ASCO
American Society of Clinical Oncology

Research Round Up

NEWS FOR PATIENTS FROM THE 2014 ASCO ANNUAL MEETING

ASCO 50TH ANNUAL MEETING SCIENCE & SOCIETY

BREAST CANCER

Taking Zoledronic Acid Less Often After the First Year of Treatment Is Safe for Women with Metastatic Breast Cancer

According to new findings from a phase III clinical trial, women taking zoledronic acid (Zometa) for breast cancer that has spread to the bone, called metastases, can safely scale back to a once-every-three-months schedule after finishing a year of monthly treatments.

Zoledronic acid is often used to reduce complications from bone metastases, such as broken bones and spinal cord compression. Most doctors give zoledronic acid once every four weeks starting as soon as bone metastases are diagnosed. It is thought that monthly treatment should continue indefinitely, but some doctors have concerns that continuing this schedule for the long term may increase the risk of rare but serious side effects like kidney problems and osteonecrosis of the jaw, which can cause pain, swelling, and infection of the jaw; loose teeth; and exposed bone. Currently, there are no recommendations for how often zoledronic acid should be given after the first year of treatment.

To find out if increasing the time between zoledronic acid treatments after a year of monthly therapy would be safe and effective, 403 women with metastatic breast cancer were divided into two groups. One group continued to receive zoledronic acid every month, and the other group received zoledronic acid every three months for an additional year.

The researchers found that the percentage of women who developed fractures, spinal cord compressions, or needed radiation therapy or surgery because of bone metastases were similar in both groups (22% in the monthly group compared with 23% percent in the every-three-months group). There were no differences in pain levels or the use of pain medications between the two groups. The researchers also observed no obvious differences in kidney side effects or the overall safety profile of the treatment between the two groups. However, two women

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A WORD FROM THE PRESIDENT

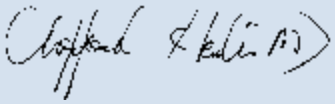
Dear Friends,

Welcome to the 2014 American Society of Clinical Oncology (ASCO) Annual Meeting. This year marks the 50th Anniversary of ASCO and our Annual Meeting. This milestone is an opportunity to reflect on the progress that has been made in cancer care and to look to future opportunities to convert scientific advances into meaningful benefits for patients. This year's theme, *Science and Society,* emphasizes ASCO's role in translating science into societal benefits as well as our obligation to help define value as we try to accelerate advances against cancer.

To help you, the patient, learn about the latest advances and progress in cancer care and what they mean for you, ASCO provides summaries of the research highlighted at the 2014 ASCO Annual Meeting in Chicago, Illinois, from May 30 through June 3, 2014.

I am optimistic about the progress described here. 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,



Clifford A. Hudis, MD, FACP
ASCO President

More Information: Breast Cancer

- Guide to Breast Cancer (www.cancer.net/breast)
- ASCO Answers Fact Sheet: When Cancer Spreads to the Bone (www.cancer.net/factsheets)
- Bone-Modifying Drugs for Breast Cancer (www.cancer.net/recommendations)
- Dental and Oral Health (www.cancer.net/sideeffects)
- Fertility Concerns and Preservation for Women (www.cancer.net/reproductivehealth)
- Fertility Preservation (www.cancer.net/recommendations)
- HER2 Testing for Breast Cancer (www.cancer.net/recommendations)
- Hormonal Therapy for Early-Stage Hormone Receptor-Positive Breast Cancer (www.cancer.net/recommendations)
- Making Decisions About Cancer Treatment (www.cancer.net/treatmentdecisions)
- Managing Your Weight After a Cancer Diagnosis (www.cancer.net/obesity)
- Targeted Treatments (www.cancer.net/targetedtreatments)

BREAST CANCER

Taking Zoledronic Acid Less Often After the First Year of Treatment Is Safe for Women with Metastatic Breast Cancer

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in the monthly group developed osteonecrosis of the jaw compared with none in the every-three-months group.

What this means for patients

"The addition of bone-modifying drugs like zoledronic acid has dramatically improved the care of patients with bone metastases. But long-term treatment carries the risk of serious side effects, such as osteonecrosis of the jaw and kidney problems," said lead study author Gabriel N. Hortobagyi, MD, a professor of medicine at the MD Anderson Cancer Center in Houston, TX. "We found that less frequent treatment may reduce the risk of these serious side effects, with added benefits in reduced patient inconvenience and cost." ■

Questions to Ask Your Doctor

- Do you recommend treatment with a bone-modifying drug?
- How long will I need to take this drug, and how often will it be given?
- What side effects can I expect from this treatment?
- What is the risk of developing osteonecrosis of the jaw?
- What signs or symptoms should I watch for?
- How will my treatment be monitored?

Exemestane Plus Ovarian Function Suppression May be a More Effective Alternative for Premenopausal Women with Early-Stage Breast Cancer

In an analysis of two ongoing studies, researchers found that exemestane (Aromasin) was more effective at preventing hormone-sensitive breast cancer from returning for premenopausal women than tamoxifen (Nolvadex, Soltamox) when each drug was paired with ovarian function suppression. Exemestane, an aromatase inhibitor (AI), and tamoxifen are types of hormonal therapy often given as adjuvant therapies to lower the chance of hormone-sensitive breast cancer coming back after other treatments are finished. Hormone-sensitive breast cancer means that the cancer uses the hormones estrogen and/or progesterone to grow.

Although both tamoxifen and AIs such as exemestane are hormonal therapies, they work differently, which affects who can use them. In order for AIs to work effectively, women need to have the low levels of estrogen that naturally occur after menopause, and this is why tamoxifen has been the standard adjuvant hormonal therapy for premenopausal women. In the studies included in this analysis, researchers suppressed ovarian function with medication, surgery to remove the ovaries, or radiation therapy to the ovaries in order to lower women's estrogen levels to similar levels they would experience after menopause.

This analysis included information from 4,690 women in two different studies who received either exemestane plus ovarian function suppression or tamoxifen plus ovarian function suppression for five years. Researchers found that the combination of exemestane plus ovarian function suppression reduced the risk of the breast cancer coming back by 34% when compared with tamoxifen plus ovarian function suppression. However, women who received either treatment were equally likely to be alive five years after treatment, with about 96% of women who received exemestane plus ovarian function suppression and about 97% of women who received tamoxifen plus ovarian suppression function alive after five years.

What this means for patients: "For years, tamoxifen has been the standard hormonal therapy for preventing breast cancer recurrences in young women with hormone-sensitive disease. These results confirm that exemestane with ovarian function suppression is a valid alternative," said lead study author Olivia Pagani, MD, Clinical Director of the Breast Unit at the Oncology Institute of Southern Switzerland in Bellinzona. "Our findings indicate that exemestane is better than tamoxifen, when given with ovarian function suppression, but longer follow-up will be important to assess survival and any long-term side effects and fertility." These studies are ongoing and, in the United States, tamoxifen is still the recommended adjuvant hormonal therapy for premenopausal women. Though recommendations may change over time, it's important to talk with your doctor about the best options for you now and why they are recommended. You may also want to discuss the side effects of hormonal therapy, which can differ depending on the type of drug used. ■

Questions to Ask Your Doctor

- What type of breast cancer do I have? Is it hormone receptor-positive?
- Will I need adjuvant hormonal therapy?
- If so, what type is recommended? Why?
- What are the side effects, and how can they be managed?

In ***Managing Your Weight After a Cancer Diagnosis: A Guide for Patients and Families,*** you can find practical information to help you work with your health care team to reach and maintain a healthy weight. Find out more at www.cancer.net/obesity.

Taking a Hormone-Suppressing Drug During Chemotherapy Helps Preserve Fertility for Women with Hormone Receptor-Negative Breast Cancer

Results from a recent phase III clinical trial show that women who took goserelin (Zoladex) with chemotherapy for early-stage, hormone receptor-negative breast cancer were 64% less likely to develop premature ovarian failure, also called early menopause, compared with women who received chemotherapy alone. Ovarian failure causes women to not be able to have children (infertility). It is a common side effect of the standard chemotherapy used for breast cancer treatment. However, a woman's personal risk of early menopause depends on the type and dose of chemotherapy she receives, as well as her age and a number of other factors.

