
Long Island Breast Cancer Study Project Newsletter

Columbia University School of Public Health

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Hotline Telephone #: (212) 305-9392

The LIBCSP is in the Field

As planned, subject recruitment for the Long Island Breast Cancer Study Project (LIBCSP) started on August 1. The LIBCSP is an epidemiologic case-control study of breast cancer and the environment. Long Island women who have been newly diagnosed with breast cancer (cases) between August 1, 1996 and July 31, 1997 are being invited to participate. Additionally, women who have never been diagnosed with breast cancer (controls) are being scientifically selected from the general population of Long Island through a random selection process and are being invited to participate.

The success of the LIBCSP depends on the participation of every eligible woman. Thus far, the response from the women who have been invited to participate as cases and controls has been excellent. A big thank you goes out to each and every woman who has agreed to be a part of the LIBCSP. Your participation is making an important scientific contribution to the understanding of breast cancer and the environment on Long Island.

There are many individuals, groups and institutions that are also making invaluable contributions to the LIBCSP. We would like to take this opportunity to thank them. The doctors and the hospitals on Long Island and in New York City have been extremely cooperative. Without their assistance, the rapid identification of women who are newly diagnosed with breast cancer would not be possible. The members of the Long Island Breast Cancer Network, a group of breast cancer survivors and advocates, were an

incredible resource during field preparations and continue to provide invaluable input as the study has moved into the field operation phase.

We would also like to acknowledge the dedication of the field staff for the study. Interviewers travel to a woman's home in order to conduct an interview and collect her biological and home samples. The information gathered by the interviewers is the very heart of the study. Without their hard work, the study would not succeed. We also want to thank the field supervisor and her office staff. They keep the day to day operations of the study running smoothly. The subject identification process must be completed, interviewers need to receive their assignments and any problems that arise must be solved. This is no small task, but the field staff has been doing a marvelous job of keeping everything running as planned.

It is clear that carrying out the Long Island Breast Cancer Study Project is a group effort. All of these individuals and institutions working together will ensure that the LIBCSP is a success.

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Long Island Breast Cancer Study Project Hotline

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Organochlorines and Breast Cancer: The Facts

What are organochlorines?

Organochlorines are chemical compounds. Organochlorines such as DDT and chlordane have been commonly used as pesticides. Other examples of organochlorines are DDE, the metabolite of DDT, and PCBs, which were used in electrical insulation. This family of chemicals has the property of being soluble in fat and can remain stored in fat for long periods of time. Because of this, scientists can use organochlorine levels measured in biological samples as an indication of a person's lifetime exposure.

Is there an association between organochlorines and breast cancer?

Organochlorines have been found to have estrogen-like activity and have been shown to be carcinogenic in animal experiments. Breast cancer is considered an estrogen-related disease. Taken together, this evidence has led investigators to propose that organochlorine exposure may be linked to breast cancer.

There have been several epidemiologic studies that have examined this relationship by measuring organochlorine levels in fat tissue or in blood serum. Early studies did not find any association between organochlorines and breast cancer, but all were based on a small number of subjects. In epidemiologic studies, the larger the sample size of a study, the more reliable the results are. Recently, larger studies have found an association. The results of these later investigations provide evidence to support the hypothesis that organochlorines may be associated with breast cancer.

How will the LIBCSP examine the association between organochlorines and breast cancer?

This hypothesis will be tested through the measurement of organochlorine levels in the blood samples that are being donated by the Long Island women who participate in the study. A statistical analysis will be conducted to see if blood levels of organochlorines are higher in women who are newly diagnosed with breast cancer (cases) than the levels measured in women

who have never had breast cancer (controls).

Additionally, samples of dust, water and soil are being collected from a subset of participants who have been residents in their homes for 15 years or longer. These home samples will be analyzed for organochlorines. A statistical analysis similar to the one being done on the blood levels will be done to see if home levels of organochlorines are higher in cases than in controls. Finally, the association will be examined using the information collected during the in-person interview.

What will the results of the LIBCSP be and when will they be available?

There is no way to predict what the outcome of this study will be. However, the LIBCSP will have one of the largest study sample sizes to date (there will be a minimum of 400 case bloods and 400 control bloods for analysis). This will ensure that if an association between organochlorines and breast cancer exists in the LIBCSP study population, it will be detected.

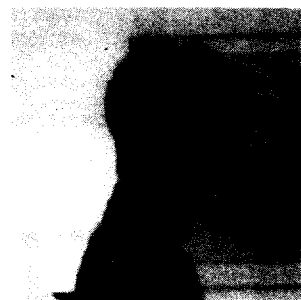
Case and control identification is taking place over a 12-month period, ending on July 31, 1997. It will take several months after the end of the identification period to complete the subject enrollment and data collection. Once all of the data is collected, the statistical analysis will begin and results are expected to be available in 1999.

Where can I learn more about organochlorines and breast cancer?

