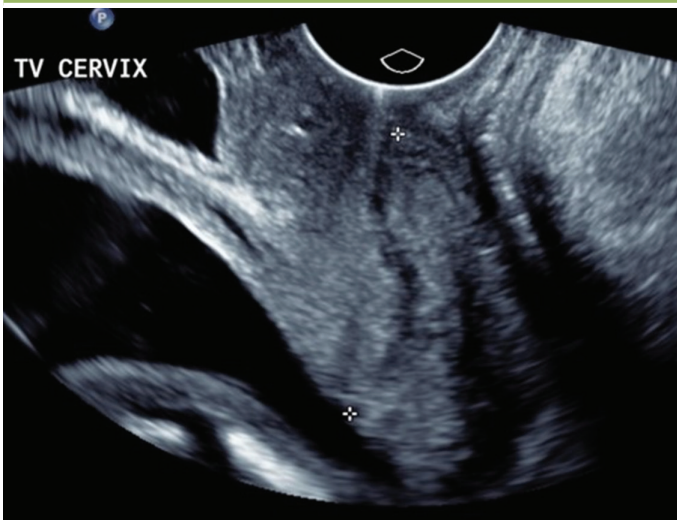


Image 24b: TVS



Image 24c: TAS



Image 24d: TAS



Transabdominal (TAS) images

Image 25: Acceptable TAS image of cervix.
(Cervical length=54mm).

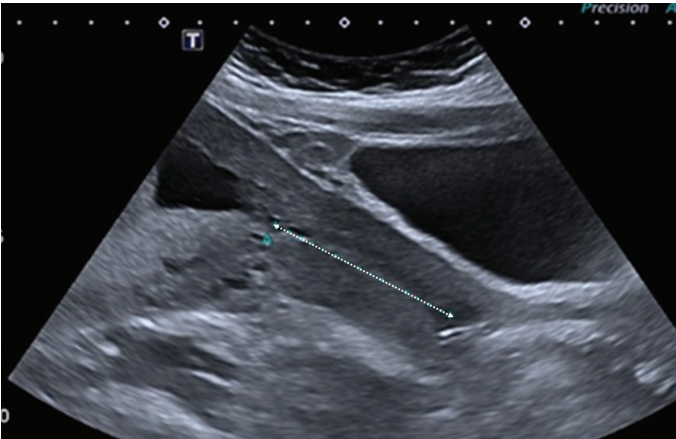


Image 26: Slight overfilling of bladder.
Note: anterior wall of cervix thinner than posterior wall due to bladder filling.



Image 27: Un-acceptable image of cervix.
TVS is recommended.



Image 29: Cervix with lower uterine contraction (*)
resulting in inadequate visualisation. Sonographer should
either wait until contraction has subsided or perform TVS
(subject to local protocols and referrer preferences).

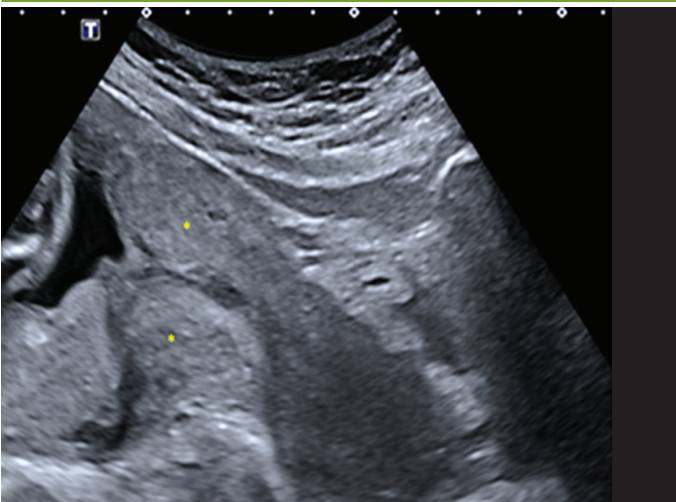


Image 28: TAS image demonstrating open cervix
marked by line. There is funnelling which extends the
length of the cervix. There is no segment of closed
cervix which can be measured. TVS is recommended.



Image 30: TAS open cervix. TVS is recommended
(subject to local protocols and referrer preferences).

