ASCO
American Society of Clinical Oncology

Research Round Up

NEWS FOR PATIENTS FROM THE 2013 ASCO ANNUAL MEETING

ASCO Annual '13 Meeting

ADVANCED CANCER

New Targeted Immunotherapy Is a Promising Treatment for Several Advanced Cancers

A new type of targeted immunotherapy (called MPDL3280A) was able to shrink several different types of cancer, including lung, melanoma, kidney, colorectal, and stomach cancers in patients whose cancer had worsened while receiving other treatments. Immunotherapy is designed to boost the body's natural defenses to fight the cancer. It uses materials either made by the body or in a laboratory to improve, target, or restore immune system function. Specifically, this new treatment targets PD-L1, a protein on the surface of tumor cells that prevents the immune system from fighting the tumor. Basically, this treatment stops PD-L1 from working, which then allows the body's immune system to fight the cancer.

This study included 140 patients with locally advanced cancer (cancer that has spread near where it started) or metastatic cancer (cancer that had spread to other parts of the body) that had worsened while receiving earlier treatments. Overall, 29 out of 140 (21%) patients had their tumors shrink, and the treatment has continued to work for three months to more than 15 months for 26 of these 29 patients. However, this was a small, early study, and larger studies will be needed to confirm that this immunotherapy works well.

What this means for patients: "We are impressed with how often and how long this drug worked for patients with very difficult-to-treat tumors. So far, almost none of the patients that have had tumor shrinkage have had their cancers worsen," said Roy S. Herbst, MD, PhD, Ensign Professor of Medicine and Pharmacology at Yale Cancer Center and Chief of Medical Oncology at Smilow Cancer Hospital at Yale-New Haven in Connecticut. This new treatment is still being researched, and a test to find PD-L1 on the surface of tumors is being developed and studied. It is currently only available through clinical trials. If

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A WORD FROM THE PRESIDENT

Dear Friends,

Welcome to the 2013 American Society of Clinical Oncology (ASCO) Annual Meeting. My theme for this year's meeting and for my term as the President of ASCO is Building Bridges to Conquer Cancer. To me, this theme brings together many of the "bridges" that represent our current needs and challenges in oncology, such as the need for a global oncology community, the need to close the gap in health disparities, the need to connect science with the clinic, and the need to bring the highest quality care to the patient.

Every day I see gaps in connecting proven treatments and preventive measures with underserved populations, and many of our members working with these populations are frustrated with the challenges of bringing what they hear at the Annual Meeting to their practices at home. To help you, the patient, learn about what the latest in high-quality cancer care means for you, ASCO provides summaries of the research highlighted at the 2013 ASCO Annual Meeting in Chicago, Illinois, from May 31 through June 4.

I am excited and encouraged by the progress made in the diagnosis and treatment of cancer. Together, we are *making a world of difference in cancer care.* For more information about cancer, please visit Cancer.Net, ASCO's patient information website.

Sincerely,

Sandra M. Swain, MD, FACP
ASCO President

BREAST CANCER

Two Commonly Used Paclitaxel Chemotherapy Schedules are Equally Effective for Early-Stage Breast Cancer, but One Has Fewer Side Effects

Women with higher-risk, early-stage breast cancer who received weekly chemotherapy with paclitaxel (Taxol) after surgery as part of a clinical trial lived for the same amount of time without the cancer returning as those who received higher doses of the same drug every two weeks (known as dose-dense therapy). However, the researchers found that the women who received chemotherapy every week experienced fewer and less serious treatment-related side effects.

Chemotherapy is the use of drugs to kill cancer cells, which

ADVANCED CANCER

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you are interested in participating in a clinical trial, talk with your doctor for more information.

Dr. Herbst was a recipient of a Conquer Cancer Foundation of ASCO Young Investigator Award in 1997 and a Career Development Award in 1999. ■

What to Ask Your Doctor

- What type of cancer do I have and what is the stage? What does this mean?
- What are my treatment options?
- What clinical trials are open to me?

For More Information: Advanced Cancer

- Guides to Cancer (www.cancer.net/cancer)
- Understanding Immunotherapy (www.cancer.net/immunotherapy)

work by stopping the cancer cells' ability to grow and divide. Drugs like paclitaxel are often given after surgery for breast cancer to kill any cancer cells that may remain in the body. Paclitaxel is usually given to patients either weekly or every two weeks, at a higher dose. Although doctors currently use both treatment schedules, this is the first time researchers have looked at whether they have different results for patients.

To answer this question, more than 2,700 women with node-positive (cancer was found in the lymph nodes at diagnosis) or high-risk node-negative breast cancer that could be removed surgically first received treatment with one of three different schedules of two common chemotherapies, doxorubicin (Adriamycin) and cyclophosphamide (Neosar), and then received either a standard dose of paclitaxel every week for 12 weeks (12 treatments) or a higher dose every two weeks for 12 weeks (six treatments).

The researchers observed that the cancer in 82% of the women who received weekly chemotherapy and 81% of women who received chemotherapy every two weeks had not returned within five years. However, the women who received treatment every two weeks experienced more allergic reactions and greater muscle and bone pain compared with those who received treatment every week. Receiving treatment every two weeks also caused more neurologic toxicity, a common side effect involving numbness, tingling, and pain in the fingers and toes. This side effect potentially could be lessened or reduced by giving only four treatments as is the current practice rather than the six treatments that were given as part of this study.

What this means for patients: "Our results suggest that either treatment plan will have a good effect, but the weekly schedule seems to result in better quality of life for patients, causing less muscle and bone pain and allergic reactions," said lead study author G. Thomas Budd, MD, a medical oncologist at the Cleveland Clinic in Ohio. "The findings provide assurance that women can choose the lower-dose therapy without sacrificing their chances of survival." After a diagnosis of cancer, patients and their families must make a number of decisions about cancer treatment, some of which are more difficult than others. Take time to learn about your treatment options and be sure to ask questions about anything that is unclear. ■

What to Ask Your Doctor

- What type of chemotherapy do you recommend? Why?
- How often will I need to have treatment? For how long?
- How will the treatment be given?
- How will chemotherapy affect my daily life? Will I be able to work, exercise, and perform my usual activities?
- What are the potential side effects of this treatment?
- What can be done to prevent or manage these side effects?

For Early-Stage Breast Cancer, Lymph Node Radiation Therapy Works as Well as Surgery with a Lower Risk of Lymphedema

Results from a recent study show that directing radiation therapy to the underarm lymph nodes works as well as removing the lymph nodes with surgery and is less likely to cause lymphedema for women with early-stage breast cancer. Lymphedema is the abnormal buildup of fluid (lymph) in the arm, causing swelling that can be painful and limit a person's movement. It is a common side effect from both surgery and radiation therapy to the underarm lymph nodes.

Because the first place breast cancer often spreads is the lymph nodes in the underarm, some of these lymph nodes are often removed to look for signs of cancer. This is called a sentinel lymph node biopsy. If cancer cells are found in the sentinel lymph nodes, it is considered a standard part of care to remove more lymph nodes in a procedure called an axillary (underarm)

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For Early-Stage Breast Cancer, Lymph Node Radiation Therapy Works as Well as Surgery

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lymph node dissection.

