

Looking Upstream for Environmental Links to Breast Cancer  
4<sup>th</sup> Annual Education Forum  
Presented by the Cincinnati Breast Cancer and the Environment Research Center  
May 17, 2008

Key Points of Presentations

Genetics of Breast Cancer: It's More than Just Your Family History

Jennifer Ruschman

- Genetic factors impact breast cancer risk and treatment for all women, not just those with a family history
- Not all of these genetic factors are created equal
- Questions important for consumers to ask include:
  - How much evidence is there for the impact of genetic factors?
  - How much will a certain genetic factor impact my risk?
  - What would I do differently if I carry a certain genetic factor?

The Sister Study: A Study of the Genetic & Environmental Risk Factors for Breast Cancer

Lisa DeRoo

- The primary aim of the Sister Study is to study environmental, genetic, and biologic risk factors for breast cancer
- New eligibility criteria were established April 2008 so that new enrollees will now be only women who are underrepresented in the study. Therefore, results will apply to all
- Baseline data has been collected on many factors, including genetic markers, stress, obesity, depression, and sleep
- A follow up study has been launched that will look at young-onset breast cancer and characteristics of both the breast cancer survivor and the sister

Dietary Fatty Acids Influence the "Micro Environment" and Breast Cancer Susceptibility

Debbie Clegg

- Preliminary data from this study suggest that fatty acids activate growth pathways similar to the ones activated by estrogen and progesterone
- The type of fat in the diet appears to alter susceptibility to carcinogenesis
- A surprising finding is that high fat fish oil and olive oil increased carcinogenesis rather than decreased it
- The study plans to test the hypothesis that maternal exposure to high fat diets will increase the susceptibility of the female offspring to carcinogenesis

## Update of Growing Up Female Study

Frank Biro

- Data collection has been very successful
- Since start of the study, 96% of participants have completed all phone calls for diet recall data and 87% of blood draws have been completed
- Blood specimens are tested for hormones, biomarkers, and DNA/RNA
- Urine specimens are tested for phytoestrogens, phthalates, phenols, and cadmium
- In Cincinnati, most of the girls are in the 8-10 age range and 62% of girls were in puberty at the time of their most recent visit
- Related studies include the Mount Sinai School of Medicine Growing Up Healthy Study and the Kaiser Permanente of Northern California CYGNET Study

## Keynote Presentation: Bodies of Evidence: Moving from Science to Action

Nancy Evans

- Says that “women’s bodies are the first environment for the next generation”
- Environmental issues are seeing more media coverage and more attention from Washington DC
- 12 states have enacted Toxic Toys legislation
- A 5<sup>th</sup> edition of State of the Evidence is anticipated in 2008
- The timing of chemical exposures is important: the “when” may be just as important as the “what”
- The Campaign for Safe Cosmetics calls for the elimination of chemicals linked to cancer, birth defects, and other health problems
- Federal legislation is being proposed that will give the FDA comprehensive authority to regulate chemicals
- Consumers can check the safety of cosmetics they use at [www.safecosmetics.org](http://www.safecosmetics.org)