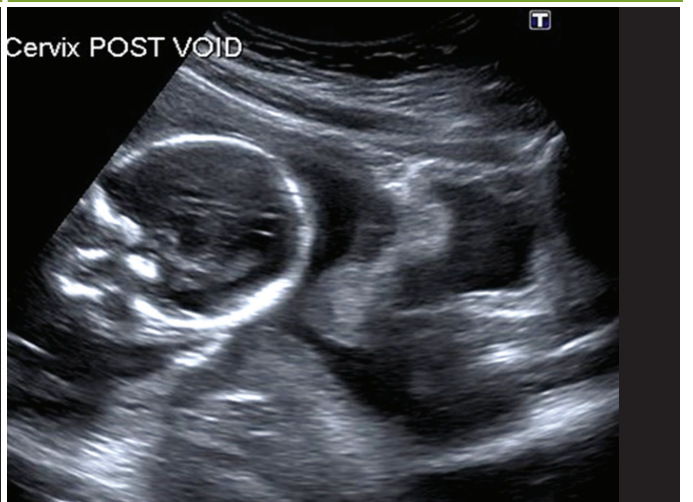


Image 31: Excessive bladder filling, falsely elongating cervix (52 mm).

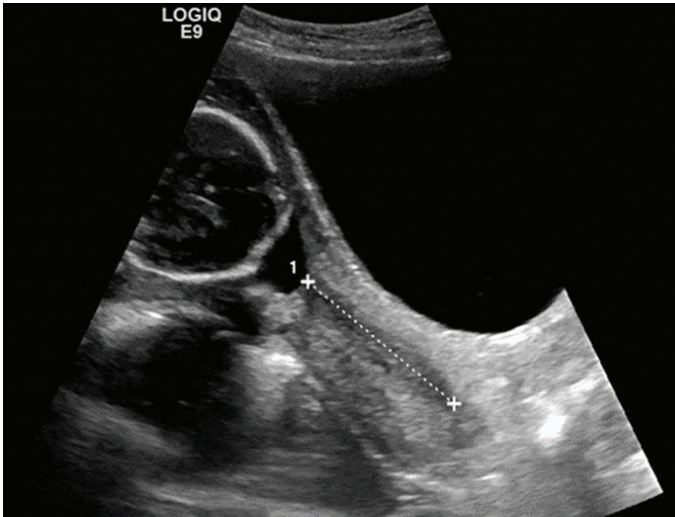


Image 32: Excessive bladder filling resulting in suboptimal image (landmarks not identifiable).

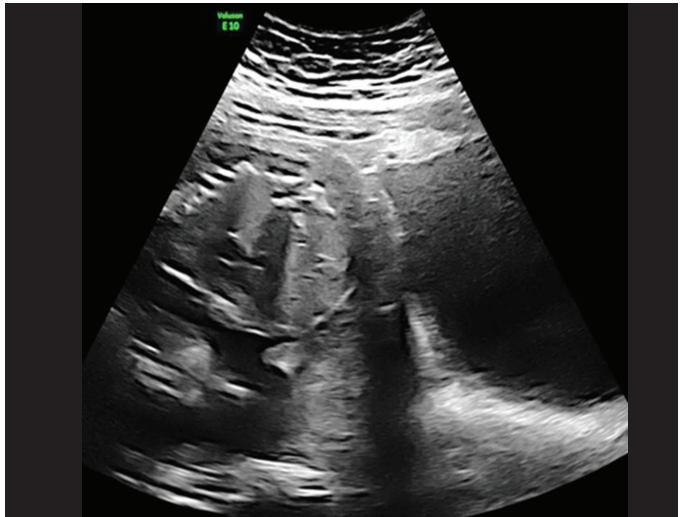


Image 33: Post-void bladder facilitating visualisation of cervix.