In this study, 1,425 patients with signs of cancer in the underarm lymph nodes (seen with a sentinel lymph node biopsy) received either an axillary lymph node dissection or radiation therapy to the underarm lymph nodes. Researchers found that with both treatments, the risk of the disease coming back in the underarm lymph nodes was low—less than 1% of those who had an axillary lymph node dissection had the disease come back compared with about 1% of those who had radiation therapy. In addition, both groups of patients were equally likely to live for at least five years after treatment—about 93% of patients in both groups.

When researchers looked at how many patients developed lymphedema, they found a difference between the two groups of patients. In the first year after treatment, 40% of patients who received an axillary lymph node dissection had lymphedema, compared with 22% of those who received radiation therapy. In addition, at five years after treatment, 28% of those who received an axillary lymph node dissection still had lymphedema, compared with 14% of those who received radiation therapy.

What this means for patients: "I am sure these findings will lead many doctors to re-think their strategy for treating patients who have a positive sentinel lymph node biopsy," said lead author Emiel J. Rutgers, MD, a surgical oncologist at the Netherlands Cancer Institute. "Lymphedema is a serious concern for patients and a side effect that can affect their quality of life indefinitely." Although it's not possible to predict who will develop lymphedema, there are steps you can take to help reduce your risk, and the condition can often be managed to help you feel more comfortable. Talk with your doctor for more information about preventing and managing lymphedema. ■

What to Ask Your Doctor

- What stage of breast cancer do I have? What does this mean?
- What are the results of my sentinel lymph node biopsy?
- What treatment plan do you recommend? Why?
- Will I need an axillary lymph node dissection? Radiation therapy?
- What can I do to help avoid lymphedema or manage the condition?

One in Five African American Women with Breast Cancer Have a Genetically Higher Risk of Breast Cancer

In a recent genetic study, researchers found that one in five African American women with breast cancer have an inherited (passed down in the family) mutation (change) in at least one of the 18 genes that are linked with a higher risk of breast cancer. Compared to the general population, African American women are more likely to be diagnosed with breast cancer at a younger age, die from the disease, and have triple-negative breast cancer. Triple-negative breast cancer is a fast-growing and difficult-to-treat cancer that does not have hormone receptors (for the hormones estrogen and/or progesterone) or HER2 receptors (a protein found on some breast tumors). Researchers have suspected that these differences are due to inherited genes linked to breast cancer, but this is the first study to look at all known breast cancer gene mutations, not just *BRCA* genes.

For this study, researchers used genetic information from 249 unrelated African American women with breast cancer to look for mutations in 18 genes using a new genetic test called BROCA. Overall, 56 out of 249 women (22%) had at least one mutation that increases the risk of breast cancer. They also found that the mutations most commonly occurred on *BRCA1, BRCA2, CHEK2, PALB2, ATM,* and *PTEN* genes. In addition, they found that mutations were most common for women with triple-negative breast cancer, with 30% of women with this type having a

breast cancer gene mutation. Also, 27% of women diagnosed before age 45, 49% of women with a second breast cancer, and 30% of women with a family history of either breast or ovarian cancer had mutations in at least one breast cancer gene.

Researchers also found that most of the mutations were unique to each person, meaning that it varied between each family. Other groups of people with a higher inherited risk of breast cancer have specific mutations that are passed through many generations. For example, Ashkenazi Jewish women are known to carry three specific mutations in the *BRCA1* and *BRCA2* genes, which can be easily tested. This study shows that such an approach would not work as well for African American women, though, because multiple tests would be needed to find the variety of mutations in the breast cancer genes.

What this means for patients: "For many years, we've seen breast cancer take a heavy toll on African American women, and this study begins to resolve unanswered questions about what's driving these disparities," said lead author Jane E. Churpek, MD, Assistant Professor of Medical Oncology at the University of Chicago in Illinois. "While larger studies are needed to confirm our results and compare them to other populations, we hope our findings will lead to life-saving genetic screening for African American women with a family history of more aggressive forms of breast cancer." Breast cancer screening for women with a higher risk of breast cancer often differs from screening for the general population. Talk with your doctor about your risk of breast cancer, the screening methods recommended for you, and any steps you can take to lower your risk.

Dr. Churpek was a recipient of a Conquer Cancer Foundation of ASCO Young Investigator Award in 2011. ■

What to Ask Your Doctor

- What is my risk of breast cancer?
- Do I have a higher risk of the disease?
- Should I meet with a genetic counselor to assess my risk?
- If I do have a mutation in a breast cancer risk gene, what are my options to lower my risk?

Ten Years of Tamoxifen Works Better to Lower the Risk of a Breast Cancer Recurrence

A recent study comparing five or 10 years of tamoxifen (Nolvadex, Soltamox) therapy for early-stage, estrogen receptor (ER)-positive breast cancer showed that continuing tamoxifen for longer than five years further lowers the risk of a breast cancer recurrence (return of the cancer) and death. ER-positive breast cancer uses the hormone estrogen to grow and spread. Tamoxifen is a type of hormonal therapy that blocks the effects of estrogen on tumor growth and has been proven to lower the risk of a breast cancer recurrence and lengthen the lives of women with early-stage breast cancer. Currently, the standard length of tamoxifen therapy is five years, and women start it right after finishing surgery or chemotherapy.

This study included 6,953 women in the United Kingdom who had been taking tamoxifen for five years and then either stopped taking the drug or continued for an additional five years. Researchers found that both recurrences and deaths decreased with each year of continuing tamoxifen, and the women with the lowest risk of recurrence were those who took tamoxifen for more than nine years. Among the women who took tamoxifen for 10 years, about 17% had a recurrence, compared with 19% of those who took the drug for five years. Longer treatment also lowered the risk of dying from breast cancer. Researchers estimate that, compared to taking no tamoxifen, taking tamoxifen for 10 years reduces the deaths from breast cancer by a third in the first 10 years after diagnosis and by half in later years.

What this means for patients: "Five years of tamoxifen is already an excellent treatment, but we thought that longer treatment might be even better because women with ER-

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Ten Years of Tamoxifen Works Better to Lower the Risk of Recurrence

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positive breast cancer can have recurrences long after treatment is completed. Until now, though, there have been doubts whether continuing tamoxifen beyond five years is worthwhile," said lead study author Richard G. Gray, MA, MSc, Professor of Medical Statistics at the University of Oxford in the United Kingdom. "This study and a related international study confirm that there is definitely a survival benefit from longer tamoxifen treatment, and many doctors will likely recommend continuing tamoxifen for an extra five years."

The side effects of tamoxifen also increased with longer use. These side effects are similar to menopausal symptoms. They include night sweats, hot flashes, and rare but serious side effects, such as a higher risk of uterine cancer, blood clots, and stroke. In this study, the risk of stroke was not higher for women taking tamoxifen for 10 years, but the risk of uterine cancer was higher. However, the researchers estimate that for every extra uterine cancer that occurs as a side effect of long-term tamoxifen, 30 deaths from breast cancer would be prevented. ■

What to Ask Your Doctor

- What stage of breast cancer do I have? What does this mean?
- What is my hormone receptor status?
- What are my treatment options?
- After treatment is over, what are my options to lower my risk of a breast cancer recurrence?
- What are the risks and benefits of each option?