To try to preserve fertility, the researchers looked at using goserelin, a drug that temporarily shuts down ovarian function. Medications like goserelin are widely used to control ovulation timing for infertility procedures, such as in vitro fertilization, and as hormonal therapies to treat advanced prostate and breast cancers.

As part of this study, 257 women with early-stage (stages I to IIIA), hormone receptor-negative breast cancer who had not already gone through menopause either received chemotherapy or chemotherapy plus goserelin. Goserelin was given as a monthly injection, starting one week before the first dose of chemotherapy.

Two years after starting chemotherapy, 8% of women who took goserelin had ovarian failure compared with 22% of women who only received chemotherapy. During this time, 22 women (21%) who took goserelin became pregnant compared with 12 women (11%) who only received chemotherapy. These pregnancies resulted in 16 women (15%) in the goserelin group delivering at least one baby versus eight women (7%) in the chemotherapy group. Three women in the goserelin group and two in the chemotherapy group were still pregnant when the data were collected. According to the researchers, taking goserelin did not increase the risk of miscarriage or pregnancy termination.

Interestingly, survival rates also improved among women taking goserelin. Women in the goserelin group were 50% more likely to be alive four years after starting chemotherapy compared with those in the chemotherapy group. Although these results establish a role for using drugs like goserelin to preserve ovarian function and fertility during breast cancer treatment, more research is needed to understand any effect these medications may have on survival.

What this means for patients

"Preserving fertility is a common and important concern among younger women diagnosed with cancer, and these findings offer a simple, new option for women with breast cancer, or possibly other cancers," said lead study author Halle Moore, MD, a staff physician at the Cleveland Clinic in Ohio. "Goserelin appears to be not only highly safe but also effective, as it increased the odds of becoming pregnant and delivering a healthy baby following chemotherapy." ■

Questions to Ask Your Doctor

- Could my treatment plan affect my ability to have children?
- Who can help me understand the options for preserving my fertility?
- Can you recommend a fertility specialist I can talk with before treatment begins?
- Will any of the fertility-preservation options affect how well the cancer treatment works?
- How will each option affect my health and the health of my future children?
- What costs are associated with each of my fertility-preservation options? What is covered by my insurance?

Obesity Linked with Higher Risk of Death for Premenopausal Women with ER-Positive Breast Cancer

A recent data analysis showed that obesity increases the risk of death from estrogen receptor (ER)-positive breast cancer for women who have not been through menopause. Menopause usually begins in a woman's mid-40s or early to mid-50s when her ovaries stop releasing eggs and her body makes less of the hormones estrogen and progesterone. Woman who are premenopausal have not been through menopause. Those who are postmenopausal have been through menopause. Estrogen receptor-positive breast cancer is a type of breast cancer that depends on estrogen to grow and spread.

As part of this study, researchers analyzed information from 80,000 women who participated in 70 different clinical trials, comparing information from women who received the same treatment in the same clinical trial. They used body mass index (BMI) to define normal weight, overweight, and obesity. BMI is the ratio of a person's weight and height. For this study, a normal BMI was considered to be between 20 and 25, an overweight BMI was between 25 and 30, and a BMI of 30 or higher was considered as obesity.

Among the premenopausal women with ER-positive breast cancer, researchers found that deaths from cancer were one-third higher for women who were obese than for those who were normal weight. However, obesity was not linked to an increased risk of death from cancer for postmenopausal women with ER-positive cancer or for women with ER-negative disease.

What this means for patients

"Obesity substantially increases blood estrogen levels only in postmenopausal women, so we were somewhat surprised to find that obesity affected the chance of recovery and survival only in premenopausal women," said Hongchao Pan, PhD, a researcher at the University of Oxford in the United Kingdom. "This means we don't understand the main way obesity affects recovery." ■

Questions to Ask Your Doctor

- What type of breast cancer do I have? What does this mean?
- What is my BMI? What does this mean?
- Would I benefit from losing weight? How is that determined?
- Who can help me set up a safe exercise and/or weight loss program?

Adding Lapatinib to Trastuzumab Does Not Lengthen the Lives of Women with Early-Stage, HER2-Positive Breast Cancer

Results from a large study show that the combination of lapatinib (Tykerb) and trastuzumab (Herceptin) plus chemotherapy after surgery is not more effective than only trastuzumab plus chemotherapy for women with early-stage, human epidermal receptor 2 (HER2)-positive breast cancer. HER2 is a specialized protein found on the surface of breast cells that can contribute to cancer growth. Both lapatinib and trastuzumab are targeted therapies, which are treatments that target the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. In this case, both drugs target HER2, but in different ways.

Treatment with trastuzumab and chemotherapy after surgery lowers the risk of the cancer returning for women with HER2-positive, early-stage breast cancer. However, about 20% of patients have the cancer come back within 10 years, often having spread to other parts of the body. Previous research suggested that adding lapatinib to trastuzumab might provide

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BREAST CANCER

Adding Lapatinib to Trastuzumab Does Not Lengthen the Lives of Women with Early-Stage, HER2-Positive Breast Cancer

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an additional benefit over trastuzumab by itself.

For this study, 8,381 women with newly diagnosed, early-stage, HER2-positive breast cancer who already had surgery received one of the following treatment options: lapatinib plus trastuzumab given at the same time, trastuzumab followed by lapatinib, or trastuzumab by itself. The majority received these treatments after chemotherapy, although many received chemotherapy that overlapped with the HER2-targeted therapy.

After four years, the percentage of women alive with no signs of cancer was similar regardless of the treatment received. For women who received lapatinib and trastuzumab together, 88% were alive and had no signs of recurrent cancer after four years. For those who received trastuzumab followed by lapatinib, 87% were alive and had no signs of recurrent cancer after four years. And, 86% of women who received only trastuzumab were alive and had no signs of recurrent cancer after four years. Researchers also found that the combination of lapatinib and trastuzumab was linked with more side effects, especially diarrhea, rash, and liver problems.

What this means for patients

"We were encouraged to see that patients with HER2-positive, early-stage breast cancer are doing rather well with standard trastuzumab therapy," said senior study author Edith Perez, MD, Deputy Director at Large at the Mayo Clinic Cancer Center in Jacksonville, FL. "But we were surprised that adding lapatinib did not provide further benefit, since the combination of these drugs was promising when given prior to surgery in a smaller study." ■

Questions to Ask Your Doctor

- What type and stage of breast cancer do I have?
- Is it HER2-positive? What does this mean?
- What are my treatment options?
- Will HER-2 targeted therapy be a part of my treatment?
- What are the side effects of each treatment, and how can they be managed?

Information is available on Cancer.Net about the coverage of costs for research study participation under the Affordable Care Act (ACA). Learn more at www.cancer.net/clinicaltrials.

CAREGIVING

Caregivers who Receive Palliative Care Support Immediately After an Advanced Cancer Diagnosis Have a Better Quality of Life

A new study demonstrates the benefits of a phone-based palliative care support program for caregivers of people with advanced cancer. The results suggest that the earlier palliative care services are introduced to caregivers, the better they will be able to cope with the caregiving experience.

Palliative care does not only mean end-of-life or hospice care. It is an extra layer of support given at every step of the treatment process and at all stages of illness. Palliative care focuses on reducing a patient's symptoms, improving quality of life, and supporting patients and their families.

As part of this study, 122 family caregivers of patients with recurrent or metastatic cancer received palliative care support over the phone with an advanced practice nurse specially trained in delivering palliative care. These sessions covered how to manage problems using creativity, optimism, planning, and expert information; self-care, including healthy eating, exercise, and relaxation; how to effectively partner with the person with cancer to manage symptoms; how to build a support

network; and decision-making, decision support, and advance care planning. After these sessions, the caregivers received monthly supportive care follow-up phone calls. One group of caregivers started this phone-based program within two weeks of agreeing to participate in the study, while the other group started 12 weeks later.