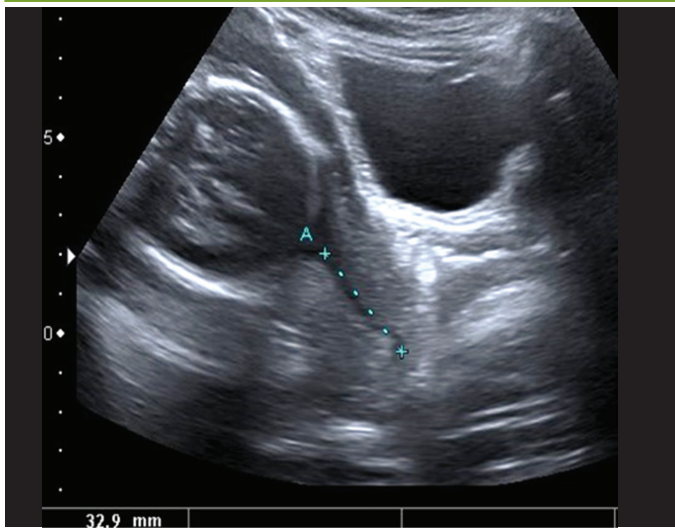


Image 34: Post-void bladder, facilitating visualisation of cervix and resulting in vertical orientation of cervix.

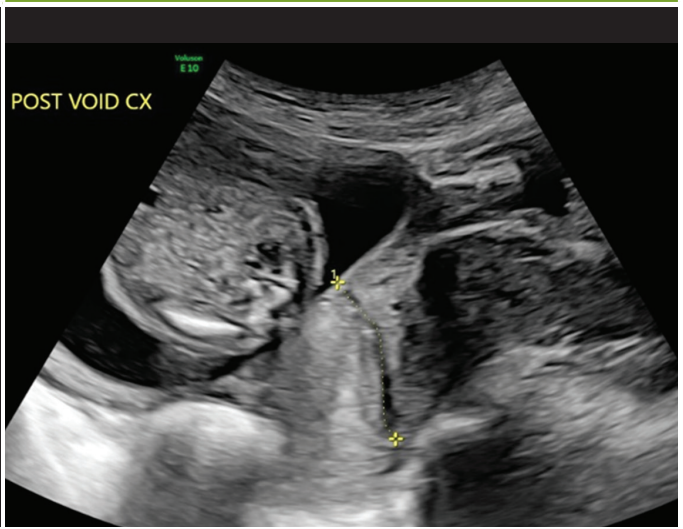


Image 35: Post-void bladder resulting in inadequate imaging. Cervix appears open (i.e., no closed measurable cervix) and TVS is recommended.

