Author's response to reviews

Title: Association of High Obesity with PAM50 Breast Cancer Intrinsic Subtypes and Gene Expression

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Author's response to reviews: see over
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BMC Cancer

Dear Editor(s):

Please find submitted our manuscript titled “Association of High Obesity with PAM50 Breast Cancer Intrinsic Subtypes and Gene Expression” for submission to BMC Cancer.

This is the first paper of its kind to examine the association of different levels of obesity with tumor gene expression by the PAM50 RT-qPCR assay. The PAM50 gene set consists of 50 target genes and classifies breast tumors into “intrinsic” subtypes of breast cancer: Luminal A, Luminal B, Basal-like, HER2-E, and Normal-like. The PAM50 has been shown to have better prognostic ability than surrogate clinical classification methods by immunohistochemistry (IHC) [Bastien et al., BMC Medical Genomics 2012; Caan et al., Cancer Epidemiology, Biomarkers, & Prevention 2014]. Body mass index around breast cancer diagnosis (kg/m^2) was categorized as: underweight (<18.5), normal (18.5-24), overweight (25-29), mildly obese (30-34), and highly obese (≥35). We found that ER tumor expression may not increase correspondingly with increasing degree of obesity, and highly obese patients (≥35 kg/m^2) were more likely to have tumors subtypes associated with high proliferation and poorer prognosis. Given these intriguing results, we think our manuscript will be a valuable and novel contribution to the breast cancer literature on obesity and breast tumor etiology.

All authors have agreed to the submission to the journal, and the manuscript is not currently under submission in any other journal.

Phillip S. Bernard has an interest in Bioclassifier LLC and University Genomics. The other authors declare that they have no conflict of interest.

Below are two (2) suggested peer reviewers:

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Thank you for your consideration.

Sincerely,

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