Reviewer's report

Title: Comparing the growth of preterm infants through the gestational period of 37 to 50 weeks with the reference fetus

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Reviewer: Pieter Sauer

Reviewer's report:

In this paper the authors present data on weight gain of infants cared for in Calgary, Regina and San Diego. They compare their data with growth curves developed by the first author, but not yet published. The authors conclude that the infants do not follow the dip in growth that is found in the present growth curves and secondly that these infants show a better weight gain compared to cohorts a decade ago. Although this topic is interesting, I have a number of concerns.

1. It is unclear to me what is the hypothesis or question raised in this paper, what do the authors want to answer?
2. In this paper weight gain is considered equal to growth, while real growth is gain in length and head circumference, but those data are not provided.
3. Weight gain is compared with curves constructed by the first author but not yet published, so not to evaluate.
4. The authors seem to neglect that present I.U. and E.U. curves are based on cross-sectional data, these apply not to longitudinal growth data. It is known for a long time that the "dip" found around 37-40 weeks in curves is artificial, due to the cross-sectional data.
5. In the title the reference fetus is mentioned, but there is no comparison with the reference fetus.
6. The authors do not provide data to show that weight gain in their cohort is better compared to cohorts a decade ago, so no conclusion in this direction can be made.
7. The weight z-score of the infants at 37, 40 and 50 weeks show that 35-65% of the infants have a weight < 10 perc, compared to 11% at birth, indicating a rather poor weight gain.

Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare I have no competing interests