For More Information: Breast Cancer

- Guide to Breast Cancer (www.cancer.net/breast)
- Cancer Screening (www.cancer.net/screening)
- Genetics (www.cancer.net/genetics)
- What to Know: ASCO's Guideline on Hormonal Therapy for Hormone Receptor-Positive Breast Cancer (www.cancer.net/whattoknow)
- What to Know: ASCO's Guideline on Sentinel Lymph Node Biopsy for Early-Stage Breast Cancer (www.cancer.net/whattoknow)
- What to Know: ASCO's Guideline on Drugs to Lower Breast Cancer Risk (www.cancer.net/whattoknow)
- Understanding Chemotherapy (www.cancer.net/chemotherapy)
- Understanding Radiation Therapy (www.cancer.net/radiationtherapy)
- Menopausal Symptoms (www.cancer.net/sideeffects)
- Managing Side Effects (www.cancer.net/sideeffects)
- After Treatment for Breast Cancer: Preventing Lymphedema (www.cancer.net/preventinglymphedema)

Bevacizumab Lengthens Lives for Patients with Recurrent and Advanced Cervical Cancer

According to a recent study, adding the drug bevacizumab (Avastin) to chemotherapy for advanced or recurrent (cancer that has come back) cervical cancer lengthens patients' lives. Chemotherapy is the use of drugs to kill cancer cells, but it is often ineffective for treating advanced cervical cancer. Bevacizumab is a type of targeted therapy, which is a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival.

In this study, 452 women with recurrent or metastatic (cancer that has spread) cervical cancer received either chemotherapy or chemotherapy plus bevacizumab. Two different combinations of drugs were used for chemotherapy, but researchers found no differences in the effectiveness of these two combinations. Overall, patients who received bevacizumab plus chemotherapy lived almost four months longer than those who received only chemotherapy. In addition, patients who received bevacizumab were more likely to have their tumors shrink for a longer period of time, and the addition of bevacizumab did not lower their quality of life.

What this means for patients: "Women with advanced cervical cancer don't have many treatment options. We finally have a drug that helps women live longer," said lead study author Krishnansu Sujata Tewari, MD, Professor of Obstetrics and Gynecology at the University of California Irvine in Orange. "This is also possibly a first step toward turning cervical cancer into a chronic disease, helping women live longer and allowing time for the development of additional treatments that could further slow the cancer's progression and improve survival." Bevacizumab is currently approved by the U.S. Food and Drug Administration for several advanced cancers. However, it has not been approved for any gynecologic cancer, so it may not be available for all patients yet; talk with your doctor for more information. ■

What to Ask Your Doctor

- What stage of cervical cancer do I have? What does this mean?
- What is my prognosis (chance of recovery)?
- What are my treatment options?
- What clinical trials are open to me?
- What treatment plan do you recommend? Why?
- What are the risks and benefits of this treatment plan?

Cervical Cancer Screening with Vinegar Could Prevent Thousands of Deaths Each Year in Developing Countries

A large clinical study that followed 150,000 women in India over 15 years found that screening with visual inspection with acetic acid (VIA), or vinegar, every other year reduced the number of cervical cancer deaths by nearly one-third (31%). Cervical cancer is the leading cause of cancer death for women living in many developing countries where there is little or no access to Pap tests (a procedure in which the doctor gently scrapes the outside of the cervix and vagina to take samples of the cells for testing). The researchers estimated that easy, low-cost screening with VIA could prevent 22,000 cervical cancer deaths every year in India and close to 73,000 deaths in developing countries around the world.

In developed countries, screening for precancerous and cancerous cells using Pap tests has reduced cervical cancer development and death by 80%. However, in India and other developing countries, screening examinations like Pap tests and human papillomavirus (HPV) testing is not possible for most women, especially those living in rural areas, because of the cost, the need for a laboratory to get results, and a lack of trained health care workers. The VIA test, on the other hand, is performed by applying vinegar to the cervix using a cotton swab. After 60 seconds, the cervix is examined with the naked eye using a lamp. Precancerous tissue turns white when vinegar is applied, while healthy tissue does not change color. The results are known immediately, and the test can be done by primary health care workers (community-based, non-medical personnel who receive special training and provide basic health care services in areas where doctors and nurses are unavailable).

As part of this study, women between the ages of 35 and 64 who had never been diagnosed with any type of cancer either received VIA screening every other year or were asked to report any potential signs and symptoms of cervical cancer they were experiencing to health care workers, which is the type of care most women in India receive. (According to international clinical research standards, tests and procedures are normally compared with what is available to most people in the local area.) All of the women who participated in the study also learned about cervical cancer and prevention, including Pap tests.

Although the same number of women developed cervical cancer in both groups, 31% fewer women who were screened with VIA died from cervical cancer, most likely because precancerous or cancerous cells on the cervix

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Screening with Vinegar Could Prevent Thousands of Deaths in Developing Countries

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were found earlier. Because of these results, Indian health officials in Maharashtra state, where the study was located, are preparing to provide VIA screening to all women between the ages of 35 and 64, including women who participated in the study. In addition, the Indian government is planning to start VIA screening programs across the country, as well as reach out to other developing countries to inform them of these results and offer training resources.

What this means for patients: "We hope our results will have a profound effect in reducing the burden of cervical cancer in India and around the world," said lead study author Surendra Srinivas Shastri, MD, Professor of Preventive Oncology at Tata Memorial Hospital in Mumbai, India. "This is the first trial to identify a cervical cancer screening strategy that reduces mortality and can be implemented on a broad scale throughout India and in other developing countries. Our trial used primary health care workers who can easily access women in the community, which is critical in India and other countries that lack sufficient nurses, physicians, and laboratory facilities. We are already working with state and national health authorities in India to make this screening strategy and health education available to women throughout the country." ■

For More Information: Cervical Cancer

- Guide to Cervical Cancer (www.cancer.net/cervical)
- Pap Test—What to Expect (www.cancer.net/paptest)
- Cancer Screening (www.cancer.net/screening)
- Understanding Targeted Treatments (www.cancer.net/targetedtreatments)
- Understanding Chemotherapy (www.cancer.net/chemotherapy)
- Advanced Cancer Care Planning (www.cancer.net/advancedcancer)

What to Ask Your Doctor

- What cervical cancer screening tests are available to me?
- How often should I be screened for cervical cancer?
- Where can I receive cervical cancer screening? How far away is this location?
- When will I receive my results? Will I need to come in for another appointment?
- What is the cost of cervical cancer screening?
- If I cannot afford this screening test, is there another option we could consider that doesn't cost as much?

Cetuximab Works Better than Bevacizumab as Initial Treatment for Advanced Colorectal Cancer

According to a recent study, initial treatment with the drug cetuximab (Erbitux) plus the chemotherapy regimen FOLFIRI lengthens the lives of patients with metastatic colorectal cancer when compared with bevacizumab (Avastin) plus FOLFIRI. The chemotherapy regimen FOLFIRI includes the drugs leucovorin (Wellcovorin), fluorouracil (5-FU, Adrucil), and irinotecan (Camptosar).

