Lombardi Cancer Center Receives $7 Million to Clarify Relationship Between Drinking and Increased Breast Cancer Risk

Washington, D.C. – The Lombardi Cancer Center at Georgetown University will establish a multi-institution Breast Cancer Center of Excellence to study the link between alcohol consumption and breast cancer. The Center, funded by a seven million dollar grant from the Department of Defense, will be led by Lombardi researchers and will also include investigators at the State University of New York at Buffalo, the National Cancer Institute, the Washington Hospital Center and the Catholic University.

Alcohol consumption is the best documented risk factor for causing breast cancer other than familial and hormonal risk factors, such as number of pregnancies and age at menopause. However, the reasons why drinking alcohol causes breast cancer have not been well studied.

Peter Shields, M.D., professor of medicine and director of cancer genetics and epidemiology at Georgetown University Medical Center, will serve as principal investigator, supervising this multicenter research effort to better understand the root mechanism behind this increased risk.

"Alcohol drinking causes about 17,000 new breast cancer cases per year," said Dr. Shields. "While seemingly low, it actually is not. This is the major known modifiable risk factor and affects about 4 times more women than those from high risk families. Just as we can learn a lot about women's risk in general by studying women from high risk families, the same also is true for the study of alcohol drinking, because it is a paradigm for other risk factors, such as diet."

Dr. Shields and his colleagues will test four hypotheses regarding alcohol consumption and increased risk of breast cancer. Specifically, they will study if alcohol affects estrogens in a woman’s body; how alcohol increases a woman’s production of harmful chemicals such as free radicals; how alcohol causes mutations in genes; and how alcohol interacts with diet to affect gene regulation and mutations.

The Center will use both experimental and epidemiology studies. Caucasian and African-American women, some with cancer and some without, will be the focal points of the epidemiology studies. The Center will consist of experts in cancer, epidemiology, basic science, biomarkers, biostatistics, radiology, medical oncology, and transgenic models.

"Today, women receive conflicting information about drinking," said Shields. "Heart specialists point out that drinking in moderation, for example a drink
per day, may be protective for heart disease. But also, drinking causes cancer and other illnesses. We need to understand how drinking affects breast cancer and which women are most susceptible. Definitive studies on breast carcinogenesis may lead to improved public health recommendations, allow women to make informed individual choices about lifestyle and risk, place alcohol drinking into a broader context of interactions with other choices such diet, hormone replacement therapy, etc., and lead to more rationale prevention strategies.”

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The Lombardi Cancer Center, part of Georgetown University Medical Center and Georgetown University Hospital, seeks to improve the diagnosis, treatment, and prevention of cancer through innovative basic and clinical research, patient care, community education and outreach, and the training of cancer specialists of the future. Lombardi is one of only 39 comprehensive cancer centers in the nation, as designated by the National Cancer Institute, and the only one in the Washington DC area. For more information, go to www.georgetown.edu/gumc.

The Nina Hyde Center for Breast Cancer Research promotes and supports the diverse breast cancer research conducted at the Lombardi Cancer Center. Named in honor of the acclaimed Washington Post fashion editor who died of breast cancer in 1990 at the age of 57, the center was founded in 1990 by her longtime friends Ralph Lauren and former Washington Post owner Katharine Graham. The breast cancer researchers affiliated with the Nina Hyde Center are internationally recognized in an elite class of scientific innovators.