Susan Blumenthal, M.D., M.P.A.
The Assistant Surgeon General and Deputy Assistant Secretary for Health reviews the latest findings on diagnosis, prevention and treatment in “8 Things You Need to Know About Breast Cancer” (page 118). “The Clinton administration is waging an all-out assault against breast cancer that is saving lives,” she says.

Judith Newman
“Vanity of vanities, all is vanity may be an ancient proverb, but it’s the last thing a man wants to believe about himself,” says Newman, who exposes the opposite sex’s obsession with looks in “He’s So Vain” (page 152). Newman is a contributing editor at Allure and has an upcoming story in New York magazine.

Bruno Gaget
This French-born photographer has made a name for himself as a fashion, beauty and celebrity photographer for Vogue and Self. This month, we feature his work in “Your True Colors” (page 182), a guide to the stronger, bolder makeup shades that are the season’s hot sellers. Gaget has a studio in New York City.

Andrea Rock
In “How Private Is Your Private Life?” (page 144), this award-winning investigative journalist (shown here with son Chad) uncovers the myriad ways criminals can access your personal files. “The technological advancements that have made communication easier have similarly made it easier to spy on others,” says Rock, a senior writer at Money magazine.

Sharon W. Linsker
These days, women have more options in the workplace, says Linsker, author of “The New Rules for Getting Ahead” (page 92). “Many companies now offer new policies that provide greater job flexibility without requiring you to make significant sacrifices.”
THINGS YOU NEED TO KNOW ABOUT BREAST CANCER

By Susan J. Blumenthal, M.D., M.P.A.

For the first time in recent history, the death rate from breast cancer is down—6.3 percent since 1991—most likely because of increased early detection and treatment advances. Even so, this year in America, one woman will be diagnosed with breast cancer every three minutes, and more than 40,000 women will die from the disease. These advances can help keep you off those lists:

1. It may be three separate diseases.

   We finally may know why certain treatments work well for some women but not for others. Breast cancer is now considered to be at least three diseases. The first type, which is slow-growing and may never leave the breast, may account for many of the 30,000 in situ breast cancers diagnosed this year. The second and most common type, called invasive cancer, is believed to be moderately aggressive but can still take ten to fifteen years to move beyond the breast into the lymph nodes. The third and most aggressive type can appear even between regular mammograms and is most likely to metastasize, or spread to other areas of the body.

   Researchers are using this information to study differences between breast-cancer patients at the cellular level. If these characteristics can be identified early, women with certain markers can be targeted for the most aggressive treatment, while others can choose conservative options.

2. Estrogen's starring role

   The female hormone estrogen has taken center stage in the search for what causes breast cancer. Women with the greatest lifetime exposure to estrogen—early onset of menstruation, never having children or having a first child (continued on page 122)
GETTING THE LATEST ADVANCES TO EVERYONE

Many women do not have sophisticated medical in-vestigations made at their first breast self-exam. In-creases in the number of women who have been screened for breast cancer are coming from the National Breast Cancer Screening Study (NBCCS), a project of the American Cancer Society. The study has found that screening can lower the death rate from breast cancer.

The study also found that after age thirty, and late onset of menopause—appear to be at higher risk. Scientists are testing ways to lower estrogen production in high-risk women.

There is still no conclusive research on breast cancer and hormone replacement therapy (HRT). But one large Harvard study now suggests that women who take HRT for more than ten years have an increased risk of dying from breast cancer, while women who take HRT for less than ten years might actually have a decreased risk. Still, a woman’s chance of dying from heart disease is more than five times greater than dying from breast cancer, and HRT lowers that risk. Each woman and her doctor must evaluate her own risk factors when considering HRT.

An international panel that reviewed more than fifty studies on oral contraceptives and cancer risk did not find a strong link between breast cancer and the pill, which contains estrogen. There was a small increase in risk for women who stopped taking the pill during the past ten years but still take it, but their breast cancer tended to be less advanced than women who never used the pill. The reviewers found no increased risk for women ten years after they stopped taking the pill.

Genes: Less risk than we thought

Mutations on the BRCA1 and BRCA2 genes may not be as strong a predictor of risk as they were once considered. Several recent studies conclude breast-cancer risk is considerably higher for women with mutations (over 50 percent compared to 13 percent for women without the mutations). But this number is less than the 85 percent risk found in previous studies that evaluated women with the mutations who had strong family histories of the disease. However, remember that at least 90 percent of women who develop breast cancer don’t have known mutations on these genes. So a genetic test cannot tell you that you won’t get the disease—it can only tell you if you’re more likely to develop it.

The National Action Plan on Breast Cancer (NAPBC), a public-private partnership coordinated by the U.S. Public Health Service’s Office on Women’s Health, has produced a video about the pros and cons of genetic testing, which should be available through your physician by the end of the year.

4 The anticancer lifestyle

New research suggests cancer-fighting antioxidants (and other potentially beneficial compounds) found in a diet rich in fruits and vegetables might offer more protection than a single cancer-fighting nutrient taken as a supplement. Other studies continue to confirm the value of antioxidants such as vitamins A and E and selenium, which protect cells against damage from free radicals.

Now, new research is indicating that free-radical damage may lead to the most aggressive tumors, possibly triggered by diet or environmental factors. Tests are being developed to assess a woman’s risk by measuring these molecular changes.

A new study suggests that three months after switching to a low-fat diet combined with a 10,000 mg fish-oil supplement (omega-3 fatty acids), women actually change the type of fatty acids stored in their breast tissue—which may decrease their risk. Also, scientists report that a low-fat, high-carbohydrate diet appears to decrease breast density, making mammograms more effective.