The Mount Sinai School of Medicine has a World Wide Web site about breast cancer and the environment. The address is <http://www.mssm.edu/commed/breastca.html>. Cornell also has a website at <http://www.cfe.cornell.edu/bcerf>.

The following scientific journal article is an excellent review of the current knowledge of environmental risk factors for breast cancer. Wolff MS, Collman GW, Barrett JC and Huff J. 1996. Breast cancer and environmental risk factors: epidemiological and experimental findings. *Ann. Rev. Pharmacol. Toxicol.* 36:573-596.

Meet the Expert on Organochlorine Research



We would like to introduce you to Mary S. Wolff, Ph.D. She is Professor of Community Medicine in the Division of Environmental and Occupational Medicine at the Mount Sinai School of Medicine in New York City and received her Ph.D. in organic chemistry from Yale University.

As a collaborator on the Long Island Breast Cancer Study Project, Dr. Wolff is responsible for the laboratory analysis of organochlorines in the blood samples collected during the study. She will also be involved in the data analysis of the laboratory results in conjunction with Columbia University School of Public Health. Dr. Wolff is one of the key members of the collaborative team that directs the scientific aspects of the LIBCSP.

Dr. Wolff's research interests center around the application of biological markers to determine exposures of humans to chemicals that occur in the environment. She has published widely on exposure assessment topics including air pollutants, lead, polycyclic aromatic hydrocarbons, solvents, pesticides, and halogenated hydrocarbons.

She has been involved in numerous studies of persons exposed both occupationally and through the environment to organochlorine pesticides and PCBs (polychlorinated biphenyls). She has conducted investigations of breast cancer risk and reproductive function associated with environmental exposures and the genetic determinants of these risks. Currently, Dr. Wolff is exploring how environmental chemicals and dietary components can affect puberty and later reproductive function, and how these exposures vary among ethnic groups.

Update on the Long Island Breast Cancer Study Project

Here are some highlights of the work that has been conducted over the past year:

Physician and Public Education:

- ✓ Information packets were mailed out to Long Island physicians who treat women with breast cancer. We wanted these doctors to understand how vital their cooperation is to the success of the study.
- ✓ Drs. Marilie Gammon and Alfred Neugut, along with other study investigators, have given (and continue to give) presentations so that public awareness and understanding of the LIBCSP will be increased.

Hospital Recruitment:

- ✓ Protocols have been set up at Long Island and New York City hospitals to rapidly identify women who are newly diagnosed with breast cancer.

Pilot Studies Completed:

- ✓ Several pilot studies have been completed to assist the investigators in carrying out the field operations.

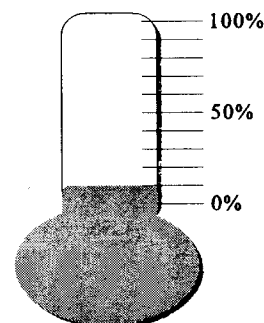
Field Preparation and Training of Interviewers and Field Staff:

- ✓ All of the LIBCSP materials needed at the in-person interview, such as the questionnaire, were developed.
- ✓ The interviewers and the field office staff went through an intensive week-long training program where they learned how to conduct all aspects of the study and had the opportunity to practice what they had learned before going out into the field.

Subject Identification

Progress Meter

8/1/96 - 9/30/96



The Long Island Breast Cancer Study Project

We welcome your questions about the study. Look for a question and answer column in future issues.

Telephone Hotline: (212) 305-9392

E-mail us at: libcsp@columbia.edu

Soon you will be able to visit us at our World Wide Web Home Page

The Investigative Collaborators

LIBCSP brings together investigators at institutions from Long Island, New York City, Maryland, New Jersey and Texas in an effort to determine whether environmental factors are associated with breast cancer among women on Long Island. We would like to recognize these institutions for the contributions they are making to the LIBCSP. The following is our list of collaborating institutions.

American Health Foundation	Massapequa General Hospital	North Shore University Hospital at Syosset
Beth Israel Medical Center	Memorial Sloan-Kettering Cancer Center	Princeton University
Brookhaven Memorial Hospital	Mercy Medical Center	St. Charles Hospital
Brunswick Hospital	Mid-Island Hospital	St. Francis Hospital
Central Suffolk Hospital	Mineola Medical Lab	St. John's Episcopal Hospital
County of Suffolk	Mt. Sinai School of Medicine	South Nassau Communities Hospital
Eastern Long Island Hospital	Nassau County Medical Center	Southwest Research Institute
Franklin Hospital Medical Center	National Audubon Society	Southampton Hospital
Good Samaritan Hospital Medical Center	North Shore University Hospital at Glen Cove	Southside Hospital
Hempstead General Hospital	North Shore University Hospital at Manhasset	Strang Cancer Prevention Center
Huntington Hospital	North Shore University Hospital at Plainview	University Medical Center at Stony Brook Westat
John T. Mather Memorial Hospital		Winthrop University Hospital
Long Beach Memorial Hospital		
Long Island Jewish Medical Center		

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