Cetuximab and bevacizumab are types of targeted therapy, a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. However, they each target a different method that a cancer can use to grow and spread. Cetuximab and bevacizumab are both commonly used as an initial treatment for colorectal cancer. Cetuximab is only approved for patients with no mutation (change) in the *KRAS* gene (often called *KRAS* wildtype), and bevacizumab works for patients with or without a changed *KRAS* gene, but researchers have not known which of these two drugs is better for patients who do not have a mutated *KRAS* gene.

As part of this study, 592 patients with a non-mutated *KRAS* gene received either

initial treatment with FOLFIRI plus cetuximab or FOLFIRI plus bevacizumab. Researchers found that it took about the same amount of time for the cancer to worsen, regardless of the treatment used. However, those who received cetuximab lived around four months longer than those who received bevacizumab.

What this means for patients: "This survival benefit is similar to the survival benefit seen in the clinical trials that led to the approval of cetuximab and bevacizumab for colorectal cancer," said Volker Heinemann, MD, PhD, Professor of Medical Oncology at the University of Munich in Germany. "We suspected that cetuximab would work better but we didn't know this would translate into better survival." ■

What to Ask Your Doctor

- What type of colorectal cancer do I have?
- What is the stage? What does this mean?
- Will my tumor be tested for a *KRAS* mutation?
- What are my treatment options?
- What treatment plan do you recommend? Why?
- What are the risks and benefits of this treatment plan?

For More Information: Colorectal Cancer

- Guide to Colorectal Cancer (www.cancer.net/colorectal)
- Understanding Targeted Treatments (www.cancer.net/targetedtreatments)
- What to Know: ASCO's Guideline on Tumor Markers for Gastrointestinal Cancers (www.cancer.net/whattoknow)

GLIOBLASTOMA

Adding Bevacizumab to Initial Chemoradiation for Glioblastoma Does Not Lengthen Lives

In a new study, researchers found that adding bevacizumab (Avastin) to first-line (first treatments given) chemoradiation therapy did not lengthen the lives of patients with a common and aggressive type of brain tumor called glioblastoma. Chemoradiation therapy is a combination of chemotherapy, which is the use of drugs to kill cancer cells, and radiation therapy, which is the use of high energy x-rays or other particles to kill cancer cells.

Bevacizumab is a type of targeted therapy, a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. It is approved by the U.S. Food and Drug Administration for people with glioblastoma that has come back after treatment. However, it has been used as a first-line treatment for patients newly diagnosed with glioblastoma despite little evidence that it works in this situation.

This study included 637 patients with newly-diagnosed glioblastoma who received either chemoradiation plus bevacizumab or chemoradiation plus a placebo (an inactive treatment, often called a "sugar pill") after surgery for the tumor. Researchers found that there was little difference in how long patients lived between those who received bevacizumab or a placebo (about 16 months for both groups of patients). They did find that there was a slight difference in how long it took for the disease to worsen, with it taking around three and a half months longer for the disease to worsen for patients who took bevacizumab. Researchers also found that patients who received bevacizumab experienced more side effects.

What this means for patients: "Unless we can identify a group of patients that clearly benefits from early use of bevacizumab, it appears that it should not be used in the first-line setting," said Mark R. Gilbert, MD, Professor of Neuro-Oncology at the University of Texas MD Anderson Cancer Center in Houston. "Bevacizumab remains an important treatment for glioblastoma, but in most

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GLIOBLASTOMA

Adding Bevacizumab to Initial Chemoradiation Does Not Lengthen Lives

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situations it should be saved for later." It is important to remember that treatment options may differ depending on a variety of factors. A treatment that is not recommended early in your treatment may be used later. Talk with your doctor about your treatment options and how they might change over time. ■

What to Ask Your Doctor

- What type of brain tumor do I have?
- What is the stage/grade? What does this mean?
- What is my prognosis (chance of recovery)?
- What are my treatment options?
- Which treatment plan do you recommend? Why?

For More Information: Glioblastoma

- Guide to Brain Tumors (www.cancer.net/brain)
- Types of Treatment (www.cancer.net/treatment)
- ASCO Expert Corner: Placebos in Cancer Clinical Trials (www.cancer.net/placebos)

LEUKEMIA

New Targeted Therapy for Chronic Lymphocytic Leukemia Shows Promise

In early, ongoing research, the drug, idelalisib helped to shrink tumors for patients with recurrent or treatment-resistant chronic lymphocytic leukemia (CLL). CLL is a slow-growing cancer and many patients do not need treatment until they start having symptoms. However, after treatment, most patients will have the disease come back, called recurrent or relapsed CLL. About 20% of patients will develop treatment-resistant or refractory CLL, meaning the disease comes back quickly or the original treatment did not work.

Idelalisib is a type of targeted therapy, a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. Specifically, idelalisib stops an overactive protein called PI3K-delta that helps CLL grow and spread.

In this study, 54 patients with refractory or relapsed CLL that had worsened on several earlier treatments received idelalisib for around nine months. About two-thirds of the patients receiving idelalisib had their tumors shrink, generally in the first two months after starting treatment.

LUNG CANCER

New Drug Works Well with the Drug Docetaxel for Advanced Lung Cancer

The combination of docetaxel (Docefrez, Taxotere) and a new drug called ganetespib lengthens patients' lives when used as a second-line therapy for advanced lung cancer, according to a new, large study. Second-line therapy is treatment that is given after the first treatment stops working.

Ganetespib is a type of targeted therapy, a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. Specifically, ganetespib blocks the function of heat shock protein (hsp) 90, a type of protein known as a "chaperone." Chaperone proteins help form other proteins, many of which drive the growth of cancer. If these specific proteins can't be built, they will not be available to help a cancer grow and spread. This is a promising new strategy for treating cancer because it allows the drug to shut down several different cancer-causing proteins at the same time.

The patients who participated in this study had the most common type of lung cancer, lung adenocarcinoma, that had worsened while receiving standard chemotherapy. After the

Researchers also found that the drug kept the disease from worsening for about 17 months, and many patients noticed fewer symptoms of the disease, such as fatigue.

What this means for patients: "We are reaching a point in CLL where we have multiple treatments in development that are very effective. Drugs like idelalisib are probably going to change the landscape of the disease in the next few years," said lead study author Jennifer Brown, MD, PhD, Assistant Professor of Medicine at Dana-Farber Cancer Institute in Boston, Massachusetts. "While this research is still early and ongoing, we hope this drug, along with others like it, will lengthen patients' lives and eventually help turn CLL into a condition that is treated like high blood pressure, where a patient can take a couple of pills every day. In the shorter term, these drugs may also provide an alternative to chemotherapy for older patients who may not be able to handle chemotherapy." Because idelalisib is still being researched, it is only available as part of a clinical trial. If you are interested in participating in a clinical trial, talk with your doctor for more information. ■

What to Ask Your Doctor

- What type of leukemia do I have?
- What treatments have I already received and what are my additional treatment options?
- What are the side effects of these treatments?
- What clinical trials are open to me?

For More Information: Leukemia

- Guide to Chronic Lymphocytic Leukemia (www.cancer.net/cll)
- Understanding Targeted Treatments (www.cancer.net/targetedtreatments)

disease worsened, 252 patients received either docetaxel plus ganetespib or only docetaxel. Researchers found that the patients who received both drugs lived about two months longer than those who received only docetaxel. Researchers also found that the patients whose disease did not get worse for six months or longer after diagnosis and initial treatment also showed a lower risk of death with the drug combination.

