CALIFORNIA Breast Cancer Research PROGRAM

CBCRP Bulletin

News from the California Breast Cancer Research Program

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"Medical Breakthroughs": Evaluating Media Reports of Medical Progress

Ellen Mahoney, M.D. FACS

MENTION THE MEDIA TREATMENT OF medical progress and you are likely to get groans from physicians, the public, and the media. Hype, shock, sound bites, and conflicting reports have overwhelmed physicians and the public. Journalists, whether print or broadcast, are accused of not covering the "real issues," when the truth is that many medical and scientific journalists are good people trying their best to communicate information that they feel the public needs to know.

The first step in evaluating media reports ... is to realize that someone is trying to sell you something ...

The general view is that the news media is primarily a public service provided for their welfare. While this is the goal of many journalists, it is not necessarily a goal of their industry. The first step in evaluating media reports of medical progress is to realize that someone is trying to sell you something, be it a magazine, television show, or radio report. Fear, conflict, and shock, rather than complex information, sell in our entertainment-oriented media outlets, and the more controversial or alarming the subject and the more likely the subject applies to you, the more likely you are to watch or to buy. Education is a secondary benefit. What the public also may not recognize is that the medical literature is not immune from hype as researchers vie for publicity that may further their funding or status.

Resist the short-attention-span version of medical progress reports and strive for the most detailed explanation you can find. Whether you are a member of the public or a journalist tackling a topic, begin with skepticism but learn how to identify the valuable studies. Resist the impression to consider a reported result valid and useful just because it is in print or worthy of air time, or even because it emanates from a distinguished institution. If you are a scientist, there are simple things you may be able to do that will help put your results in perspective.

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From the Director's Desk

Breast Cancer and the Environment...Case Closed?

Marion Kavanaugh-Lynch, M.D., M.P.H.

SINCE THE RELEASE OF THE LONG-AWAITED results from the Long Island Breast Cancer Study Project, there has been a flurry of articles, editorials, and private debate concerning further study of the role of environmental toxins in the causation of breast cancer.

The Long Island study, created by the political efforts of Long Island breast cancer activists and funded by the National Institutes of Health, looked at blood levels of the organochlorine pesticides DDT, chlordane, and dieldrin and electrical insulators known as PCBs, as well as evidence of DNA changes that are caused by polycyclic aromatic hydrocarbons (PAHs), a ubiquitous toxin created by cigarette smoke, motor vehicle exhaust, and smoking or burning meat. The results? ... Researchers found no association between breast cancer and exposure to these pesticides or PCBs. They identified a 50 percent elevated risk of breast cancer with higher levels of PAH-associated DNA changes, but this did not correlate with exposure to PAHs. The

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IN THIS ISSUE:

Smoking and Breast Cancer: Is there a Connection?

Katherine McKenzie, Ph.D.

IS THERE A CONNECTION BETWEEN SMOKING and breast cancer? That is the question that was addressed at a workshop sponsored by the California Breast Cancer Research Program, the Tobacco Related Diseases Research Program, and the American Cancer Society. On December 4, 2002, the three programs convened a panel of experts to discuss what we know and don't know about the connection between breast cancer and smoking.

The question seems easy enough—does smoking increase one's risk of developing breast cancer? It's a valid question because, as panelist Dr. Stephen Hecht of the University of Minnesota pointed out, there are over 60 known carcinogens in cigarettes, 10 of which cause breast cancer in rodents. Additionally, some of these compounds can be detected in the breasts of smokers. However, studies in humans have been performed and the answer appears to be in: if you look at the population as a whole, smoking does not cause breast cancer. In fact, panelist Dr. John Baron of Dartmouth University went so far as to say that the question has been answered.

