cure®

Cancer Updates, Research & Education®

AN *Innovative* APPROACH *to* CHEMOTHERAPY

ERENA VAN DER HEIJDEN's response to treatment allowed her to undergo six rounds of PIPAC instead of three.

LUNG CANCER
Trends in Immunotherapy for Advanced NSCLC

MULTIPLE MYELOMA
Triplet Therapy for Patients Ineligible for Transplant

DIET & NUTRITION
Navigating Healthy Food During a Cancer Journey

SPRING 2023
VOL.22 NO.1

KEYTRUDA IS A BREAKTHROUGH IMMUNOTHERAPY.

FOR TODAY

KEYTRUDA is a potential first treatment for **3 out of 4 patients** with advanced non–small cell lung cancer (NSCLC).

KEYTRUDA is also used to treat **more patients** with advanced lung cancer than any other immunotherapy.

FOR THE FUTURE

Ongoing clinical trials are exploring if KEYTRUDA can help treat more patients.

KEYTRUDA may be your first treatment for advanced NSCLC, either in combination with chemotherapy or used alone as a chemotherapy-free option.
Ask your doctor if KEYTRUDA is right for you.

KEYTRUDA is a prescription medicine used to treat a kind of lung cancer called non–small cell lung cancer (NSCLC).

- **KEYTRUDA + CHEMOTHERAPY, NONSQUAMOUS**
  It may be used with the chemotherapy medicines pemetrexed and a platinum as your first treatment when your lung cancer has spread (advanced NSCLC) **and** is a type called "nonsquamous" **and** your tumor does not have an abnormal "EGFR" or "ALK" gene.
- **KEYTRUDA + CHEMOTHERAPY, SQUAMOUS**
  It may be used with the chemotherapy medicines carboplatin and either paclitaxel or paclitaxel protein-bound as your first treatment when your lung cancer has spread (advanced NSCLC), **and** is a type called "squamous."
- **KEYTRUDA USED ALONE, PD-L1 POSITIVE**
  It may be used alone as your first treatment when your lung cancer has not spread outside your chest (stage III) and you cannot have surgery or chemotherapy with radiation, **or** your NSCLC has spread to other areas of your body (advanced NSCLC), **and** your tumor tests positive for "PD-L1" **and** does not have an abnormal "EGFR" or "ALK" gene.
- **KEYTRUDA AFTER CHEMOTHERAPY, PD-L1 POSITIVE**
  It may also be used alone for advanced NSCLC if you have tried chemotherapy that contains platinum and it did not work or is no longer working **and**, your tumor tests positive for "PD-L1" **and** if your tumor has an abnormal "EGFR" or "ALK" gene, you have also received an "EGFR" or "ALK" inhibitor medicine that did not work or is no longer working.

PD-L1 = programmed death ligand 1;
EGFR = epidermal growth factor receptor;
ALK = anaplastic lymphoma kinase.

IMPORTANT SAFETY INFORMATION

KEYTRUDA is a medicine that may treat certain cancers by working with your immune system. KEYTRUDA can cause your immune system to attack normal organs and tissues in any area of your body and can affect the way they work. These problems can sometimes become severe or life-threatening and can lead to death. You can have more than one of these problems at the same time. These problems may happen any time during treatment or even after your treatment has ended.

Call or see your health care provider right away if you develop any signs or symptoms of the following problems or if they get worse. These are not all of the signs and symptoms of immune system problems that can happen with KEYTRUDA:

- **Lung problems:** cough, shortness of breath, or chest pain.
- **Intestinal problems:** diarrhea (loose stools) or more frequent bowel movements than usual; stools that are black, tarry, sticky, or have blood or mucus; or severe stomach-area (abdomen) pain or tenderness.
- **Liver problems:** yellowing of your skin or the whites of your eyes; severe nausea or vomiting; pain on the right side of your stomach area (abdomen); dark urine (tea colored); or bleeding or bruising more easily than normal.
- **Hormone gland problems:** headaches that will not go away or unusual headaches; eye sensitivity to light; eye problems; rapid heartbeat; increased sweating; extreme tiredness; weight gain or weight loss; feeling more hungry or thirsty than usual; urinating more often than usual; hair loss; feeling cold; constipation; your voice gets deeper; dizziness or fainting; changes in mood or behavior, such as decreased sex drive, irritability, or forgetfulness.
- **Kidney problems:** decrease in the amount of your urine; blood in your urine; swelling of your ankles; loss of appetite.
- **Skin problems:** rash; itching; skin blistering or peeling; painful sores or ulcers in your mouth or in your nose, throat, or genital area; fever or flu-like symptoms; swollen lymph nodes.
- **Problems can also happen in other organs and tissues.** Signs and symptoms of these problems may include: chest pain; irregular heartbeat; shortness of breath; swelling of ankles; confusion;

Important Safety Information is continued on the next page.

keytruda.com/lung

IMPORTANT SAFETY INFORMATION *(continued)*

sleepiness; memory problems; changes in mood or behavior; stiff neck; balance problems; tingling or numbness of the arms or legs; double vision; blurry vision; sensitivity to light; eye pain; changes in eyesight; persistent or severe muscle pain or weakness; muscle cramps; low red blood cells; bruising.

- **Infusion reactions that can sometimes be severe or life-threatening.** Signs and symptoms of infusion reactions may include chills or shaking, itching or rash, flushing, shortness of breath or wheezing, dizziness, feeling like passing out, fever, and back pain.
- **Rejection of a transplanted organ.** Your health care provider should tell you what signs and symptoms you should report and they will monitor you, depending on the type of organ transplant that you have had.
- **Complications, including graft-versus-host disease (GVHD), in people who have received a bone marrow (stem cell) transplant that uses donor stem cells (allogeneic).** These complications can be serious and can lead to death. These complications may happen if you underwent transplantation either before or after being treated with KEYTRUDA. Your health care provider will monitor you for these complications.

Getting medical treatment right away may help keep these problems from becoming more serious. Your health care provider will check you for these problems during treatment with KEYTRUDA. They may treat you with corticosteroid or hormone replacement medicines. They may also need to delay or completely stop treatment with KEYTRUDA if you have severe side effects.

Before you receive KEYTRUDA, tell your health care provider if you have immune system problems such as Crohn's disease, ulcerative colitis, or lupus; have had an organ transplant or have had or plan to have a bone marrow (stem cell) transplant that uses donor stem cells (allogeneic); have had radiation treatment in your chest area; have a condition that affects your nervous system, such as myasthenia gravis or Guillain-Barré syndrome.

If you are pregnant or plan to become pregnant, tell your health care provider. KEYTRUDA can harm your unborn baby. If you are able to become pregnant, you will be given a pregnancy test before you start treatment.

Use effective birth control during treatment and for at least 4 months after your final dose of KEYTRUDA. Tell them right away if you think you may be pregnant or you become pregnant during treatment with KEYTRUDA.

Tell your health care provider if you are breastfeeding or plan to breastfeed. It is not known if KEYTRUDA passes into your breast milk. Do not breastfeed during treatment with KEYTRUDA and for 4 months after your final dose of KEYTRUDA.

Tell your health care provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

Common side effects of KEYTRUDA when used alone include feeling tired; pain, including pain in muscles; rash; diarrhea; fever; cough; decreased appetite; itching; shortness of breath; constipation; bones or joints and stomach-area (abdominal) pain; nausea; and low levels of thyroid hormone.

Common side effects of KEYTRUDA when given with certain chemotherapy medicines include feeling tired or weak; nausea; constipation; diarrhea; decreased appetite; rash; vomiting; cough; trouble breathing; fever; hair loss; inflammation of the nerves that may cause pain, weakness, and paralysis in the arms and legs; swelling of the lining of the mouth, nose, eyes, throat, intestines, or vagina; mouth sores; headache; weight loss; stomach-area (abdominal) pain; joint and muscle pain; and trouble sleeping.

These are not all the possible side effects of KEYTRUDA. Talk to your health care provider for medical advice about side effects.

Please read the adjacent Important Information About KEYTRUDA and discuss it with your oncologist.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Having trouble paying for your Merck medicine?

Merck may be able to help. www.merckhelps.com

IT'S TRU. KEYTRUDA® (pembrolizumab) Injection 100 mg

MERCK

Important Information About KEYTRUDA® (pembrolizumab) injection 100 mg. Please speak with your healthcare professional regarding KEYTRUDA (pronounced key-true-duh). Only your healthcare professional knows the specifics of your condition and how KEYTRUDA may work with your overall treatment plan. If you have any questions about KEYTRUDA, speak with your healthcare professional. ℞**ONLY**

What is the most important information I should know about KEYTRUDA?

KEYTRUDA is a medicine that may treat certain cancers by working with your immune system. KEYTRUDA can cause your immune system to attack normal organs and tissues in any area of your body and can affect the way they work. These problems can sometimes become severe or life-threatening and can lead to death. You can have more than one of these problems at the same time. These problems may happen anytime during treatment or even after your treatment has ended.

Call or see your healthcare provider right away if you develop any new or worsening signs or symptoms, including:

Lung problems

- cough
- shortness of breath
- chest pain

Intestinal problems

- diarrhea (loose stools) or more frequent bowel movements than usual
- stools that are black, tarry, sticky, or have blood or mucus
- severe stomach-area (abdomen) pain or tenderness

Liver problems

- yellowing of your skin or the whites of your eyes
- severe nausea or vomiting
- pain on the right side of your stomach area (abdomen)
- dark urine (tea colored)
- bleeding or bruising more easily than normal

Hormone gland problems

- headaches that will not go away or unusual headaches
- eye sensitivity to light
- eye problems
- rapid heartbeat
- increased sweating
- extreme tiredness
- weight gain or weight loss
- feeling more hungry or thirsty than usual
- urinating more often than usual
- hair loss
- feeling cold
- constipation
- your voice gets deeper
- dizziness or fainting
- changes in mood or behavior, such as decreased sex drive, irritability, or forgetfulness

Kidney problems

- decrease in your amount of urine
- blood in your urine
- swelling of your ankles
- loss of appetite

Skin problems

- rash
- itching
- skin blistering or peeling
- painful sores or ulcers in your mouth or in your nose, throat, or genital area
- fever or flu-like symptoms
- swollen lymph nodes

Problems can also happen in other organs and tissues. These are not all of the signs and symptoms of immune system problems that can happen with KEYTRUDA. Call or see your healthcare provider right away for any new or worsening signs or symptoms, which may include:

- chest pain, irregular heartbeat, shortness of breath, swelling of ankles
- confusion, sleepiness, memory problems, changes in mood or behavior, stiff neck, balance problems, tingling or numbness of the arms or legs
- double vision, blurry vision, sensitivity to light, eye pain, changes in eyesight
- persistent or severe muscle pain or weakness, muscle cramps
- low red blood cells, bruising

Infusion reactions that can sometimes be severe or life-threatening. Signs and symptoms of infusion reactions may include:

- chills or shaking
- itching or rash
- flushing
- shortness of breath or wheezing
- dizziness
- feeling like passing out
- fever
- back pain

Rejection of a transplanted organ. Your healthcare provider should tell you what signs and symptoms you should report and monitor you, depending on the type of organ transplant that you have had.

Complications, including graft-versus-host-disease (GVHD), in people who have received a bone marrow (stem cell) transplant that uses donor stem cells (allogeneic). These complications can be serious and can lead to death. These

Continued on next page.

complications may happen if you underwent transplantation either before or after being treated with KEYTRUDA. Your healthcare provider will monitor you for these complications.

Getting medical treatment right away may help keep these problems from becoming more serious. Your healthcare provider will check you for these problems during treatment with KEYTRUDA. Your healthcare provider may treat you with corticosteroid or hormone replacement medicines. Your healthcare provider may also need to delay or completely stop treatment with KEYTRUDA if you have severe side effects.

Before receiving KEYTRUDA, tell your healthcare provider about all of your medical conditions, including if you:

- have immune system problems such as Crohn's disease, ulcerative colitis, or lupus
- have received an organ transplant
- have received or plan to receive a stem cell transplant that uses donor stem cells (allogeneic)
- have received radiation treatment to your chest area
- have a condition that affects your nervous system, such as myasthenia gravis or Guillain-Barré syndrome
- are pregnant or plan to become pregnant. KEYTRUDA can harm your unborn baby.

  Females who are able to become pregnant:

  - Your healthcare provider will give you a pregnancy test before you start treatment with KEYTRUDA.
  - You should use an effective method of birth control during and for at least 4 months after the final dose of KEYTRUDA. Talk to your healthcare provider about birth control methods that you can use during this time.
  - Tell your healthcare provider right away if you think you may be pregnant or if you become pregnant during treatment with KEYTRUDA.
- are breastfeeding or plan to breastfeed. It is not known if KEYTRUDA passes into your breast milk. Do not breastfeed during treatment with KEYTRUDA and for 4 months after your final dose of KEYTRUDA.

Tell your healthcare provider about all the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements.

How will I receive KEYTRUDA?