The researchers found that overall quality of life, depression, and feelings of being overwhelmed by the demands of caregiving all improved in the group that started the program immediately compared with those who started later. The timing of the start of the program had a large effect on decreasing depression and a small to medium effect on improving quality of life and decreasing the perceived burden of caregiving.

What this means for patients

"Family caregivers are a crucial part of the patient care team. Because the well-being of one affects the well-being of the other, both parties benefit when caregivers receive palliative care," said senior study author Marie Bakitas, DNSc, Marie L. O'Koren Endowed Chair and Professor at the University of Alabama's School of Nursing in Birmingham. "We found that when caregivers began receiving palliative care support around the time of the patient's advanced cancer diagnosis, they had less depression, perceived themselves to be less burdened by performing caregiving tasks, and had a better quality of life." To find palliative care programs for caregivers in your local area, Dr. Bakitas recommends using the online family care navigator tool provided by Family Caregiver Alliance's National Center on Caregiving at **caregiver.org/family-care-navigator**. ■

Questions to Ask Your Doctor

- If I am feeling overwhelmed by caregiving, what types of support and resources are available?
- What is palliative care? How is it different from hospice care?
- Does this hospital or cancer center provide palliative care services to both patients and caregivers?
- When can we start receiving palliative care services?
- What other support services are available to me? To my family?

More Information: Caregiving

- Advanced Cancer Care Planning (www.cancer.net/advancedcancer)
- Caregiver Support (www.cancer.net/caregiving)
- Caring for the Symptoms of Cancer and its Treatment (www.cancer.net/palliativecare)
- Finding Support and Information (www.cancer.net/coping)

CERVICAL CANCER

Study Shows Potential of a New Personalized Strategy for Advanced Cervical Cancer

Women with cervical cancer that has spread to other parts of the body have few treatment options, especially if the disease gets worse during or after treatment. As a result, newer approaches to treatment are needed. A small study looking at a new type of personalized immunotherapy, known as adoptive T-cell therapy, has produced some promising results. This treatment approach boosts the body's natural defenses against the human papillomavirus (HPV) to fight the cancer. HPV is the virus that causes cervical cancer, and HPV proteins are usually found in cervical cancer cells.

Adoptive T-cell therapy is called a personalized treatment because immune cells that specifically attack cervical cells containing HPV proteins are grown from a person's tumor in a laboratory. These cells are then delivered back into the body to treat the cancer using an intravenous (IV) tube placed into a vein.

During this study, nine women with cervical cancer received adoptive T-cell therapy. After treatment, two women had no signs of cancer, which is called a complete remission. Both of these women joined

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Study Shows Potential of a New Personalized Strategy for Advanced Cervical Cancer

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the study with cancer that had spread throughout their body (widespread metastases), and their disease had worsened despite previous treatment. According to the researchers, these women have remained cancer-free for 11 and 18 months and will continue to be monitored.

Treatment with adoptive T-cell therapy caused a number of serious side effects, the most common being low blood counts, infections, and metabolic disorders.

What this means for patients

"This proof-of-principal study shows that adoptive transfer of HPV-targeted T cells can cause complete remission of metastatic cervical cancer and that this remission can be long-lasting," said lead study author Christian Hinrichs, MD, Assistant Clinical Investigator at the National Cancer Institute in Bethesda, MD. "This treatment is still considered experimental and is associated with significant side effects. We also need to explore why this therapy worked so well in certain women and not in others." The researchers are planning to expand this study to enroll additional patients. Adoptive T-cell therapy is also being offered at an increasing number of major medical centers in the United States and other countries. Talk with your doctor about all of your treatment options for cervical cancer, including clinical trials. ■

Questions to Ask Your Doctor

- What stage of cervical cancer do I have?
- What are my treatment options?
- What treatment plan do you recommend? Why?
- What clinical trials are open to me?
- What is my chance of recovery?

More Information: Cervical Cancer

- Guide to Cervical Cancer (www.cancer.net/cervical)
- Advanced Cancer Care Planning (www.cancer.net/advancedcancer)
- HPV and Cancer (www.cancer.net/hpv)
- What is Immunotherapy? (www.cancer.net/immunotherapy)

Chemotherapy Plus Either Bevacizumab or Cetuximab Are Equally Effective for Metastatic Colorectal Cancer

In a large, ongoing study, results indicate that two common treatment regimens approved by the U.S. Food and Drug Administration are equally effective for metastatic colorectal cancer. Metastatic colorectal cancer is cancer that has spread to other parts of the body.

Both of the treatments researched in this study include chemotherapy, but one adds the targeted therapy bevacizumab (Avastin) and the other adds the targeted therapy cetuximab (Erbitux). Targeted therapy is a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. Bevacizumab and cetuximab target cancer growth differently.

Additionally, for either the bevacizumab or the cetuximab regimen, two different but equally effective combinations of drugs may be used for chemotherapy. This includes the combination called FOLFOX, which is oxaliplatin (Eloxatin), 5-fluorouracil (5-FU, Adrucil), and leucovorin (Wellcovorin), or FOLFIRI, which is irinotecan (Camptosar), 5-FU, and leucovorin.

For this study, 1,137 patients

with metastatic colorectal cancer who had not previously received treatment were given either bevacizumab plus chemotherapy or cetuximab plus chemotherapy. The drugs used for chemotherapy, either FOLFOX or FOLFIRI, were determined by the doctor providing care.

Researchers found that patients who received either treatment lived a similar amount of time and had a similar chance of the disease worsening. For those who received bevacizumab plus chemotherapy, it took about 11 months for the disease to worsen, and those patients lived almost two and a half years after diagnosis. For those who received the cetuximab regimen, it took about 10 months for the disease to worsen, and those patients also lived for about two and a half years after diagnosis.

What this means for patients

"About 75% of patients with metastatic colorectal cancer in the United States initially receive bevacizumab-based therapy, although we know that cetuximab-based therapy is also a good option," said lead author Alan P. Venook, MD, the Madden Family Distinguished Professor of Medical Oncology and Translational Research at the University of California in San Francisco. "Our findings clearly show that the two options—with either FOLFOX or FOLFIRI—are both acceptable and similarly effective."

Costs of bevacizumab and cetuximab are similar but the side effects are slightly different. The side effects of FOLFOX and FOLFIRI are also different. When making treatment decisions, talk with your doctor about the side effects of your treatments and how they will affect your quality of life. ■

Questions to Ask Your Doctor

- What stage of colorectal cancer do I have? What does this mean?
- Has it spread to other parts of the body?
- What are my treatment options?
- What are the risks and benefits of these options?
- What are the side effects of each option, and how can they be managed?

More Information: Colorectal Cancer

- Guide to Colorectal Cancer (www.cancer.net/colorectal)
- Making Decisions About Cancer Treatment (www.cancer.net/treatmentdecisions)
- Side Effects of Chemotherapy (www.cancer.net/chemotherapy)
- Skin Reactions to Targeted Therapies (www.cancer.net/sideeffects)
- Targeted Treatments (www.cancer.net/targetedtreatments)

END-OF-LIFE CARE

Stopping the Use of Cholesterol-Lowering Drugs Near the End of Life Improves Quality of Life

According to new research, people who are expected to live less than a year can safely stop taking cholesterol-lowering drugs, known as statins, without shortening their lives. In fact, discontinuing statins provided a number of important benefits, including reducing symptoms, having to take fewer pills, and improving overall quality of life.

The number of medications people with a life-limiting illness must take doubles during the last year of their lives. This often means people are taking 10 or more different pills per day—a difficult task for patients who frequently have trouble swallowing and a poor appetite. In addition, the side effects of each medication accumulate, and new side effects often develop when a number of drugs are taken together. These interactions between drugs can also reduce how well each individual treatment works.