Smoking and Breast Cancer Workshop Panelists L to R: Marilie Gammon, Ph.D., John Baron, Ph.D., Stephen Hecht, Ph.D., Susan Murin, M.D., and Phillip Gardiner, Dr.P.H. (moderator)

Is this the end of the story? What about passive smoking? Does genetics play a role in determining whether smoking can lead to the development of breast cancer? Does the time of life or amount of smoking affect breast cancer? What about the time of life when you quit—does that make a difference? Does smoking have implications for breast cancer prognosis? If we are going to get to the bottom of this issue, we will need to ask smarter questions and develop better tools to answer them.

Dr. Marilee Gammon of the University of North Carolina described the epidemiological efforts to answer these questions and the difficulties encountered in designing the studies. For instance, some studies define intensity and duration of smoking differently or some simply compare "non-active smokers" to "active smokers", which taints their results because they are grouping non-smokers with passive smokers. Additionally, the concurrent use of alcohol, which has also been linked to breast cancer risk, can confound analyses. Passive smoking exposure has historically been difficult to quantify and is increasingly correlated with other aspects of lifestyle, such as alcohol consumption. These types of confounding factors make it hard to

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Marketing Outreach Kicks Off Tax Check-Off Season

Betsy Krugliak

LAST YEAR THE CBCRP INITIATED ITS FIRST marketing and communications program. The purpose of the program is to generate increased awareness with the people of California—who make the CBCRP possible—through individual support, as well as state funding.

The program is now in full gear, with a new Community Partners Program for public education and support, a sterling executive team of renowned business and civic leaders, new collateral materials, media stories about the CBCRP awards and their impact, and outreach events throughout the state.

At this time of year, the program focuses on alerting Californians to one of the most important ways they can support breast cancer research: the voluntary Tax Check-off Program. By simply checking off line 56 on state income

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When Survivors Perform Science: About Lucy Berlin

Diana Chingos

PRESERVING FERTILITY AFTER BREAST CANCER treatment prevails as one of the orphan areas of breast cancer medicine. Whether because of concerns that pregnancy after breast cancer affects long-term survival or because of the small numbers of young patients available for research study, medical evidence has mounted slowly. The persistence and courage of young survivors like Lucy Berlin are fueling progress in this area, in some unexpected ways.

Lucy Berlin set forth to document how young breast cancer patients are affected by the risk of early menopause or infertility due to chemotherapy—and to find out whether there's a way to avoid ovarian damage in the first place. And she didn't have to look far for funding.

Ms. Berlin teamed with Dr. Hope Rugo, a breast cancer oncologist at the University of California, San Francisco, and Dr. Lynn Westphal, a reproductive endocrinologist at Stanford University who has a special interest in cancer patients. Their CBCRP-funded pilot project, "Chemotherapy Induced Ovarian Damage: Prevention and Impact" is a Community Research Collaboration Award, a type of award that encourages research collaborations among community members, scientists, and physicians.

For some young women, the thought of infertility or menopause after chemotherapy is devastating and adds insult to injury.

Lucy was diagnosed at the age of 36, when her son Erik was 23 months old. Two years after an aggressive neoadjuvant regimen of Adriamycin, Cytoxan, and Taxol, she was told she was post- menopausal. She grieved, but to her satisfaction became pregnant four months later with her son Colin, now three years old.

Lucy is the leader of the "Young Moms with Breast Cancer," a Palo-Alto based support group for mothers of young children, also known as the "Moms' Group". These young women share ideas on the parenting, relationship, and health concerns common to women dealing with breast cancer, young children, and often-sudden menopause.

"Young women often want to keep the *option* of becoming pregnant after breast cancer," Lucy observed. "These days women often start families in their 30s. For some young women, the thought of infertility or menopause after chemotherapy is devastating and adds insult to injury. The sudden onset of menopause can cause insomnia from night sweats, sexual problems, and drop in bone density."

As the first part of the pilot, Lucy and the team developed a survey to study issues identified by young survivors, such as what information women received about side effects and their options for minimizing damage, how young women with breast cancer made their decisions, how their menstruation and fertility were affected, and what factors influenced their attitudes and decisions. Lucy, an anthropologist, will be interviewing a sample of survey respondents to get a more in-depth understanding of their experiences and attitudes around these issues.

