

Detecting slow growth according to serial fundal height measurement reduces stillbirth risk

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Objective

- Standardised measurement of fundal height is important for fetal growth surveillance in low-risk pregnancies and has been shown to improve the identification of SGA fetuses ^{1,2}.
- When performed serially during the third trimester, they also allow assessment of growth velocity. →
- We investigated the association of stillbirth risk with slow growth determined by digital assessment of serial fundal height.

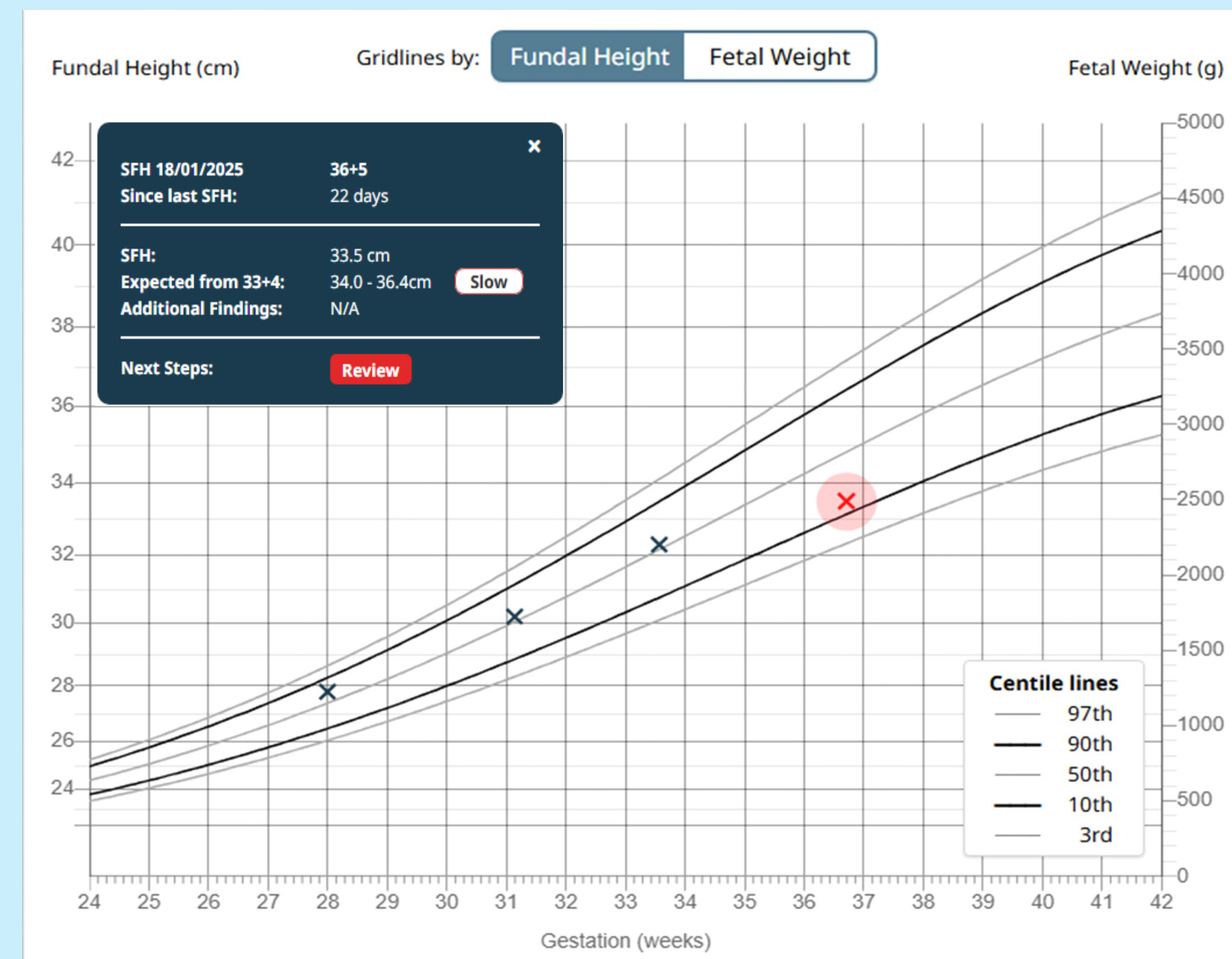


Figure 1 – GROW 2.0 chart with fundal height measurements, highlighting slow growth

Results

- This low risk cohort consisted of 222,335 deliveries including 267 stillbirths (1.67).
- The average gestational age of the last 2 SFH measurements was 34+2 and 37+5 weeks.
- The last fundal height measurement was SGA in 6.0% of cases
- The last two SFHs indicated slow growth in 16.8% of pregnancies, with 77.1% of those not being SGA according to last SFH.
- Fetuses with slow SFH growth but no ultrasound scan had a significantly increased stillbirth risk: RR 4.27, CI 2.70-6.76.
- The risk was less severe when slow growth according to SFH measurements was followed by ultrasound scan: RR 1.67, CI 1.19-2.36.
- These fetuses were delivered on average at 39+3 weeks, 5 days earlier than fetuses with slow growth that did not have a scan following the SFH measurements (40+1 weeks).

