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Latest News in Breast Cancer Research

*Highlights from the 2010 San Antonio
Breast Cancer Symposium*

Editors

Generosa Grana, MD

Robert Wood Johnson School of Medicine
Voorhees, New Jersey

Larissa Korde, MD, MPH

Fred Hutchinson Cancer Research Center
Seattle, Washington

Lidia Schapira, MD

Harvard Medical School
Boston, Massachusetts

Learn about:

- Treatment advances in breast cancer
- Medications on the horizon
- Managing side effects
- Breast cancer resources



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Contacting CancerCare

National Office

CancerCare
275 Seventh Avenue
New York, NY 10001

info@cancercares.org
1-800-813-HOPE (4673)
www.cancercares.org

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Generosa Grana, MD

Director, Cooper Cancer Institute, Cooper University Hospital
Associate Professor of Medicine
University of Medicine and Dentistry of New Jersey
Robert Wood Johnson School of Medicine
Voorhees, New Jersey

Larissa Korde, MD, MPH

Assistant Professor, Division of Medical Oncology
University of Washington School of Medicine
Assistant Member, Public Health Sciences Division
Fred Hutchinson Cancer Research Center
Seattle, Washington

Lidia Schapira, MD

Assistant Professor of Medicine
Harvard Medical School
Staff Oncologist, Gillette Center for Breast Oncology
Massachusetts General Hospital
Boston, Massachusetts

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This special edition of the CancerCare Connect® booklet series highlights cutting-edge research presented at the 2010 San Antonio Breast Cancer Symposium, which took place December 8–12 in San Antonio, Texas.

Please note: Some of the treatments discussed are still in the very early stages of research and may not be available to the general public outside of a clinical trial.

The information contained in this booklet is intended for discussion with your doctor. He or she can let you know whether these advances affect your treatment plan and whether a clinical trial is right for you.

Early-Stage Breast Cancer

Researchers reported on a number of different treatment options for women with early-stage breast cancer. In patients with HER2-positive tumors who received chemotherapy before surgery, combining the targeted treatments trastuzumab (Herceptin) and lapatinib (Tykerb) was found to be more effective than using one of the targeted treatments alone. Another combination of targeted treatments (trastuzumab and pertuzumab) and standard chemotherapy (docetaxel [Taxotere]) was also encouraging. Researchers believe that, for certain groups of women, it may be possible to refine treatment in the future and leave out docetaxel, possibly avoiding unnecessary side effects. Researchers were pleased to learn that, for some women with early-stage breast cancer,



less aggressive treatments such as lumpectomy and a single radiation treatment given during surgery could benefit women. And a clinical trial showed that capecitabine (Xeloda) may reduce the chances of recurrence in women who have faster growing breast tumors, such as triple-negative breast cancer. These studies and others are described in more detail here.

Benefits of Newer Hormone Treatments for Early-Stage Breast Cancer

According to the results of a clinical trial, anastrozole (Arimidex and others) and exemestane (Aromasin and others) appear to be equally effective in treating women who have hormone receptor-positive early-stage breast cancer. More than 7,500 postmenopausal women with hormone receptor-positive breast cancer were treated with either anastrozole or exemestane for five years. The time it took for the cancer to relapse was the same with both drugs. (A relapse is when cancer symptoms return after a period of improvement.) Also, there seemed to be no survival difference between the drugs.

WHAT PATIENTS NEED TO KNOW

Because anastrozole and exemestane appear to be equally effective, doctors may choose one over the other based on their side effects and cost in a given patient. Both drugs are approved treatments for postmenopausal women with early-stage breast cancer.

These medications belong to a class of hormone treatments known as aromatase inhibitors. Aromatase inhibitors block the action of a substance called aromatase, which is needed for the production of estrogen. These drugs are intended only for

postmenopausal women. That's because before menopause, a woman's ovaries make so much estrogen that limiting the action of aromatase would not make much difference.

Targeted Treatment for Early-Stage HER2-Positive Breast Cancer

Trastuzumab and Lapatinib

Trastuzumab and lapatinib are proving to be effective treatments for women with early-stage HER2-positive breast cancer. The results are from two clinical trials in which women with early-stage breast cancer were treated with either trastuzumab or lapatinib or both. These medications are targeted treatments. Rather than killing both healthy and unhealthy cells, as chemotherapy does, targeted treatments attack cancer cells primarily, sparing healthy tissues and causing fewer serious side effects.