At the same time, the investigators will prospectively test the observation that the use of hormone suppressing agents (called gonadotropin releasing hormones, or GnRH agonists) to shut down the ovaries may reduce ovarian damage from drugs such as cyclophosphamide (often known as Cytoxan). GnRH agonists are an established treatment for young women with hormone receptor-positive breast cancer.

Since Cytoxan seems to be a key culprit in ovarian damage, this team consisting of a breast oncologist, an infertility specialist, and an anthropologist worked together to design a Phase II clinical trial to explore whether using the GnRH-agonist triptorelin during chemotherapy might reduce the damage from common cyclophosphamide-containing regimens (e.g. FAC, AC/Taxol, or CMF).

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Survivors

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The pilot study will enroll 30 women between the ages of 35 and 44—women who are more likely to develop infertility or menopause after standard chemotherapy. Patients will get triptorelin two weeks before chemotherapy and for the duration of treatment. Their levels of FSH and estradiol will be monitored during and after chemotherapy to check for ovarian function. The CBCRP grant will pay for added tests for the participants, and the maker of triptorelin will supply the drug free of charge.

pregnancies after breast cancer don't seem to worsen a woman's chance of long-term survival

The trial opened in mid-January at UCSF, San Francisco General, and a few other clinics in the San Francisco Bay Area. However, other local oncologists are welcome to join, so that young patients may be able to enroll even if they choose to be treated by other community oncologists.

Despite fears common to women and physicians, pregnancies after breast cancer don't seem to worsen a woman's chance of long-term survival. However, possibly because of these fears and because infertility is less visible than nausea or hair loss, fertility concerns and menopause effects are often glossed over.

"Even women who were done childbearing often wish they hadn't gone through menopause because of concerns for osteoporosis, hot flashes, mood swings, libido changes, and vaginal atrophy," said Lucy. "We're hoping that if the GnRH-a regimen proves protective, it might be of interest to many young women whether or not they are interested in a future pregnancy. The study aims to measure this type of interest and to show oncologists what information women want to know."

To learn more about the survey-based study, contact Lucy Berlin at berlin@cs.stanford.edu or at 408-366-0161. Physicians interested in learning more or finding out how to enroll their patients on the Phase II trial of GnRH-agonists can contact Hope Rugo, MD, at 415-353-7428. Patients can also contact the UCSF new patient coordinator, Margaret Rubino, at 415-353-7027, or the Clinical Research Associate, Maria Kenzer, at 415-885-7328.

Marketing Outreach

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tax form 540, taxpayers directly contribute to research grants made by the CBCRP.

CBCRP staff and marketing support have partnered with numerous organizations to help spread the word about the Tax Check-Off Program. One of the most exciting series of events this season takes place in professional and college basketball. The Golden State Warriors are graciously featuring the CBCRP at a game during the first quarter, as are the Men's and Women's Athletic Departments at UC Berkeley.

Spectators at these events will have the opportunity to learn about the CBCRP and the Tax Check-Off Program.

In addition to sporting events, community and corporate activities are planned. The CBCRP has partnered with companies, such as Macy's, to alert employees about the Tax Check-Off Program through email splash-screen reminders, paycheck stuffers, and rallies. On the media front, the CBCRP contacts radio, television, and newspaper outlets with Public Service Announcements that encourage

Californians to support the Tax Check-Off Program for breast cancer research. Information is also provided to physicians, tax preparers, and the medical community.

Outreach activities reflect the CBCRP's mission to share information and to support the thousands of Californians who suffer from breast cancer or are impacted by breast cancer in their families and communities. The program focuses on helping people realize that they can personally make a difference with a simple checkmark on their tax forms.

