



THE JOHNS HOPKINS  
WOMEN'S HEALTH  
P O R T F O L I O S

BREAST HEALTH 1996

THE NORMAL BREAST  
CANCER OF THE BREAST  
CANCER PREVENTION  
BREAST PAIN  
BENIGN CONDITIONS  
COSMETIC SURGERY

# INTRODUCTION

**T**housands of women come to The Johns Hopkins Medical Institutions each year to have their breasts checked, either by manual examination, mammography, or biopsy. The goal of Hopkins medical providers for every woman who walks in the door is to maximize her breast health, thus minimizing her risk of losing a breast, or her life, to cancer.

To help us achieve this goal, the editors of *Johns Hopkins Women'sHealth* have published this *Women's Health Portfolio* on breast health. Why did we choose breast health for the subject of this book? Because, in 1995 alone, 182,000 new cases of breast cancer were diagnosed and 46,000 women died of the disease. Because breast cancer is the leading cause of death for women between the ages of 35 and 54. Because the breast is the most common site of new cancers in women. And because it is the leading cause of death for African-American women, even though breast-cancer mortality is falling for white women.

Fortunately, this cancer can be detected at an early and treatable stage. A mammogram can discover it up to two years before it can be found by breast self-examination or clinical exam. Even so, only 40% of American women have regular mammograms.

The Johns Hopkins approach to breast health is three-pronged: doctors and nurses examine and treat patients; scientists evaluate research findings for new diagnostic tools and therapies; and scientists develop new public-health strategies for preventing breast problems.

To this equation, you must add a fourth factor—your own personal commitment. Doctors, nurses, and scientists are just part of the solution. You must be your own health advocate and work with your individual health-

care provider in protecting your breast health.

This publication can be an important part of your education and empowerment. Within it you'll find critical information about breast cancer and health. Our experts provide you with tools to effectively communicate with your health-care provider. They tell you how to make sure the technologist performing your mammogram is trained to prevent damage to breast implants. Cancer-prevention strategies, like diet and exercise, are discussed in great detail.

**Section I** of this book describes normal breast structure and function.

**Section II** deals with breast cancer—genetics, risk factors such as obesity and environmental estrogens, new techniques for detection and treatment, and psychological issues. You will read about such experimental treatments as shark cartilage, which may prevent the growth of blood vessels that supply tumors. And much more.

**Section III** gives details on breast pain, benign breast disease, and cosmetic surgery; it explains a new scar-free

breast-augmentation technique.

**Section IV** is rich in self-help advice about preventing breast problems through nutrition, exercise, and healthy lifestyle.

The appendix offers tips on breast self-examination and how to obtain the medical information you need. It lists breast-care resources and organizations and includes answers to common questions about breasts.

We offer you a chance to stay on top of issues affecting your breasts and other aspects of women's health by subscribing to the monthly *Johns Hopkins Women'sHealth* newsletter. Each issue contains new developments and practical information you can use today to maintain and even improve your well-being.

*Every woman  
is capable of  
improving  
the quality  
of her life  
by becoming  
an advocate  
for her own  
physical  
and mental  
health.*

*—philosophy of  
Johns Hopkins  
Women'sHealth*

# 1995's SIGNIFICANT FINDINGS IN BREAST HEALTH

**E**very year, our knowledge about the breast and breast cancer grows. This past year was no different, except perhaps for the mounting confusion over whether hormone replacement therapy (HRT) increases a woman's risk of breast cancer. This publication brings you up-to-date on HRT and other major reports of the year—and takes you over the horizon to see what is coming. Here are a few highlights from 1995:

■ After ten years of research, **lumpectomy plus radiation** in women with Stage 1 or 2 breast cancer was found to be as effective a means of prolonging life as mastectomy (see page 12).

■ **Positron emission tomography (PET) scans**, an imaging technique, may be able to show a doctor, early in treatment, whether a tumor is shrinking in response to chemotherapy so that a drug regimen can be modified accordingly (see page 14).

■ One research report says that **HRT** leaves women at higher risk for breast cancer. Another says it does not. The answer may have to wait for the completion of a ten-year study from the National Institutes of Health, begun in 1993, that will report the impact of HRT on cancer, heart disease, and osteoporosis. Preliminary results of the study, involving more than 150,000 women, will be available in five years (see page 5).

■ **Isothiocyanate**, a chemical found in broccoli, Brussels sprouts, cabbage, and other cruciferous vegetables, could fight cancer. Researchers found a shrinkage in the size of mammary tumors in rats and mice who received isothiocyanate (see page 31).

■ Enrollment of women in the Breast Cancer Prevention Trial (BCPT), a research effort assessing the preventive effect of the drug **tamoxifen**, has resumed after being halted because of concerns about it causing an increased risk of endometrial cancer. The study will include 16,000 women older than 35 who are at high risk for breast cancer (see page 16).

■ In 1994, scientists discovered the **BRCA1** gene, which has been linked to breast cancer. Researchers first thought the gene was associated only with a rare form of breast cancer that runs in families. Now, they report that women with breast cancer and no family history of the disease have certain abnormalities in their cancer cells related to the same gene. The discovery could lead to a test that will detect a genetic link to breast cancer for all women—and men (see page 4).

The appendix contains an extensive bibliography that will lead you to other readings about these important issues, and more.