For this study, 381 patients with a life-limiting illness (49% had cancer) and a life expectancy between one month and one year were divided into two groups. One group continued taking their statin as prescribed, while the other stopped statin

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END-OF-LIFE CARE

Stopping the Use of Cholesterol-Lowering Drugs Near the End of Life Improves Quality of Life

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therapy. The researchers found that stopping statin use was safe. Few patients in either group (13 in the group that stopped versus 11 in the group that continued) experienced the cardiovascular complications statins are prescribed to prevent, such as heart attacks or strokes. In fact, half of the group that discontinued statins were alive after 229 days compared with 190 days in the group that continued statin therapy. The patients who stopped taking their statins had a better quality of life and tended to have fewer symptoms. They also took fewer medications overall compared with patients who continued taking statins.

What this means for patients

"Many doctors argue that, near the end of life, it is not necessary to continue medications for chronic illnesses that are not life-threatening. But we have no guidance on which medicines to stop and when to do so," said lead study author Amy P. Abernethy, MD, PhD, a medical oncologist and palliative care specialist at Duke University Medical Center in Durham, NC. "Our study provides the first evidence

LEUKEMIA

For Older Patients with CLL, Ibrutinib May Be an Effective New Treatment Option

Early results from an ongoing study show that ibrutinib (Imbruvica) keeps relapsed chronic lymphocytic leukemia (CLL) from worsening for longer than ofatumumab (Arzerra), a standard treatment option for relapsed or refractory CLL. CLL is the most common type of leukemia in adults. Relapsed CLL is when the disease returns after remission, a time when there are no signs or symptoms of the disease. Refractory CLL is when the disease worsens despite treatment.

The standard treatment for CLL is a combination of chemotherapy and rituximab (Rituxan). However, many older patients, who are more likely to develop CLL, are not healthy enough for this intensive treatment regimen. For these patients, ofatumumab is often used as an alternative for relapsed or refractory disease. In this study, 40% of the participants were older than 70.

Ibrutinib, ofatumumab, and rituximab are all different types of targeted therapies. A targeted therapy is a treatment that targets the leukemia's specific genes, proteins, or the tissue environment that contributes to the growth of the disease.

This study included 391 older patients with relapsed or refractory CLL or a subtype of CLL called small lymphocytic lymphoma that had worsened after they had already received two or more different treatments. For the study, they received either ofatumumab or ibrutinib. After about 9 months, 42% of patients who received ibrutinib had their disease improve, compared with 4% of those who received ofatumumab. Additionally, patients who received ibrutinib had an 80% lower risk of the disease worsening and a 57% lower risk of dying than patients who received ofatumumab. Because ibrutinib was so effective, patients receiving ofatumumab were offered treatment with ibrutinib instead. Overall, researchers found that ibrutinib causes few severe side effects.

What this means for patients

"With ibrutinib, about 80% of patients were still in remission at one year, twice as many as we would expect with standard

More Information: Leukemia

- Guide to Chronic Lymphocytic Leukemia (www.cancer.net/CLL)
- Targeted Treatments (www.cancer.net/targetedtreatments)
- When the First Treatment Doesn't Work (www.cancer.net/treatment)

that stopping statins is safe and improves patients' quality of life." However, Dr. Abernethy noted that discontinuing statins is not appropriate for every patient, and the decision should be made on an individual patient basis. ■

Questions to Ask Your Doctor

- What is my prognosis (chance of recovery)?
- What is the purpose of each of my medications?
- Is there a chance that any of my medications could interact?
- What should I do if I experience any unexpected side effects to my medications?
- What are the potential risks and benefits of stopping one or more of my medications, such as statins?

More Information: End of Life Care

- Advanced Cancer Care Planning (www.cancer.net/advancedcancer)
- Chronic Conditions: When Cancer Is Not Your Only Health Concern (www.cancer.net/chronicconditions)
- Hospice Care (www.cancer.net/endoflife)

therapy," said lead study author John Byrd, MD, a professor of medicine at the Ohio State University Comprehensive Cancer Center in Columbus. Ibrutinib was approved by the U.S. Food and Drug Administration in February 2014 for patients with CLL who have had at least one previous treatment. ■

Questions to Ask Your Doctor

- What type of CLL do I have? Has it worsened or come back?
- What are my treatment options?
- How is my health in general? Will it affect the treatment options available to me?
- What is my chance of recovery?

Listen to ASCO experts discuss what these studies mean for patients at www.cancer.net/blog.

LUNG CANCER

Early Results Suggest New EGFR Targeted Therapy Shrinks Worsening Lung Cancers with Fewer Side Effects

In a recent phase I clinical trial, about 50% of patients receiving a new targeted therapy for worsening non-small cell lung cancer (NSCLC) had the cancer shrink. Targeted therapy is a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. Specifically, this new targeted therapy, AZD9291, targets changes or mutations to the epidermal growth factor receptor (EGFR).

In a healthy cell, EGFR allows cells to grow and divide as needed. However, some cancer cells have a mutation that results in too many receptors, allowing the cancer to grow uncontrollably. About 10% to 15% of white patients and about 40% of Asian patients with NSCLC have changes to EGFR. In the United States, this means about 18,000 people diagnosed with lung cancer each year have an EGFR mutation. Other EGFR targeted therapies are available for lung cancer, but for most patients with EGFR mutations, eventually these drugs stop working, often within 10 to 14 months.

Unlike other drugs that target EGFR, this study showed that AZD9291 worked well for patients who developed the most common mutation, T790M, that causes other EGFR targeted therapies to stop working. Currently, the only treatment option for NSCLC with this type of mutation is a combination of two different EGFR targeted therapies that causes severe side effects.

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Early Results Suggest New EGFR Targeted Therapy Shrinks Worsening Lung Cancers with Fewer Side Effects

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The 199 patients who participated in this study had NSCLC with EGFR mutations that continued to grow or spread after receiving one or more of the currently available EGFR targeted therapies. As part of this study, they received different doses of AZD9291.

Overall, the cancer shrank for 51% of patients participating in the study. Patients receiving each of the different doses experienced some level of tumor shrinkage, even those with cancer that had spread to the brain. For the 89 patients in the study with the T790M mutation, 64% had the cancer shrink or stop growing, compared with 23% of those without this mutation.

AZD9291 also appears to cause fewer side effects than other drugs that target EGFR because it specifically targets the changed EGFR in the tumor, whereas other EGFR therapies target both the changed EGFR in the tumor and the normal EGFR in the skin and other organs, causing side effects such as severe and uncomfortable rashes.

What this means for patients

"There is currently no standard treatment for patients whose lung cancer worsens after initial treatment with an EGFR targeted therapy," said lead study author Pasi A. Jänne, MD, PhD, a professor of medicine at Dana Farber Cancer Institute and Harvard Medical School in Boston, MA. "Although it is still a bit early, our study suggests that AZD9291 may offer an effective new therapy option for these patients, without the skin side effects we typically see with existing EGFR therapies."

AZD9291 is still being studied and is not currently available outside of a clinical trial. Talk with your doctor about clinical trials as an option when making treatment decisions.

Dr. Jänne was a recipient of a Conquer Cancer Foundation of ASCO Young Investigator Award in 2001. ■

Questions to Ask Your Doctor

- What type of lung cancer do I have? What does this mean?
- Does the cancer have EGFR or other mutations that contribute to cancer growth?
- What are my treatment options?
- If the cancer has worsened, what other treatment options are available?
- What clinical trials are available to me?
- What treatment option do you recommend? Why?

Second-Line Treatment with Ramucirumab and Chemotherapy Lengthens Lives of Patients with NSCLC

Results from a new study show that combining the targeted therapy ramucirumab (Cyramza) with standard chemotherapy lengthens the lives of patients with non-small cell lung cancer (NSCLC). Targeted therapy is a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. Specifically, ramucirumab targets a protein called VEGF receptor 2, blocking the growth of new blood vessels in the tumor that are needed for the tumor to grow and spread.