If you know of any company or group to sponsor a rally or other activities about the Tax Check-Off Program, please contact madelyn@talmus.com. To catch the latest updates on research and outreach activities, or to contribute to the CBCRP, please visit www.cbcrp.org.

Events featuring the CBCRP Tax Check-Off program:

February 1:
Cal Women's Basketball against Stanford

February 15:
Cal Men's Basketball against Washington

March 1:
Golden State Warriors against Detroit

Executive Team Helps Launch Outreach Program

To launch the CBCRP's first marketing outreach program, a Community Partners Program was established to provide a forum for public support and education about the CBCRP.

At the helm of the Community Partner program you will find a group of accomplished leaders from business, science, medicine, community and civic groups, who serve on the Executive Team under the stellar leadership of Sherry Lansing, UC Regent and Chairman, and CEO of Paramount Pictures. Our Executive Team will spearhead fundraising and outreach efforts over the next year, and we are truly grateful for their commitment to action.

The CBCRP extends heartfelt thanks to the Executive Team for their unsurpassed creative talents and know-how participation—and for their unwavering commitment to support breast cancer research on behalf of the people of California. Kudos to all:

Sherry L. Lansing, chair: chairman and CEO, Paramount Pictures, Los Angeles; regent, University of California; board of directors, Teach for America and the American Film Institute; served on board of trustees of Scripps College, UCLA Foundation, and Dean's advisory board of UCLA School of Theatre, Film and Television

Gary Erickson: president, CEO, The Erickson Group, Los Angeles; consulting services to medical and health care nonprofits; president-elect, UCSB Alumni Association; member, UCSB Foundation board of trustees; former executive vice president, United Way of Los Angeles

Faith Fancher: journalist, news reporter, and anchorwoman, KTVU FOX television network, Oakland; "Journalist of the Year," Beverly Johnson Award for Bay Area Black Media Coalition; breast cancer survivor

Linda Griego: president, Griego Enterprises, Los Angeles; acting director, The Los Angeles Community Development Bank; member, Federal Reserve Bank Board, San Francisco; former head of Rebuild Los Angeles; former Deputy Mayor, Los Angeles

Judith H. Guggenhime: philanthropist, volunteer, San Francisco; member, board of trustees, San Francisco General Hospital; former president, board of trustees, CORO Northern California

Barbara Hopper: real estate associate, Prudential California Realty; president, Auxiliary to the Sinkler Miller Medical Association; state president, Auxiliary to the Golden State Medical Association

Dr. Cornelius Hopper: emeritus vice president for Health Affairs, University of California system; board of regents chair, Samuel Merritt College; board member, Meharry Medical College; board member, Alta Bates Summit Medical Center; board member, East Bay Community Foundation; vice chair, Kaiser Permanente Arbitration Oversight Board

Dr. Susan Love: president, Susan Love MD Breast Cancer Foundation; Clinical Professor of Surgery, David Geffen School of Medicine at UCLA; founder and senior partner, LLuminari, a multimedia women's health company; board member, National Breast Cancer Coalition; board member Y-ME National Breast Cancer Organization; appointed by President Clinton to the National Cancer Advisory Board; author of Dr. Susan Love's Breast Book, Dr. Susan Love's Menopause and Hormone Book (second edition 2003); founder of www.SusanLoveMD.org.

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Lucy McCoy: partner, Garcia McCoy & Lee Consulting, Los Angeles; public affairs, real estate, and advocacy for public, private, and nonprofit sectors; board of directors, Library Commissioners, California Science Center and Para Los Ninos; former vice president and secretary, Library Foundation of Los Angeles

Dr. Maria C. Pellegrini: program director, W.M. Keck Foundation, Los Angeles, one of the nation's largest philanthropic organizations in medical research, science and engineering; former Dean of Research, USC College of Letters, Arts and Sciences, and professor of biological sciences; author, 50 scientific journal articles; grant reviewer, National Institutes of Health, National Science Foundation, and American Cancer Society

Dr. Marilyn Rosenwein: physician, educator, and activist, San Mateo; private practice ob-gyn with specialization in menopause; clinical faculty, UCSF; advisory board, Women's Health at Stanford University; breast cancer survivor

Steve Soboroff: president, Playa Vista, Los Angeles; real estate and community land-use development projects in Los Angeles' West side; former president, Los Angeles Recreation and Parks Commission

To share your ideas, keep on top of the latest news, support the Community Partners Program, or to contribute to the CBCRP, join us at www.cbcrp.org.

