

Reduction of stillbirths with digital support for assessment of fetal growth velocity

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Objective

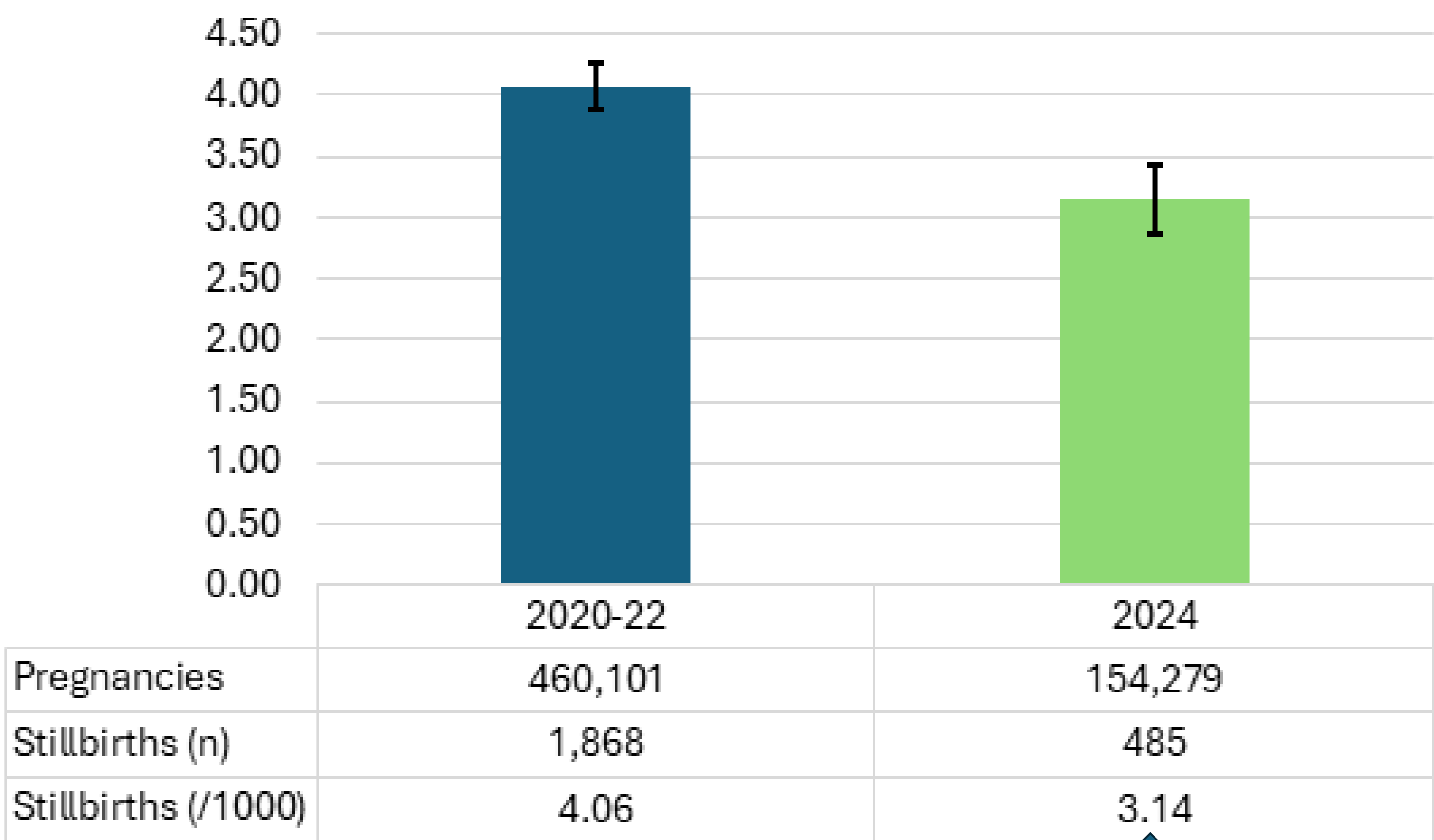
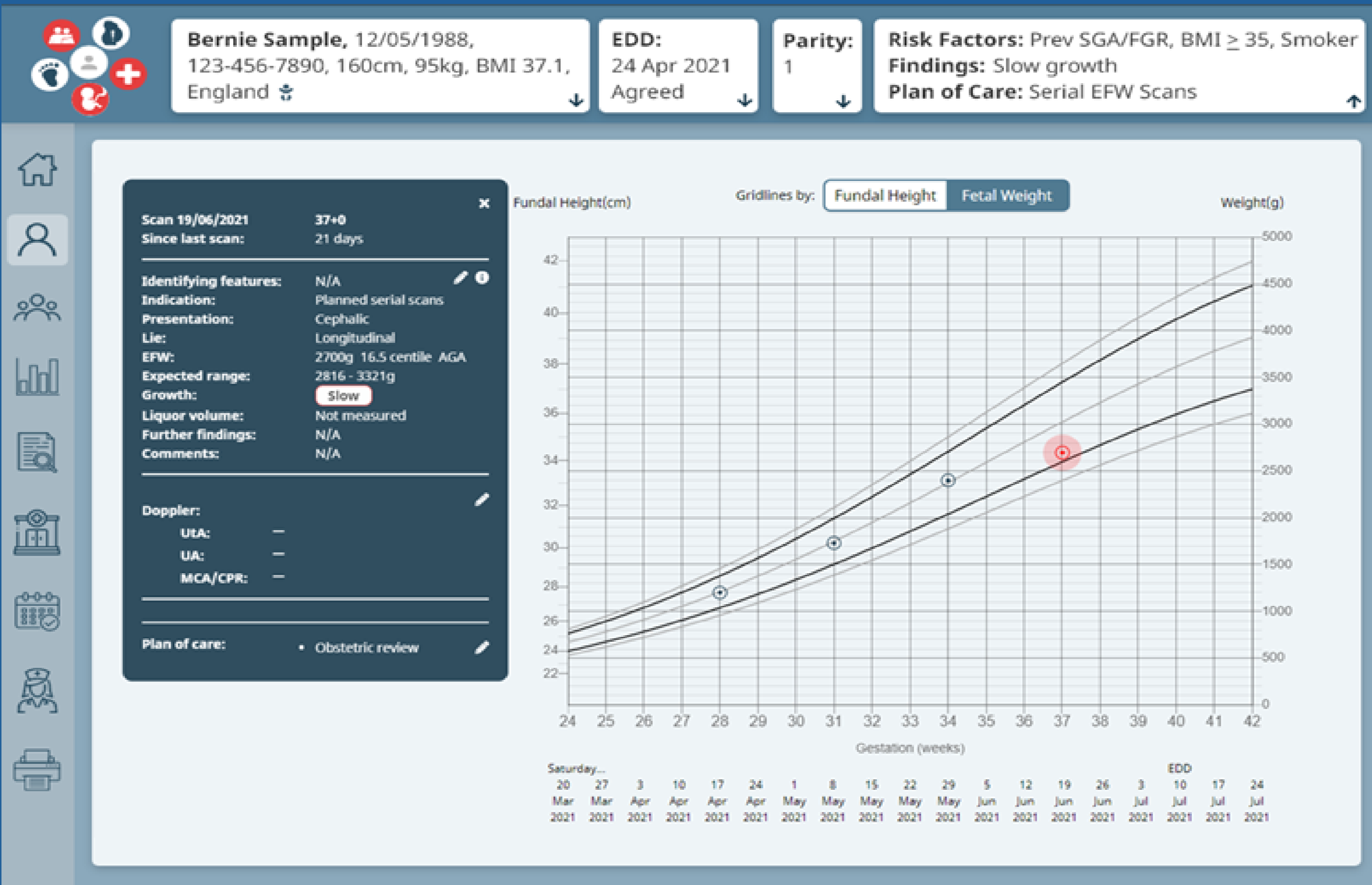
- The new electronic customised growth charts (GROW 2.0) includes auto-plotting, calculation of growth velocity, and prompts for clinical risk assessment and review.
- We assessed the effect of implementation on stillbirth rates.