In this study, ramucirumab was combined with a current standard chemotherapy, docetaxel (Docefrez, Taxotere), as a second-line therapy. Second-line therapy is treatment given after the first treatments, called first-line therapy, stop working. There are few treatments approved as second-line therapy for NSCLC, and those that are currently available do not often work very well, with patients living about seven to nine months.

The 1,253 patients who participated in this study had stage IV NSCLC that had worsened while receiving chemotherapy. They received either ramucirumab plus chemotherapy with docetaxel or an inactive treatment called a placebo plus docetaxel.

Nationwide Lung Cancer Screening Could Find More Early-Stage Cancers, but at an Increased Cost

A new model predicts that nationwide lung cancer screening for people enrolled in Medicare who have a high risk of the disease would double the percentage of early-stage lung cancers diagnosed over five years. In March 2014, the U.S Preventive Services Task Force (USPSTF) recommended that people age 55 to 80 with a high risk of lung cancer due to cigarette smoking receive screening for the disease each year with low dose computed tomography (CT). A CT scan creates a three-dimensional picture of the inside of the body with an x-ray machine to find any abnormalities or tumors. People considered to have a high risk of lung cancer include current tobacco smokers who have smoked an average of one pack of cigarettes a day for at least 30 years or those who have quit within the past 15 years.

Researchers looked at three different screening use scenarios for implementing the recommendations. The expected screening use scenario is based on historic experience with mammography, in which 50% of patients that are offered screening each year actually receive screening. In the low-use scenario, 25% of patients that are offered screening each year receive screening. For the high-use scenario, 75% of patients offered screening would receive screening each year. The high-use screening scenario would find the most early-stage lung cancers, but would be challenging to implement because of the resources needed to follow this approach.

Researchers found that following the USPSTF recommendations with the expected screening use scenario would result in 54,900 more lung cancer diagnoses over five years than no screening. It would also increase the percentage of lung cancers diagnosed at an early stage from the current 15% to 33%. However, they also estimate that screening would increase Medicare premiums by $3.00 per month. For the low-use scenario, researchers estimated that Medicare premiums would increase by $1.90 per month. For the high-use scenario, that increase would be $4.10 per month.

What this means for patients

"If we can diagnose lung cancers at an earlier stage, patients can be treated far more effectively and the chance of survival is much better," said lead study author Joshua A. Roth, PhD, MHA,

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Researchers found that almost 23% of patients who received ramucirumab plus docetaxel had the tumors shrink, compared with about 14% of those who received the placebo plus docetaxel. In addition, patients who received ramucirumab plus docetaxel lived about one and a half months longer than those who received the placebo plus docetaxel, ten and a half months compared with nine months.

What this means for patients

"This is the first treatment in approximately a decade to improve the outcomes for patients in the second-line setting," said lead study author Maurice Pérol, MD, Head of Thoracic Oncology at Cancer Research Center of Lyon in France. "The survival improvement is significant because patients with advanced NSCLC typically have a very short survival time following second-line therapy." If you have NSCLC, talk with your doctor about the treatment options currently available, including clinical trials, and how those options will affect the length and quality of your life. ■

Questions to Ask Your Doctor

- What type and stage of lung cancer do I have?
- What treatments have I already received?
- What is my chance of recovery?
- What are my treatment options?
- What treatment do you recommend? Why?
- What is the chance of success with the planned treatment?
- What clinical trials are open to me?

LUNG CANCER

Nationwide Lung Cancer Screening Could Find More Early-Stage Cancers, but at an Increased Cost

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a postdoctoral research fellow at Fred Hutchinson Cancer Research Center in Seattle, WA. "However, the key to the success of this screening program is ensuring that those who are at high risk actually undergo screening and receive appropriate treatment." ■

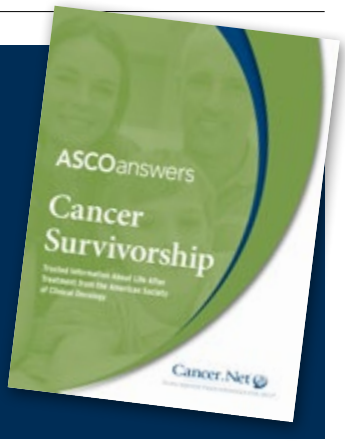
Questions to Ask Your Doctor

- What is my risk of lung cancer? How is this determined?
- Is lung cancer screening recommended for me?
- What are the risks and benefits of lung cancer screening?
- What are the next steps if the CT scan shows an abnormality?
- If I'm concerned about managing the costs of my care, who can help me with these concerns?

More Information: Lung Cancer

- Guide to Lung Cancer (www.cancer.net/lung)
- Advanced Cancer Care Planning (www.cancer.net/advancedcancer)
- EGFR Testing for Advanced NSCLC (www.cancer.net/recommendations)
- Explaining Cancer Genome Research (www.cancer.net/research)
- Financial Considerations (www.cancer.net/managingcostofcare)
- Lung Cancer Screening (www.cancer.net/recommendations)
- Quitting Smoking (www.cancer.net/tobacco)
- Skin Reactions to Targeted Therapies (www.cancer.net/sideeffects)
- Targeted Treatments (www.cancer.net/targetedtreatments)
- Understanding Cancer Risk (www.cancer.net/prevention)
- When the First Treatment Doesn't Work (www.cancer.net/treatment)

ASCO Answers: Cancer Survivorship helps patients transition into life after active treatment has finished. In addition to information on the challenges survivors may face and the importance of follow-up care, it includes a blank treatment summary and survivorship care form that patients can fill out with the help of their health care team. Download this booklet at www.cancer.net/survivorship.



MELANOMA

New Immunotherapy, MK-3475, Shows Promise for Metastatic Melanoma

According to the results of a large, phase I study, a new drug called MK-3475 may benefit people with melanoma that has spread to other parts of the body. MK-3475 blocks the function of a protein called PD-1 (programmed death-1) found on T-cells, a type of white blood cell that directly helps fight disease. Because PD-1 keeps the immune system from destroying cancer cells, stopping PD-1 from working allows the immune system to better eliminate melanoma.

As part of this study, 411 people with melanoma that had spread to distant parts of skin, the lungs, or other organs received treatment with MK-3475, although it was given using three different dose schedules. Before joining the study, 221 participants had received ipilimumab (Yervoy), while 190 had not.

MK-3475 provided a benefit no matter which dose was given and regardless of a number of other factors, including previous treatment with ipilimumab. Overall, 34% of the participants had tumors that responded to treatment. The response rate was higher in patients who had not had treatment with ipilimumab before the study began (40% compared with 28% of patients whose tumors had gotten worse

during or after ipilimumab treatment). After about a year, 88% of the patients whose tumors responded to MK-3475 had not gotten worse. The estimated one-year overall survival rate was 69% for all participants and 74% for people who had not previously received treatment with ipilimumab. The one-year survival rate is the percentage of people who live at least one year after starting treatment.

Overall, 8% of the participants experienced serious treatment-related side effects, and 4% had to stop treatment because them.

What this means for patients

"This is probably the biggest phase I trial ever conducted in oncology," said lead study author Antoni Ribas, MD, PhD, a professor of medicine at the David Geffen School of Medicine at University of California in Los Angeles. "We were excited to see that MK-3475 was effective in previously untreated patients as well as in those who had multiple prior therapies, including ipilimumab. These are early data, but they tell us we are on to something really important."

The U.S. Food and Drug Administration has granted MK-3475 a breakthrough therapy designation for metastatic melanoma or melanoma that cannot be removed with surgery, as well as a priority review designation. This helps speed up the review and approval of drugs that offer major advances in treatment or provide a treatment for a condition that does not have an adequate existing treatment.

Additional clinical trials are planned, but eligible patients with advanced melanoma who have been previously treated with ipilimumab and, if indicated, a BRAF inhibitor may be able to receive MK-3475 through an expanded access program. Expanded access programs allow drug manufacturers to provide patients with new investigational drugs under certain conditions. Talk with your doctor about all of your treatment options, including clinical trials.