- Your healthcare provider will give you KEYTRUDA into your vein through an intravenous (IV) line over 30 minutes.
- In adults, KEYTRUDA is usually given every 3 weeks or 6 weeks depending on the dose of KEYTRUDA that you are receiving.
- In children, KEYTRUDA is usually given every 3 weeks.
- Your healthcare provider will decide how many treatments you need.
- Your healthcare provider will do blood tests to check you for side effects.
- If you miss any appointments, call your healthcare provider as soon as possible to reschedule your appointment.

What are the possible side effects of KEYTRUDA?
KEYTRUDA can cause serious side effects. See "What is the most important information I should know about KEYTRUDA?"

Common side effects of KEYTRUDA when used alone include: feeling tired, pain, including pain in muscles, rash, diarrhea, fever, cough, decreased appetite, itching, shortness of breath, constipation, bones or joints and stomach-area (abdominal) pain, nausea, and low levels of thyroid hormone.

Side effects of KEYTRUDA when used alone that are more common in children than in adults include: fever, vomiting, upper respiratory tract infection, headache, and low levels of white blood cells and red blood cells (anemia).

Common side effects of KEYTRUDA when given with certain chemotherapy medicines include: feeling tired or weak, nausea, constipation, diarrhea, decreased appetite, rash, vomiting, cough, trouble breathing, fever, hair loss, inflammation of the nerves that may cause pain, weakness, and paralysis in the arms and legs, swelling of the lining of the mouth, nose, eyes, throat, intestines, or vagina, mouth sores, headache, weight loss, stomach-area (abdominal) pain, joint and muscle pain, and trouble sleeping.

Common side effects of KEYTRUDA when given with chemotherapy and bevacizumab include: tingling or numbness of the arms or legs, hair loss, low red blood cell count, feeling tired or weak, nausea, low white blood cell count, diarrhea, high blood pressure, decreased platelet count, constipation, joint aches, vomiting, urinary tract infection, rash, low levels of thyroid hormone, and decreased appetite.

Common side effects of KEYTRUDA when given with axitinib include: diarrhea, feeling tired or weak, high blood pressure, liver problems, low levels of thyroid hormone, decreased appetite, blisters or rash on the palms of your hands and soles of your feet, nausea, mouth sores or swelling of the lining of the mouth, nose, eyes, throat, intestines, or vagina, hoarseness, rash, cough, and constipation.

These are not all the possible side effects of KEYTRUDA.

Call your healthcare provider for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

General information about the safe and effective use of KEYTRUDA

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. You can ask your pharmacist or healthcare provider for information about KEYTRUDA that is written for health professionals.

Based on Medication Guide usmg-mk3475-iv-2203r050 as revised March 2022.

MERCK

CURE® Contents

SPRING · 2023

» **BRENDA DUGGINS** was treated with a BTK inhibitor for chronic lymphocytic leukemia, which she was diagnosed with in 2012.

22

» **TERI GRIEGE** had just completed an Ironman competition when she was diagnosed with stage 4 colorectal cancer.

34

DUGGINS BY BRIANA SNYDER; GRIEGE PROVIDED BY TERI GRIEGE

ERENA VAN DER HEIJDEN had fewer side effects when treated with PIPAC.

ALYSSA STEFEK

28

FEATURES

publisher's note

SPRING • 2023

Seeing Another Perspective

CHEMOTHERAPY HAS BEEN USED for decades to treat several types of cancer, but now researchers are looking into innovative ways to deliver this treatment in particular cancers, including appendiceal, ovarian, gastric and colon cancers.

Pressurized intraperitoneal aerosolized chemotherapy, or PIPAC, involves spraying chemotherapy directly onto the microscopic tumors that lie on the surface of the abdominal cavity. This approach may allow the treatment to go deeper into the tumor.

In this seasonal issue of *CURE*®, we speak to a patient who participated in a clinical trial assessing PIPAC for the treatment of her ovarian cancer. While in the trial, she was able to undergo more rounds of PIPAC compared with traditional deliveries of chemotherapy because she responded so well to it.

Another feature in this seasonal issue focuses on how training for a triathlon, for example, can not only prepare your body for a race but also potentially your mind when receiving a diagnosis of cancer. We spoke with an Ironman competitor who received a diagnosis of stage 4 colorectal cancer just after completing a race. Although she was unable to fully train after undergoing surgery, she maintained movement throughout the rest of her treatments, which allowed her to keep her body and mind sharp. She no longer competes in Ironman competitions, but she uses swimming, running and biking to raise money and awareness for cancer.

On the topic of health and wellness, a doctor wrote a story about the importance of diet and healthy eating during one's cancer journey. She describes what types of foods to focus on and what types of benefits they may provide patients.

Other topics addressed in this seasonal issue are seeing test results before an oncologist reviews them with a patient, creating art as a means of therapy at home, immunotherapy in lung cancer and triplet therapy for patients with multiple myeloma.

As always, we hope you find our stories inspirational and informative. Thank you for reading.

MIKE HENNESSY JR.
President & CEO
MJH LIFE SCIENCES®

cure®

EDITORIAL & PRODUCTION

Editor-in-Chief Debu Tripathy, M.D.
Vice President, Content Kristie L. Kahl
Associate Editorial Director Darlene Dobkowski; editor@curetoday.com
Assistant Managing Editor Brielle Benyon
Editor Colleen Moretti
Assistant Editor Miranda Lankas
Vice President, Copy Jennifer Potash
Copy Chief Paul Silverman
Copy Supervisors Angie DeRosa, Nicole Canfora Lupo
Senior Copy Editors Cheney Baltz, Marie-Louise Best, Kelly King
Copy Editors Kirsty Mackay, Justin Mancini, Kim Nir, Ron Panarotti, Mercedes Pérez, Yasmeen Qahwash
Creative Director, Publishing Melissa Feinen
Senior Art Director Gwendolyn Salas
Creative Services Manager & Photo Editor Emily Hakkinen

SALES & MARKETING

Vice President, CURE Media Group Erik Lohrmann / elohrmann@mjhassoc.com
Vice President & Executive Producer, MJH Productions David Lepping / dlepping@mjhassoc.com
Executive Vice President, Oncology Professional Relations Donna Short, M.A.
Associate Director Brittany Hansen
Associate Director, Strategic Alliance Partnerships Brooke Weinstein
Director, Marketing Melissa Hindle
Group Coordinator Samantha Melassanos
Sales and Marketing Coordinator Nicole Wagner

OPERATIONS & FINANCE

Circulation Director Jon Severn; subscribe@curetoday.com, circulation@mjhassoc.com
Vice President, Finance Leah Babitz, CPA
Controller Katherine Wyckoff

CORPORATE

President & CEO Mike Hennessy Jr.
Chief Financial Officer Neil Glasser, CPA/CFE
Chief Operating Officer Michael Ball
Chief Marketing Officer Brett Melillo
Chief Data Officer Terric Townsend
Executive Vice President, Global Medical Affairs & Corporate Development Joe Petroziello
Senior Vice President, Content Silas Inman
Senior Vice President, Human Resources & Administration Shari Lundenberg
Senior Vice President, Mergers & Acquisitions, Strategic Innovation Phil Talamo
Executive Creative Director Jeff Brown

Mike Hennessy Sr.
FOUNDER | 1960-2021

AN MJH life sciences® BRAND

MJH Life Sciences, LLC.
2 Clarke Drive, Suite 100
Cranbury, N.J. 08512
609-716-7777

All the stories you read in *CURE*® are reported and edited without the influence of advertisers or sponsors.

Subscriptions: *CURE*® is FREE to cancer patients, survivors or caregivers who live in the U.S. FREE bulk subscriptions are available for physicians, cancer centers and other organizations. Subscriptions may be obtained at www.curetoday.com/subscription, or by calling 800-210-2873 or requested via email to subscribe@curetoday.com.

CURE® (ISSN 1534-7664, USPS 022-616) is published quarterly for cancer patients, survivors and caregivers by CURE Media Group, LLC, Inc., 2 Clarke Drive, Suite 100, Cranbury, NJ 08512. Periodicals postage paid at Princeton, NJ and additional mailing offices. POSTMASTER: Send address changes to *CURE*®, P.O. Box 606, Cranbury, NJ 08512.

SPRING • 2023

Developmental Pathways: A Key to Effective Treatments for Lymphoid Malignancies

THE DEVELOPMENT OF A complex organism like a human being requires highly choreographed activities that include growth and migration of cells as well as cell differentiation to perform essential functions and to communicate with each other. This requires the expression of specific proteins in space and time that allow for the different cell types, tissues and organs to develop properly. This is accomplished in part by having our DNA, which encodes all the proteins we make, turn specific genes on and off at the right time. A subset of our genes, known as developmental genes, mediate the conversion of cells to accomplish specific tasks. The Bruton tyrosine kinase (BTK) gene encodes an enzyme of the same name that is essential for the development and normal function of B-cell lymphocytes, a type of blood cell that is part of our immune system through the production of antibodies and interactions with other immune activities, such as augmenting T-cell activity.

Developmental genes are being used as targets for malignancies that form in tissues whose development is guided by those genes. As you will read in this issue of *CURE®*, drugs that target the BTK enzyme have shown remarkable success in treating B-cell malignancies.

Since BTK is an enzyme known as a tyrosine kinase, it can be inhibited by kinase inhibitors. The first BTK inhibitor, Imbruvica (ibrutinib), was approved in 2014 for the difficult-to-treat mantle cell lymphoma and later for chronic lymphocytic leukemia (CLL), but not B-cell malignancies.

Imbruvica combined with Rituxan (rituximab), an anti-CD20 antibody that binds CD20 that is expressed on B cells, was then found to be better than standard Rituxan plus chemotherapy, demonstrating that combination biologics could actually be quite effective.

Unfortunately, cancers tend to become resistant to kinase inhibitors because the part of the protein they bind to can be altered by tumor gene mutations. This has necessitated refinements in BTK inhibitors, with the next generation of these agents represented by Calquence (acalabrutinib) and Brukinsa (zanubrutinib). Not only are these drugs more effective at other B-cell malignancies like Waldenström macroglobulinemia, but they are also more selective for BTK as opposed to other kinases that govern many normal cellular processes, and therefore with fewer side effects, particularly on the heart.

The most recent approval for newer-generation BTK inhibitors is for Brukinsa to treat CLL, one of the most common lymphoid malignancies, and for small lymphocytic lymphoma. Two separate trials were the basis for these approvals on the basis primarily of MOR activity (tumor response and progression-free survival), including more aggressive cases with chromosome 17p abnormalities.

Personalized medicine means not only more powerful drugs for cancers, but also more precise mechanisms that target the specific consequence of mutations and other alterations that drive cancer cell growth, sparing normal cells. Our ability to design drugs rapidly and test them in the lab is accelerating, explaining the more rapid cadence of drug approvals. The BTK story is just one more, and we expect the list to keep growing. C

DEBU TRIPATHY, M.D.
EDITOR-IN-CHIEF
Professor of Medicine
Chair, Department of Breast Medical Oncology
The University of Texas MD Anderson Cancer Center

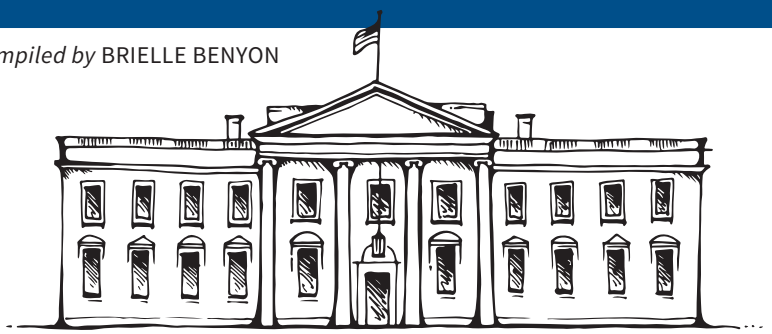
OUR CONTRIBUTORS IN THIS ISSUE

Contributing Writers Marilyn Fenichel, Jeannette Moninger, Kathleen O'Brien

Contributing Photographers Mike Kitada; Larry Remiker; Lana Rowe; Briana Snyder; Alyssa Stefek

FIRSTLINE

compiled by BRIELLE BENYON



The White House Announces New Goals for the Cancer Moonshot

A YEAR AFTER RELAUNCHING Cancer Moonshot, which had the goal of decreasing cancer-related death by 50% within the next 25 years, the White House provided updates on the program.

Among these updates was information about funding Cancer Moonshot, which was not disclosed last year. President Joe Biden said that the White House will allocate $10 million in funding through the Health Resources and Services Administration to connect community health centers with National Cancer Institute-designated cancer centers for screenings. CancerX will also be established, which will partner private and public funds to support post-treatment care. Finally, Biden explained that there will be a pediatric cancer navigation program that will also include private and public funding.