- Measurements are auto-plotted on the electronic chart



Methods

- Growth velocity assessment is by the projected optimal weight range (POWR) method¹ and prompts clinical review if slow growth is detected.
- Previously, growth velocity based on serial ultrasound estimated fetal weight (EFW) was assessed only visually
- We analysed routinely recorded 2024 data from the first 44 NHS Trusts that had implemented GROW 2.0
- We compared it with data from the same 44 units between 2020-2022, when only printed charts were in use.



Stillbirth rates

Pre

and

Post

GROW 2.0 implementation in 44 NHS Trusts

Results

- In 2020-22 (baseline), there were 460,101 births incl. 1,868 stillbirths (**4.06** / 1000)
- In 2024, with GROW 2.0, there were 154,279 births incl. 485 stillbirths (**3.14** /1000)
- This represented a reduction of stillbirths by **23%** (RR: 0.77, CI 0.70 – 0.86)
- GROW 2.0 identified 17.0% of pregnancies with slow growth, most of which (71%) were not SGA, were delivered about a week earlier, and had a stillbirth rate of **1.61** - half the rate in the overall GROW 2.0 cohort.
- The greatest effect was **at term**, where stillbirth rates reduced from **1.86 to 1.04** (RR 0.56, CI 0.47-0.66).

Conclusion

- Electronic growth chart with auto-plotting, assessment of growth velocity and prompts for review support clinical awareness and decision making
- Recognition of slow growth is important for stillbirth prevention.

References

- GROW 2.0 Electronic fetal growth chart. Perinatal Institute 2023 <https://www.perinatal.org.uk/GROW2.0/>
- Hugh O, Gardosi J. Fetal weight projection model to define growth velocity and validation against pregnancy outcome in a cohort of serially scanned pregnancies. Ultrasound Obstet Gynecol 2022;60(1):86–95. <https://doi.org/10.1002/uog.24860>