In the GeparQuinto study, nearly 600 women with HER2-positive breast cancer were treated with either trastuzumab or lapatinib. All of the patients also received chemotherapy and then surgery. The chemotherapy contained epirubicin (Ellence and others), cyclophosphamide (Cytoxan and others), and docetaxel.

There was no sign of cancer in the breast in 50 percent of those who received trastuzumab, compared with 35 percent of those who received lapatinib. Of the women who received lapatinib, 35 percent stopped treatment because of severe diarrhea.

In the NeoALLTO study, more than 450 women with HER2-positive breast cancer received trastuzumab, lapatinib, or both. In addition, these patients were treated with the anti-cancer drug paclitaxel (Taxol and others) and then surgery.

There was no sign of cancer in the breast in more than 50 percent of those who received both lapatinib and

trastuzumab, compared with 30 percent of those who received trastuzumab and 25 percent of those who received lapatinib. Again, more women treated with lapatinib experienced severe diarrhea than did those who were treated with trastuzumab (more than 20 percent versus two percent).

WHAT PATIENTS NEED TO KNOW

These results show that combining trastuzumab and lapatinib (in addition to chemotherapy) may prove to be more effective than using one of the drugs alone when treating HER2-positive breast cancer. In addition, some researchers believe that in the future, targeted treatments may help women with HER2-positive breast cancer avoid aggressive surgery. However, further studies with these medications are needed to find out whether they can extend the lives of these women.

Lapatinib and trastuzumab both target the HER2 protein but in different ways. Trastuzumab attaches to the HER2 protein to block its activity. On the other hand, lapatinib enters cells to block HER2 signals from there. Both methods work to block HER2 and tumor growth and in fact may work together to improve the result.

Trastuzumab and Pertuzumab

A newer targeted drug called pertuzumab also appears to be a promising treatment when combined with trastuzumab and standard chemotherapy. In a clinical trial, known as the NEOSPHERE study, more than 400 women with early-stage HER2-positive breast cancer received one of the four following treatments before surgery:

- Trastuzumab and docetaxel
- Trastuzumab, pertuzumab, and docetaxel
- Trastuzumab and pertuzumab
- Pertuzumab and docetaxel

The best results were seen with trastuzumab, pertuzumab, and docetaxel. There was no sign of cancer in the breast in 46 percent of the women treated with these three drugs. That's compared with 29 percent who received trastuzumab and docetaxel, 24 percent who received pertuzumab and docetaxel, and 17 percent who were treated with trastuzumab and pertuzumab. Patients who received the combination of trastuzumab and pertuzumab, with or without docetaxel, did not experience severe diarrhea or skin rash. However, 45 percent of those who received trastuzumab and pertuzumab in combination with docetaxel did have severe neutropenia, a low white blood cell count that can increase the risk of infection.

WHAT PATIENTS NEED TO KNOW

Researchers are so encouraged by these early results that the combination of trastuzumab, pertuzumab, and chemotherapy is being studied further in clinical trials. The results of a clinical trial of this treatment in women with metastatic HER2-positive breast cancer (cancer that has spread from the breast to other parts of the body) are expected later this year. The fact that nearly 20 percent of these patients responded to treatment with just trastuzumab and pertuzumab was especially interesting to researchers. They believe that in the future, some women with breast cancer might be effectively treated with targeted treatments but no chemotherapy, possibly avoiding unnecessary side effects.

Bevacizumab for Early-Stage HER2-Negative Breast Cancer

Another study showed that adding the targeted drug bevacizumab (Avastin) to chemotherapy given before surgery did not do a better job of shrinking tumors in women with early-stage HER2-negative breast cancer than chemotherapy alone. Nearly 2,000 women took part in a

clinical trial, the first to evaluate the use of bevacizumab in combination with chemotherapy given before surgery for women with early-stage breast cancer. Regardless of whether patients received chemotherapy alone or chemotherapy plus bevacizumab, there was no sign of cancer in the breast in about 15 percent to 18 percent of the women. However, women with triple-negative breast cancer seemed to benefit from treatment with bevacizumab. There was no sign of cancer in the breast in around 40 percent of the women with triple-negative breast cancer who received bevacizumab.

