Reviewer’s report

Title: Associations between ERα/β Gene Polymorphisms and Osteoporosis Susceptibility and Bone Mineral Density in Postmenopausal Women: A systematic review and meta-analysis

Version: 0 Date: 13 Oct 2017

Reviewer: Patricia Canto

Reviewer’s report:

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This meta-analysis was performed in order to detect the associations between ERα, ERβ gene polymorphisms and osteoporosis susceptibility and BMD in postmenopausal women.

This study is interesting; however, I have some comments:

Introduction section:

* Although the majority of the articles report the ERα and ERβ polymorphisms using the nomenclature according to the restriction enzymes such (PvuII and XbaI for ERα, AluI and RsaI for ERβ), the authors should clarify in the introduction what is the nomenclature of these polymorphisms according to NCBI (National Center for Biotechnology Information); since, currently, the nomenclature used for polymorphisms should be according to the National Center for Biotechnology Information (refSNP number).

Material and Method section:

* In inclusion criteria, the authors refer that were as follow: "ERα XbaI, ERα PvuII, ERα G2014A, Erβ AluI and ERβ RsaI" With this nomenclature might be not take into consideration, the articles that used the nomenclature of the National Center for Biotechnology Information (refSNP number).

* How the authors take into consideration the several confounding factors for osteoporosis (like age, years since menopause, estrogen therapy, etc) reported in the articles analyzed?

* The authors take into consideration the differences of the frequencies of the alleles of the different polymorphisms of the both ethnic groups (Caucasian and Asian), since the frequencies of the alleles are different in both ethnic groups (HapMap).
* The authors take into consideration the Hardy-Weinberg equilibrium for the polymorphisms reported in the articles analyzed?

* The authors take into consideration the power of the different studies analyzed?

Results section:

* The redaction of the results is confusing, perhaps they should reduce the writing and put only the most important, since in the tables are all the information.

* It is unclear whether the authors together analyzed studies reporting BMD as a Z-value with those reporting BMD in g/cm2.

Discussion section:

* It is too long, and it does not focus on something new of the mechanisms involved in these receptors in osteoporosis.

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

No

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.

No

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I recommend additional statistical review

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

Needs some language corrections before being published
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