

BACKGROUND

Investigation Explores Possible Relationships Between Unusual Factors and Breast Cancer Incidence in Seven ZIP Code Area

Summary

State Health Department researchers have been examining information about the environment and other factors that might be related to a higher occurrence of breast cancer in seven ZIP Codes of Suffolk County. This is called the CMP (Coram, Mt. Sinai, Port Jefferson Station) Follow-up Investigation. Materials are available that summarize details about different parts of this investigation and describe progress to date.

Background

The CMP investigation is part of the Cancer Mapping Project also known as the Cancer Surveillance Improvement Initiative, created to respond to New Yorkers' concerns about cancer in their communities. This investigation focuses on identifying unusual factors that might be related to why breast cancer incidence was elevated in these communities between 1993 and 1997 compared to other parts of New York State.

The CMP investigation follows a research protocol called the *Unusual Disease Pattern Protocol*. This protocol was developed after areas of higher than expected cancer incidence were identified on ZIP Code level cancer maps released in 2000 and 2001. It is being used for the first time during this investigation.

See the back page for more details about the evaluations completed as part of this investigation

Our researchers identified this seven ZIP Code area during the first step of the protocol. Teams of researchers completed an epidemiological, a toxicological and an environmental exposure evaluation as part of Steps 2 and 3 of the

protocol. In the final stages of Integration, researchers are working together to evaluate whether or not possible exposures to elevated levels of contaminants could be related to breast cancer incidence in these communities.

Exposure—
Contact with a contaminant by breathing, touching or swallowing.

This stage of the investigation is almost complete. A *Working Draft Integration Report* has been prepared that documents research conducted to date and provides some preliminary conclusions. After the remaining analyses are completed, a final draft report will be released that will provide what, if any, additional research or recommended follow-up activities should

Where We are In the Investigation

(Adapted from the Unusual Disease Pattern Protocol)

STEP 1

SELECT AREA

Coram (11727), Mt. Sinai (11766), Port Jefferson Station (11776), Sound Beach (11789), East Setauket (11733), Miller Place (11764) and Port Jefferson (11777)

STEP 2

EXAMINE

Epidemiologists reviewed and verified cancer statistics

Environmental data sets and sources of potential exposures identified

REFINE

Study area confirmed based on epidemiological reviews

STEP 3

SEEK

Communities provided input on environmental concerns

EVALUATE

Possible exposures to contaminants in the area were evaluated

REVIEW

Additional breast cancer statistics examined, breast cancer risk factor classification system developed and implemented

INTEGRATE

Issue Final Draft Report that:

- 1) makes conclusions about elevated levels of contaminants and other factors that might be related to breast cancer incidence
- 2) makes recommendations about any useful activities
- 3) makes recommendations about modifications to the Unusual Disease Pattern Protocol

Researchers are completing Step 3 of the CMP Investigation. A Working Draft Integration Report has been prepared that describes research efforts to date and some preliminary conclusions about whether contaminants in these communities could be related to breast cancer.

The CMP Follow-up Investigation is designed to evaluate the likelihood that unusual factors in this area could be related to the elevated breast cancer incidence observed between 1993 and 1997. During this broad-based effort, multiple research teams evaluated large amounts of data and are integrating their findings. Their conclusions will determine if there are any useful future activities.

Epidemiological evaluation. Since the beginning of this investigation, a team of epidemiologists has been analyzing breast cancer data,

Risk factor—

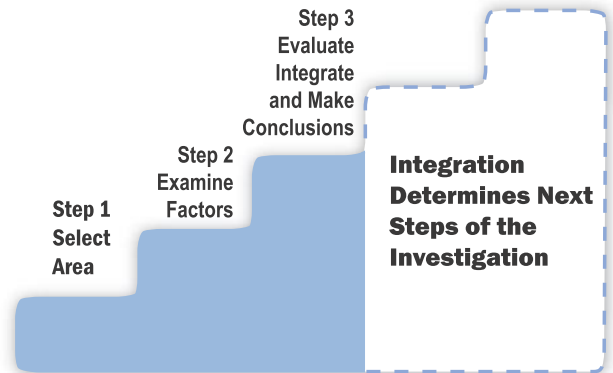
Something that has been demonstrated to increase the chance of developing breast cancer. Having or being exposed to a risk factor or combination of risk factors does not necessarily mean that a person will develop breast cancer.

reviewing what is known about breast cancer and evaluating additional information on women living in this seven ZIP Code area. Their efforts more fully characterize the excess in breast cancer incidence in the area.