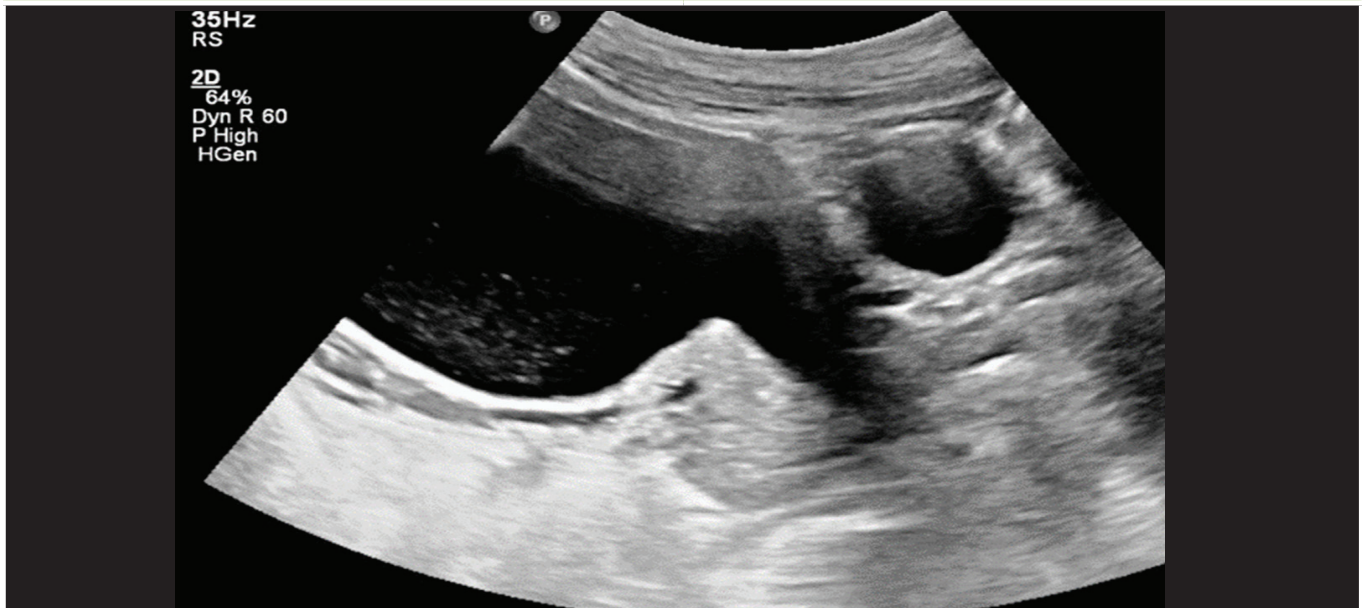


Image 36: Same patient: comparison of full and empty bladder TAS images and TVS image.

Image 36a: Unacceptable TAS image. Cervical length measurement is falsely long (58 mm) as it includes the lower uterine segment due to excessive bladder filling.

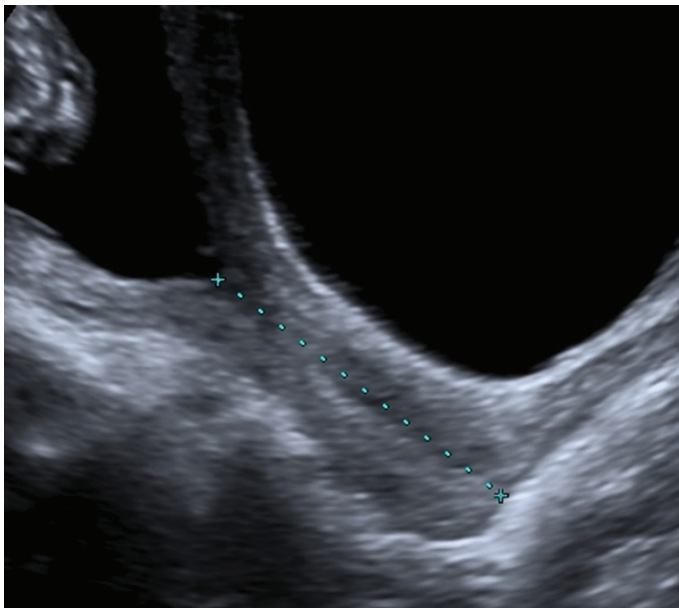
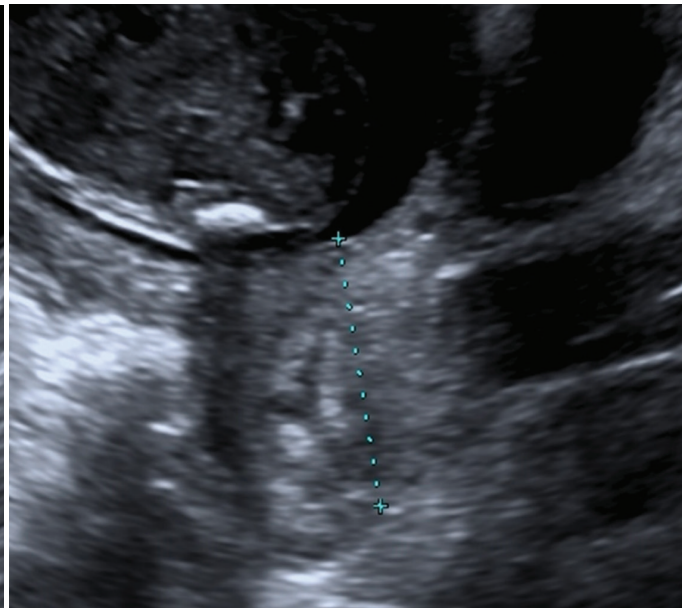


Image 36b: TAS image with empty bladder. Cervical length measurement (34 mm) is slightly overestimated as vaginal wall is included. TVS is recommended.



Transperineal (TPS) images

Image 37: Correctly measured cervical canal on TPS image.

