Reviewer’s report

Title: Temporal changes in gut microbiota profile in children with acute lymphoblastic leukemia prior to commencement-, during-, and post-cessation of chemotherapy

Version: 0 Date: 10 Dec 2019

Reviewer: Theodoros Rampias

Reviewer's report:

In this manuscript entitled "Temporal changes in gut microbiota profile in children with acute lymphoblastic leukemia prior to commencement-, during-, and post-cessation of chemotherapy", the authors investigated the changes of gut microbiota in children with acute lymphoblastic leukemia (ALL) pre-, during- and after cessation of chemotherapy.

They observed a different bacterial composition and evidence of gut microbiota dysbiosis among the patients with ALL especially at time of diagnosis and the start of chemotherapy. The manuscript also present evidence that the microbiota composition remained distinctive among the patients with ALL compared to controls despite the completion of chemotherapy.

Although, the findings on the role of antibiotics and cancer related inflammation in alterations of gut microbiota in patients that are going to start chemotherapy are interesting, this study is based on a small patient cohort (7) and its findings on gut microbiota alterations are not novel (previous studies have identified gut microbiota alterations in ALL patients before the start of chemotherapy).

Besides the very small size of the patient cohort and the novelty issue in this study, the sequencing analysis was based on rarefraction for normalizing variation using 13,000 sequencing reads per sample that are not enough for a trusted representation of gut microbiota composition.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes
Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
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I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

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