

Study confirms genetic differences in breast tissue among races

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Scientists from Sylvester Comprehensive Cancer Center at the University of Miami Miller School of Medicine are working on a series of genetic analyses that suggest the underlying differences among racial groups are present not just in tumors, but in normal tissue as well. Lisa Baumbach, Ph.D., associate research professor, and colleagues will present the full study results at the AACR 102nd Annual Meeting 2011, held here April 2-6.

"Our group has been working for quite some time on the hypothesis that there are underlying genetic differences in breast tissue across ethnicities, which would explain, at least in part, disparities in morbidity and mortality," said Baumbach.

Baumbach's research group is observing a multi-ethnic cohort of patients with triple-negative breast cancer, including 10 blacks, 10 Hispanics and 10 non-Hispanic whites. Study samples were marked by pathology as normal vs. tumor tissue. They were then analyzed for RNA isolation, cDNA preparation and hybridization of tumor/normal cDNAs and compared to a [breast cancer](#) focused [gene expression](#) array.

Results showed that the number of genes related to the DNA repair pathway, a known biology in cancer, was expressed differently across ethnicities. In a set of 10 DNA repair/cell cycle genes, the direction of change was the same for all three ethnic groups, but the level of change differed.

Provided by American Association for Cancer Research

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