Dr. Ribas was a recipient of a Conquer Cancer Foundation of ASCO Career Development Award in 2000. ■

Questions to Ask Your Doctor

- What stage of melanoma do I have?
- What are my treatment options?
- What clinical trials are open to me? Where are they located, and how do I find out more about them?
- What treatment plan do you recommend? Why?
- What is my chance of recovery?
- Where can I get more information about expanded access programs?

Treatment with Ipilimumab After Surgery Reduces the Recurrence of High-Risk Stage III Melanoma

Results from a large clinical study show that treatment with ipilimumab (Yervoy) decreases the risk of melanoma coming back after surgery by roughly 25% for people diagnosed with high-risk stage III disease. However, this treatment causes serious side effects.

Nine hundred fifty-one (951) people who had already had surgery to treat stage III melanoma volunteered to participate in this study. They were considered to be at high risk for the cancer coming back (recurrence) because the cancer had spread to the lymph nodes. The volunteers were randomly assigned to one of two groups. One group received ipilimumab, a drug that works by taking the brakes off the immune system to destroy cancer cells. The other group received an inactive treatment called a placebo.

Nearly three years after treatment, the researchers found that ipilimumab therapy greatly reduced the risk of melanoma recurrence. During this time, there were 234 recurrences reported in the ipilimumab group compared with 294 recurrences in the placebo group. This means that 47% of people who received ipilimumab remained melanoma-free after three years compared with 35% of people who received the placebo. Overall, ipilimumab reduced the risk of recurrence by 25% compared with placebo.

Despite its effectiveness, treatment with ipilimumab often caused serious side effects. More than half (52%) of people

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Treatment with Ipilimumab After Surgery Reduces the Recurrence of High-Risk Stage III Melanoma

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in the ipilimumab group stopped treatment because of side effects, most within the first 12 to 16 weeks. These side effects included rash and inflammation of the colon (colitis), thyroid, and pituitary gland. There were also five treatment-related deaths reported during this study. However, most of these side effects can be prevented and managed by watching closely for symptoms before they become more serious. Still, more research is needed to better understand whether the benefits outweigh the risks associated with this treatment.

What this means for patients

"This is a promising treatment—we saw substantially fewer recurrences among patients who are at high risk of relapse," said lead study author Professor Alexander Eggermont, MD, PhD, Director General of the Gustave Roussy Cancer Campus Grand Paris in France. "We've seen many impressive new treatments for advanced melanoma in recent years. This trial with ipilimumab is the first to show we may be able to give these new drugs earlier in the course of disease, where it can do more good and potentially cure more patients."

Ipilimumab is approved by the U.S. Food and Drug Administration for the treatment of stage IV melanoma, as well as stage III melanoma that cannot be removed with surgery. However, it is not currently approved to reduce the risk of recurrence after surgery. Talk with your doctor about all of your treatment options, including clinical trials. ■

Questions to Ask Your Doctor

- What stage of melanoma do I have?
- What are my treatment options?
- Can the melanoma be removed using surgery?
- Will I need to have additional treatment after surgery? Why or why not?
- Will immunotherapy be part of my treatment plan?
- What are the possible side effects of each treatment option, both in the short term and the long term? How can they be managed?
- Is the cancer likely to come back after treatment?

Combining Ipilimumab and Nivolumab Helps People with Advanced Melanoma Live Longer

An early study shows that half of patients with advanced melanoma who received a combination of ipilimumab (Yervoy) and nivolumab, an investigational medication, were alive almost three and a half years later (40 months). That is nearly double the amount of time reported in earlier studies that used either drug by itself. Ipilimumab and nivolumab are immunotherapies, which is a type of treatment designed to boost the body's natural defenses to fight the cancer. However, each drug targets a different checkpoint found on T-cells, a type of white blood cell that directly helps the immune system fight disease.

As part of this study, 53 people with stage III or IV melanoma that could not be removed with surgery received ipilimumab and nivolumab. According to the researchers, the combination treatment caused melanoma to shrink quickly and substantially. Within about nine months, 42% of the participants had the number of tumors decrease by more than 80%. This effect appears to be long-lasting, with 18 of the 22 responses (82%) continuing at least until the time when these data were collected. Overall, 22 out of 53 study participants (41%) had some benefit from this treatment, and nine (17%) experienced a complete remission, which means there were no signs of melanoma after treatment.

The number of side effects caused by the combination treatment was higher than the number reported in other studies that used either ipilimumab or nivolumab by themselves. However, most of these side

effects were manageable and reversible.

What this means for patients

"Just a few years ago, median survival for patients diagnosed with advanced melanoma was as little as a year or less, and only approximately 20% to 25% survived two years, so it's truly remarkable that we're seeing a median survival of over three years in this trial," said lead study author Mario Sznol, a professor of medical oncology at Yale School of Medicine in New Haven, CT. "While we're encouraged by what we're seeing with the use of these two drugs together, this trial was small, so a randomized phase III trial will be important to validate our initial results."

Ipilimumab is approved by the U.S. Food and Drug Administration (FDA) for the treatment of stage IV melanoma and for stage III melanoma that cannot be removed with surgery. However, nivolumab is not currently FDA-approved. If you have been diagnosed with advanced melanoma, talk with your doctor about the treatment options available to you, including clinical trials, and how those options will affect the length and quality of your life. ■

Questions to Ask Your Doctor

- What stage of melanoma do I have?
- What are my treatment options?
- What clinical trials are open to me? Where are they located, and how do I find out more about them?
- What treatment plan do you recommend? Why?
- What is my chance of recovery?
- If I'm worried about managing the costs related to my cancer care, who can help me with these concerns?

More Information: Melanoma

- Guide to Melanoma (www.cancer.net/melanoma)
- Advanced Cancer Care Planning (www.cancer.net/advancedcancer)
- Clinical Trials (www.cancer.net/clinicaltrials)
- Dealing With Cancer Recurrence (www.cancer.net/survivorship)
- Drug Approval and Labeling (www.cancer.net/research)
- Side Effects (www.cancer.net/sideeffects)
- What is Immunotherapy? (www.cancer.net/immunotherapy)
- When the First Treatment Doesn't Work (www.cancer.net/treatment)

OROPHARYNGEAL CANCER

Certain People with HPV-Positive Head and Neck Cancer May Benefit From a Lower Dose of Radiation Therapy

Early research suggests that lowering the dose of radiation therapy for some people with oropharyngeal cancer is an effective treatment option and may help reduce long-term side effects. This new approach customizes the radiation dose based on a person's response to initial chemotherapy, as well as other factors known to affect a person's chance of recovery, such as whether the tumor has tested positive for the human papillomavirus (HPV), the tumor's size, and the person's smoking history.

Approximately 70% of newly-diagnosed oropharyngeal cancers are related to HPV, and the number of people diagnosed with HPV-related head and neck cancers appears to be increasing. People diagnosed with HPV-positive oropharyngeal cancer tend to have better survival rates compared with patients with HPV-negative disease, which is usually related to tobacco use.

As part of this study, 90 patients with stage III, IVa, or IVb HPV-positive oropharyngeal cancer received induction chemotherapy with cetuximab

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Certain People with HPV-Positive Head and Neck Cancer May Benefit From a Lower Dose of Radiation Therapy

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(Erbitux), cisplatin (Platinol), and paclitaxel (Taxol) before radiation therapy. After chemotherapy, 62 of the patients had no signs of cancer based on an endoscopic exam and were assigned to receive a lower dose of intensity-modulated radiation therapy (IMRT). The rest of the patients enrolled in the study received a standard dose of IMRT. IMRT uses advanced technology to more accurately direct the beams of radiation to the tumor, helping reduce damage to nearby healthy cells. Both groups were given standard cetuximab along with radiation therapy.