Smoking and Breast Cancer

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determine the precise role of smoking in breast cancer. However, there are tantalizing observations that certain segments of the population may be more susceptible to toxins in smoke because of their ability (or inability) to activate or detoxify them. Dr. Gammon argued that getting better answers to these questions will require multidisciplinary studies with sample sizes large enough to be able to understand the possible gene environment interactions involved.

Dr. Susan Murin of the University of California, Davis, discussed a relatively unexplored line of inquiry—how does smoking affect breast cancer prognosis? The data on this question is extremely scant, but several studies have shown that breast cancer patients who are smokers at the time of their diagnosis have a significantly higher risk of developing lung metastasis and have a higher chance of dying from the disease. Dr. Murin is currently funded by CBCRP and TRDRP to investigate the mechanism behind this increased risk. The preliminary results from Dr. Murin's mouse study indicate that smoking cessation at the time of diagnosis is effective in changing the course of the disease.

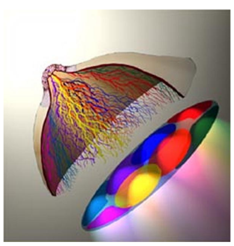
So, does smoking cause breast cancer? While smoking may not increase breast cancer in the population as a whole, it may increase risk in susceptible individuals and there may be implications for breast cancer prognosis. Additional total population studies on active smoking may not be necessary, but refined studies on questions such as the influence of timing of smoke exposure and effect on breast cancer prognosis can still yield valuable answers.

Join us for...

Two Exciting Breast Cancer Conferences

- **Breast Cancer Course for Researchers: An In-depth Interdisciplinary Review of the State of the Science**
  March 26 – March 27, 2003
- **3rd International Santa Barbara Symposium: The Intraductal Approach to Breast Cancer**
  March 27 – March 30, 2003

Co-sponsored by the CBCRP and the Susan Love MD Breast Cancer Research Foundation. Go to http://www.susanlovemdfoundation.org *for more information*



Evaluating Media Reports

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Exploratory Studies

The first question to explore is the type of study reported. Initially this will probably be a descriptive, exploratory study. Causes and explanations are not the goal, but rather a test of whether effort should be expended to study the question further. The results of these studies are not meant to be used in clinical decision-making, but since they are creative, simple, and numerous, they may make good press. An example would be the observation that women who have their first term pregnancy in middle age may have more breast cancer. The public, hearing this, assumed that the observation translated into a clinical recommendation or that they had increased their risk by delaying childbirth. In extreme cases, women raced to have children by 29, feeling that they were then safer than if they had waited until 31—an unwarranted response. We do not know what causes breast cancer, and we do not yet know the explanation for the association, but the observation points us in the direction of considering the timing of complex hormonal interactions, and it tells us that further study on this topic may be fruitful. Results like this can be used as an argument for funding more detailed and expensive follow-up work to explore associations to determine causation. One of the difficulties is that should the improved study methods result in showing that the descriptive study was on the wrong track, the published results of the prior study are still available and prone to citation, causing further confusion. Also, since the descriptive studies are fairly crude, contradictory results may be obtained, leading to further burnout.

Explanatory Studies

The next level of study design aims to confirm, and hopefully to actually explain, the observed phenomenon. Explanatory studies can still be observational in nature but with a slightly tighter design, such as a case-control trial, or they can be experimental, such as the gold standard (but still imperfect) prospective randomized clinical trial. Both of these paradigms are improvements, but they are not guarantees that the results are meaningful. And even scientists can have trouble remembering that statistical significance doesn't always equal clinical significance.