What this means for patients: "This is the first randomized study to show a treatment benefit for patients with a heat shock protein inhibitor," said lead study author Suresh S. Ramalingam, MD, Professor of Medical Oncology at the Winship Cancer Institute of Emory University in Atlanta, Georgia. "We hope that a similar recently started study will confirm our findings, as patients with this common form and stage of lung cancer urgently need more effective treatments." Ganetespib is still being researched and currently only available in clinical trials. If you are interested in participating in a clinical trial, talk with your doctor for more information.

Dr. Ramalingam was a recipient of a Conquer Cancer Foundation of ASCO Career Development Award in 2006. ■

What to Ask Your Doctor

- What type and stage of lung cancer do I have? What does this mean?
- What is my prognosis (chance of recovery)?
- What are my treatment options?
- What clinical trials are open to me?
- What treatment plan do you recommend? Why?
- What are my options if the first treatment doesn't work?

Standard-Dose Radiation Therapy Works Better Than High-Dose Radiation Therapy for Patients with Stage III Non-Small Cell Lung Cancer

Patients with stage III non-small cell lung cancer (NSCLC) who participated in a recent study lived longer and had fewer side effects when they received the standard dose of radiation therapy and not the high-dose radiation therapy. Stage III NSCLC is usually difficult or impossible to remove with surgery. Radiation therapy is used to slow the growth and spread of the cancer to lengthen patients' lives. The standard dose for radiation therapy is 60 Gray (Gy), a measurement of how much radiation is absorbed by the body, although many doctors use higher doses in the hope of better controlling the cancer's growth.

In this study, 464 patients received either standard-dose or high-dose radiation therapy combined with standard chemotherapy, the drugs paclitaxel (Taxol) and carboplatin (Paraplatin), plus the drug cetuximab (Erbitux) or no additional drugs.

Researchers found that the patients who received the standard radiation therapy dose lived nearly two and a half years compared with a little more than one and a half years for those who received high-dose radiation therapy. In addition, patients who received the standard dose of radiation therapy were less likely to have the cancer come back and less likely to die from problems related to the treatment than those who received high-dose radiation therapy.

What this means for patients: "We were surprised, though also pleased, to discover that less intense treatment led to better control of cancer progression and spread and even improved overall survival," said lead author Jeffrey D. Bradley, MD, Professor of Radiation Oncology at the Washington University School of Medicine in St. Louis, Missouri. "The reasons why high-dose radiation therapy did not improve survival and disease control are not yet clear." If you have been diagnosed with lung cancer, be sure to talk with your doctor about the treatment options, including the goals of treatment, what to expect, and the possible side effects. ■

What to Ask Your Doctor

- What type and stage of lung cancer do I have? What does this mean?
- What is my prognosis (chance of recovery)?
- What are my treatment options?
- What clinical trials are available to me?
- What treatment plan do you recommend? Why?
- What are my options if the first treatment doesn't work?

For More Information: Lung Cancer

- Guide to Lung Cancer (www.cancer.net/lung)
- Understanding Radiation Therapy (www.cancer.net/radiationtherapy)
- Understanding Targeted Treatments (www.cancer.net/targetedtreatments)
- What to Know: ASCO's Guideline on Adjuvant Treatment for Lung Cancer (www.cancer.net/whattoknow)
- Clinical Trials (www.cancer.net/clinicaltrials)
- When the First Treatment Doesn't Work (www.cancer.net/features)

Watch videos and listen to podcasts with ASCO experts discussing the recent advances highlighted at the 2013 ASCO Annual Meeting at www.cancer.net/ascoannualmeeting.

An Investigational Drug, Nivolumab, Shrinks Advanced Melanoma Tumors

Long-term follow-up of patients participating in an early study for advanced melanoma showed that nivolumab was able to shrink tumors and continue working for a longer time than other approved melanoma treatments. Nivolumab is a type of immunotherapy, a treatment designed to boost the body's natural defenses to fight the cancer. Specifically, nivolumab targets PD-1, which is found on the surface of tumor cells and prevents the immune system from destroying the cancer. Nivolumab stops PD-1 from working so the immune system can get rid of the cancer.

In this study, 107 patients with advanced melanoma that had worsened on previous treatments received one of five different doses of nivolumab. Researchers found that 31% (33 out of 107 patients) had their tumors shrink by at least a third, regardless of the dose they received. Researchers estimate that about 43% of patients will be alive after two years of treatment.

What this means for patients: "I think nivolumab is a real breakthrough drug for patients with metastatic melanoma, and probably for other diseases, too," said lead author Mario Sznol, MD, Professor of Medical Oncology at the Yale Cancer Center in New Haven, Connecticut. Because this study was an early-stage clinical trial and not from a large, randomized clinical trial, the results will need to be confirmed in further studies. Nivolumab is still being studied and this drug is only available through clinical trials. If you are interested in participating in a clinical trial, talk with your doctor for more information. ■

What to Ask Your Doctor

- What stage of melanoma do I have? What does this mean?
- What are my treatment options?
- What clinical trials are open to me?

Early Research Suggests That Ipilimumab and Nivolumab Work Better Together for Advanced Melanoma

Results from an early, ongoing study suggest that pairing the drug ipilimumab (Yervoy) with a new drug called nivolumab works better to shrink advanced melanoma. Currently, ipilimumab is a standard treatment option for advanced melanoma in many countries. Nivolumab, when used by itself, has been shown to effectively treat melanoma, as well as other cancers, in previous studies. Both nivolumab and ipilimumab are types of immunotherapy, a treatment designed to boost the body's natural defenses to fight the cancer. It uses materials either made by the body or in a laboratory to improve, target, or restore immune system function. Specifically, nivolumab targets PD-1 and ipilimumab targets CTLA-4, which are both found on the surface of tumor cells and keep the immune system from destroying the cancer. These drugs stop PD-1 and CTLA-4 from working so the immune system can get rid of the cancer.

This study included patients with stage III and stage IV (cancer that has spread) melanoma that could not be removed with surgery. Before participating in this study, all of the patients had already received up to three different treatments that had stopped working. The results discussed here are from 37 patients who all received the same dose of ipilimumab, but three different doses of nivolumab, although there were more patients participating in the study.

Researchers found that 21% of the patients (3 out of 14 patients) who received the lowest dose of nivolumab and 50% of patients (3 out of 6 patients) who received the highest dose of nivolumab had their tumor shrink. In addition, these drugs started to shrink the tumors quickly, with

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Early Research Suggests Ipilimumab and Nivolumab Work Better Together for Advanced Melanoma

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three out of four patients having their tumors shrink within three months of starting treatment. Overall, one-third of the patients had their tumor shrink by more than 80%.

What this means for patients: "Melanoma researchers have been hopeful that combining treatments would increase the effectiveness of immunotherapies, and now we have confirmation that such an approach could work," said Jedd D. Wolchok, MD, PhD, a medical oncologist at the Memorial Sloan-Kettering Cancer Center in New York. Ipilimumab is currently used to treat melanoma. However, nivolumab is still being studied and this drug combination is only available through clinical trials. If you are interested in participating in a clinical trial, talk with your doctor for more information. ■

What to Ask Your Doctor

- What stage of melanoma do I have? What does this mean?
- What are my treatment options?
- What clinical trials are open to me?