Toxicological evaluation. A team of toxicologists developed a classification system and applied it to classify substances as risk factors for breast cancer. During this evaluation, they evaluated the existing evidence from human, laboratory animal and other studies.

Environmental exposure evaluation. With input from the communities, a team of environmental scientists evaluated a large number of existing environmental data sets to identify possible exposures to elevated levels of contaminants compared to other areas of the state. Their efforts identified contaminants that were then evaluated as risk factors for breast cancer.

Integration evaluation. The three research teams continue to integrate their findings and evaluate health risks associated with possible exposures to elevated levels of contaminants in terms of their relationship to breast cancer and other non-cancer health effects. They are also reviewing the results of the three prior evaluations to decide what, if any, additional follow-up activities are useful to increase our knowledge about breast cancer in these communities.



be conducted as called for as part of Step 3 of the Unusual Disease Pattern Protocol. The final draft will also include recommendations about how to streamline and improve the protocol for future investigations.

Limitations of the Investigation

The CMP investigation is a broad-based evaluation of many factors. It uses group-level data, such as U.S. population statistics and existing environmental data sets, rather than interviewing individual women in the area diagnosed with breast cancer, to make conclusions. This approach is designed for researchers to evaluate many factors, propose hypotheses and identify any useful follow-up research activities. It cannot determine what is causing cancer in this area.

Two limitations (among others) of this investigation are that our researchers have limited information about how long each woman diagnosed with breast cancer lived at her residence prior to her diagnosis. They also have a limited amount of data to evaluate possible environmental exposures.

So much remains unknown about why some women develop breast cancer and others do not. Women are exposed to many risk factors for breast cancer throughout their lives. Collecting strong evidence about these risk factors is almost impossible when looking back after the diagnoses.

One reason why it is so difficult to identify contaminants that are risk factors for breast cancer is that this disease takes a long time to develop. Scientists estimate that breast cancer might occur somewhere between 5 and 40 years after a person is exposed to risk factors that might have caused the disease. This time period varies depending on the type of exposure that may have started the breast cancer and the age of a woman when she was exposed. Risk factors for

CMP Follow-up Investigation Summary Materials Available

BACKGROUND: About The Coram, Mt. Sinai, Port Jefferson Station Follow-up Investigation

EPIDEMIOLOGICAL EVALUATION: Evaluating Area Demographics and Known Risk Factors Provides Background for Ongoing Breast Cancer Investigation

TOXICOLOGICAL EVALUATION: Classifying Substances as Risk Factors for Breast Cancer

ENVIRONMENTAL EVALUATION: Existing Environmental Data are Used to Evaluate Elevated Levels of Contaminants

INTEGRATION EVALUATION: Making Conclusions About Environmental and Other Factors and Breast Cancer Incidence

Additional details about the CMP Investigation can be found in the *Coram, Mt. Sinai, Port Jefferson Station Follow-up Investigation Working Draft Integration Report*.

For More Information Contact

New York State Department of Health

(800) 458-1158 ext. 27530

<http://www.health.state.ny.us/nysdoh/cancer/sublevel/follow.htm>

breast cancer can also interact to increase a woman's risk in ways that are not fully understood.

In spite of these limitations, our research teams evaluated a large amount of data about this area and local environmental concerns. They are using this information to make conclusions about the likelihood that elevated exposures and other unusual factors in the CMP area could be related to breast cancer in these communities. These efforts will determine what, if any, follow-up efforts are needed.