First Lady Jill Biden Undergoes Mohs Surgery for Basal Cell Carcinoma

IN JANUARY, THE PHYSICIAN to the president announced that First Lady Jill Biden underwent Mohs surgery to remove basal cell carcinoma on her face. After skin lesions were initially removed and tested, it was discovered that two out of the three were basal cell carcinoma, a type of skin cancer that tends to be nonaggressive and slow growing.

"All cancerous tissue was successfully removed, and the margins were clear of any residual skin cancer cells," Dr. Kevon O'Connor, physician to the president, wrote in a statement. "We will monitor the area closely as it heals but do not anticipate any more procedures will be needed."

FIRST LADY JILL BIDEN

The Military Is Investigating Potential Relationship Between Cancer and Prior Nuclear Missile Work

NINE MILITARY OFFICERS who worked at the Malmstrom Air Force Base in Cascade County, Montana — some as many as 25 years ago — have been diagnosed with non-Hodgkin lymphoma, a type of blood cancer, sparking the military to look into the potential relationship between the disease and the job of "missileers," according to the Associated Press.

"There are indications of a possible association between cancer and missile combat crew service at Malmstrom (Air Force Base)," U.S. Space Force Lt. Col. Daniel Sebeck said in slides presented to his Space Force unit in January. The "disproportionate number of missileers presenting with cancer, specifically lymphoma" was concerning, he said.

continued on page 10

WHITE HOUSE: FANDORINA LIZA / STOCK.ADOBE.COM; BIDEN: DREW ANGERER / STAFF / GETTY IMAGES NEWS VIA GETTY IMAGES; MISSILE: LEOGRAPHICS / STOCK.ADOBE.COM

MAY 20 2023 CONFERENCE

TRIAGE CANCER®
Beyond Diagnosis

FREE EDUCATIONAL CONFERENCE

SCAN HERE

Learn about topics that impact the cancer community:

- ☑ Health Insurance
- ☑ Disability Insurance
- ☑ Employment
- ☑ Finances
- ☑ Medical Decision-making
- ☑ Estate Planning
- ☑ And more!

TriageCancer.org/Conferences
Fill out a brief, online form to register

Join us online
FREE registration, gift bags, & prizes!
*Health care professionals earn free CEs

PRACTICAL GUIDES TO CANCER RIGHTS

Four comprehensive guides introduce you to the cancer rights law topics that most people encounter in some way after a cancer diagnosis.

- **Cancer Rights: Navigating Employment, Insurance, & Finances**
- **A Practical Guide to Cancer Rights for Caregivers**
- **A Practical Guide to Cancer Rights for Young Adults**
- **A Practical Guide to Cancer Rights for Seniors**

TriageCancer.org/CancerRightsGuides
Download in English or Spanish

continued from page 8

Michael Bublé Discusses How His Son's Cancer Diagnosis Changed His Life

SINGER MICHAEL BUBLÉ'S son, Noah, was diagnosed with a rare type of liver cancer in 2016 at age 3 and subsequently underwent intense treatment for the disease.

"That, of course, changed me in a big way — it changed what mattered to me, it changed how I saw life," he told Red magazine, explaining that as a performer, he created an "alter ego" on stage that Noah's diagnosis caused him to drop. "I'd become the superhero I always wanted to be. Then my wife and I went through this unthinkable thing, and I lost that alter ego."

Noah is now 9 years old and in remission.

MICHAEL BUBLÉ

'24' Actress Dies From Cancer

ANNIE WERSCHING, the actress who played FBI agent Renee Walker in "24" and was the voice behind Tess in the video game The Last of Us, has died. She was 45 years old. Wersching received a cancer diagnosis in the summer of 2020.

A GoFundMe page was set up to help support Wersching's family: her husband, Stephen Full, and three sons, Freddie, Ozzie and Archie. As of press time, it had raised more than $200,000.

"We just lost a beautiful artist and human being. My heart is shattered," Neil Druckmann, co-creator of "The Last of Us," wrote on Twitter. "Thoughts are with her loved ones."

Duran Duran Guitarist Opens Up About Cancer

ANDY TAYLOR, Guitarist for the rock band Duran Duran, announced in November that he received a metastatic prostate cancer diagnosis. In fact, the 61-year-old missed the band's induction into the Rock & Roll Hall of Fame due to the disease.

Recently, he spoke with Channel 5 News in the UK about his diagnosis.

"I didn't have any plan (to reveal the diagnosis), and then afterwards, the amount of love and support of offers of help. I realized that by talking about it, Duran (Duran has) quite a large female fan base, so it's like, your partner, your boyfriend — give them a nudge, get them a test."

Pro Tennis Player **Chris Evert** Says She Is Cancer Free But Her 'Journey Isn't Over'

FORMER NO. 1 tennis player and 18-time Grand Slam singles champion Chris Evert announced last year that she received a diagnosis of stage 1c ovarian cancer after learning she had a BRCA-1 variant. Evert stayed up-to-date on genetic testing and cancer screening after her sister, Jeanne, died from ovarian cancer in February 2020.

"I'm sharing my story because my journey isn't over. I needed time to recover from chemo and rebuild my strength, but I still had one mountain left to climb," Evert said in an essay she wrote for ESPN. "The risk for me was bigger than ovarian cancer alone. BRCA mutations are associated with an up to 75% risk of developing breast cancer and an increased risk of prostate and pancreatic cancer as well."

'Riverdance' Star **Michael Flatley** Is Diagnosed With an Aggressive Cancer

MICHAEL FLATLEY, THE 64-year-old Irish dancer behind "Riverdance" and "Lord of the Dance," has been diagnosed with cancer, according to an announcement on his official Instagram account.

"Michael Flatley has been diagnosed with an aggressive form of cancer. He has undergone surgery and is in the care of an excellent team of doctors," the post read.

The post did not specify what type of cancer Flatley is being treated for, although in 2021, he told the public that he had been diagnosed with skin cancer in 2003.

BUBLÉ: BEATRIZ VELASCO / STRINGER / GETTY IMAGES ENTERTAINMENT VIA GETTY IMAGES

Register today at
curetoday.com/EH23

CURE® Extraordinary HEALER® 2023

JOIN THE *celebration*

Help us honor this year's extraordinary healers!

Wednesday, April 26, 2023
6:30 PM CDT

Join CURE® as we come together to recognize and celebrate this year's winner and finalists of the 2023 Extraordinary Healer® award for oncology nursing. The annual award recognizes and celebrates oncology nurses who go above and beyond the call of duty regularly to make a difference in the lives of patients with cancer.

The power of recognition and gratitude is tangible during this ceremony, you won't want to miss it!

‘I Was Winning and the Cancer Wasn’t’

Exercise, from walking to running, allows patients to take control of their bodies at a time when things may feel out of reach during their cancer journey. *By* DARLENE DOBKOWSKI, M.A.

DEBORAH CARPENTER HAS ALWAYS prioritized movement, whether through walking, jogging or even running. But after she received a diagnosis of breast cancer in 2007, she learned how much exercise was able to give her a boost not only physically but also emotionally and mentally.

“I decided I didn’t want cancer to beat me,” Carpenter told *CURE*®. “How I’d manage that was staying busy physically. I figured if I could stay physically fit, that would help a lot of ways — even emotionally, mentally — to keep myself going. I felt like I was winning and the cancer wasn’t.”

The retired nurse lives in Jacksonville, Florida, and has participated in several DONNA Foundation events like its Marathon Weekend, when she would run its half marathon. This year, she participated in the organization’s 110 Mile-a-Day Challenge, a virtual event that challenges participants to walk 1 mile per day for 110 days to show how walking even a short distance can be beneficial.

CURE® spoke with Carpenter about how exercise helped her through her cancer journey and advice she offers patients based on her experience.

Q: Can you tell us about your cancer journey?

A: In April 2007, I found a lump while I was doing my self-exam. I have had mammograms annually and this was six months after my mammogram. I just happened to find this one. Then it was confirmed in late May.

I had surgery in June, when I chose to have a lumpectomy. … As it turned out, good news. God is great. And I had no lymph node involvement. It was a great, great relief. But I did have to have chemo and radiation after.

During that time, the first DONNA Marathon Weekend was getting ready to kick off. I started preparing for that event during my treatment, so in 2008, I did a half marathon for The DONNA Foundation.

Q: Were you a runner before your diagnosis?

A: I’ve always been. I like to walk and jog. In fact, I was a runner for years when I was in college, and then I kind of got out of it. Then I stopped working out for years. You have kids, you get busy and you put yourself last. So I hadn’t done anything for a long time. After I received my diagnosis, I had started walking a little bit more.

PHOTO PROVIDED BY THE DONNA FOUNDATION

DEBORAH CARPENTER and others participated in this year's virtual 110 Mile-a-Day Challenge.

Q: Do you think keeping active helped with side effects?

A: I do. Even through chemo, I didn't throw up a lot. People talked about how they lost weight. I didn't have that problem.

I'm not sure there's any research for that, but I had some friends who had gone through chemo as well and were not active. They did seem to have more issues with that. But more importantly — and this was huge — a couple of those friends did not do any exercise. And I think they never mentally recuperated from it. They were always thinking about how they have cancer, whereas I kept myself busy physically. I actually felt pretty good because of what I was doing. And again, I think mentally — more than probably anything else — it helped me.

Q: Where are you with your cancer journey now?

A: I'm done with everything. I just went back to the breast clinic at Mayo Clinic not because there's anything wrong with me, but because chemo put me into early menopause. As I'm getting older — I'm 62 — I was starting to find that I wasn't feeling the same energy-wise. It was hard to keep weight off even though I was exercising. I wanted to start taking hormones. Because of my diagnosis — it was estrogen positive — they did not want to put me on hormones. So I went back because I wasn't feeling like myself.

The team did put me on very, very, very low-dose hormones, but it's enough that it's made a difference. When I told the doctor, "I don't even feel like walking anymore," the doctor said she didn't want me to stop jogging and walking because it is so important to stay physically fit to help with cancer diagnosis and recurrence. She really felt that that was important.

I'm not on high-dose hormones like some women my age are, but it's enough. She started me very, very low. We only had to step up the dose one time for me to start feeling like Debbie again.

Q: Tell us about your involvement in the DONNA 110 Mile-a-Day Challenge.

A: I haven't done the half marathon for a couple of years because of my age, and my knees are starting to go bad. Before my cancer diagnosis, I loved staying fit. I also love the idea that — I'm pretty competitive, too — I can get out there and even walk a mile a day to be a part of that, to help raise awareness, to help myself. It's a goal I had to do in my mind. I had to do at least a mile a day, if not more. Most times I did more, like not an astronomical 10 miles, but maybe 3 miles, 4 miles a day. I love that event. I did it last year as well in '21. It doesn't take a lot of time. It keeps me active. It helps an organization that I really believe in. And my husband does it with me, too. Anybody can do that. Anybody can go around and walk around the block a couple of times a day and get their miles in. It's really fun.

Q: What advice would you give to patients who want to start becoming more active?

A: I think that being physically fit helps. Mentally as well as physically, it gives you something to focus on. It's like, it's time to get out there and get a walk in. It's not like, I have to deal with this cancer.

There are days when you don't feel like doing it when you're going through treatment. I'm not going to say that that's not the truth because that is the truth. There are days that I didn't feel physically like I could do it. There were days that I had little pity parties for myself. I couldn't do it. However, you can still do it the next day or the next day, and you still feel like you've accomplished something.

It's not like I can get out there and run 13.1 miles because of what I'm going through. And I feel bad about that. But I can walk around the block a couple of times. There's something about logging those miles and seeing the progress you're making.

The fact that you're going through treatment and so many other things are restrictions for you. Like for chemo, for example, I couldn't be around a lot of people. My kids had to be careful about who they brought in the house. But (walking) I could do myself; I could do that for me. I could go out there and I could walk and log those miles and see what progression I've made.

I didn't want it to beat me. I wanted to be in control of what was happening to Debbie. If you can't go out and run 10 miles a day or 5 miles, you can go out and walk a mile a day. Most everybody can do that. You don't have to do it all at once.

This transcription has been edited for clarity and conciseness.

LEARN MORE ONLINE
SCAN the QR code for a collection of content on multiple myeloma.

‘A Huge Improvement for the Field’

Triplet therapy demonstrates improved remission and survival rates, with manageable side effects for patients who are ineligible for transplant. By COLLEEN MORETTI

DARZALEX (DARATUMUMAB), REVLIMID (LENALIDOMIDE) and dexamethasone combined, which is a triplet therapy, resulted in a significant overall survival (the time when a patient with cancer is still alive) benefit for patients with relapsed or refractory multiple myeloma, according to recent study results.

Specifically, overall survival was 67.6 months with the triplet therapy at a median follow-up of 79.7 months compared with 51.8 months with Revlimid and dexamethasone combined. The results were published in the *Journal of Clinical Oncology*. This trend followed through into most subgroups, including patients over the age of 65 and those who have been treated with one, two or three prior lines of therapy.

“This report showed that the overall survival was continuing to look good and that the triplet combination was improving not (only) time in remission but also the overall survival of patients,” Dr. Robert Z. Orlowski, a co-author on the study and a professor of medicine in the department of myeloma at The University of Texas MD Anderson Cancer Center in Houston, said in an interview with *CURE*®.