Adding GM-CSF to Ipilimumab Lengthens the Lives of Patients with Metastatic Melanoma

In a recent study, combining a high dose of ipilimumab (Yervoy) with GM-CSF (Sargramostim, Leukine) helped patients with metastatic melanoma live longer than those who received ipilimumab alone. Both ipilimumab and GM-CSF are types of immunotherapy, a treatment designed to boost the body's natural defenses to fight the cancer. Specifically, ipilimumab works to take the brakes off the immune system by targeting CTLA-4, a protein found on the surface of tumor cells that keeps the immune system from destroying the cancer. GM-CSF, on the other hand, is a growth factor that the body produces to help increase the number and function of white blood cells. It is commonly used to boost white blood cell counts after chemotherapy or stem cell transplantation.

This study included 245 patients with metastatic melanoma (melanoma that has spread to other parts of the body) who had received no more than one other treatment before the

Selumetinib Is the First Effective Drug for Advanced Melanoma of the Eye

Results from a new study show that the drug selumetinib keeps metastatic (cancer that has spread) melanoma of the eye from worsening and lengthens patients' lives. Melanoma of the eye (also called uveal melanoma) is a rare cancer. Most patients with uveal melanoma are diagnosed when the cancer is located in the eye. But, the cancer eventually spreads outside of the eye to other parts of the body in about half of patients, and these patients usually live about nine to 12 months after diagnosis, so a drug that can lengthen patients' lives is a major breakthrough.

The current standard treatment is the drug temozolomide (Temodar), but its benefit is limited and new treatments have been needed. Selumetinib is a type of targeted therapy, a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. In particular, selumetinib targets mutated (changed) *Gnaq* and *Gna11* genes, which help the cancer grow. These gene mutations are found in 85% of patients with melanoma of the eye.

The 98 patients with metastatic melanoma of the eye participating in this study received either selumetinib or temozolomide (48 patients received selumetinib and 50 received temozolomide). During the study, patients who

study began. As part of the study, the volunteers received either ipilimumab plus GM-CSF or ipilimumab alone.

Researchers found more than two-thirds of patients (69%) who received the drug combination were alive after one year versus half (53%) of those treated with ipilimumab alone, a significant advance for metastatic melanoma. Interestingly, adding GM-CSF also decreased some of the serious side effects of ipilimumab, especially those involving the lungs and gastrointestinal tract.

What this means for patients: "This study provides another important sign that immunotherapy can be important for patients with advanced melanoma," said lead author F. Stephen Hodi, MD, Associate Professor of Medicine at Dana-Farber Cancer Institute in Boston, Massachusetts. Currently, ipilimumab is a standard treatment option for advanced melanoma in many countries; however, this study used a higher dose of ipilimumab than is currently approved by the U.S. Food and Drug Administration (FDA). Additionally, GM-CSF is not currently approved by the FDA to treat patients with melanoma. As a result, this drug combination is only available through clinical trials at this time. If you are interested in participating in a clinical trial, talk with your doctor for more information.

Dr. Hodi was a recipient of a Conquer Cancer Foundation of ASCO Young Investigator Award in 1998. ■

What to Ask Your Doctor

- What stage of melanoma do I have? What does this mean?
- What are my treatment options?
- What clinical trials are open to me?

had their disease worsen while receiving temozolomide were able to switch to selumetinib. Researchers found that the tumors in 50% of patients shrank, with 15% of the patients who received selumetinib experiencing considerable tumor shrinkage, compared with none of the patients who received temozolomide.

In addition, it took almost four months for the disease to worsen for patients who took selumetinib, compared with almost two months for those who took temozolomide.

What this means for patients: "This study proves that inhibiting *Gnaq* and *Gna11* mutations is effective, more than doubling the length of time it takes for the disease to worsen," said lead author Richard D. Carvajal, MD, a medical oncologist at Memorial Sloan-Kettering Cancer Center in New York. "We're hopeful a drug like selumetinib will be commercially available in the near future; in the meantime, we must continue to steer patients towards clinical trials." If you are interested in participating in a clinical trial, talk with your doctor for more information.

Dr. Carvajal was a recipient of a Conquer Cancer Foundation of ASCO Young Investigator Award in 2008 and a Career Development Award in 2010, which partially funded this study. ■

What to Ask Your Doctor

- What type of eye cancer do I have?
- What is the stage? What does this mean?
- What is my prognosis (chance of recovery)?
- What are my treatment options?

For More Information: Melanoma

- Guide to Melanoma (www.cancer.net/melanoma)
- Guide to Eye Cancer (www.cancer.net/eye)
- Understanding Immunotherapy (www.cancer.net/immunotherapy)
- Understanding Targeted Treatments (www.cancer.net/targetedtreatments)
- Clinical Trials (www.cancer.net/clinicaltrials)

Spouses of Patients with HPV-positive Oropharyngeal Cancer Do Not Have a Higher Risk of Oral HPV Infections

In a new study, researchers found that spouses of patients with human papilloma virus (HPV)-related oropharyngeal cancer were not more likely to have an HPV infection than the general population. Oropharyngeal cancer begins in the oropharynx, which is the middle part of the throat behind the mouth, and includes the base of the tongue, the soft palate, the side and back walls of the throat and the tonsils. HPV infection is very common among men and women in the United States and is a risk factor for several types of cancer, including oropharyngeal cancer. However, most people with an HPV infection will not get cancer. When a cancer contains signs of HPV, it is called HPV-positive.

The study included 147 patients with cancer and 83 spouses or partners. To find evidence of HPV when the patients were first diagnosed, the participants used a 30-second mouth rinse and gargle, which was spit out and analyzed for signs of HPV. This test was repeated a year later. Signs of HPV were found in 66% of the patients with cancer when they were diagnosed, and 7% still had signs of HPV a year later after receiving cancer treatment. Overall, a little more than 7% of the partners had signs of oral HPV. However, among the 75 partners who were women, 5% had signs of HPV, which is similar to the 4% of women in the general population that have signs of HPV. Among partners who were men, the percentage of those with signs of HPV was also similar to that of the general population of men; however, it was higher than for partners who were women.

In addition, researchers found no cancers or precancers (abnormal cells that are not cancer but could become cancer over time) in 64% of the partners who had an examination to look for oral cancer.