In addition to giving more credibility to more sophisticated study design, it is important to understand the data reported, and to be skeptical of results reported in "percentage increase or decrease" or in "relative risk". Numbers can be valuable when making comparisons within the study itself, but in order to responsibly apply the results to clinical decision-making, it is crucial to know the number of events and time. For instance, in 1999 the NSABP reported results of its first prevention trial for tamoxifen. The results were widely touted as showing a 49% reduction in breast cancer when women at high risk for the disease took tamoxifen for 5 years. The actual results were 4.3 cases of breast cancer per 100 women in the study over 5 years with placebo, and 2.2 cases of breast cancer per 100 women per 5 years with tamoxifen. The comparison between 4.3 and 2.2 was the basis of the 49% reduction cited. While these data are indeed accurate, many women and their clinicians who were trying to decide whether to take tamoxifen felt misled. Not as widely reported were the 0.5 cases of endometrial carcinoma per 100 women over 5 years if they were on placebo and 1.3 cases if they were on tamoxifen. These are still very small numbers, but if they were to be consistent in reporting data, they would report a 260% increase in endometrial cancer, offsetting the benefit of the tamoxifen. None of this should diminish the progress made by the NSABP in the past 20 years, but it can be difficult to extract these more helpful numbers from the data presented. For purposes of reporting and evaluating data though, one must insist on having those numbers.

> *even scientists can have trouble remembering that statistical significance doesn't always equal clinical significance*

Relative Risk

Another commonly used method of reporting data is relative risk, which must also be backed up by information about actual numbers involved. For instance, when two groups are

studied with respect to increased risk from a particular attribute, a relative risk (RR) of 1.0 is assigned if the groups are the same. When the groups differ, the number is higher or lower than 1.0. In order to emphasize the imprecision of this commonly used statistic, some scientists state that the numbers should vary by a factor of 3 in order to be meaningful. Even this does not tell the whole story though, and to get that, one needs to know what the baseline risk is in absolute terms. For instance, if an event usually happens once in a million times, and a comparison group shows 3 events in a million after a particular intervention, that is an increase of 300% or a RR of 3.0. It sounds strong until you realize that the event still only happens 3 in a million times. If however, an event usually happens 100 times in a thousand, and a particular risk factor confers a RR of 3, it will happen 300 times in a thousand. The excess 200 cases are much more significant, even though the percentage and relative risk are the same. Relative risk in breast cancer is frequently applied to risk factors for ever getting the disease, and without information on baseline risk, the results are wide open to misinterpretation. The point is that unless you know the baseline risk being used in the comparison, the results can be very misleading.

medicine is a matter of balancing risks and benefits, and this information is not contained in results presented as percentages or relative risks

In summary, there are several questions to ask when deciding on the relevance of a news report of a so-called "medical breakthrough", but the first principle is to approach the report with skepticism. You *are* being sold something, you are the final judge, and it is up to the reporting agency to convince you that the results reported are both valid and applicable to you.

Ask yourself if the result makes sense.

Once you have a proper attitude, try to determine the study design from the report. Descriptive studies of possible associations should be viewed with mild interest at most.

Next, be sure the facts are straight and that the result applies to the group you are interested in. In recent years there have been a series of epidemiological studies of a possible association between tricyclic antidepressants and increased breast cancer risk. The better the study design and the larger the numbers of patients involved, the less likely that association has validity, and it is now considered unlikely. Meanwhile, many breast cancer patients are resisting the use of SSRI antidepressants such as Celexa, Effexor, or Paxil, not recognizing that not only is any association between antidepressants and breast cancer weaker, but also the drugs prescribed for them are in an entirely different class.