WHAT PATIENTS NEED TO KNOW

Previous studies showed that bevacizumab was a promising treatment for women with metastatic breast cancer. So



researchers were hoping that the same would be true for women with early-stage HER2-negative breast cancer, although that was not the case. However, studies such as this one often help researchers change the direction of their search for effective treatment options. And sometimes, such studies may identify a certain group of people who might benefit from the new treatment. In this case, bevacizumab may prove to be an effective way to treat women with triple-negative breast cancer.

In December 2010, the U.S. Food and Drug Administration (FDA) recommended that bevacizumab not be used to treat women with metastatic breast cancer. The drug, the FDA said, has not been shown to be safe and effective for these women. What role this drug will play remains to be defined. Researchers are now trying to identify the group of patients for whom bevacizumab may be most beneficial.

Mixed Results With Zoledronic Acid for Breast Cancer

Two major clinical trials studying the use of the bone-strengthening drug zoledronic acid (Zometa) to treat women with breast cancer have reached very different conclusions. In the updated results of the ABCSG-12 clinical trial, the use of zoledronic acid appeared to help prevent a recurrence (return of cancer) and extend the lives of women with breast cancer, even two years after they stopped receiving hormone therapy.

But in the clinical trial known as the AZURE study, zoledronic acid—when added to chemotherapy—did not seem to be an effective way to prevent a recurrence or extend the lives of women with breast cancer. However, researchers did learn that zoledronic acid improved the survival by nearly 30 percent in older women who had gone through menopause at least five years earlier.

WHAT PATIENTS NEED TO KNOW

One possible explanation for the differences between these two studies focuses on whether or not the women were in menopause. In the AZURE study, zoledronic acid seemed to have more of an effect on women who were postmenopausal. In the ABCSG-12 study, all of the women received a drug named goserelin (Zoladex), which blocked hormone production and caused them to become menopausal. Some researchers believe that postmenopausal women may have better results with zoledronic acid than other women because they have lower levels of estrogen.

It is important to remember that zoledronic acid remains an effective way to treat bone loss among women with metastatic breast cancer. This drug has also been shown to be an effective treatment for osteoporosis in women without breast cancer. But for now, zoledronic acid is not

routinely recommended to prevent breast cancer recurrence, although some doctors may consider using it to reduce the risk of bone loss in postmenopausal women. Ongoing clinical trials should show whether zoledronic acid is an effective treatment for preventing recurrence in women with breast cancer.

Less Aggressive Local Treatment Is Still Effective for Early-Stage Breast Cancer

Less aggressive treatments for women with early-stage breast cancer may be just as effective as, and in some cases more effective than, aggressive treatments, according to the results of two different clinical trials. These less aggressive treatments also may be more convenient and may enhance the quality of life of these patients.

In the first study, women with early-stage breast cancer who were treated with breast-conserving surgery (lumpectomy) lived between 20 percent and 30 percent longer than those who were treated with mastectomy (surgery to remove the breast). Researchers point out that the overall health of these patients may have played a part in the improved survival with breast-conserving surgery. However, these very encouraging results warrant further study of breast-conserving surgery in the treatment of women with early-stage breast cancer.

In the second study, the use of a single radiation treatment given during surgery appears to be equally effective as three to six weeks of radiation treatment given after surgery in preventing the recurrence of breast cancer. The radiation treatment given during surgery is called targeted intraoperative radiotherapy (TARGIT). The radiation treatment given after surgery is called external-beam radiotherapy (EBRT). Four years after treatment, there was

no difference in outcome between the women who received TARGIT and those who received EBRT.

WHAT PATIENTS NEED TO KNOW

Researchers are pleased with these benefits of less aggressive treatments for women with early-stage breast cancer. Treatments such as lumpectomy and TARGIT may be considered effective alternatives to mastectomy and EBRT for some women with early-stage breast cancer.

Capecitabine and Chemotherapy for Early-Stage Breast Cancer

Women with early-stage breast cancer who were treated with standard chemotherapy and the drug called capecitabine lived longer than women who received the standard chemotherapy alone. Five years after treatment, 94 percent of patients who received capecitabine were alive, compared with 92 percent of those who did not, according to the results of a clinical trial. The chemotherapy drugs included doxorubicin, cyclophosphamide, and docetaxel.