Methods

- The cohort consisted of singleton pregnancies with 2 or more third trimester standardised fundal height (SFH) measurements in UK hospitals, 2018 - 2024.
- Outcome data included stillbirth, defined as a fetus with no signs of life from 24+0 weeks gestation.
- From the last two serial SFH measurements, we calculated the projected optimal weight range (POWR) ³ to determine whether the fetus had slow growth.
- Small for gestational age (SGA) was defined as less than the tenth centile, customised for maternal height, weight, parity and ethnic origin.
- Stillbirth rates are presented per thousand, and stillbirth risk by relative risk (RR) and 95% confidence interval (CI).

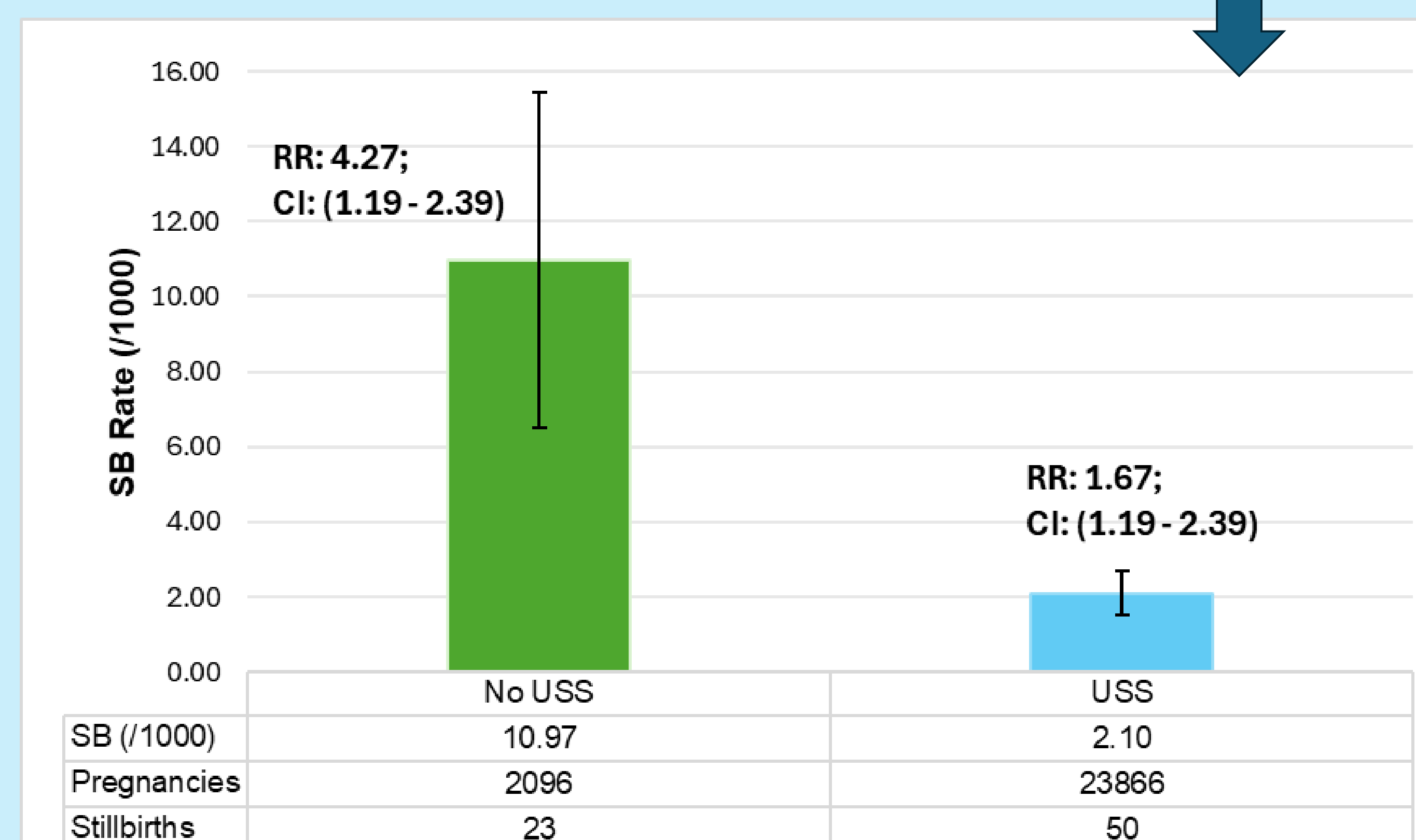


Figure 2 – Stillbirth rate (per 1000) when slow growth according to SFH measurements was followed by scan

Conclusions

- Digital assessment of serial SFH provides an important additional parameter for fetal growth surveillance and can reduce stillbirth risk.
- Pregnancies with slow fundal height growth regardless of fetal size are at increased risk and require urgent referral for further investigation.

References

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