What this means for patients: "Patients with HPV-positive oropharyngeal cancers and their spouses often worry about oral HPV transmission and wonder about the spouses' cancer risk. These findings provide assurance that a partner's risk of HPV-related oropharyngeal cancer remains low. Couples who have been together for several years have likely already shared whatever infections they have and no changes in their physical intimacy are needed," said lead study author Gypsyamber D'Souza, PhD, MPH, MS, Associate Professor of Epidemiology at Johns Hopkins University in Baltimore, Maryland. ■

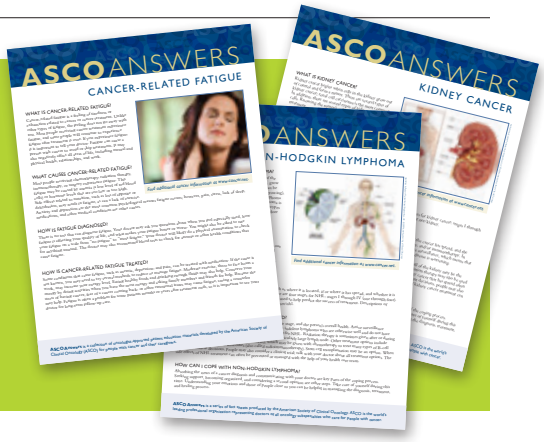
What to Ask Your Doctor

- What is my risk of HPV?
- Should I be tested for an oral HPV infection?
- What is my risk of developing an HPV-related cancer?
- How can I reduce my risk of an HPV infection?

For More Information: Oropharyngeal Cancer

- Guide to Oral and Oropharyngeal Cancer (www.cancer.net/oral)
- HPV and Cancer (www.cancer.net/hpv)

ASCO Answers fact sheets provide an introduction to a specific type of cancer or cancer-related topic. These fact sheets can be downloaded at www.cancer.net/factsheets, or purchased at www.cancer.net/estore.



Treatment with Pazopanib After Successful Chemotherapy Delays the Recurrence of Advanced Ovarian Cancer

Women with advanced ovarian cancer or a related gynecologic cancer who receive treatment with the targeted therapy pazopanib (Votrient) following successful chemotherapy lived longer without their disease coming back than those receiving a placebo (an inactive treatment, often called a "sugar pill"), according to the results of a recent clinical trial. Pazopanib is medication taken by mouth that focuses on stopping angiogenesis, which is the process of making new blood vessels. Because a tumor needs the nutrients delivered by blood vessels to grow and spread, the goal of anti-angiogenesis therapy is to starve the tumor.

Despite successful initial treatment with surgery and chemotherapy, about 70% of women with advanced ovarian cancer experience a recurrence (when the cancer comes back after the initial treatment), and about half of these occur within the first year. Advanced ovarian cancer is cancer that has spread into the peritoneum (the membrane that lines the inside of the abdomen) or to distant organs. Because doctors are currently unable to predict which patients will experience a recurrence, maintenance therapy (ongoing treatment to help lower the risk of recurrence after the cancer has disappeared following initial therapy) is a promising area of research.

As part of this study, 940 women with stage III or stage IV ovarian, fallopian tube, or primary peritoneal cancer (a rare cancer that begins in the peritoneum) received either pazopanib or a placebo every day for 24 months. Before participating in this study, all of the women had surgery and five or more rounds of chemotherapy that successfully prevented the disease from getting worse.

Researchers found that for women who received maintenance therapy with pazopanib, it took an average of 18 months for the disease to worsen compared with 12 months for women who did not receive the maintenance therapy.

What this means for patients: "Our findings show that we finally have a drug that can maintain control over ovarian cancer growth achieved through initial treatments," said lead author Andreas du Bois, MD, Professor of Gynecologic Oncology at Kliniken Essen Mitte in Essen, Germany. "If pazopanib is approved for ovarian cancer, many patients will experience longer disease-free and chemotherapy-free periods."

Pazopanib is currently approved to treat kidney cancer and soft tissue sarcoma. It is not approved in the United States for use as a maintenance therapy for ovarian cancer at this time. As a result, it may only available as part of a clinical trial. If you are interested in participating in a clinical trial, talk with your doctor for more information. ■

For More Information: Ovarian Cancer

- Guide to Ovarian Cancer (www.cancer.net/ovarian)
- Guide to Fallopian Tube Cancer (www.cancer.net/fallopian)
- Angiogenesis and Angiogenesis Inhibitors to Treat Cancer (www.cancer.net/angiogenesis)
- Understanding Maintenance Therapy (www.cancer.net/maintenancetherapy)
- ASCO Expert Corner: Placebos in Cancer Clinical Trials (www.cancer.net/placebos)

What to Ask Your Doctor

- What stage of cancer do I have? What does this mean?
- What is my prognosis (chance of recovery)?
- What are my treatment options?
- What is the chance that the cancer will come back after treatment?
- If the cancer does come back, what are the next steps?
- What clinical trials are open to me?

Men's Fitness in Middle Age Protects Against Developing and Dying from Cancer Later in Life

In a large, 20-year study, researchers found that men with a high level of fitness at middle age have a lower risk of developing and dying from lung and colorectal cancers. They also found that better fitness lowers the risk of dying of prostate cancer.

As part of this study, researchers looked at the results of a fitness assessment included in a preventive health check-up for 17,049 men around age 50. For this fitness test, the men were asked to walk on a treadmill while both the speed and incline were increased, making it more difficult over time. How long each man could stay on the treadmill was recorded using a standard measurement for fitness, called metabolic equivalents or METs.

To find out whether these men developed or died of lung, colorectal, or prostate cancer later in their lives, researchers looked at information collected from Medicare. In the 20 to 25 years after the fitness assessment, 2,332 men were diagnosed with prostate cancer, 276 were diagnosed with colorectal cancer, and 277 were diagnosed with lung cancer. In addition, 347 of the men died of cancer and 159 of heart disease.

Researchers found that the men who were most fit were 68% less likely to be diagnosed with lung cancer and 38% less likely to be diagnosed with colorectal cancer compared with those who were the least fit. Researchers also found that the men who were more fit who did develop lung, colorectal, or prostate cancer were less likely to die of the disease than those who were less fit, with even a small improvement in fitness lowering the risk of dying of cancer by 14%. The study also showed that those who were less fit still had an increased risk of cancer and heart disease, even if they were not obese.

What this means for patients: "While poor fitness is already known to predict future heart disease, this is the first study to explore fitness as a marker of future cancer risk," said lead study author Susan Lakoski, MD, Assistant Professor of Medicine at the University of Vermont. "This finding makes it clear that patients should be advised that they need to achieve a certain fitness level, and not just be told that they need to exercise." It's important to remember that fitness level depends on age and gender. If you are looking to improve your fitness, talk with your doctor before starting any new exercise program. ■

What to Ask Your Doctor

- Do I have a high risk for any specific types of cancer?
- What steps can I take to help reduce my risk of cancer?
- Do I currently have a good level of fitness? How is this measured?
- Do I need to improve my fitness? If so, can you provide resources or a referral to help me with an exercise plan?

For More Information: Prevention

- Guides to Cancer (www.cancer.net/cancer)
- Physical Activity and Cancer Risk (www.cancer.net/prevention)
- Physical Activity: Suggestions andTips (www.cancer.net/prevention)

Many Patients with Diffuse Large B-Cell Lymphoma May Not Need Regular Computed Tomography Scans

Most diffuse large B-cell lymphomas (DLBCL) that recur (come back after treatment) are found based on symptoms reported by patients, abnormal blood test results, or abnormal findings on a physical examination, rather than by a computed tomography (CT) scan, according to a recent study. DLBCL is the most common form of lymphoma and is typically curable. However, up to a third of patients will have the disease recur. A CT scan is a way to create pictures of the inside of the body and is currently recommended as a regular part of follow-up care for patients with DLBCL to watch for a recurrence.