Insist on some reference to actual numbers of events per group of patients during a specified time and/or a specified baseline risk. Until you have those numbers, you cannot judge the magnitude of the benefit or any offsetting downside. All of medicine is a matter of balancing risks and benefits, and this information is not contained in results presented as percentages or relative risks. Also realize that statistical significance in itself is not necessarily proof that a hypothesis is correct or that it is relevant to the way the human body works. It does become more convincing if similar results are obtained in repeated studies on the same question.

We don't need more information from the media—we need **better quality** *information*

Ask yourself if the result makes sense. For instance, the recent results showing that breast self-examination (BSE) is not sufficient for screening a population of healthy women for breast cancer does not mean that you should stop doing BSE. It makes sense to know the

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Director's Desk

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conclusion of many: there is no solid environmental link to breast cancer.

We feel that the environmental debate around breast cancer is far from being settled by the Long Island study.

The real conclusion to be made from the Long Island study comes from a quote that appeared several years ago in *Science* ("Epidemiology Faces its Limits"). Sander Greenland, a noted epidemiologist said, "There is nothing sinful about going out and getting evidence…the sin comes in believing a causal hypothesis is true because your study came up with a positive result, or believing the opposite because your study was negative."

Anything short of this conclusion is a disservice to the 4,200 California women who will die of breast cancer this year, and to the thousands of women who are survivors.

traditional epidemiologic approaches have limits when dealing with diseases that are likely multi-causal

As further explanation:

1. No definitive conclusion can be made from Dr. Marilie Gammon's comment that, "Whether environmental contaminants increase breast cancer risk among women on Long Island, NY, is unknown." The study addressed only five compounds—a small portion of the spectrum. In fact, one of the compounds, PAHs, was associated positively with breast cancer in Long Island. (Dr. Gammon has served CBCRP as a research application reviewer and speaker at our bi-annual symposium.)

2. The Long Island study was severely compromised from the outset by conflicting political, scientific, and emotional needs. The study couldn't hope to address activists' concerns or even a significant portion of the underlying scientific questions (see the recent in-depth *Newsweek* feature, "Tattered Hopes.")

3. **The Long Island study demonstrates that traditional epidemiologic approaches have limits when dealing with diseases that are likely multi-causal.** Why? It takes many years for breast cancer to develop, and causal factors probably act decades before a woman is diagnosed with breast cancer. The relevant dose, timing of exposures, effects of exposures to multiple mixed compounds, and interactions between exposures and an individual's genetic make-up are still largely unknown. True comparison groups (groups of people who have not been exposed) may not even be possible.

It's true that there is no "smoking gun" for breast cancer as there is for cigarettes and lung cancer. However, as women continually witness the devastating toll of breast cancer, they hear bewildering shots in the night and smell gun smoke. Both come from a tantalizing volume of observations that point to environmental exposures as likely suspects in the breast cancer mystery.

It is for this reason the CBCRP is calling for innovative research that focuses on environmental exposures and breast cancer. If the methods we have used until now have not brought us definitive answers (and they have not), then we must push for new methods and new approaches.

Mhel Kavanaugh-Lynch

S A V E T H E D A T E !

Help CBCRP celebrate their 10-year anniversary at their statewide symposium

From Research to Action: A Decade of Progress

San Diego Convention Center

September 12-14, 2003

S A V E T H E D A T E !

Evaluating Media Reports

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texture of your breasts; it does not make sense to make BSE your sole screening strategy.

Learn the responsible news outlets and reporters available to you, and do not be afraid to write to ask them for proper documentation if it is lacking. We don't need more information from the media—we need *better quality* information in order to make good decisions and to avoid burnout from sensationalized reports intended to frighten rather than to accurately inform us.