Almost 50 percent of the patients who were treated with capecitabine experienced stomatitis (inflammation of the inside of the mouth), compared with 30 percent of those who did not receive capecitabine. Also, more women who received capecitabine developed hand-foot syndrome than women who did not receive capecitabine (46 percent versus 10 percent). (Hand-foot syndrome is a condition that causes pain, swelling, numbness, tingling, and redness of the hands and feet.)

WHAT PATIENTS NEED TO KNOW

Capecitabine did not significantly decrease the chances of recurrence of breast cancer in this study. However, many researchers believe that it may reduce the chances

of recurrence in women who have faster growing breast tumors, such as triple-negative breast cancer. About one-third of the patients in this clinical trial had triple-negative breast cancer. Although the use of capecitabine and standard chemotherapy helped women with faster growing breast tumors live a bit longer, it was not a big improvement. These patients will be followed over the next year.

Locally Advanced and Metastatic Breast Cancer

Some exciting new developments for advanced and metastatic breast cancer were reported at this year's symposium. For the first time in a large clinical trial, a single drug, eribulin (Halaven) has extended the lives of women with resistant breast cancer.

Another medication, fulvestrant (Faslodex), now appears to be beneficial as a first-line treatment option for women with advanced breast cancer. Women whose cancer responded to previous hormone treatments seem to benefit more from everolimus (Afinitor) and tamoxifen (Nolvadex and others) than those whose cancer never responded to previous hormone treatments.

A new type of drug called denosumab (Xgeva), which is easier to give and safer for kidney function than zoledronic acid (Zometa), was shown to be an effective alternative to zoledronic acid for delaying or reducing bone complications in women with advanced breast cancer that has spread to the



bone. Combining cetuximab (Erbix) and cisplatin (Platinol and others) was reported to be a promising treatment option for women with triple-negative breast tumors.

Denosumab Strengthens Bone in Women Being Treated for Advanced Breast Cancer

A major clinical trial compared two bone-strengthening drugs in more than 2,000 women with advanced breast cancer and bone metastases (breast tumors that had spread to the bone).

Patients who received denosumab lived five months longer than those who received zoledronic acid before experiencing a bone complication, such as fracture (break), severe spinal cord injury, or the need for radiation or surgery to bone (32 months versus 27 months). However, there appeared to be no survival difference between the two drugs. The women treated with denosumab reported that pain interfered less in their daily activities. Their overall quality of life improved compared with patients who received zoledronic acid.

WHAT PATIENTS NEED TO KNOW

Denosumab was approved by the FDA in November 2010 to help prevent bone complications in people with bone metastases from tumors (except for multiple myeloma). Zoledronic acid has been considered the standard drug in the prevention of bone loss in people with cancer.

Denosumab appears to be an effective alternative to zoledronic acid to delay or reduce bone complications in women with advanced breast cancer that has spread to the bone. In addition, denosumab may prove to be a more convenient treatment option. Denosumab is given as an injection under the skin, whereas zoledronic acid is given

through a vein. Also, when patients take denosumab, there is no need for doctors to closely check kidney function and adjust the dose, as is the case for zoledronic acid. To learn whether denosumab can prevent cancer from spreading to other parts of the body at an earlier, more treatable stage, researchers are now studying it in women with early-stage breast cancer.

Eribulin for Drug-Resistant Breast Cancer

A new drug called eribulin may be an effective treatment to extend the lives of women with metastatic breast cancer that no longer responds to initial chemotherapy. In a clinical trial known as the EMBRACE study, women who received eribulin lived for an average of 13.2 months, whereas women who did not receive eribulin lived for an average of 10.5 months. It also took longer for the cancer to continue growing in those who received eribulin than in those who did not (3.3 months versus 2.2 months). All of the more than 750 women who took part in this study had already received between two and five different types of chemotherapy for their resistant breast cancer.

WHAT PATIENTS NEED TO KNOW

This is the first time in a large clinical trial that a single drug has extended the lives of women with resistant breast cancer. Based largely on these encouraging results, the FDA approved eribulin for the treatment of metastatic breast cancer that does not respond to at least two prior forms of chemotherapy for advanced cancer. This new treatment option is also being studied further in women who have received fewer previous treatments for metastatic breast cancer. In the EMBRACE study, patients who had received up to three previous treatments seemed to benefit more from eribulin than those who had received more than three

previous treatments. Researchers are hopeful that eribulin will prove to be an effective treatment of metastatic breast cancer when used before many other options have been tried.