Of note, it was previously reported that the triplet therapy also significantly improved progression-free survival (time during and after treatment when the patient lives without disease progression) compared with the doublet in this patient population (56 months versus 34 months, respectively). Orlowski called this a “huge improvement.”

“I would definitely say these (results) are very significant,” he said. “And this is now considered one of the standards of care for patients (who) have newly diagnosed symptomatic myeloma who are not candidates for stem cell transplant.”

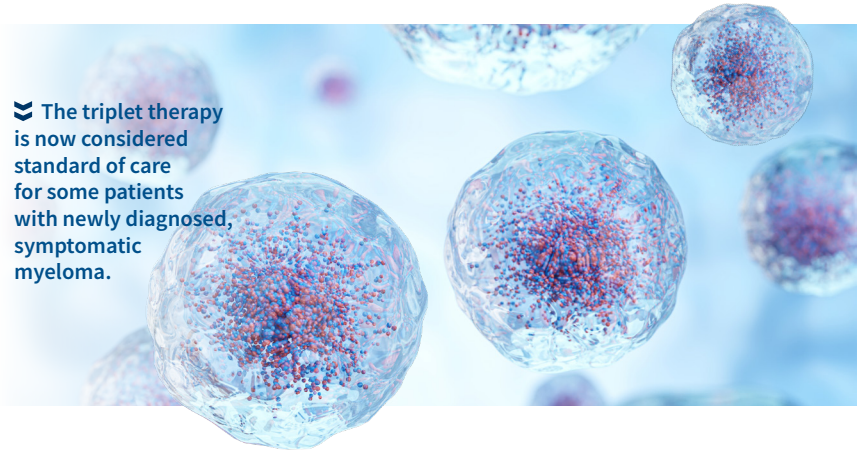
There are now clinical trials under design that are adding a fourth drug to this new standard of care. Orlowski explained that they do this because although the outcome was improved with the triplet therapy, not all patients had a benefit.

“The thought is that if we add the right fourth drug, there’s a possibility that we could extend the benefits even further,” he said. “We’re hopeful that with the right combination, we may be able to cure patients of myeloma, not just put them into a remission from which many of them can still ultimately relapse.”

The most common side effects, which occurred in at least 10% of patients, reported in those who received the triplet therapy compared with the doublet included neutropenia (low white blood cell count; 57.6% versus 41.6%), anemia (19.8% versus 22.4%), pneumonia (17.3% versus 11%), thrombocytopenia (low blood platelet count; 15.5% versus 15.7%) and diarrhea (10.2% versus 3.9%). Orlowski explained that it is common for side effects to increase, as they did here, when adding a third drug to a regimen. However, most of the side effects were able to be managed because they had experience doing so already.

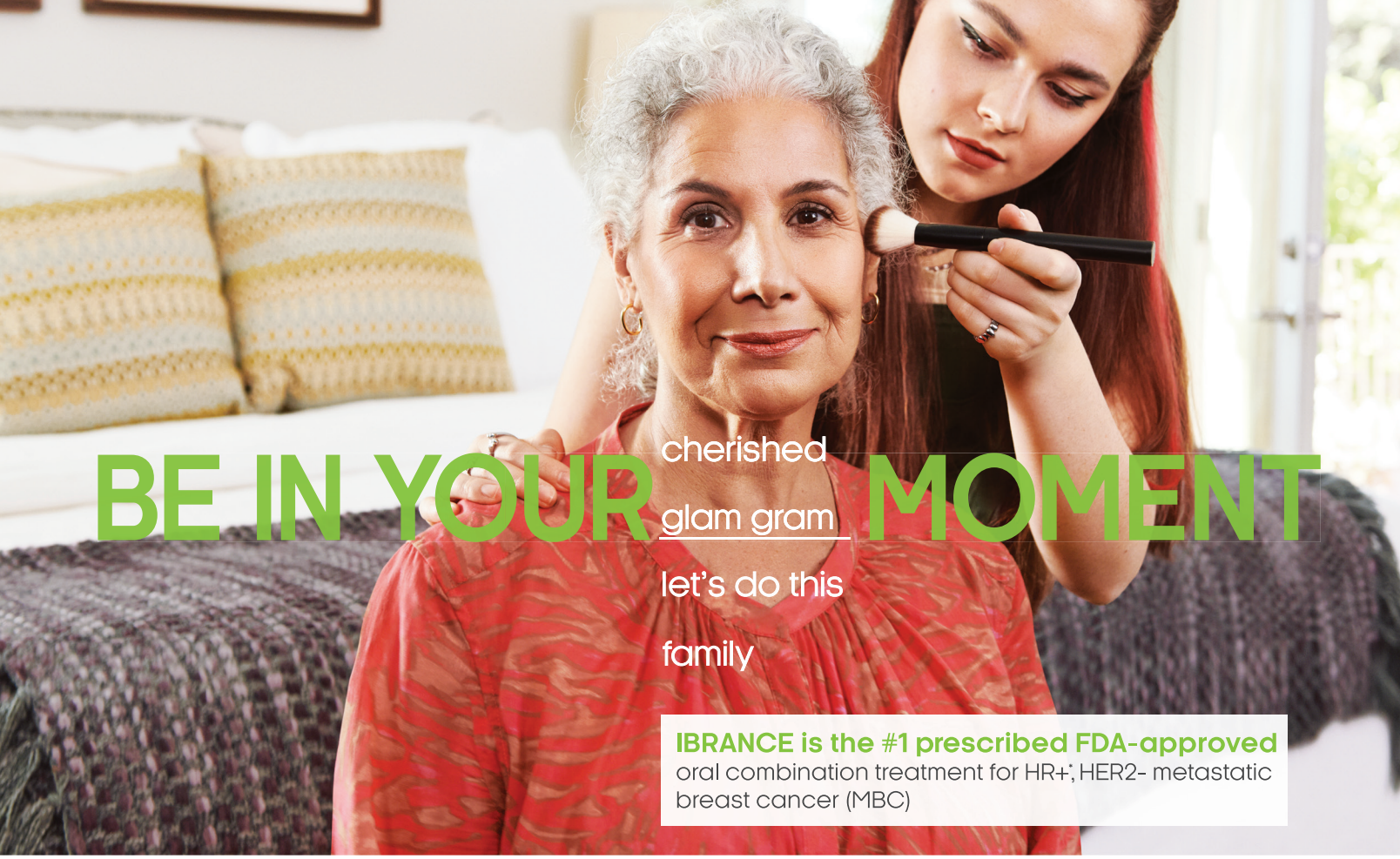
“What that translates into is that patients have a much better outcome. They have relatively fewer additional side effects, (which) means a better quality of life,” he said. “We want patients not (only) to live longer but (also) be able to enjoy that time.”

Orlowski also said it is important to look at the results in the context of where multiple myeloma treatment was 20 years ago, for example. During that period, the average time a patient had lived was about 3 years. Now there are therapies, such as this one, that keep them in remission for 56 months or longer. “This means they will live even longer, because even if you come out of remission, you still have other treatment options available,” Orlowski said. “Coming out of remission doesn’t mean you’re done, so this is just a huge improvement for the field.”



The triplet therapy is now considered standard of care for some patients with newly diagnosed, symptomatic myeloma.

STOCKDEVIL / STOCK.ADOBE.COM



IBRANCE is the #1 prescribed FDA-approved oral combination treatment for HR+*, HER2- metastatic breast cancer (MBC)

What Is IBRANCE® (palbociclib)?

IBRANCE is a prescription medicine used in adults to treat hormone receptor-positive (HR+), human epidermal growth factor receptor 2-negative (HER2-) breast cancer that has spread to other parts of the body (metastatic) in combination with an aromatase inhibitor as the first hormonal based therapy in postmenopausal women or in men.

Important Safety Information for Patients

IBRANCE may cause serious side effects, including:

Low white blood cell counts (neutropenia). Low white blood cell counts are very common when taking IBRANCE and may cause serious infections that can lead to death. Your doctor should check your white blood cell counts before and during treatment.

If you develop low white blood cell counts during treatment with IBRANCE, your doctor may stop your treatment, decrease your dose, or may tell you to wait to begin your treatment cycle. Tell your doctor right away if you have signs and symptoms of low white blood cell counts or infections such as fever and chills.

Lung problems (pneumonitis). IBRANCE may cause severe inflammation of the lungs during treatment that can lead to death. Tell your doctor right away if you have any new or worsening symptoms, including chest pain, cough with or without mucus, and trouble breathing or shortness of breath.

Your doctor may interrupt or stop treatment with IBRANCE completely if your symptoms are severe.

Before you take IBRANCE, tell your doctor about all of your medical conditions, including if you:

- have fever, chills, or any other signs or symptoms of infection.
- have liver or kidney problems.
- are pregnant or plan to become pregnant; IBRANCE can harm your unborn baby.
  - Females who are able to become pregnant should use effective birth control during treatment and for at least 3 weeks after the last dose of IBRANCE. Your doctor may ask you to take a pregnancy test before you start treatment with IBRANCE.
  - Males with female partners who can become pregnant should use effective birth control during treatment with IBRANCE for at least 3 months after the last dose of IBRANCE.
- are breastfeeding or plan to breastfeed. It is not known if IBRANCE passes into your breast milk. Do not breastfeed during treatment with IBRANCE and for 3 weeks after the last dose.

The most common side effects of IBRANCE include:

- Low red blood cell counts and low platelet counts. Call your doctor right away if you develop any of these symptoms during treatment:
  - dizziness
  - shortness of breath
  - weakness
  - bleeding or bruising more easily
  - nosebleeds

Other most common side effects include: infections, tiredness, nausea, sore mouth, abnormalities in liver blood tests, diarrhea, hair thinning or hair loss, vomiting, rash, and loss of appetite.

IBRANCE may cause fertility problems in males. This may affect your ability to father a child. Talk to your healthcare provider about family planning options before starting IBRANCE if this is a concern for you.

These are not all of the possible side effects of IBRANCE. For more information, ask your doctor.

Tell your doctor about all of the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. IBRANCE and other medicines may affect each other, causing side effects.

Do not drink grapefruit juice or eat grapefruit products while taking IBRANCE as they may increase the amount of IBRANCE in your blood.

Tell your doctor if you start a new medicine. Take IBRANCE exactly as your doctor tells you.

If you take too much IBRANCE, call your doctor right away or go to the nearest hospital emergency room.

You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088.

Please see Important Facts About IBRANCE on the following page.

To learn more, talk to your doctor.

Can't afford your medication? Pfizer may be able to help. Visit IBRANCE.com.

*Hormone receptor-positive includes estrogen receptor-positive (ER+) and/or progesterone receptor-positive (PR+)

IBRANCE® palbociclib | 125 mg tablets

April 2022 PP-IBR-USA-4956-03

IBRANCE®
palbociclib | 125 mg tablets

IMPORTANT FACTS

IBRANCE® (EYE-brans)
(palbociclib)

The risk information provided here is not comprehensive. This information does not take the place of talking to your healthcare provider about your condition or treatment. To learn more about IBRANCE, talk to your healthcare provider or pharmacist. To obtain the FDA-approved product labeling, call 1-800-438-1985 or visit www.IBRANCE.com.

What is IBRANCE?

IBRANCE is a prescription medicine used in adults to treat hormone receptor (HR)-positive, human epidermal growth factor receptor 2 (HER2)-negative breast cancer that has spread to other parts of the body (metastatic) in combination with:

- an aromatase inhibitor as the first hormonal based therapy in postmenopausal women or in men, **or**
- fulvestrant in people with disease progression following hormonal therapy.

It is not known if IBRANCE is safe and effective in children.

What is the most important safety information I should know about IBRANCE?

IBRANCE may cause serious side effects, including:

Low white blood cell counts (neutropenia). Low white blood cell counts are very common when taking IBRANCE and may cause serious infections that can lead to death. Your healthcare provider should check your white blood cell counts before and during treatment.

If you develop low white blood cell counts during treatment with IBRANCE, your healthcare provider may stop your treatment, decrease your dose, or may tell you to wait to begin your treatment cycle. Tell your healthcare provider right away if you have signs and symptoms of low white blood cell counts or infections such as fever and chills.

Lung problems (pneumonitis). IBRANCE may cause severe or life-threatening inflammation of the lungs during treatment that can lead to death. Tell your healthcare provider right away if you have any new or worsening symptoms, including:

- chest pain
- cough with or without mucus
- trouble breathing or shortness of breath

Your healthcare provider may interrupt or stop treatment with IBRANCE completely if your symptoms are severe. **See "What are the possible side effects of IBRANCE?" for more information about side effects.**

What should I tell my healthcare provider before taking IBRANCE?