References for further reading:

- *Assess Your True Risk of Breast Cancer* by Patricia T. Kelly, Ph.D., Henry Holt and Co. 2000
- *Interpreting the Medical Literature* by Stephen H. Gehlbach, McGraw-Hill 2002
- *Making the News: A guide for nonprofits and activists* by Jason Salzman, Westview 1998

CBCRP News

Updated Mission Statement Captures CBCRP Purpose

Marking the 10-year anniversary of the CBCRP, advisory Council members recently reviewed and updated the mission statement to reflect the intent and actions that drive the nation's largest state-funded research entity for breast cancer research. The revisions followed extensive attention to the achievements that have occurred, hope for the future, and the need to aggressively fund the potential for breakthrough research with broad-based participation, awareness, and support.

The revised mission statement reminds us why we are committed to breast cancer research—on behalf of the people of California who make the CBCRP grants a reality, and the women, families and communities who endure the impact of breast cancer every day.

> ***Our mission is to eliminate breast cancer by leading innovation in research, communication, and collaboration among California's scientific and lay communities.***

CBCRP Co-Sponsors Two Events with the Susan Love, MD Breast Cancer Research Foundation

The CBCRP is joining with the Susan Love, MD Breast Cancer Research Foundation to sponsor the Breast Cancer Course for Researchers and the Intraductal Approach to Breast Cancer. The Breast Cancer Course for Researchers will cover major areas of breast cancer research so that scientists can gain a broad perspective. The Intraductal symposium provides a forum for exchanging research results and methods on the intraductal approach to studying breast cancer. Detailed information and registration is available on the Susan Love, MD Breast Cancer Research Foundation Web site at http://www.susanlovemdfoundation.org.

New Web Site

We are proud to announce the launch of our new Web site. We designed our new site to be more user-friendly while still giving you access to research reports, publications, and program updates. We have added a search feature that makes finding research much easier. Come see the changes at http://www.cbcrp.org.

Tax Check-Off results for 2002

The results are in! Over 65,000 Californians donated to the California Breast Cancer Tax Check-Off fund and helped us to raise $736,040 in 2002. Donations to the fund have increased by $113,000 over 2001—that is enough to fund a new IDEA grant or support a postdoctoral fellow. In an era of declining revenues, we are grateful to the taxpayers of California for helping us to continue funding research in our quest to eliminate breast cancer.

Recent CBCRP Publications

(These and all other publications are available on the CBCRP Web site.)

Call for Applications, Cycle IX

Application Packet for Cycle IX

Cycle VIII 2002 Awards

2002 Grant Administration Manual

2002 Advances in Breast Cancer Research

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Vice Chair, Sandy Walsh, *advocate*

A. Elaine Ashby, M.D., *scientist/clinician*
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Vicki Boriack, *advocate*
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M. Ellen Mahoney, M.D., F.A.C.S., *non-profit health organization representative*
Debra Oto-Kent, M.P.H., *advocate*
Jacqueline Papkoff, Ph.D., *private industry representative*
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What is the California Breast Cancer Research Program?

In 1993, California breast cancer activists joined forces with scientists, clinicians, state legislators, and University of California officials to catapult the state into national leadership for breast cancer research. The activists, most of them women who had survived or currently had breast cancer, were impatient with the slow pace of progress against the disease. With their allies, they wrote and won passage of statewide legislation to push breast cancer research in new, creative directions. The California Breast Cancer Act, introduced by then-Assemblywoman Barbara Friedman, increased the tobacco tax by two cents a pack, with 45 percent of the proceeds going to what was then, and still is, the largest state-funded breast cancer research effort in the nation, the California Breast Cancer Research Program (CBCRP). Funded primarily by the tobacco tax, and supplemented with taxpayer donations designated on state income tax returns and private contributions, CBCRP has provided nearly $135 million in research funds since 1995. In 2002, the CBCRP awarded over $15 million for 68 single- and multiple- year grants at 22 California institutions.

The CBCRP is under the direction of the University of California, Office of the President in Oakland. Our 16-member Breast Cancer Research Council includes scientists, clinicians, representatives of industry and non-profit health organizations, and breast cancer advocates. The Council provides vision, sets research priorities and recommends how we invest our funds in research.

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