Two years after treatment, 93% of the patients who received the lower dose of IMRT and 87% of patients treated with the standard IMRT dose were alive. Eighty percent (80%) of the low-dose group and 65% of the standard-dose group had tumors that did not grow or spread further during this time. Survival was slightly higher for people in the low-dose group who had smoked less than 10 pack-years and had earlier-stage disease.

Lowering the dose of IMRT can also lead to a better quality of life by decreasing the risk of serious long-term side effects, such as trouble swallowing, dry mouth, loss of taste, neck stiffness, and thyroid problems.

What this means for patients

"Treatment for head and neck cancer can be quite grueling, so it's very encouraging to see we can safely dial back treatment for patients with less aggressive disease and an overall good prognosis, particularly for young patients who have many years to deal with long-term side effects," said lead study author Anthony Cmelak, MD, a professor of radiation oncology at the Vanderbilt-Ingram Cancer Center in Nashville, TN. "However, we need longer follow up, as well as confirmatory phase III data, before we can recommend applying this strategy in practice." According to Dr. Cmelak, lower-dose IMRT is not suitable for patients with HPV-negative disease or larger tumors. ■

More Information: Oropharyngeal Cancer

- Guide to Oral and Oropharyngeal Cancer (www.cancer.net/oral)
- HPV and Cancer (www.cancer.net/hpv)
- Side Effects of Radiation Therapy (www.cancer.net/radiationtherapy)
- What is Radiation Therapy? (www.cancer.net/radiationtherapy)

Questions to Ask Your Doctor

- What type of head and neck cancer do I have?
- Is it important to determine if I have HPV? Why?
- Will my treatment plan include radiation therapy? Will radiation therapy be combined with chemotherapy?
- What dose and schedule do you recommend? Why?
- What are the possible side effects of my treatment plan, both in the short term and the long term? How can these be managed?
- Should I see a dentist before starting treatment?

Combination of Targeted Therapies Increases the Time it Takes for Recurrent Ovarian Cancer to Worsen

In a recent study, researchers found that the combination of olaparib and cediranib (Recentin) kept recurrent ovarian cancer from worsening for almost nine months longer than treatment with olaparib alone. Recurrent ovarian cancer is cancer that has come back after the initial treatment. The current standard treatment for recurrent ovarian cancer is chemotherapy, which can cause severe side effects and may not work very well because the cancer often develops a resistance to chemotherapy, meaning that the chemotherapy that was used initially can no longer control the cancer's growth. This is why researchers have been studying other ways to treat recurrent ovarian cancer, such as the use of olaparib and cediranib.

Both of these drugs are targeted therapies, but they work differently to treat cancer. Targeted therapy is a treatment that targets the cancer's specific genes, proteins, or the tissue environment that contributes to cancer growth and survival. Olaparib is a type of targeted therapy called a PARP inhibitor. Cediranib is a type called an anti-angiogenic that is focused on stopping the process of making new blood vessels, which are needed for a tumor to grow and spread.

For this study, 90 women with recurrent ovarian cancer that was either a type called high-grade serous or was related to a *BRCA* gene mutation, or change, received either olaparib by itself or olaparib plus cediranib. Researchers found that 80% of the women who received the combination of therapies had the tumors shrink, and it took about 18 months for the cancer to worsen. Additionally, five patients who received the combination had no signs or symptoms of cancer after treatment. For those who received only olaparib, 48% had the tumors shrink, and it took about nine months for the disease to worsen. Two patients who received olaparib only had no signs or symptoms of cancer after treatment.

Some side effects, such as high blood pressure, fatigue, and diarrhea, were more common for women taking the combination therapy. However, these side effects were often manageable with treatment of the symptoms or by reducing the treatment doses, if needed.

What this means for patients

"The significant activity that we saw with the combination suggests that this could potentially be an effective and alternative to standard chemotherapy," said lead study author Joyce Liu, MD, MPH, an instructor in medical oncology at Dana-Farber Cancer Institute in Boston, MA. "At the same time, this approach is not yet ready for clinical practice as neither of these drugs is currently FDA approved for ovarian or any other cancer. We also need additional clinical trials to confirm the findings of this study to see how this combination compares to standard treatment." Talk with your doctor about all of your treatment options for recurrent ovarian cancer, including clinical trials.

Dr. Liu was a recipient of a Conquer Cancer Foundation of ASCO Young Investigator Award in 2008. ■

Questions to Ask Your Doctor

- What type and stage of ovarian cancer do I have? What does this mean?
- Is it recurrent? If so, has it spread elsewhere in my body?
- What is my chance of recovery?
- What are my treatment options?
- What treatment plan do you recommend? Why?
- What is the chance of success with the planned treatment?
- What clinical trials are open to me?

More Information: Ovarian Cancer

- Guide to Ovarian Cancer (www.cancer.net/ovarian)
- Hereditary Breast and Ovarian Cancer (www.cancer.net/hboc)
- Targeted Treatments (www.cancer.net/targetedtreatments)

Waiting to Receive Hormone Therapy May Be Safe for Men with Rising PSA Levels After Treatment for Prostate Cancer

According to a large study, men who have rising prostate-specific antigen (PSA) levels after surgery or radiation therapy may be able to safely hold off on receiving hormone therapy until they experience symptoms or other signs that the cancer has returned. PSA is a substance released by prostate tissue that is found in higher levels in a man's blood when there is abnormal activity in the prostate, such as prostate cancer. Rising PSA levels after initial treatment for prostate cancer is called a PSA relapse. It means that the PSA levels are increased, but a man has no other symptoms of cancer or signs of cancer on imaging tests.

Currently, there are no standard recommendations on when to start hormone therapy for men with a PSA relapse. Hormone therapy for prostate cancer, also called androgen deprivation therapy (ADT), is used to reduce the amount of male hormones called androgens that the cancer can use to grow and spread.

For this study, researchers analyzed information from 2,012 men who had a PSA relapse after either surgery to remove the prostate or radiation therapy. When these patients received ADT was categorized as either "immediate," meaning ADT was started within three months of the PSA relapse, or "deferred," meaning ADT was started at least two years after the PSA relapse or when they had other symptoms or signs that the cancer returned or was worsening.

Researchers found that the percentage of men who died of either prostate cancer or other causes after five years was similar for both treatment strategies, with about 85% of men who received the "immediate" treatment and 87% of men who received the "deferred" treatment alive after five years. This means that neither strategy lengthened nor shortened men's lives.

What this means for patients

"Rising PSA levels trigger a lot of anxiety, and many men want to start treatment as soon as possible," said lead study author Xabier Garcia-Albeniz, MD, a research associate at Harvard University School of Public Health in Boston, MA. "These findings suggest that there may be no need to rush to ADT. If our results are confirmed, patients could feel more comfortable waiting until they develop symptoms or signs of cancer that are seen on a scan, before initiating ADT." Delaying hormone therapy would allow men to avoid a decrease in quality of life associated with common side effects of ADT that can worsen the longer it is given, such as sexual problems, bone weakness and breaks, hot flashes, decreased mental sharpness, fatigue, loss of muscle, high cholesterol, weight gain, and depression. ■

Questions to Ask Your Doctor

- What stage of prostate cancer do I have? What does this mean?
- What treatments have I already received?
- How often is PSA testing done?
- If my PSA levels rise, what other tests are needed to search for a return of the cancer?
- What are the next steps after these tests?
- Will I need hormone therapy? Why or why not?

More Information: Prostate Cancer

- Guide to Prostate Cancer (www.cancer.net/prostate)
- Hormone Deprivation Symptoms in Men (www.cancer.net/hormonemen)
- Hormone Therapy for Advanced Prostate Cancer (www.cancer.net/recommendations)
- Sexual and Reproductive Health (www.cancer.net/reproductivehealth)
- When the First Treatment Doesn't Work (www.cancer.net/treatment)

Adding Docetaxel to Hormone Therapy Lengthens the Lives of Men with Metastatic Hormone-Sensitive Prostate Cancer

Results from a new study led by the National Cancer Institute suggest that adding chemotherapy with the drug docetaxel (Docefrez, Taxotere) to standard hormone therapy lengthens the lives of men newly diagnosed with metastatic hormone-sensitive prostate cancer. Metastatic cancer is cancer that has spread to other parts of the body, and hormone-sensitive prostate cancer uses male hormones called androgens to grow. Hormone therapy, also called androgen deprivation therapy (ADT), lowers levels of androgens in the body, which helps to slow or stop cancer growth. However, it eventually stops working to control cancer growth for most men. This is usually when chemotherapy is given.

