LAY ABSTRACT

TITLE: Pubertal development in girls by breast cancer family history: the LEGACY girls cohort

JOURNAL: Breast Cancer Research, 2017

AUTHORS: Mary Beth Terry¹,²*, Theresa H. M. Keegan³, Lauren C. Houghton¹, Mandy Goldberg¹, Irene L. Andrulis⁴,⁵, Mary B. Daly⁶, Saundra S. Buys⁷, Ying Wei⁸, Alice S. Whittemore⁹, Angeline Protacio¹, Angela R. Bradbury¹⁰,¹¹, Wendy K. Chung¹²,¹³, Julia A. Knight⁵,¹⁴, Esther M. John¹⁵,¹⁶

*Corresponding author

INSTITUTIONS:
¹Department of Epidemiology, Columbia University Mailman School of Public Health
²Herbert Irving Comprehensive Cancer Center, Columbia University Medical Center
³Division of Hematology and Oncology, University of California (UC) Davis School of Medicine, and UC Davis Comprehensive Cancer Center
⁴Department of Molecular Genetics, University of Toronto
⁵Lunenfeld-Tanenbaum Research Institute, Sinai Health System
⁶Department of Clinical Genetics, Fox Chase Cancer Center
⁷Department of Medicine, University of Utah Health Sciences Center, Huntsman Cancer Institute
⁸Department of Biostatistics, Columbia University Mailman School of Public Health
⁹Departments of Biomedical Data Sciences and Health Research and Policy, and Stanford Cancer Institute, Stanford University School of Medicine
¹⁰Departments of Medicine, Hematology/Oncology, Perelman School of Medicine, University of Pennsylvania
¹¹Medical Ethics and Health Policy, Perelman School of Medicine, University of Pennsylvania
¹²Herbert Irving Comprehensive Cancer Center, Columbia University Medical Center
¹³Departments of Pediatrics and Medicine, Columbia University Medical Center
¹⁴Division of Epidemiology, Dalla Lana School of Public Health, University of Toronto
¹⁵Cancer Prevention Institute of California
¹⁶Department of Health Research and Policy (Epidemiology), and Stanford Cancer Institute, Stanford University School of Medicine

This is attributed to the BCERP grant ES026122

Breast development, menstrual periods, and pubic hair development are puberty milestones that play a role in breast cancer risk. We studied how those three puberty milestones in girls in the LEGACY Girls Study were related to whether girls had a family member who had been diagnosed with breast cancer. We collected information about breast development, pubic hair development, and starting menstruation from 533 girls with a family history of breast cancer and 497 girls without a family history of breast cancer. We found that heavier body weight was related to earlier breast development
and pubic hair growth, and starting menstrual periods sooner. Girls with a family member with breast cancer were slightly more likely to have early breast development compared to girls without a family member with breast cancer. The total length of time from breast development to beginning menstrual periods was longer for girls with a family history of breast cancer. Our results suggest that a family history of breast cancer may be related to earlier breast development.