**Appendix S2**Summary of 18 ultrasound signs for detection of fetal lower urinary tract obstruction (LUTO) suggested in literature and number of studies they are reported in

|  |  |
| --- | --- |
| **Ultrasound Finding** | **Number of Studies Reporting Ultrasound Finding** |
| Bilateral agenesis | 1 |
| Bilateral dysplasia | 9 |
| Bilateral hydronephrosis | 19 |
| Bilateral hydroureteronephrosis | 17 |
| Bladder thickening | 11 |
| Echogenicity | 5 |
| Keyhole sign | 10 |
| Megacystis\* | 20 |
| Male sex | 14 |
| Oligo- or anhydramnios | 26 |
| Obstructive ureterocele | 2 |
| Unilateral agenesis | 3 |
| Unilateral dysplasia | 7 |
| Unilateral hydronephrosis | 14 |
| Unilateral hydroureteronephrosis | 11 |
| Urinoma or Ascites | 8 |
| Cortical cysts | 7 |
| Cortico-medullary differentiation | 7 |

**\*Proposed megacystis definition in the literature:**

First trimester (up to 13 weeks): longitudinal bladder diameter (LBD) >/= 7 mm

* Sebire *et al.* 1996: suggested spontaneous resolution if LBD<15 mm

Early pregnancy (10-17 weeks)

* Fontanella *et al.* 2018: suggested spontaneous resolution if LBD<12 mm

2nd trimester (beyond 14 weeks):

* Maizels *et al.* 2004: predicted LBD: GA (weeks)-5. PUV LBD was between GA+2 and GA+12, while beyond that suggested complex megacystis.
* Fontanella *et al.* 2018: enlarged bladder that fails to void over a period of 40 min during ultrasonographic examination, but no standardized measurement cut-offs
* Fontanella *et al.* 2021: predicted LBD = 1.48 × GA − 17.15. PUV LBD z score was <5.2, while beyond that suggested complex megacystis.