Reviewer's report

Title: Green tea and urinary estrogens and estrogen metabolites in Japanese-American women

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Reviewer: Qi Dai

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In the manuscript, the authors examined the associations between green tea drinking and urinary excretion of estrogens and metabolites in a cross-sectional study of Japanese American women. The findings are interesting. The comments are as follow.

Major Compulsory Revisions

1) In the current study, the authors found green tea drinking was associated with reduced EM in premenopausal women and was associated with reduced urinary excretions of estrone and estradiol among postmenopausal women. If these findings are real, green tea drinking should be consistently related to a reduced risk of postmenopausal breast cancer because high estrogens concentrations are an established risk factor for postmenopausal breast cancer. However, as the authors mention, previous findings on green tea drinking and breast cancer risk are not consistent. The meta-analysis from cohort studies did not show a significant association. The authors need to directly discuss this and provide a possible interpretation.

2) The authors mentioned that in a previous clinical trial, EGCG supplementation did not significantly reduce levels of estradiol, estrone or testosterone. Based on these findings, “green tea might modify cancer risk through other pathways”. However, this interpretation is in contrast to the major finding in the current study that green tea drinking was associated with reduced levels of estrone and estradiol. Thus, there are two possibilities 1) the findings from the current study are confounded by other underlying factors, such as cruciferous vegetables intake; or 2) EGCG may not be the components of green tea affecting estrone and estradiol and, in turn, risk of breast cancer although EGCG may change LDL and glucose. The authors should provide a reasonable interpretation.

Minor Essential Revisions

1) On page 5, line 4: “The research was approved by X.” The authors need to clarify what “X” is.

Discretionary Revisions

1) Some sentences are too long and the authors need to consider dividing them into two sentences.
Quality of written English: Needs some language corrections before being published

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests:

None