Before taking IBRANCE, tell your healthcare provider about all of your medical conditions, including if you:

- have fever, chills, or any other signs or symptoms of infection.
- have liver or kidney problems.
- are pregnant, or plan to become pregnant. IBRANCE can harm your unborn baby.
  - Females who are able to become pregnant should use effective birth control during treatment and for at least 3 weeks after the last dose of IBRANCE. Your healthcare provider may ask you to take a pregnancy test before you start treatment with IBRANCE.
  - Males with female partners who can become pregnant should use effective birth control during treatment with IBRANCE for at least 3 months after the last dose of IBRANCE.
  - Talk to your healthcare provider about birth control methods that may be right for you during this time.
  - If you become pregnant or think you are pregnant, tell your healthcare provider right away.
- are breastfeeding or plan to breastfeed. It is not known if IBRANCE passes into your breast milk. Do not breastfeed during treatment with IBRANCE and for 3 weeks after the last dose.

Tell your healthcare provider about all of the medicines you take, including prescription and over-the-counter medicines, vitamins, and herbal supplements. IBRANCE and other medicines may affect each other, causing side effects.

How should I take IBRANCE tablets?

- Take IBRANCE exactly as your healthcare provider tells you.
- IBRANCE tablets may be taken with or without food.
- IBRANCE should be taken at about the same time each day.
- Swallow IBRANCE tablets whole. Do not chew, crush or split IBRANCE tablets before swallowing them.
- Do not take any IBRANCE tablets that are broken, cracked, or that look damaged.
- Avoid grapefruit and grapefruit products during treatment with IBRANCE. Grapefruit may increase the amount of IBRANCE in your blood.
- Do not change your dose or stop taking IBRANCE unless your healthcare provider tells you.
- If you miss a dose of IBRANCE or vomit after taking a dose of IBRANCE, do not take another dose on that day. Take your next dose at your regular time.
- If you take too much IBRANCE, call your healthcare provider right away or go to the nearest hospital emergency room.

What are the possible side effects of IBRANCE?

IBRANCE may cause serious side effects. See "What is the most important safety information I should know about IBRANCE?"

The most common side effects of IBRANCE when used with either letrozole or fulvestrant include:

- low red blood cell counts and low platelet counts. Call your healthcare provider right away if you develop any of these symptoms during treatment:
  - dizziness
  - shortness of breath
  - weakness
  - bleeding or bruising more easily
  - nosebleeds
- infections (see "What is the most important safety information I should know about IBRANCE?")
- tiredness
- nausea
- sore mouth
- abnormalities in liver blood tests
- diarrhea
- hair thinning or hair loss
- vomiting
- rash
- loss of appetite

IBRANCE may cause fertility problems in males. This may affect your ability to father a child. Talk to your healthcare provider about family planning options before starting IBRANCE if this is a concern for you.

These are not all of the possible side effects of IBRANCE.

Keep IBRANCE and all medications out of the reach of children.

Call your doctor for medical advice about side effects. You are encouraged to report negative side effects of prescription drugs to the FDA. Visit www.fda.gov/medwatch or call 1-800-FDA-1088. To learn more, talk to your doctor.

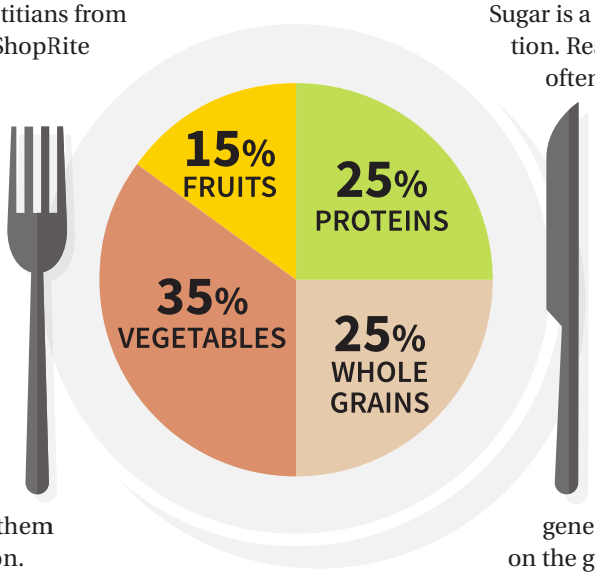
These IMPORTANT FACTS are based on IBRANCE® (palbociclib) Patient Information LAB-1372-1.0, Rev. 11/2019.

Better Nutrition Can Help People With Cancer

By DR. ROSHANI PATEL

ONE OF MY GOALS as the medical director of breast surgery at Hackensack Meridian Jersey Shore University Medical Center is to make it easier for patients with cancer to eat well. Patients with breast cancer and survivors are often told that a healthy lifestyle is a key factor in successfully treating cancer and keeping it from recurring. However, the practical advice for how to incorporate better nutrition into an already full life isn't always provided. One of the ways I'm providing my patients with this advice is by leading grocery store tours twice a month along with dietitians from Hackensack Meridian Health and ShopRite of Belmar, New Jersey.

It can be challenging for people to know what foods are healthy with the abundant fad diet information posted online, and taking time to read labels at the store can be overwhelming. I started the grocery store tours so patients can benefit from firsthand, trusted advice for grocery shopping and healthy eating. There are a few general health tips I provide my patients to help them achieve better health with nutrition.



First is to properly balance meals, to get enough protein and fiber, with 25% proteins, 25% whole grains, 35% vegetables and 15% fruits. Protein is especially important during cancer treatment for the prevention of edema (swelling). For those too tired or sick to cook, I recommend low-sugar protein powders, nuts and legumes, and lean meats that are easy to prepare.

Patients with cancer, especially those experiencing side effects from chemotherapy, often get dehydrated. Water alone isn't enough to maintain hydration, so electrolytes are needed. I recommend adding natural sources of electrolytes, such as cucumber, watermelon chunks or orange zest or peel, to water rather than buying sports drinks, which contain sugar, artificial colors or sweeteners.

Whole and unprocessed or minimally processed foods are best to keep meals simple. With packaged goods, fewer (and easily pronounceable) ingredients are better. For example, look for crackers that contain only whole wheat, oil and salt.

I completely understand the urge to reach for something easy and tasty like chips when people need a burst of energy, so I recommend preparing grab-and-go snacks ahead of time. For example, using a reusable container version of a charcuterie board with cheese cubes, berries, olives, nuts and other healthy finger foods.

Sugar is a major dietary cause of inflammation. Read labels carefully, since sugar is often hidden in packaged goods that people may not associate with it, such as bread, condiments and other products. Sugar may be labeled as glucose, fructose, cane, dextrose, sucrose, maltose and galactose. Women should have less than 6 teaspoons of added sugar a day (24 grams); men should have less than 9 teaspoons of sugar per day (36 grams). Artificial sweeteners aren't much better and actually increase sugar cravings and craving for food in general. They can have a negative impact on the gut microbiome, which is important in healing to reduce inflammation in the body.

Lastly, grocery stores place items strategically to maximize impulse purchases of higher-profit (and usually less healthy) products, and change things up regularly to make shoppers see more choices while looking for things on their list. I tell my patients that understanding that stores present food this way helps them stick to the basics. It's often a good idea to shop the perimeter of stores, where fresh produce, dairy, meats and seafood — rather than processed foods — are positioned.

Dr. Roshani Patel is the medical director of breast surgery at Hackensack Meridian Jersey Shore University Medical Center in Neptune Township, New Jersey. She has more than 10 years of experience as a board-certified breast surgical oncologist.

Art as Therapy

ART THERAPY IS a type of treatment that uses art as a medium to help patients with cancer promote emotional or physical healing throughout one's cancer journey. This allows patients to figure out how to use art to access emotions and experiences and to externalize them, one expert said.

It can also be used as a way to incorporate goals for movement and grip strength, which may help improve side effects like neuropathy.

Although some cancer centers offer an art therapy program, some patients may be able to do a modified version of art therapy at home using coloring books, paints, colored pencils and other materials.

"We would guide them to use the art mediums that they are most comfortable with if there's no art therapist physically present with them," Calliandra Perry, MA, LLPC, ATR-P, art therapist from Henry Ford Health in Detroit, told *CURE®*. "That way, we're not pushing them outside of their comfort zone in terms of making someone use watercolors who has no experience, but we are going to push them to explore their emotions and their experiences by using color, symbolism and different shapes."

Perry mentioned that doing some form of art therapy throughout a patient's cancer journey can not only help them work through emotions, but also serve as milestones along the way.

"There's a lot of (emotions) that patients go through when they're being diagnosed, going through treatment, living with cancer or if they hit that survivorship phase," she said. "It's something that they can explore in a way that almost acts as mile markers for them."

If patients decide to take the at-home route for art therapy, Perry advised to start slow depending on how comfortable they are with art materials. She mentioned that trying a coloring book first may be a good starting point.

"Some patients are looking to use art as a distraction, where they don't want to be thinking about their treatments, their medications, the fact that they can't feel their fingertips, they have issues with their feet or their pain, nausea, anything that they're feeling," she said. "(Trying) out a coloring book or scribbling on their own and see if that's something where they feel the benefit of it, they feel more relaxed. They are able to distract themselves."

It is important to be mindful of the fact that doing art-related activities at home, although helpful, does not necessarily replace an art therapy program that may be offered at a cancer center.

"Anyone can do art therapy technically from home, but it wouldn't necessarily be art therapy; it's art as therapy," Perry said. "There's a fine line between how far do we want to push patients to do things on their own and how risky is that if they have (an) emotional breakthrough, and there's not someone there to process it with them."

PROJECTS TO TRY AT HOME

Use structured materials like a pen or pencils (versus a paintbrush) and incorporate goals of increasing movement and grip strength, which can be helpful for neuropathy.

Visit Pinterest or other websites to see if there are art activities that spark interest.

Make a camera roll of things to look at when swiping through a camera. Prompts like these may help patients focus on positive things in life.

Try adult coloring books or scribbling

Create digital art with applications and websites on a tablet or computer/ laptop

Work with paper to create a collage or do origami.

During stressful times, create a paper chain with paper loops, on which to write something a patient is grateful for or a positive affirmation. This allows patients to look back and remind themselves that they're doing OK.

BRAMGIND / STOCK.ADOBE.COM

Your insights can change the future of cancer support

Did your cancer experience include the social support you needed?

Did you experience problems accessing care?

Did caregiving impact your quality of life?

Participate in Important Research

The Cancer Experience Registry (CER) survey from Cancer Support Community (CSC) uncovers the emotional, physical, practical, and financial impact of cancer to help patients and caregivers get the support they need. Through the CER survey, we reach those impacted by cancer so their voices can be part of this important research and so that together, we can:

Influence healthcare policies

Enhance cancer care

Improve support services

CancerSupportCommunity.org/Registry

CANCER SUPPORT COMMUNITY™
CANCER EXPERIENCE REGISTRY

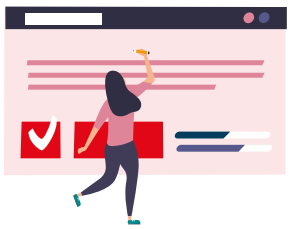
How it Works

1 Start the survey by selecting patient or caregiver

2 Answer questions about your cancer experience

3 Start and stop when you like by using the unique link emailed to you

4 Be invited to take part in follow-up surveys or other research and programs applicable to you



The survey takes about 35 minutes to complete.

Use the QR code to take the survey

Frequently Asked Questions

What is the Cancer Experience Registry?
The Cancer Experience Registry (CER) is an online research survey that helps enhance cancer care, improve health care policies, and ensure support services better reflect the needs of people affected by cancer.

Who can take the survey? The CER is open to any adult who has been diagnosed with cancer at any point in their life or has been a family or informal caregiver to someone with cancer. Participants must live in the United States, a U.S. territory, or Canada and be able to read and understand English.

