

## **Assessing breast development in The Jersey Girl Study: agreement between physician and mom assessment.**

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Epidemiologic studies have identified early puberty as a risk factor for breast cancer. The Jersey Girl Study is a cohort study in 9 and 10 year old healthy girls aiming to evaluate predictors of early onset of puberty in New Jersey girls. This ongoing study has currently recruited 135 girls through pediatric practices, media, and community recruitment efforts. Data collection includes completion of a brief phone questionnaire to assess eligibility and a self-administered questionnaire (both by mothers), three 24-hour recalls to assess girls' dietary intake, and an appointment during which body measurements (weight, height, body composition, body circumferences), as well as a morning urine sample and saliva sample are collected. In addition, mothers and study physicians independently assess girls' breast and pubic hair development at baseline using the same Tanner scale forms. Physician assessment is conducted by physical exam during the appointment. We conducted preliminary analyses to evaluate the agreement between physician and mom assessment among 118 girls who completed both. According to physician assessment, 54.9% of the 9 year-old girls (n=71) and 68.1% of the 10 year-old girls (n=47) had started breast development. There was substantial agreement between mom and physician assessment of pubertal development. For our 9 year-old girls, there was an 86% agreement between physicians and mom assessment of the onset of breast development (marked by reaching Tanner Stage 2), with a kappa of 0.7 (95% CI: 0.6-0.9). For 10 year-old girls, the agreement was 85%, with a kappa of 0.7 (95% CI: 0.4-0.9). Agreement was stronger for the assessment of the onset of pubic hair. Our preliminary results suggest that, although physician assessment of breast development is more accurate, for research purposes, Tanner stage assessment by mothers may be considered when physician assessment is not feasible, at least in an educated population similar to ours.

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