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## **Researchers from The Cancer Institute of New Jersey Present Findings at International Conference**

### *Racial Differences in Mutation Frequency in Breast Cancer Susceptibility Gene Looked at*

**New Brunswick, N.J., December 17, 2007** –During a poster session this past weekend at the San Antonio Breast Cancer Symposium in San Antonio, Texas, researchers from The Cancer Institute of New Jersey (CINJ) presented data, which may have implications in the testing of the breast cancer susceptibility gene BRCA 1 and BRCA 2 in young women. The research focused on the similarity in the frequency of mutations in those particular genes among young African-American, Asian and Caucasian women with breast cancer.

When functioning properly, these genes normally act as tumor suppressors, but when harmful changes take place, the genes can no longer control cell growth, therefore resulting in one's increased risk for breast cancer. And while there has been much study in the incidence rate among young women of various races with breast cancer, there is generally little knowledge about the frequency of mutations in the BRCA 1 and BRCA 2 genes in these women.

Bruce G. Haffty, M.D., chair, radiation oncology at CINJ and professor and chair, Department of Radiology Oncology at UMDNJ-Robert Wood Johnson Medical School, is the lead author of the research, which looked at more than 300 women of African-American, Asian and Caucasian descent, who were diagnosed with breast cancer at an age younger than 45. The women were not selected based on any family history of breast cancer, however that aspect was measured for each woman going back three generations.

The study showed that while the gene mutations in those with a family history of breast cancer were more frequent across all three racial groups, the frequency of the mutations was also significant for even those without a family history of the disease. Overall, the research found that the frequency of the mutations in the BRCA 1 and 2 genes was remarkably similar between the racial groups; this is despite the varied rate of incidence between those groups, with more young African-American women being diagnosed with breast cancer compared to Caucasian women.

Dr. Haffty notes the findings help open new doors, "Since there has been little study done in this particular area, these results will help researchers compile the most comprehensive data in order to better identify new testing mechanisms regarding the BRCA 1 and BRCA 2 genes."

It's estimated one in eight women will be diagnosed with breast cancer in their lifetime – many of them young women. This year alone, the American Cancer Society puts new cases of breast cancer in the United States at nearly 178,500 with nearly 40,500 dying from their disease. It's estimated that nearly 6,100 new cases were diagnosed in New Jersey this year, with nearly 1,400 of those cases resulting in death.

The study team for *Racial Differences in Frequency and Spectrum of BRCA 1/2 Mutations in Young Women with Breast Cancer* also included senior author, Deborah Toppmeyer, M.D., director, New Jersey Comprehensive Breast Care Center and director of the LIFE (LPGA In the Fight to Eradicate breast cancer) Center at CINJ and associate professor of medicine at UMDNJ-Robert Wood Johnson Medical School, and Kimberly Ranieri, M.S., certified genetic counselor at the LIFE Center at CINJ.

Also presenting posters at the 30<sup>th</sup> annual symposium were Laurie J. Kirstein, M.D., surgical oncologist at CINJ and assistant professor of surgery at UMDNJ-Robert Wood Johnson Medical School on *Radiation After Axillary Lymph Node Dissection: Impact of Neoadjuvant Chemotherapy*. In addition, Antoinette R. Tan, M.D., medical oncologist at CINJ and assistant professor of medicine at UMDNJ-Robert Wood Johnson Medical School presented a poster on *HKO-272, an Irreversible Pan erbB Receptor Tyrosine Kinase Inhibitor: Preliminary Phase 2 Results in Patients with Advanced Breast Cancer*.

The annual conference serves as a vehicle to provide information on the latest in experimental biology, prevention, diagnosis, therapy and other aspects surrounding breast cancer. The program is geared toward an international audience of academic and private researchers and physicians.

### **About The Cancer Institute of New Jersey**

The Cancer Institute of New Jersey is the state's first and only National Cancer Institute-designated Comprehensive Cancer Center, and is dedicated to improving the prevention, detection, treatment and care of patients with cancer. CINJ's physician-scientists engage in translational research, transforming their laboratory discoveries into clinical practice quite literally bringing research to life. The Cancer Institute of New Jersey is a center of excellence of UMDNJ-Robert Wood Johnson Medical School. To support CINJ, please call the Cancer Institute of New Jersey Foundation at 1-888-333-CINJ.

The Cancer Institute of New Jersey Network is comprised of hospitals throughout the state and provides a mechanism to rapidly disseminate important discoveries into the community. Partner Hospitals: Robert Wood Johnson University Hospital, Atlantic Health (Morristown Memorial Hospital and Overlook Hospital). Affiliate Hospitals: Bayshore Community Hospital, CentraState Healthcare System, Cooper University Hospital\*, Jersey Shore University Medical Center, JFK Medical Center, Raritan Bay Medical Center, Robert Wood Johnson University Hospital at Hamilton (CINJ-Hamilton), Saint Peter's University Hospital, Somerset Medical Center, Southern Ocean County Hospital, The University Hospital/UMDNJ-New Jersey Medical School\*, and University Medical Center at Princeton. \*Academic Affiliate

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