Reviewer's report

Title: Elevated MED28 expression predicts poor outcome in women with breast cancer

Version: 4 Date: 17 February 2010

Reviewer: Gulisa Turashvili

Reviewer's report:

Major compulsory Revisions

Abstract
1. Comment on the limitation of the study - small sample size (only 88 patients had survival data). Similar comment should be included in Discussion.

Methods
1. The 32 patients with more than one surgical procedure - are these primary and recurrent tumors or core biopsy and surgical specimen from the same primary tumor? This needs to be clarified in the text.

2. The authors should also clearly break down 242 tissue samples from 210 patients.

Define how many patients had primary invasive tumors (n=179), recurrent tumors (n=?), metastatic lymph nodes (n=64), matched normal tissues (n=?), reduction mammoplasties (n=29), pure DCIS (n=17), ductal hyperplasia (n=3), intraductal papilloma (n=4). If any of these premalignant lesions were from invasive breast cancer patients, this should also be explained in the text.

3. The number of replicate TMA cores (3) should be included in the text.

4. Specify the antigen retrieval buffer used.

5. For the statement that MED28 was even stronger predictor than stage, p-value is 0.094.

6. Since nuclear and cytoplasmic staining were seen in the same cells, what is the rationale for scoring nuclear and cytoplasmic staining separately rather then scoring it as nuclear-cytoplasmic?

Results
1. How many patients with invasive breast carcinoma or other lesions are MED28 positive IN TOTAL? This should be included in the text.

2. It is not unusual for the TMA cores to fell off during IHC procedure or to see no tumor cells in the core. Include the number of unreadable cores in the text (n=90).

3. The authors had three cores per case. How did they calculate final MED28 score for each case?
Figures

Fig. 1. There is no staining in normal tissue (1A), provide higher magnification figure. 1C seems to be lymph node, and 1E is DCIS. Provide better quality (and higher magnification) lymph node figure.

Fig. 1F shows ‘the number of spots in each category’. Is this number of cores for each lesion? n=39 for ductal hyperplasia but there is only 3 cases of ductal hyperplasia. Each patient should only have one MED28 score.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**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