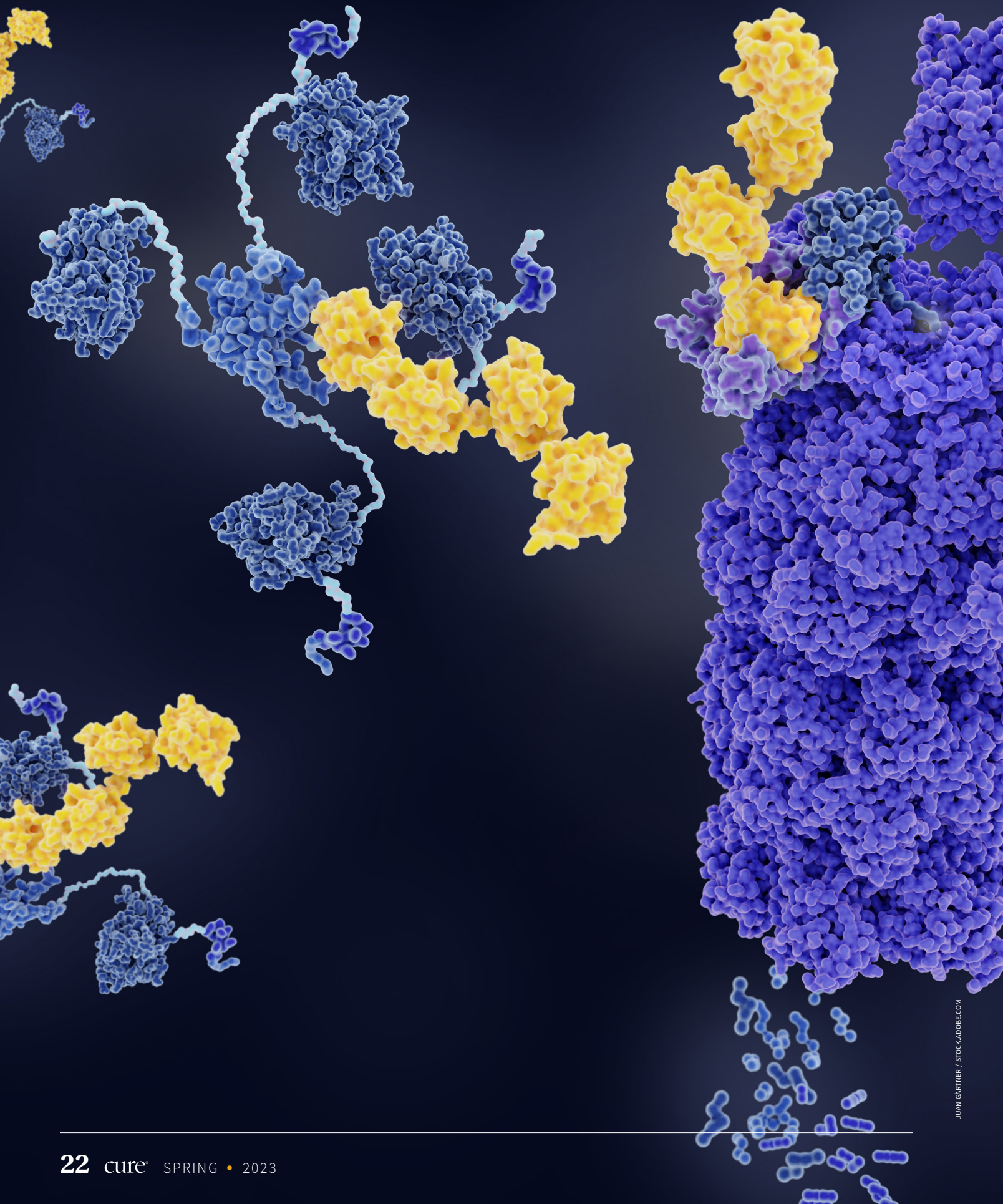
What about my privacy? The survey is an Institutional Review Board (IRB) approved research study, which means that the confidentiality, rights and welfare of participants are protected.

Is there a cost to take part? No, there is no cost to take part in this research.

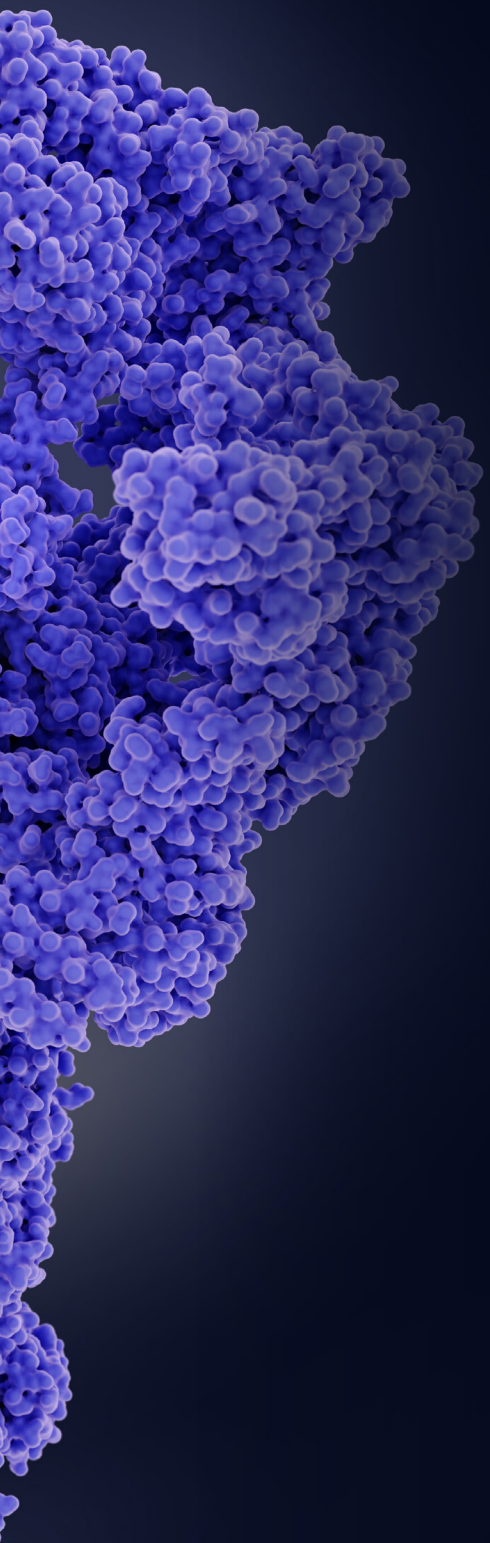
What is the benefit to taking part? By generously giving your time for this important research, your contributions help deliver better outcomes for those impacted by cancer, now and in the future.

What happens when I've finished the survey?
Once you complete the survey, you become part of a registry of patients and caregivers with the opportunity to complete follow-up surveys that track changes over time, or additional surveys that ask about emerging topics in cancer care.

Help change the future of cancer support by taking the CER survey



JUAN GÄRTNER / STOCK.ADOBE.COM



REVOLUTIONARY TREATMENT *OF* RELAPSED CLL/SLL

Bruton tyrosine kinase inhibitors have changed the space for treating patients with CLL or SLL, with more on the way to potentially address drug resistance.

By **JEANNETTE MONINGER**

When **PENNY ISOP** was diagnosed with chronic lymphocytic leukemia (CLL) in July 2012, her doctor said it was a "good cancer" to have. Isop, then 65 years old, didn't see it that way. She and her partner, David Needle, had recently relocated from Atlanta to Mount Pleasant, South Carolina, since they "needed a slower pace," Isop says. She took a part-time job at a travel agency, where she worked until her diagnosis. "I didn't feel good about having cancer," Isop recalls.

In fact, things weren't good. Some people who receive a new CLL diagnosis can take a watch-and-wait approach, starting treatments only if the cancer progresses or symptoms worsen. This is because CLL is not generally curable but can be treated and even put into varying degrees of remission, where treatment may not be needed for some period of time. However, within a month of her diagnosis, Isop was getting blood transfusions to treat stage 3 or 4 CLL. She was so fatigued and out of breath that the mere act of walking to her car was a struggle. »

> **PENNY ISOP**'s cancer team recommended BTK inhibitors after her white blood cell count tripled.

A subsequent bone marrow biopsy and gene test showed her CLL cells were missing part of the 11th chromosome (what's known as CLL with an 11q deletion). This meant the cancer was more aggressive and less likely to respond to chemoimmunotherapy, the standard first-line treatment at the time. The test results also demonstrated that the CLL had an unmutated IGHV status, which is a molecular marker that's typically linked with poorer prognosis and shorter survival.

Isop's prognosis wasn't as good as the doctor thought.

In October, Isop sought the advice of a New York City hematologist oncologist. "He said I was a perfect candidate for a clinical trial," recalls Isop, "but I needed to be in New York for at least four months for treatment and monitoring." She and Needle moved into an American Cancer Society Hope Lodge, which provides free housing for adults getting cancer treatments.

As a participant in the phase 2 ThRiL trial, Isop received alternating treatments of three immunotherapy drugs: Rituxan (rituximab), Revlimid (lenalidomide) and thalidomide. Her response to the treatments was remarkable, with the cancer quickly going into remission. The trial followed a scheduled dose reduction, with Isop eventually taking just Revlimid every other day until the trial ended in December 2020.

"The hope was that the cancer would stay in remission after I stopped treatment," Isop says.

PHOTOS PROVIDED BY ISOP

At first, Isop's blood labs looked promising. But by the end of the year, her white blood cell count had tripled, a sign the cancer cells were multiplying again. That's when her doctor recommended an oral-targeted therapy known as Bruton tyrosine kinase (BTK) inhibitors.

WHAT ARE *BTK INHIBITORS?*

BTK inhibitors target and block an enzyme called Bruton tyrosine kinase. "This enzyme transmits signals that promote the survival and uncontrolled growth of leukemic B-lymphocytes," says Dr. Shuo Ma, a hematologist oncologist at Northwestern University's Robert H. Lurie Comprehensive Cancer Center in Chicago**.** "BTK inhibitors cut off the signaling pathway, leading to leukemia cell death and disease remission."

Imbruvica (ibrutinib) was the first BTK inhibitor to receive approval from the Food and Drug Administration (FDA). But that November 2013 approval was for mantle cell lymphoma, a rare and aggressive blood cancer. Three months later, in February 2014, the FDA approved the drug for CLL, but only for those who had tried at least one other treatment. In July, it extended the approval to those who had CLL with a 17p deletion, another difficult-to-treat form of CLL.

It wasn't until March 2016 that the FDA approved Imbruvica as a first-line treatment for all patients with CLL. The approval came after a phase 3 clinical trial showed the drug to be superior to chemotherapy in stopping disease progression and extending longevity. A few months later, the FDA approved the drug for small lymphocytic lymphoma (SLL), a blood cancer almost identical to CLL.

PENNY ISOP enjoys retirement by traveling with her husband and spending time with her sons, **PETER** (left) and **MARK** (right).

The approval of a BTK inhibitor for CLL was a game changer for the more than 200,000 Americans living with the disease as well as the 18,000-plus people who will receive a CLL diagnosis this year. "Imbruvica made an incredible impact for patients with CLL," says Dr. Ian W. Flinn, director of lymphoma research for the Sarah Cannon Research Institute at Tennessee Oncology in Nashville. "People very sick with CLL who received this treatment oftentimes had near-complete resolution of their symptoms, including severe fatigue, fever and night sweats. They were able to enjoy life again."

SIDE EFFECTS FROM *BTK INHIBITORS*

Still, Imbruvica, like all cancer treatments, has side effects. Among them: easy bleeding and bruising, anemia (low red blood cells), neutropenia (low neutrophils or white blood cells), fatigue, muscle and joint pain, diarrhea and respiratory infections. It wasn't until thousands of patients had taken the drug for years that another, more alarming side effect — atrial fibrillation (AFib) — became apparent. This heart rhythm problem (arrhythmia) can cause potentially life-threatening blood clots, strokes, heart failure and other cardiac events. Studies now show that people who take Imbruvica are 10 times more likely to develop AFib.

"CLL predominantly affects people in their 60s and 70s, an age group that's more prone to heart problems," says Flinn. "It took a while to connect that the drug was also a contributing factor to arrhythmias." Imbruvica is meant to target the BTK enzyme. But for reasons that aren't clear, the drug sometimes homes in on and »

damages healthy enzymes critical for heart function. AFib may occur within a few months of starting the drug or years into treatment. An estimated 4 in 10 people stop taking Imbruvica because of adverse side effects, about 4% of them heart related.

Not everyone who takes Imbruvica for CLL develops an arrhythmia. Dr. Reshma Ramlal, a hematologist oncologist at the University of Kentucky Markey Cancer Center in Lexington and interim director of the center's Bone Marrow Transplant and Cellular Therapy Program, has patients taking the treatment for years with great success and no heart issues. "The good news for those who develop AFib is that the condition typically goes away when you stop the drug," she says. "And it doesn't appear to cause long-term heart damage."

Even better news: Recent studies show that newer second-generation BTK inhibitors are more effective at treating CLL, and they're less likely to affect the heart.

A NEW GENERATION *of* *TREATMENT OPTIONS*

In April 2018, Dayton, Ohio, resident **BRENDA DUGGINS** enrolled in a clinical trial for one of the newer BTK inhibitors, Calquence (acalabrutinib). The trial combined the drug with two other targeted therapy drugs, Rituxan and Venclexta (venetoclax). At the time, Calquence had FDA approval for mantle cell lymphoma (just as its predecessor Imbruvica had started out), but not CLL, and tends to have fewer side effects than Imbruvica.

Duggins was aged 62 years when she learned she had CLL in June 2012. By October, the disease had her feeling so poorly, she could barely leave her bed. Her doctor started her on an intensive 12-week combination treatment of Rituxan and the steroid Solu-Medrol (methylprednisolone), which kept the cancer in remission for five years. When blood tests showed an uptick in CLL cells, Duggins enrolled in the Calquence clinical trial.