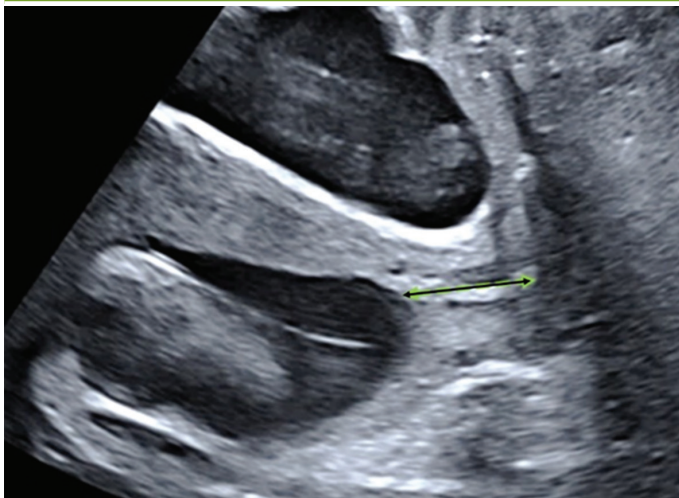


Image 38: Cervical canal, suboptimal image due to rectal shadowing.

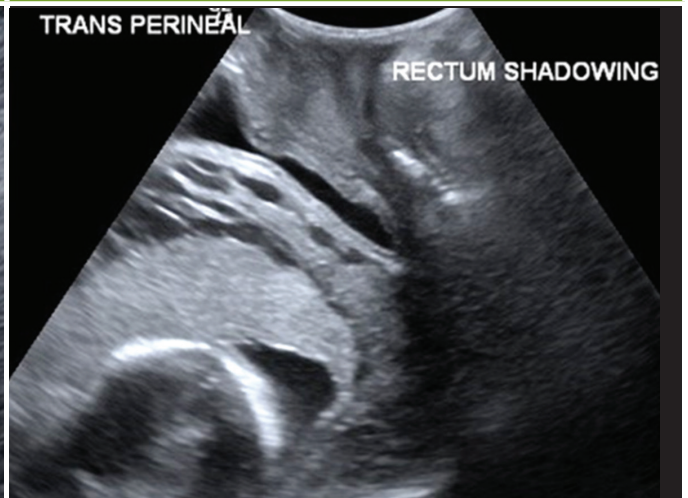
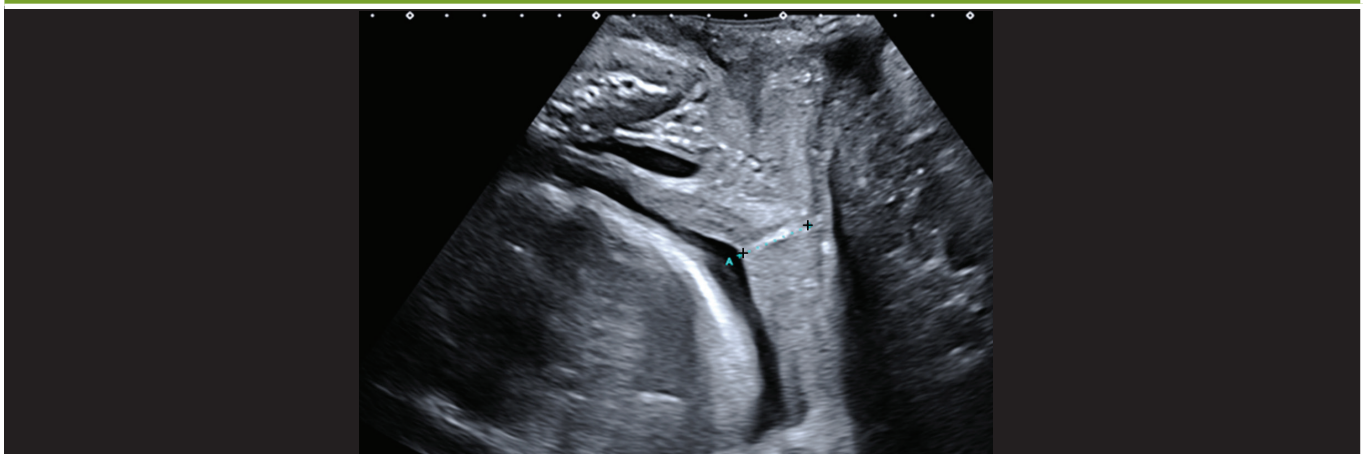


Image 39: Example of a short cervix on TPS image (20.4mm).



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