As part of this study, 790 men newly diagnosed with metastatic hormone-sensitive prostate cancer received either ADT only or ADT with docetaxel. About two-thirds of the patients participating in the study had high-extent disease, which means that the cancer had spread to major organs and/or to multiple bones. When the disease worsened, men who received ADT plus docetaxel were given additional docetaxel, and men who received only ADT were given docetaxel for the first time.

Overall, researchers found that the men who initially received ADT and docetaxel lived about 14 months longer than those who initially received only ADT. They found that the difference was even larger for men who had high-extent disease, with those who initially received ADT plus docetaxel living about 17 months longer than those who initially received ADT only. In addition, adding docetaxel earlier on kept the disease from worsening for longer. It took about 13 months longer for men who initially had ADT plus docetaxel to experience symptoms of the disease worsening or new areas of cancer spread when compared with men who initially received only ADT.

What this means for patients

"Hormone therapy has been a standard treatment for prostate cancer since the 1950s," said lead study author Christopher Sweeney, MBBS, a medical oncologist at the Lank Center of Genitourinary Oncology at the Dana-Farber Cancer Institute in Boston, MA. "This is the first study to identify a strategy that prolongs survival for men with newly-diagnosed metastatic prostate cancer. The benefit is substantial and warrants this being a new standard treatment for men who have high-extent disease and are able to have chemotherapy." ■

Questions to Ask Your Doctor

- What type of prostate cancer do I have? Is it hormone sensitive?
- Has it spread to other parts of my body? How does this affect my chance of recovery?
- What are my treatment options?
- What treatment do you recommend? Why?
- What are the next steps if the first treatment stops working?

***ASCO Answers* guides to breast, colorectal, lung, and prostate cancer** contain information about diagnosis, treatment, side effects, and psychosocial effects; questions to ask the health care team, with space for notes; and checklists to help newly diagnosed patients keep track of the tests, procedures, and treatments they will receive. These guides are available to download at www.cancer.net/guides.

In the Future, Patients with a Rare Neoplastic Joint Disease May Have a New Treatment Option

Early-stage research suggests that a new targeted drug, PLX3397, could become a treatment option for people with a neoplastic joint disorder called pigmented villonodular synovitis (PVNS). PVNS is a rare joint condition that usually affects the hip or knee, causing tumors to form in these joints that destroy joint tissue and cause severe, life-changing symptoms. PVNS is a type of uncontrollable cell growth, similar to a cancer, but it is not considered a cancer because it usually does not spread to other parts of the body.

PVNS is usually well-managed with surgery, but the disease comes back in some patients. When the disease recurs, more surgery is needed, often including a joint replacement, and the disease will eventually worsen so much that surgery can no longer control it. PLX3397 is a targeted therapy that could be an option for patients who have the disease worsen. A targeted therapy is a treatment that targets the specific genes, proteins, or the tissue environment that contributes to uncontrolled cell growth. Specifically, this treatment can target the change that controls PVNS, which causes some cells to make too much of a protein called colony stimulating factor 1 receptor. Blocking the overproduction of this protein with PLX3397 slows the damage to the joint and reduces swelling from the disease.

The 23 patients who received PLX3397 as part of this early study had PVNS that had worsened despite other treatment. Most had already had more than one surgery for the disease, as well as radiation therapy and other types of targeted therapy. Eleven out of 14 (79%) of the patients in the study had the tumors shrink, and the other three patients had the disease stop worsening.

What this means for patients

"These results are a shining example of how patients can experience a meaningful clinical benefit when we are able to match the right treatment with the right target," said lead author William D. Tap, MD, Chief of the Sarcoma Medical Oncology Service at Memorial Sloan Kettering Cancer Center in New York. "PLX3397 seemed to have a tremendous impact on the disease process that is destroying the joint as patients often reported a marked decrease in swelling and pain, even very early in their treatment." Because this study is very early, research on this treatment is ongoing, and it is only available through clinical trials. If you have PVNS, talk with your doctor about clinical trials as a treatment option. ■

Questions to Ask Your Doctor

- What are my treatment options for PVNS?
- How likely is the disease to return and worsen after surgery?
- In this situation, what treatment options are available?
- What clinical trials are open to me?
- How can I manage the symptoms of PVNS?

More Information: PVNS

- Clinical Trials (www.cancer.net/clinicaltrials)
- Targeted Treatments (www.cancer.net/targetedtreatments)

Now you can write down your family's cancer history using ASCO's Cancer Family History questionnaire. Sharing this document with other family members can lead to new information and may change how your health history is evaluated. Learn more at www.cancer.net/familycancerhistory.

Lenvatinib Could Be a New Option for Patients with Differentiated Radioiodine-Resistant Thyroid Cancer

Results from a recent study show that the drug lenvatinib could become a new, effective treatment option for patients with differentiated thyroid cancer that is resistant to standard radioiodine (RAI) therapy. Differentiated thyroid cancer is the most common subtype of thyroid cancer. It is generally curable with surgery and RAI. However, about 5% to 15% of patients with this subtype develop resistance to RAI, which means that it is no longer able to control the cancer's growth.

Lenvatinib 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. Lenvatinib actually targets several different changes in cancer cells and is also being researched as a treatment for liver, lung, kidney, and other cancers.

In this study, 392 patients with differentiated thyroid cancer that was RAI resistant and had worsened within a year received either lenvatinib or an inactive treatment called a placebo. Patients receiving the placebo were offered treatment with lenvatinib if the cancer worsened.

About 65% of the patients receiving lenvatinib had the tumors shrink, usually within the first two months of treatment. Only 3% of patients receiving the placebo had the tumors shrink. In addition, researchers found that it took about 18 months for the disease to worsen for patients who received lenvatinib, compared with about four months for those who received the placebo.

The side effects of lenvatinib include high blood pressure, diarrhea, decreased appetite, decreased weight, and nausea. About 79% of patients needed to have their doses of lenvatinib reduced due to the side effects, although the lead author noted that these patients still benefitted from the lower doses.

What this means for patients

"We are confident that, based on our findings, lenvatinib will eventually become a standard treatment for radioiodine-resistant thyroid cancer," said lead study author Martin Schlumberger, MD, a professor of oncology at the University Paris Sud in Paris, France. "As little as a year ago, this group of patients had no effective treatment options. It's remarkable that today we now have two targeted therapies that could be potential options." The targeted therapy sorafenib (Nexavar) is currently the only option outside of clinical trials available for patients with this type of thyroid cancer. It was approved by the U.S. Food and Drug Administration (FDA) in 2013. Lenvatinib is not currently approved by the FDA. Talk with your doctor about all of your treatment options for thyroid cancer, including clinical trials. ■

More Information: Thyroid Cancer

- Guide to Thyroid Cancer (www.cancer.net/thyroid)
- Targeted Treatments (www.cancer.net/targetedtreatments)
- When the First Treatment Doesn't Work (www.cancer.net/treatment)

Questions to Ask Your Doctor

- What type of thyroid cancer do I have?
- Is it RAI resistant? What does this mean?
- If it is RAI resistant, what treatment options are available?
- What clinical trials are open to me?
- What treatment plan do you recommend? Why?

ASCO Answers: Managing the Cost of Cancer Care offers practical guidance, information about the Affordable Care Act, a list of financial resources, and more. Download this booklet at www.cancer.net/managingcostofcare.

Cancer.Net

For more information, visit ASCO's patient website, www.cancer.net, or call 888-651-3038.

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