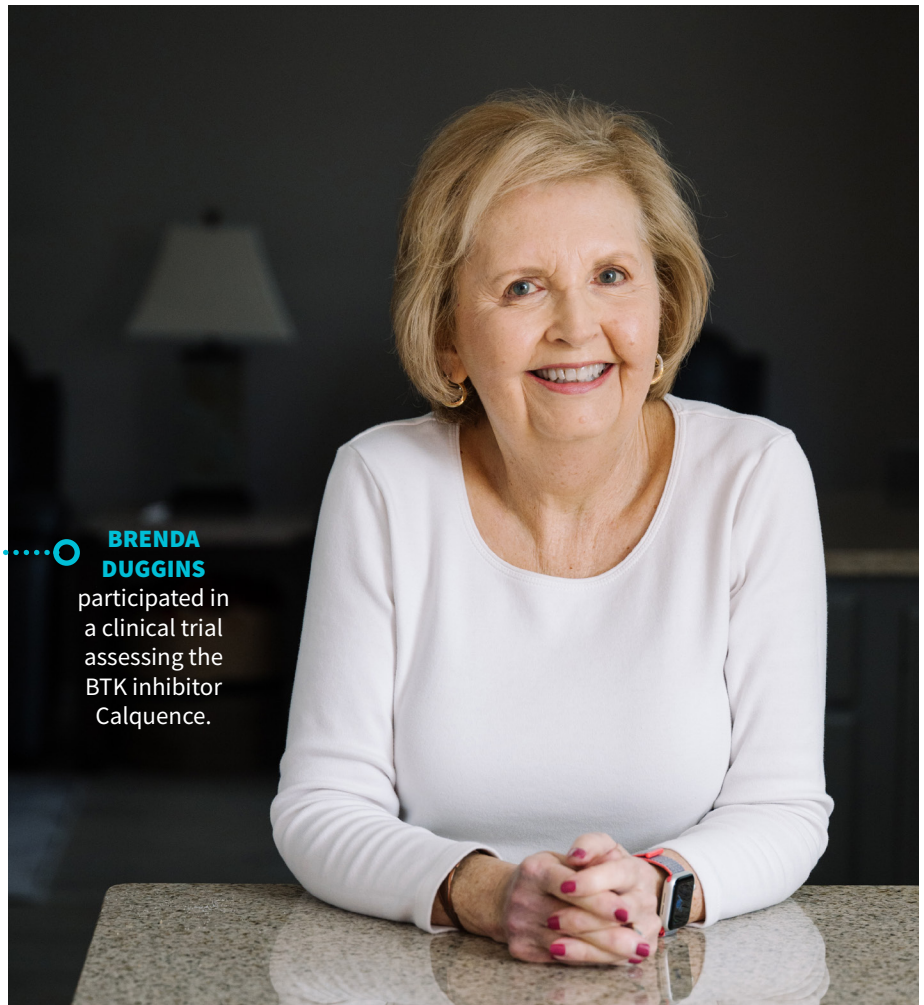
Per the trial's protocols, Duggins stopped taking Rituxan after five months and Venclexta after one year. But she continued with Calquence, the BTK inhibitor, until September 2022. Since 2020, her bloodwork has shown no signs of CLL. "The doctors think the cancer is in a deep remission," says Duggins, who experienced no adverse heart events. The FDA approved Calquence for the treatment of CLL and SLL in November 2019.

Calquence was also the BTK inhibitor that Isop's doctor recommended. But the medicine triggered headaches so severe that she couldn't function. While headaches are a known potential side effect, they're usually not debilitating. In July 2022, her doctor recommended a different and newer BTK inhibitor: Brukinsa (zanubrutinib).

BRUKINSA: THE THIRD BTK INHIBITOR

The FDA approved Brukinsa in 2019 for mantle cell lymphoma and again in 2021 for marginal zone lymphoma and Waldenström macroglobulinemia. But experts were still tabulating results from clinical trials of Brukinsa for CLL/SLL when Isop began taking the drug off label. Previously, Isop had told her doctor she wasn't interested in taking Imbruvica because of the risk of AFib. "I was grateful there was another treatment option," she says.

Isop was on Brukinsa for less



BRENDA DUGGINS participated in a clinical trial assessing the BTK inhibitor Calquence.

BRENDA DUGGINS' blood work has shown no signs of CLL since starting treatment with a BTK inhibitor.

BRIANA SNYDER

than six months when it received FDA approval for CLL/SLL. The January 2023 approval came after two global, randomized, phase 3 clinical trials showed the drug to be more effective than other CLL treatments and with less risk of serious side effects like AFib.

Findings from the ALPINE trial released in December 2022 showed a superior progression-free survival rate (time during and after treatment that a patient lives with cancer without worsening) as well as an overall response rate (patients with a partial or complete response to therapy) of 80% for Brukinsa compared with Imbruvica (73%) in people with relapsed or refractory CLL/SLL. There were more than twice as many AFib incidents on Imbruvica compared with Brukinsa. Six study participants died of cardiac events while taking Imbruvica, while there were no cardiac deaths among those on Brukinsa. The trial also found Brukinsa to be more effective at treating CLL with chromosomal deletions and gene mutations.

The SEQUOIA clinical trial compared the use of Brukinsa as a frontline CLL treatment over two years to a more commonly used combination treatment of Rituximab and the chemotherapy drug Treanda (bendamustine). The study found that Brukinsa offered an 86% progression-free survival rate at 24 months versus 70% for chemoimmunotherapy.

"People with harder-to-treat CLL with chromosomal deletions also fared better," says Flinn, one of the study's authors, who noted there were also fewer incidents of AFib. "Second-generation BTK inhibitors appear to be more selective at targeting only the BTK enzyme and not healthy enzymes that aid heart function."

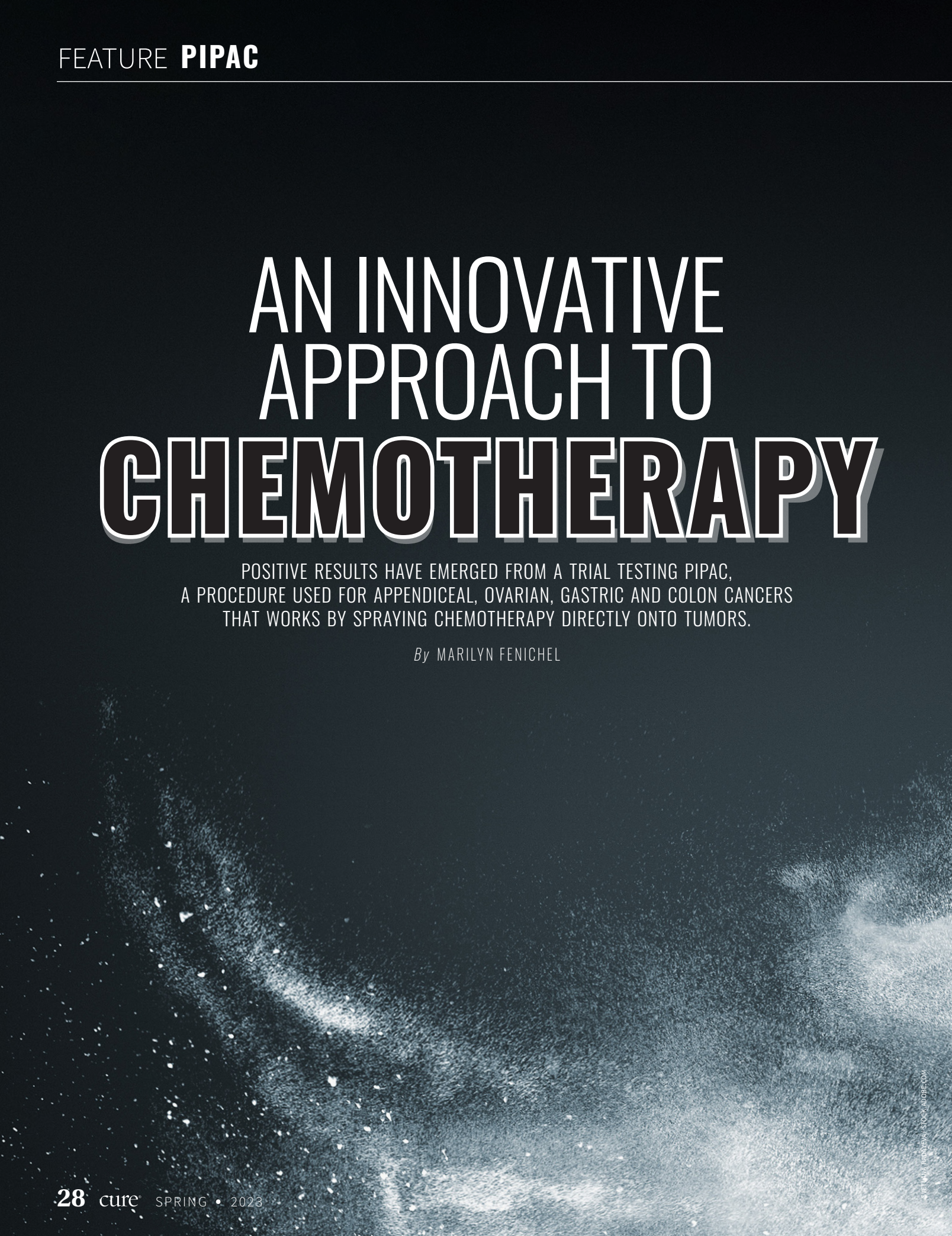
There are no studies underway to directly compare Brukinsa and Calquence. Instead, researchers are focused on developing new CLL treatments, such as third-generation BTK inhibitors that can overcome drug resistance, combination therapies that pair BTK inhibitors with BCL-2 inhibitors like Venclexta or other drugs, CAR-T cell therapies and treatments for Richter transformation (Richter syndrome), an aggressive and hard-to-treat lymphoma that develops in as many as 1 in 10 people with CLL.

"There have been so many advancements in CLL treatments since my diagnosis more than a decade ago," says Isop, who is back to enjoying her retirement, traveling to Portugal and Mexico last fall. At the start of this year, she received the best blood lab results since the CLL diagnosis. "I try not to waste time worrying about the cancer coming back. I'm confident there will be a new treatment or clinical trial when I need it."

AN INNOVATIVE APPROACH TO CHEMOTHERAPY

POSITIVE RESULTS HAVE EMERGED FROM A TRIAL TESTING PIPAC, A PROCEDURE USED FOR APPENDICEAL, OVARIAN, GASTRIC AND COLON CANCERS THAT WORKS BY SPRAYING CHEMOTHERAPY DIRECTLY ONTO TUMORS.

By MARILYN FENICHEL



ERENA VAN DER HEIJDEN, 61, of Glendale, California, had been treated extensively for her ovarian cancer. After receiving her diagnosis in 2013, she had a total hysterectomy and received chemotherapy. When the cancer recurred in 2017, she had more surgery, where much of her colon was removed.

But neither surgery nor a wide array of drugs stopped her cancer, in large part because of the type of ovarian cancer she had. Called low-grade serous ovarian cancer, it is a rare cancer characterized by small tumors in the peritoneum, the thin layer of tissue that lines the abdominal cavity and wraps around several organs and tubes that connect them. This type of cancer is hard to treat because these small tumors are slow growing and don't have an extensive network of blood vessels, making it difficult for chemotherapy administered through infusion to reach them. What's more, this type of ovarian cancer is often resistant to chemotherapy. In addition, van der Heijden had developed ascites, a buildup of cancer cell-containing fluid in the abdomen. »»

> The side effects were so much less than they've been for either intravenous chemotherapy or the oral form.
>
> ***ERENA VAN DER HEIJDEN***

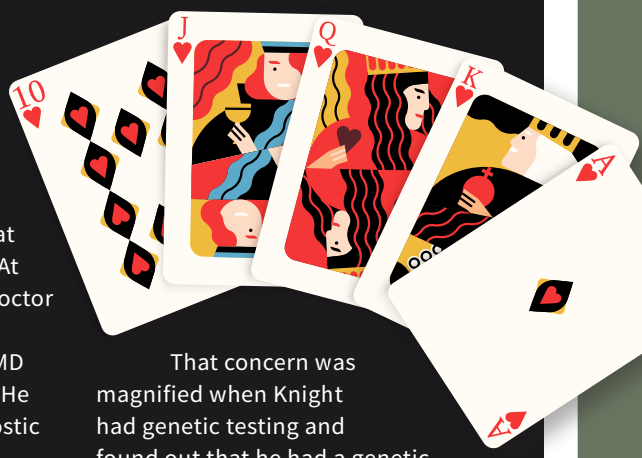
Having tried a variety of treatments — including chemotherapy, hormone therapy and targeted therapy — with limited success, van der Heijden turned to her doctors for other options. They referred her to a trial being conducted at City of Hope, in Duarte, California, under the direction of Dr. Thanh Dellinger, principal investigator and a gynecologic oncologist and surgeon. Two other sites — Northwell Health in New York and Mayo Clinic in Jacksonville, Florida — are also part of the trial.

