

The Perinatal Institute has been receiving enquiries about new growth charts for twins, commissioned and promoted by TAMBA. The charts are based on a Southwest Thames study [1] and provide reference values for fetal head, abdomen and femur length measurements.

**We cannot recommend these charts because of the following concerns:**

1. New charts should undergo rigorous evaluation against outcome to assess safety and benefit. We are not aware that any prospective or retrospective population based validation has taken place. The need for caution before introducing new growth charts into clinical practice has been highlighted in a recent editorial [2].
2. The charts show growth curves that are significantly lower than those for singletons. They are based on reference values derived from the whole population, not only from uncomplicated pregnancies. Therefore, they do not represent a normal growth standard but one that may have been affected by an unspecified number of pathological factors. This concept is particularly important in twin pregnancies as they have a substantially increased number of complications.
3. The pattern of slowed growth from 30-32 weeks in many (but not all) twin pregnancies may be pathological due to late onset fetal growth restriction associated with placental insufficiency, which usually also becomes manifest from around 32 weeks. Adjusting the curves downwards may normalise pathology, reduce recognition of pregnancies at risk, and lead to false reassurance.
4. An added consideration is that estimation of fetal weight is less accurate in twins than in singleton pregnancies – as also acknowledged by the authors of the TAMBA growth curves in a separate study [3]. This fact, together with the proposed overall lower standard for twins, could exacerbate the risk of fetuses with poor growth not being recognised.
5. The twin charts also take a one-size-fits-all approach, ignoring individual variation. There is however recent evidence for customising the growth standard also for twin pregnancies [4,5].

The main issue remains as to whether lowering the standard for twins may result in missed warning signs and reduced patient safety. Until there is evidence to the contrary, the default position should be that singleton and twin babies have the same growth potential (up to 'term' for twins = 37 weeks).

**We therefore recommend continued use GROW charts for singleton as well as twin pregnancies.**

## References

- [1] Stirrup OT, Khalil A, D'Antonio F, Thilaganathan B. on behalf of the Southwest Thames Obstetric Research Collaborative (STORK). Fetal growth reference ranges in twin pregnancy. *Ultrasound Obstet Gynecol* 2015;45:301-7. [http://refhub.elsevier.com/S0002-9378\(17\)30442-8/sref27](http://refhub.elsevier.com/S0002-9378(17)30442-8/sref27)
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- [3] Khalil, A., D'Antonio, F., Dias, T., Cooper, D., Thilaganathan, B. and on behalf of the Southwest Thames Obstetric Research Collaborative (STORK) Ultrasound estimation of birth weight in twin pregnancy: comparison of biometry algorithms in the STORK multiple pregnancy cohort. *Ultrasound Obstet Gynecol*, 44: 210–220. <http://onlinelibrary.wiley.com/doi/10.1002/uog.13253/full>
- [4] Odibo AO, Cahill AG, Goetzinger KR, Harper LM, Tuuli MG, Macones GA. Customized growth charts for twin gestations to optimize identification of small-for-gestational age fetuses at risk of intrauterine fetal death *Ultrasound Obstet Gynecol* 2013;41:637-42. <http://onlinelibrary.wiley.com/doi/10.1002/uog.12404/abstract>
- [5] Ghi T, Prefumo F, Fichera A, et al. Development of customized fetal growth charts in twins. *Am J Obstet Gynecol* 2017;216:514.e1-17. [http://refhub.elsevier.com/S0002-9378\(17\)30442-8/sref1](http://refhub.elsevier.com/S0002-9378(17)30442-8/sref1)