New Treatment Options for Triple-Negative Breast Cancer

Combination Treatment With Iniparib

The new drug iniparib (BSI-201) in combination with chemotherapy appears to be a promising way to extend the lives of women with metastatic triple-negative breast cancer. According to the results of a clinical trial, patients



who received iniparib plus chemotherapy (gemcitabine [Gemzar] and carboplatin [Paraplatin and others]) lived almost five months longer than those who received chemotherapy alone (12.2 months versus 7.7 months). However, in January 2011 the maker of iniparib announced that in a large clinical trial evaluating the drug, iniparib did not improve survival overall.

Although these data have not yet been released, researchers are continuing to study this medication.

WHAT PATIENTS NEED TO KNOW

Some women with metastatic triple-negative breast cancer may still benefit from treatment with the combination of iniparib plus chemotherapy. Many researchers believe that iniparib plus chemotherapy may stop cancer from growing and extend survival when used as a secondary or later treatment in these women. The results of ongoing studies of iniparib in the treatment of women with triple-negative

breast cancer, as well as in people with lung, ovarian, pancreatic, and brain cancers, should shed some light on how best to use this new treatment combination.

Iniparib belongs to a new class of drugs called PARP inhibitors. PARP is short for poly ADP-ribose polymerase. These drugs block a cancer cell's ability to repair itself when damaged by radiation or chemotherapy. PARP inhibitors may make these other treatments more effective.

Cetuximab and Cisplatin

The combination of a newer targeted drug, cetuximab, and a standard cancer drug, cisplatin, seems to be a promising treatment option for women with triple-negative breast cancer. In a clinical trial of nearly 175 patients, the tumor disappeared or shrank by more than half in 20 percent of those who received cetuximab and cisplatin, compared with 10 percent of those who received cisplatin alone. Women who were treated with the combination of drugs lived slightly longer than those who were treated with cisplatin alone (12.9 months versus 9.4 months). It also took longer for the cancer to continue to grow with cetuximab and cisplatin than with cisplatin alone (3.7 months versus 1.5 months). Nearly 15 percent of patients who received the combination treatment developed an acne-like rash, whereas no patients who received cisplatin alone developed a rash.

WHAT PATIENTS NEED TO KNOW

Combining cetuximab and cisplatin is a promising treatment option for women with triple-negative breast tumors. Some researchers believe that postmenopausal women and those receiving secondary treatment for their breast cancer may benefit the most from cetuximab and cisplatin. However, further study is needed to learn how best to use this treatment combination.

Cetuximab has been approved by the FDA for treating people with metastatic colorectal and metastatic head and neck cancers. This medication belongs to a new class of targeted treatments known as monoclonal antibodies. These drugs are designed to stimulate the immune system to attack cancer cells.

Hormone Therapy for Advanced Hormone Receptor-Positive Breast Cancer

Fulvestrant may prove to be more effective than anastrozole (Arimidex and others) in first-line (first-time) treatment of postmenopausal women with hormone receptor-positive metastatic breast cancer. It took longer for the cancer to continue growing in patients who received fulvestrant than in those who received anastrozole (23 months versus 13 months), according to a clinical trial. None of the women in the study had previously received treatment for their metastatic breast cancer. The dose of fulvestrant used in this study was 500 milligrams (mg), which is double the standard dose.

WHAT PATIENTS NEED TO KNOW

With these positive results, fulvestrant now appears to be beneficial as a first-line treatment option for women with advanced breast cancer. In addition, the higher dose of fulvestrant appears to be more effective.

Fulvestrant is an approved treatment for postmenopausal women with hormone receptor-positive metastatic breast cancer that has returned or grown after treatment with tamoxifen or other hormone treatments. Because estrogen receptor-positive cells depend on estrogen for their growth, they can be treated effectively with anti-estrogen hormone treatment, such as fulvestrant.

Combination Treatments for Metastatic Hormone Receptor-Positive Breast Cancer

Two different combination treatments for women with advanced hormone receptor-positive breast cancer were tested in two clinical trials. The combination of everolimus and tamoxifen appears to be a promising combination, whereas AMG 479 plus hormone therapy does not.