Other recent research that examined the exercise habits of more than 25,000 women suggests that regular physical activity decreases risk. More research is needed on diet, exercise and other lifestyle factors, but the bottom line is that a combination of healthy habits still offers the best strategy (continued)
for weight maintenance, stress reduction and overall good health.

At least fifty studies show that alcohol may play a role in breast-cancer risk, and a startling recent one suggests that women in their thirties who consume two or more alcoholic drinks per day may have an 80 percent increased risk. The culprit, once again, may be estrogen. Alcohol appears to significantly increase estrogen levels in the blood. The effect of alcohol was most pronounced among women with advanced breast cancer, suggesting that alcohol may make tumors grow faster.

New research also suggests that smoking increases a woman's risk for breast cancer. One study indicates that some women may have a genetic susceptibility to the carcinogens in cigarettes; others suggest smoking alters certain hormone levels, which may affect a woman's risk.

New screening technologies

Until we find a way to prevent or cure breast cancer, early detection remains a woman's best hope for beating this disease. The National Cancer Institute (NCI) says regular mammograms can reduce the death rate from breast cancer by about 30 percent in women over fifty and about 17 percent in women ages forty to forty-nine. They recommend that women get tested every one to two years. The Clinton administration is encouraging private insurance carriers to cover annual mammograms for women forty and over.

Still, today's mammograms miss about 15 percent of all breast cancers. And almost three out of four lesions they do find are benign, putting women through a tense time and painful diagnostic procedures, such as biopsies. A variety of new imaging technologies, used in combination with mammograms, are providing a more accurate picture. High-definition ultrasound has been approved by the Food and Drug Administration (FDA) for use along with mammograms, because it can show more details of some lesions.

Just this spring, the FDA approved a new test called Miraluma breast imaging, in which a special camera photographs the breast tissue after the patient is injected with an imaging agent that is thought to accumulate in malignant cells. Miraluma imaging may be better than mammograms at detecting some tumors because it is unaffected by breast density. Positron emission tomography (PET) scans are currently being tested for detecting tumors in dense breast tissue as well as tumors that have metastasized.

Computers have also found their way into breast imaging. One technique being studied is digital mammography, in which a computer records the X-ray image and can highlight possible tumors.

Kinder, gentler biopsies

In the past, when mammograms detected suspicious areas, surgeons had to make biopsy incisions that usually resulted in discomfort and scarring. The technology that is rapidly replacing the surgeon's knife is needle biopsy, with small punctures that heal much faster with less scarring. The procedure is available in many major medical centers, and clinical trials are evaluating the results.

If cancer is diagnosed, surgeons often must remove a number of lymph nodes under the armpit to determine if the disease has spread. This procedure can cause pain and swelling in the arm. A promising new technique called sentinel node biopsy is designed to find the first node in the cancer's path as it leaves the breast and enters the lymph system. Doctors inject a blue dye and a radioactive tracer that "lights up" the sentinel node, which is then removed and tested for cancer cells. Studies have shown that if this node is free of cancer, the remaining nodes usually are, too. This technique is now available at major medical centers.

7 Top trends in treatment

Conventional cancer treatments work by poisoning or radiating cells, which causes side effects. Scientists are seeking ways to block angiogenesis, the blood flow that tumors need for sustenance. Researchers are also investigating monoclonal antibodies and vaccines to boost the immune system to fight cancer.

While breast-conserving lumpectomy is often used for small tumors, women with very large tumors still need mastectomies followed by chemotherapy to kill any remaining cancer cells. But new research suggests that, in some women, chemotherapy before surgery can actually shrink the tumors enough so that a lumpectomy can be performed. In one test group, 80 percent of the tumors shrank to at least half their original size. Researchers followed more than 1,500 women for more than six years and found that survival rates were the same for those who received chemotherapy before and after surgery—but many of the women who got chemo first had less-invasive operations.

Bone-marrow transplants—once reserved for women with late-stage breast cancer—are now being performed on women at earlier stages of the disease. The transplants, which may be more effective when the disease is still localized, are designed
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8 THINGS YOU NEED TO KNOW

Continued

to improve the body's resilience to high-dose chemotherapy.

8 Preventing and detecting recurrence

A study found that early-stage patients who took tamoxifen pills could reduce the risk of a recurrence or the development of a new breast tumor by 40 percent. This year, NCI recommended limiting the use of tamoxifen to a five-year course because the benefits do not improve with longer treatment and side effects increase, including the risk of uterine cancer.

Also, the FDA recently approved a new blood test to detect a possible recurrence. It measures the level of the antigen CA 27.29, which increases as breast cancer develops. Since false results can occur, patients also must be monitored carefully by other methods such as mammograms. This antigen test is not being evaluated for use in detecting initial cancers because of the high number of false readings.

As we stand on the threshold of a new century, with increased national commitment, awareness and resources, the hope and promise of finding the causes of breast cancer, strategies to prevent it and a cure may be within our reach. We have made the fight against breast cancer a top national health priority. Federal government support for breast-cancer programs has grown to over $600 million this year, up from approximately $90 million in 1990. The Clinton administration has also proposed putting an end to "drive through" mastectomies, guaranteeing a forty-eight-hour hospital stay for the procedure when medically indicated. Recent legislation protects those with group-insurance policies from discrimination based on preexisting conditions or genetic tests.

While there's more work to be done, real progress has been made, measured in women's lives saved—that recent dip in the death rate from breast cancer.

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