Reviewer's report

Title: Final height and body mass index in adult survivors of childhood acute lymphoblastic leukemia treated without cranial radiotherapy: a retrospective longitudinal multicenter Italian study.

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Reviewer: Wassim Chemaitilly

Reviewer's report:

The manuscript by Bruzzi and colleagues reports on the impact on growth and BMI in survivors of childhood ALL treated using contemporary chemotherapy only treatment. The manuscript is generally well written and will be of wide interest given limited data on this topic.

Specific comments

A-Abstract:
1-Background, line 52. I suggest replacing "a persistent increased....final height" with "persistent weight gain and reduced final height".
2-Background, line 54. I suggest removing "analyze" and replacing with "combine".
3-Background, line 55. I suggest removing "combination" and adding "multi-agent".

B-Introduction
1-Line 94: I suggest removing "serious sequelae" and replacing with "sequelae related to this treatment modality"
2-Line 107. I suggest removing "succesfully" and replacing with "succesful".

C-Results
1-A large percentage of patients (20%) were excluded for incomplete data. This represents 1 out of 5 potential participants. The authors need to explain which type of data was missing (auxological measurements, final height etc.). They also need to prove that non participants did not significantly differ from participants in terms of demographic parameters such as age, sex, age at diagnosis, current age etc.
2-The authors detail demographic characteristics of the cohort lines 145-150. This information is better described using a dedicated table with, if possible, comparisons of these parameters between study participants and non-participants which will also address the issue detailed above.

D-Discussion
1-Line 221-222. The authors appropriately state that the lack of data on pubertal status in this population makes it difficult to further explain differences in height outcomes among genders. And yet, they then hypothesize this as probably related to differences in timing of the puberty. It is unclear, however, how this would cause more severe outcomes in females (vs. females simply achieving final height earlier). I would therefore suggest rephrasing this statement using "possibly" instead of "probably".

2-Line 226. I suggest removing "Nevertheless" from the beginning of this statement. The authors need to explain that GH deficiency in the context of exposure to chemotherapy alone is controversial and cite work that suggested it as a possibility such as:


It is also significant that the study by Vandecruys et al., cited in detail by the authors, did not find correlations between height outcomes and GH status. It will be important to discuss these elements along with the authors' opinion that a catabolic state may cause relative insensitivity to GH in this section.

Understanding the effect of chemotherapy on growth is a potential question for future research in this field and it does deserve being discussed in more detail.

3-Line 238: I suggest specifying "most worrisome and common endocrine late effects"

4-Line 247: I suggest removing "routinely"

5-Line 248: I suggest replacing "persist" with "persists"

6-Line 259: I suggest replacing "sensible" with "sensitive"

E-Conclusion

1-Line 276: I suggest inserting "in" before AIEOP

2-Line 279: I suggest replacing "endocrinologist" with "endocrinologists".
Level of interest: An article whose findings are important to those with closely related research interests

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 that I have no competing interests