Everolimus and Tamoxifen

The combination of a new drug called everolimus and the standard drug tamoxifen appears to be more effective than tamoxifen alone at stopping cancer from growing and extending the lives of women with hormone receptor-positive, HER2-negative metastatic breast cancer. The tumor disappeared, shrank by more than half, or did not continue to grow in 60 percent of the women who received everolimus and tamoxifen, compared with 42 percent of those who received tamoxifen alone. Eighty percent of the women who were treated with everolimus and tamoxifen were still alive 30 months later, compared with 40 percent of those who were treated with tamoxifen alone. All of the more than 100 women who took part in this study had tumors that did not respond or no longer responded to previous hormone therapy.



WHAT PATIENTS NEED TO KNOW

Many researchers believe that everolimus may reverse resistance to hormone treatments such as tamoxifen and perhaps make these treatments even more effective in

fighting cancer. Women whose cancer responded to previous hormone treatments seem to benefit more from everolimus and tamoxifen than those whose cancer never responded to previous hormone treatments. This promising combination treatment will be studied further in women with hormone receptor-positive, HER2-negative metastatic breast cancer that no longer responds to hormone treatments.

Everolimus is used to prevent rejection of organ transplants and to treat advanced kidney cancer. It belongs to a class of targeted treatments called mTOR inhibitors.

AMG 479 and Exemestane or Fulvestrant

The combination of a new drug called AMG 479 and hormone therapy does not seem to be an encouraging treatment option for postmenopausal women who have hormone receptor-positive locally advanced or metastatic breast cancer. More than 150 women with this type of breast cancer took part in a clinical study. There did not seem to be a difference between AMG 479 and hormone therapy (either exemestane [Aromasin and others] or fulvestrant) and hormone therapy alone in stopping the growth of cancer or in improving the effectiveness of hormone therapy. The women in this study all had cancer that had not responded or no longer responded to previous hormone therapy.

WHAT PATIENTS NEED TO KNOW

Researchers were hoping to learn that adding AMG 479 to hormone therapy would offer a treatment alternative to women with resistant breast cancer. Sometimes negative studies like these shed light on future directions in the search for more effective cancer treatments. Early clinical trials using combination treatment with AMG 479 in people with metastatic pancreatic cancer have been promising, suggesting that this new drug may still have a future in cancer treatment.

Preventing Cancer

Many clinical trials study different treatments for women with breast cancer in the hope of finding an effective way to stop its growth. However, sometimes clinical trials focus on possible ways to prevent cancer from developing in the first place. At the 2010 San Antonio Breast Cancer Symposium, researchers offered some promising results with a non-cancer drug that may prevent breast cancer, and possibly other cancers as well. The diabetes drug metformin (Glucophage and others) may prove to be an effective way to prevent triple-negative breast cancer. That's important because there are fewer options available to treat this form of breast cancer. Combining metformin and the targeted cancer treatment erlotinib (Tarceva) killed more cancer cells than either of the drugs alone. They appeared to do so without affecting healthy breast cells.



Diabetes Drug and Breast Cancer

A drug called metformin, used to treat diabetes, may prove to be an effective way to prevent triple-negative breast cancer. Three early clinical trials have shown that metformin, used alone or with the targeted cancer drug erlotinib, may stop this type of breast cancer from growing.

In the first study, the combination of metformin and erlotinib killed more cancer cells than either of the drugs alone. And

the combination treatment appeared to do so without a major effect on healthy breast cells.

In the second study, the use of metformin appeared to prevent triple-negative breast cancer from developing in patients with diabetes. Of 44 patients who took metformin, none of them developed triple-negative breast cancer. Of 46 patients who did not receive metformin, seven of them developed triple-negative breast cancer.

The third study reviewed 11 different cancer studies to learn more about the apparent connection between metformin and the development of cancer in people with diabetes. The studies showed that the risk of cancer was decreased by more than 30 percent in patients who were treated with metformin, compared with other drugs used to treat diabetes. This positive result was not only seen in women with breast cancer but also in people with other cancers, such as pancreatic and liver cancers.

WHAT PATIENTS NEED TO KNOW

Researchers are encouraged by these early results with metformin in reducing the risk of cancer. Further studies are being performed to determine whether metformin can protect people from developing cancer, especially triple-negative breast cancer.

About 15 percent of all breast cancers are triple-negative. This form of breast cancer lacks the receptors, or entryways, for the hormones estrogen and progesterone as well as the HER2 protein. A number of medications are available to block hormones or the HER2 protein from getting into the cell by way of these receptors and causing tumors to grow. But triple-negative tumors do not depend on these substances for their growth, so there are fewer treatment options available.