This study included 644 patients with DLBCL who received the standard initial treatment for the disease and had a remission (no signs of the disease). Researchers then looked at how many of these patients had a recurrence, needed additional treatment, or died from DLBCL after the initial treatment. They found that after about five years, 20% (109 patients) experienced a recurrence. When these recurrences were found, 68% of patients had symptoms of a recurrence, 42% had an abnormal finding on physical exam, and 55% had abnormal blood test results. A recurrence was detected only by a planned CT scan for only 8 patients.

What this means for patients: "Scans expose patients to radiation and that may increase the risk of a second cancer. Surveillance scans have also been shown to increase a patient's anxiety and lead to unnecessary biopsies," said lead study author Carrie A. Thompson, MD, a hematologist at Mayo Clinic, Rochester, Minnesota. "While our study shows that most of recurrences are found through a patient's symptoms, whether to do CT scans and how often should be tailored for each patient." Because a DLBCL recurrence usually causes symptoms, it is important for patients to report any new symptoms or a change in symptoms to the doctor. Some signs of a possible recurrence include swollen lymph nodes (tiny, bean-shaped organs that fight infection), night sweats, unexplained fever, and unintentional weight loss. ■

What to Ask Your Doctor

- What type of lymphoma did I have?
- What is the risk that the disease will recur?
- What tests will I need to watch for a recurrence and how often will I need them?
- What are the risks and benefits of these tests?
- What are the signs and symptoms of a recurrence that I should watch for?

Monitoring Stage I Testicular Cancer Is a Safe Option After Surgery

Results from a long-term study on stage I seminoma show that surveillance, or watching for a cancer recurrence (cancer that comes back after treatment), is a safe option for most men. Seminoma is a type of testicular cancer that is generally slow growing and makes up about half of all testicular cancer diagnoses. In stage I seminoma, the tumor has not spread to the lymph nodes (tiny, bean-shaped organs that fight infection) or other parts of the body. Surgery is usually the first treatment given. Surveillance includes physical examinations and imaging and blood tests for five years. In the United States, about half of patients are monitored for a recurrence and the other half receives either radiation therapy or chemotherapy to help prevent a recurrence.

For this study, researchers

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Monitoring Stage I Testicular Cancer Is a Safe Option After Surgery

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used a nationwide database in Denmark to collect information from 1,822 men with stage I seminoma who were followed as part of a five year surveillance program to monitor for a cancer recurrence after surgery. Overall, 355 of these patients, or about 20%, had the cancer come back within about 15 years. Then they received chemotherapy, radiation therapy, or further surgery. Researchers found that more than 99% of these men lived at least 10 years after the original treatment. In other words, out of every 1,000 men who received surveillance after surgery, four died within 10 years after the original treatment.

Researchers also found that certain factors are linked with a higher risk of recurrence, such as a tumor larger than 1.5 inches, spread to blood or lymphatic vessels, and higher levels of a blood marker called human chorionic gonadotropin.

What this means for patients: "With this study, we have solid proof that surveillance is safe and appropriate for most patients with this particular cancer," said Mette Saksø Mortensen, MD, a PhD student in the Department of Oncology at the Copenhagen University Hospital in Denmark. "We also identified key factors that predict the risk of a recurrence, which can help us know which patients may need therapy after surgery instead of surveillance. However, in general, all patients with stage I seminoma can safely be followed on a surveillance program." Although surveillance can seem like a difficult choice for patients, it can help patients maintain their quality of life by avoiding the side effects of further treatments, such as increased risk of another type of cancer, especially when, in this situation, these treatments are unlikely to lengthen a man's life. ■

What to Ask Your Doctor

- What type and stage of testicular cancer do I have?
- What are my treatment options?
- Do you recommend additional treatments after surgery?
- What is the chance that the tumor will come back after treatment?
- Is surveillance recommended for me? If so, what tests will I need and how often?
- If the cancer does come back, what are the next steps?

For More Information: Survivorship

- Guide to Non-Hodgkin Lymphoma (www.cancer.net/nhl)
- Guide to Testicular Cancer (www.cancer.net/testicular)
- Computed Tomography (CT) Scan—What to Expect (www.cancer.net/ctscan)
- CT Scans and Cancer Risk (www.cancer.net/features)
- What to Know: ASCO's Guideline on Tumor Markers for Testicular Cancer and Extragonadal Germ Cell Tumors in Teenage Boys and Men (www.cancer.net/whattoknow)

Sorafenib Stops Growth of Thyroid Cancer When Radioactive Iodine Has Stopped Working

In a recent study, researchers found that the drug sorafenib (Nexavar) keeps metastatic differentiated thyroid cancer from worsening when treatment with radioactive iodine has stopped working. Differentiated thyroid cancer is the most common type of thyroid cancer; it is called "differentiated" because the cancerous thyroid cells look like normal thyroid cells when viewed under a microscope. Metastatic cancer means the thyroid cancer has spread outside of the thyroid.

Thyroid cancer is generally successfully treated with surgery and radioactive iodine. However, about 5% to 15% of patients develop radioactive iodine resistance, meaning that this treatment stops working. For these patients, the drug doxorubicin (Adriamycin) is the standard treatment option, but it does not work well and causes many side effects. Sorafenib is a type of targeted treatment, which is a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival, and is in the form of a tablet that is taken orally (by mouth).

As part of this study, 417 patients with metastatic, radioactive iodine-resistant differentiated thyroid cancer received either sorafenib or a placebo (an inactive treatment, often called a "sugar pill"). However, once the disease worsened, patients taking a placebo could switch to treatment with sorafenib. Researchers found that it took nearly 11 months for the disease to worsen for those taking sorafenib, compared with almost six months for those receiving the placebo. They also found that 42% of patients receiving sorafenib did not have their disease worsen for six months or longer. In addition, about 12% of patients taking sorafenib had their tumors shrink, compared with less than 1% of those taking the placebo.

What this means for patients: "After having no effective drugs for these patients for so many years, it is very exciting to find an oral drug that stops cancer growth for several months," said Marcia Brose, MD, PhD, Assistant Professor of Otolaryngology and Head and Neck Surgery in the Abramson Cancer Center and the Perelman School of Medicine at the University of Pennsylvania in Philadelphia. "For these patients, a longer time before the disease worsens means more months without hospitalization and invasive procedures to control the symptoms." Sorafenib is currently approved by the U. S. Food and Drug Administration for other types of cancer, but not thyroid cancer, so it may not be available for all patients; talk with your doctor for more information.

Dr. Brose was a recipient of a Conquer Cancer Foundation of ASCO Young Investigator Award in 2000. ■

What to Ask Your Doctor

- What type of thyroid cancer do I have?
- What treatments have I already received?
- What treatment plan do you recommend?
- Is my current treatment still working to control thyroid cancer growth?
- If not, what other treatment options are available to me?
- What clinical trials are open to me?
- What are the risks and benefits of the recommended treatment plan?

For More Information: Thyroid Cancer

- Guide to Thyroid Cancer (www.cancer.net/thyroid)
- Understanding Targeted Treatments (www.cancer.net/targetedtreatments)
- ASCO Expert Corner: Placebos in Cancer Clinical Trials (www.cancer.net/placebos)

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