Reviewer's report

Title: Safety and survival effect comparison of adjuvant tamoxifen and toremifene in premenopausal patients with ER/PR positive breast cancer: a retrospective cohort study

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Reviewer: Patrick Neven

Reviewer's report:

Major Revisions
-The language which is used is not correct English and this needs improved upon
-How well are large numbers of excluded patients balanced between groups
-Statistics: there is a 13% difference in local treatment modality (mastectomy versus breast conservative surgery). Tamoxifen users clearly had a higher tumor load which might explain small differences in recurrence free survival. This needs at least being commented on
- 4% difference in patients with more than 3 involved lymph nodes comparing tam with toremifene / see also differences for stage III/ see huge differences in local control in table 7
-Please state proportion in each group having received adjuvant chemotherapy
-We all know that premenopausal women have less side effects from tamoxifen than postmenopausal women. Authors should refer to literature which differentiates side effects of SERMs by menopausal status for tamoxifen and toremifene
-The authors should compare toremifene outcome data from other trials with these in this study and explain differences (Ahn et al in JCO 2007).
-Some patients were on the drug only for a few months/ please provide SD and ranges for follow-up times
-Please provide data on how patients are followed-up in this setting (yearly mammogram? yearly bone scan/CT chest-abdomen?!) and whether these patients all presented with self detected breast cancers versus screen detected tumors (excellent outcome!!)

Minor revisions
- Data on follow-up oestradiol and FSH levels should be reported (proportion in menopause following 5 years of follow-up) as interaction between ovarian suppression from chemo may interfere with results as several times demonstrated by other groups
-'A lot of them menstruate again a few days later after chemotherapy'- this may be better 'months' rather than days
- The authors should discuss the poor value of retrospective data analyses concerning drug side effects/ what is a uterine cyst?/ how long after
- Please report treatment discontinuation/compliance between groups
- It is always better to report the first event as number of events in table 7 is larger than overall number of patients with an event

**Level of interest:** An article of importance in its field

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

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
'I declare that I have no competing interests'