Managing Side Effects

Clinical trials on managing the side effects of breast cancer and breast cancer treatment have been an important part of research. In the past, survivors of breast cancer who had or were at risk of having lymphedema were advised to avoid heavy lifting.

Now, based on the results of studies reported at the 2010 San Antonio Breast Cancer Symposium, researchers have learned that progressive weightlifting is safe for these women. Furthermore, such exercise may even improve their physical performance and reduce the symptoms of lymphedema in some women



and the development of lymphedema in others. Also reported were early results on a medication called duloxetine, which seems to be a promising treatment option for women who experience joint pain as a result of using aromatase inhibitors.

Exercise for Lymphedema

Recent clinical trials have shown that exercise may be a safe way to reduce the symptoms of lymphedema and to improve the physical performance of women who have been treated for breast cancer. Lymphedema, which may occur when lymph nodes have been removed or damaged during treatment of breast cancer, involves swelling, usually of the arm from which lymph nodes are removed.

The Physical Activity and Lymphedema Trial included nearly 200 breast cancer survivors, some who had lymphedema and some who were at risk of developing lymphedema. Among

the women who already had lymphedema, the symptoms improved more in those who lifted weights twice a week for about a year than in those who did not (29 percent versus 14 percent). In those who were at risk of developing lymphedema, swelling occurred in fewer women who lifted weights than in those who did not (11 percent versus 17 percent). Women who had more than five lymph nodes removed seemed to benefit even more from weightlifting.

WHAT PATIENTS NEED TO KNOW

In the past, survivors of breast cancer who had or were at risk of having lymphedema were advised to avoid heavy lifting. Now, based on the results of studies such as the Physical Activity and Lymphedema Trial, researchers have learned that progressive weightlifting is safe for these women. Furthermore, such exercise may even improve their physical performance and reduce the symptoms of lymphedema in some women and the development of lymphedema in others.

Duloxetine for Joint Pain

Duloxetine (Cymbalta), a drug used to treat people with depression and anxiety, seems to be a promising treatment option for women who experience joint pain as a result of using an aromatase inhibitor. In a small clinical trial, about 60 percent of women who received duloxetine for eight weeks had at least a 30 percent decrease in their joint pain. Seventy percent of the patients who completed all eight weeks of treatment with duloxetine chose to continue taking it.

WHAT PATIENTS NEED TO KNOW

Studies have shown that approximately 50 percent of postmenopausal women with early-stage hormone receptor-positive breast cancer who have been treated with an aromatase inhibitor develop joint pain. So researchers are encouraged by these early results with duloxetine. It is hoped that larger clinical trials will confirm these positive results.

How CancerCare[®] Helps

When you are being treated for breast cancer, you may have many concerns. But the more you learn about what's involved and what to expect, the better you'll feel. CancerCare can help, too, through these free resources:

Counseling Our oncology social workers can speak with you one-on-one to help you find ways to cope with the emotional and practical challenges of cancer. Counseling services are available in person or over the phone.

Support groups Connect with other people who are in a similar situation in our free support groups, led by professional oncology social workers.

Connect Education Workshops Leading experts in oncology provide up-to-date information in these free, one-hour workshops over the telephone. Listen in live to learn about cancer-related issues from the convenience of your home or office. Past workshops are also available as podcasts on our website and on telephone replay 24 hours a day.

Publications Our free booklets and fact sheets offer up-to-date, easy-to-read information on topics such as the latest treatments, managing side effects, and coping with cancer.

Financial help Our staff helps you manage financial concerns and provides referrals. Limited aid also is available to eligible individuals and families for cancer-related costs such as co-payments, transportation to and from treatment, and child care.

Referrals to resources CancerCare can help you learn about other organizations in your community and nationwide that can assist you in finding information and help.

To learn more about how we help, call us at **1-800-813-HOPE (4673)** or visit our website, www.cancercare.org.

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To find out about clinical trials:

Coalition of Cancer Cooperative Groups
www.CancerTrialsHelp.org

National Cancer Institute
www.cancer.gov/clinicaltrials



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The information presented in this patient booklet is provided for your general information only. It is not intended as medical advice and should not be relied upon as a substitute for consultations with qualified health professionals who are aware of your specific situation. We encourage you to take information and questions back to your individual health care provider as a way of creating a dialogue and partnership about your cancer and your treatment.

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