Reviewer's report:

The authors describe a randomized controlled trial that compared the effect of an energy- and nutrient-enriched formula and a standard term formula between term age and six months corrected age on neurodevelopmental outcome at 24 months corrected age, assessed by Griffiths Mental Developmental scale. A novel item in this study, was that the effect of such formulae was evaluated in AGA and SGA preterm infants separately. However, additional modifications and statistical clarifications are needed.

Major compulsory revisions

Introduction: The novelty of this study seems to be the comparison of the two treatment groups within AGA and SGA infants, since many other studies already evaluated the effect of nutrient-enrichment of formula after discharge in preterm infants, as also described in the discussion. I would suggest that the author would emphasize this novel idea and also provide a hypothesis regarding the primary as well as the secondary outcome of the trial.

Patients and Methods- Study design, first paragraph: What does the clinical practice on weaning implicate? Was this according to ESPGHAN and/or WHO recommendations?

Patients and Methods-Study design, second paragraph: The average daily intake of energy and protein was calculated between term age and six months corrected age. Was this calculated in kcal/d and g/d or per kg per day? It would help the reader to show these intake in the results section or one of the tables (e.g. Table 1).

Patients and Methods-Subjects, second paragraph: The paper would benefit flow chart of subject recruitment including the feeding groups and the reasons of exclusion and loss to follow-up. In addition, how many infants were eligible to participate at birth?

Patients and Methods-Subjects, third paragraph: Only the definition of minor brain lesions is described, please emphasize that this was because infants with severe brain lesions were excluded (as described early as an exclusion criterium).

Patients and Methods-Measurements, first paragraph: Are the mean GQ and subscale GQ described means of the total cohort or population means? Are
reference values available/what is normal? Which values indicate an impairment?

Patients and Methods-Statistics: Were the parameters normally distributed? The use of the Mann-Whitney U test implies that some parameters were not normally distributed? Why are these parameters not described as median with interquartile range?

Patients and Methods-Statistics: Were analyses adjusted for gender, gestational age, abnormal MRI, maternal educational level etc.?

Patients and Methods-Statistics: Please provide the power analysis of this secondary outcome of the randomized controlled trial. Were sufficient infants included in the study groups?

Results, first paragraph and Tables 1-3: Please provide the statistics used in a footnote en describe that no differences were found between groups (and specify between which groups). Were treatment A and treatment B compared within AGA and SGA groups or were AGA with treatment A also compared to SGA with treatment A, etc.?

Results and discussion, second paragraph: what are normal GQ and subscale scores?

Results and discussion: Please provide a conclusion based on the results of this study, before the statement that further studies are needed.

Minor essential revisions
Introduction, end of first paragraph: “intakes with the” should be “intakes and the”.

Introduction, end of first paragraph: Is assume that the authors refer to the “Mental Developmental Index scores” of the BSITD?

Introduction, second paragraph, second line: please rephrase “could determine” as “leads to”.

Introduction, second paragraph, last sentence: please clarify the intervention period, for example “between term age and six months corrected age” and define that is were also “preterm” infants that were fed standard term formula.

Patients and Methods-Study design, second paragraph: Please add “–” to “protein-to-energy ratio”.

Patients and Methods-Study design, second paragraph: Was the vitamin D content of the formulae in milligram or microgram? In mg it seems quite high.

Patients and Methods-Subjects, first paragraph: Please rephrase “informed written consent” to “written informed consent”.

Patients and Methods-Subjects, second paragraph: “the same institution”: please name the institution.

Patients and Methods-Subjects, second paragraph: The paper would benefit flow chart of subject recruitment including the feeding groups and the reasons of
exclusion and loss to follow-up. In addition, how many infants were eligible to participate at birth?

Patients and Methods-Subjects, third paragraph: “gestational age (AGA or SGA)”: being AGA or SGA does not only reflect gestational age but also birth weight. It would be better to describe this as a separate neonatal characteristic.

Patients and Methods-Subjects, third paragraph: Please add “brain” to “an abnormal MRI”.

Patients and Methods-Subjects, third paragraph: What is meant by “VD”? Please define this abbreviation.

Patients and Methods-Measurements, first paragraph: What do standard procedures mean? Or were these described previously, if so please provide a reference?

Patients and Methods-Measurements, first paragraph: Please rephrase “the same skilled examiner” as “one single skilled examiner”.

Results and Discussion, third paragraph: Please specify that the PDI was part of the BSITD.

Results and Discussion: Was the nutritional intake of studies mentioned in the discussion similar to the study described in the paper?

Results and Discussion: Are there any studies that specifically compared AGA and SGA infants and their developmental outcome? If not, I would emphasize this novelty in the discussion.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Needs some language corrections before being published

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

**Declaration of competing interests:**

I declare that I have no competing interests