The trial is testing PIPAC, or pressurized intraperitoneal aerosolized chemotherapy, which is unique in that the chemotherapy is sprayed directly onto the tumors that lie on the surface of the abdominal cavity. This process is designed to make absorption of chemotherapy by the tumor cells more efficient and hopefully more effective. Using laparoscopic surgery, small incisions are made into the abdomen and an aerosolized form of chemotherapy is spread in the area and left there for about a half an hour. "We have animal data showing that the pressurized approach goes deeper into the tumor, while the aerosol helps deliver the chemotherapy more widely throughout the abdomen," says Dellinger. "Although this procedure is given after patients have received three or four lines of treatments and is not designed to be curative, it can provide significant relief."

That has been van der Heijden's experience. PIPAC has given her a much-needed reprieve from both the cancer and the unsuccessful treatments she has endured. "The side effects were so much less than they've been for either intravenous chemotherapy or the oral form," she says. "The biggest problem was fatigue, which could last anywhere

ALYSSA STEFEK

PLAYING THE ODDS IN THE POKER GAME *of* LIFE



BURT KNIGHT, 62, of Denver, received a diagnosis of stage 4 stomach cancer in 2020 that had spread to the peritoneum. He had just undergone 12 rounds of chemotherapy, but cancer cells were still present in his stomach. What's more, his oncologist was not very optimistic, leaving Knight feeling discouraged.

Knight was no stranger to cancer. Ten years earlier, he had received a diagnosis of colon cancer, discovered during a routine colonoscopy. "I was the poster child for colon cancer," Knight recalls. "I had a colonoscopy at 50, they found malignant polyps and were able to treat the cancer surgically. I didn't even need chemo."

But this time, his situation was different. As Knight was pondering next steps, his family scoured the internet for treatment options. One of Knight's daughters came across a webinar about stomach cancer with Dr. Brian Badgwell, a surgeon and oncologist at The University of Texas MD Anderson Cancer Center in Houston. He was talking about HIPEC and surgery for gastric surgery, still considered an experimental treatment in the United States.

"You could see his passion even over the computer screen," Knight recalls. "He didn't just want to treat cancer; he wanted to eradicate it. At that moment, I knew he was the doctor I wanted to work with."

Knight and his wife traveled to MD Anderson and met with Badgwell. He wanted to conduct his own diagnostic tests, so he ordered an endoscopy and new scans. Although there was no sign of cancer in the peritoneum, they too, saw cancer cells in the stomach.

That concern was magnified when Knight had genetic testing and found out that he had a genetic mutation for stomach cancer that increased his chances of developing the disease to over 80%.

"Dr. Badgwell wanted me to have my stomach removed, which felt drastic," he says. "Ultimately, however, I went that route. I had HIPEC both before and after surgery."

Knight had his surgery two years ago and so far, so good. He stopped working and has taken several trips, including a fishing trip to Alaska. He also has a 2-year-old grandson, whom he watches every Wednesday.

"In the poker game of life, if you're dealt a bad set of cards, the best you can do is play them as well as you can," Knight adds. "If only 1% of gastric cancer patients beat the odds, I want to be one of those 1 percenters."

PHOTO PROVIDED BY KNIGHT; POKER: GOOD STUDIO / STOCK.ADOBE.COM

from 24 hours to four days. There is also some healing from the incisions. But even with those issues, I'm a big fan of the procedure."

"Erena has responded so well to the treatment that we gave her six treatments instead of the usual three," Dellinger adds. "Her markers for ovarian and peritoneal cancers have dropped to levels within the normal range, and the ascites disappeared. It's very interesting that a chemo-resistant kind of cancer is responding when the chemo is delivered a different way. We're trying to figure out why that's the case."

THE EVOLUTION *of* PIPAC

PIPAC was first developed in Europe, and the technology has been available there for about a decade. In recent years, interest in PIPAC has grown in the United States largely because systemic chemotherapy has not been successful in treating peritoneal tumors. The search for alternative approaches resulted in this multisite clinical trial, the first testing PIPAC in the United States. "Unlike in Europe, the United States requires approval from the Food and Drug Administration (FDA) before a treatment can become standard of care," says Dellinger. "This phase 1 clinical trial, which currently has about 25 patients at City of Hope, was designed to determine safety and efficacy, which we have already done."

Dr. Richard Lawrence Whelan, chief of colorectal surgery at Northwell Health system and the Northwell Health Cancer Institute, is spearheading Northwell's PIPAC clinical trial as an affiliate site of the PIPAC trial led by City of Hope. "We've done 18 PIPAC treatments on four patients," Whelan says. "In two of our patients, one with »

> **ERENA VAN DER HEIJDEN**'s response to treatment allowed her to undergo six rounds of chemotherapy instead of three.

colorectal cancer and the other with appendiceal cancer, the PIPAC decreased the amount of tumor such that they were now eligible for debulking, or removing the tumors on the organs, and applying HIPEC (hyperthermic intraperitoneal chemotherapy), heated chemotherapy spread onto the clean abdominal cavity. Unlike PIPAC, which is a palliative form of treatment, surgical resection and HIPEC have the potential to be curative." Recent data have shown that for mesothelioma and appendiceal cancer, for which HIPEC and chemotherapy is standard of care, the five-year survival rate is now at least 50%.

Under the leadership of Dr. Mustafa Raoof, a surgical oncologist at City of Hope, the trial is being modified to include a combination of systemic chemotherapy and PIPAC for patients with colorectal and appendiceal cancer. The regimen alternates traditional chemotherapy with PIPAC. "Unlike the first PIPAC trial we conducted, for this one, patients don't have to have failed a previous line of therapy," Whelan says. "In fact, they need to have been successful on the chemotherapy before we start PIPAC. We've started this trial, called bidirectional treatment, with five patients. We're also looking into starting another trial for patients with pancreatic cancer."

At City of Hope, Dellinger is developing a bidirectional trial for patients with ovarian cancer. She's excited about this approach and believes the two types of treatments will "synergize each other."

As with PIPAC, physicians are looking to expand the use of HIPEC beyond the two cancers for which it is commonly done. Dr. Brian Badgwell, a surgeon and oncologist specializing in gastric and esophageal cancer at The University of Texas MD Anderson Cancer Center in Houston, was the principal investigator for the three clinical trials using HIPEC for peritoneal metastases as a result gastric cancer. He has also performed over 100 HIPEC procedures to treat these metastases. "Since the peritoneum is the most common site for metastases for gastric cancer, I would like to see

ALYSSA STEFEK

HIPEC receive national guideline approval for this disease, especially since peritoneal disease is a horrible malignancy," Badgwell says. "But progress is slow."

THE TWO SIDES *of* PIPAC

Although PIPAC has provided tremendous relief to patients who have received it, the treatment can have a negative side. Repeated treatments may cause scar tissue — or adhesions — to form, and vital organs may then cement together. As a result, they no longer function properly.

That's what happened to **MARTIN GREENWOOD, 63**, of Lake Grove, New York. After receiving a diagnosis in 2020 of stage 4 appendiceal cancer that involved multiple areas throughout the abdomen, he had surgery to remove half his stomach and 80% of his colon, along with some of his small intestine and his gallbladder, spleen, appendix and 14 lymph nodes. The surgery was followed by HIPEC, which, in his case, did not prove to be curative. Unfortunately, his cancer recurred a year later.

"At that point, PIPAC was my best option. There were only two slots for appendiceal cancer in the clinical trial, and I got the second one," Greenwood says. "Although the PIPAC clinical trial only included three treatments, I was approved for an additional five by the FDA. I felt well and experienced a higher quality of life than I had in a while."

Then things took a turn for the worse. Greenwood developed a series of bowel obstructions, a result of the adhesions, that required hospitalization. Because the organs were stuck together, he was not eligible for surgery.

Since then, Greenwood has had several more obstructions, occurring about a week apart. When they occur, he takes medication for the intense pain, stops eating and drinking, then moves onto liquids and soft foods before returning to his new low-fiber diet. "I've managed to stay out of the hospital for over a month now," Greenwood says. "But I can't afford to lose any more weight. If I can't maintain and gain weight, I will likely have to go on TPN (total parenteral nutrition), which involves having nutrition administered through a port located in a vein near my heart. The treatment is typically administered every day and takes about 10 hours, so it would be life changing."

While Greenwood has struggled with these problems over the last couple of months, he is grateful for the symptom- and pain-free time PIPAC gave him. "I've had wonderful care at Northwell, with very compassionate nurses and doctors," Greenwood says. "I was able to dance at my son's wedding in 2021 and travel to Israel and Costa Rica with my wife. For that, I am forever grateful."

MARTIN GREENWOOD underwent PIPAC treatment for stage 4 appendiceal cancer.

LANA ROWE

GOING THE DISTANCE

*SERIOUS ATHLETES MAY BENEFIT FROM THE TRAINING THEY DID **BEFORE** DIAGNOSIS, BUT THAT DOESN'T MEAN IT'S TOO LATE FOR ANYONE TO START MOVEMENT **DURING** ONE'S CANCER JOURNEY.*

By DARLENE DOBKOWSKI, M.A.

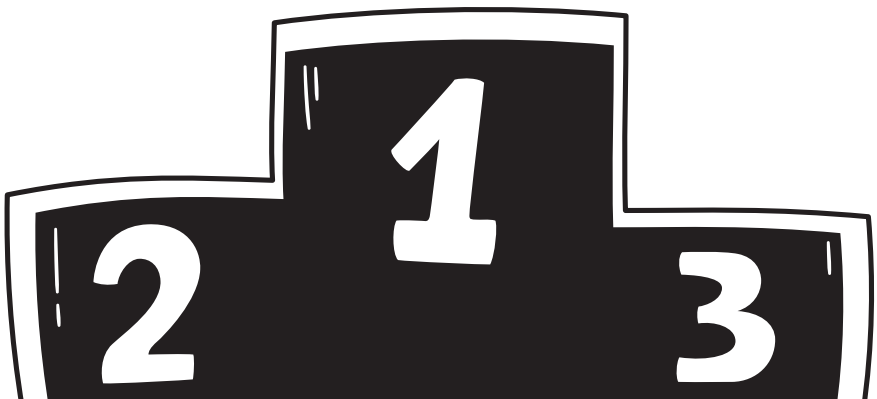
TERI GRIEGE has always loved sports. She participated in high school sports but once she got married, built her career as a nurse and started her family — a son and a daughter — running took a back seat.

She started running again later on, kicking off with a marathon in 2006. Griege then shifted her interest to triathlon, which incorporates swimming, biking and running. She did her first Ironman Triathlon — a 2.4-mile open water swim, a 112-mile bike ride and a 26.2-mile run — in 2008 when she was 47. Griege placed fourth in her age group and just missed qualifying for the Ironman World Championship in Kona, Hawaii.

"I had no idea I was going to be fairly good at this," Griege says.

She took the next year to train to qualify for the World Championship even though she was not feeling great.

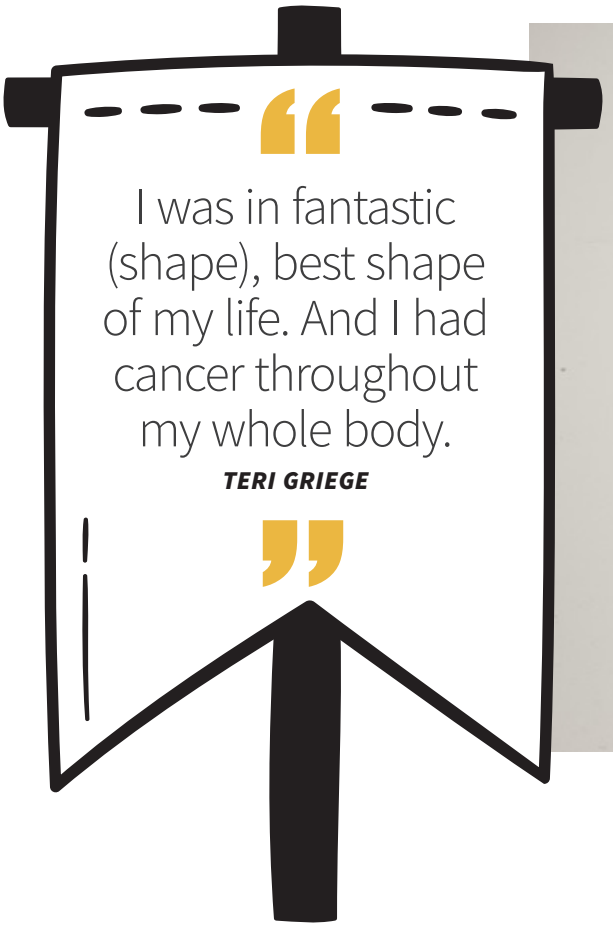
"I wasn't really sure what was going on. On some days, I'd feel really good. Other days, I'd feel bad," Griege recalls. "I started having some bleeding. I thought maybe it was hemorrhoids. I'd get an injury; it seemed like it would take a long time to heal." »



SVETLANA RADAYEVA / STOCK.ADOBE.COM

***TERI GRIEGE** has been an athlete nearly all her life, with a major focus on biking, running and swimming.*

PHOTO PROVIDED BY GRIEGE



Griege did another Ironman Triathlon in 2009 and was 10 minutes slower, completing it in 12:28:52. She also noted that her symptoms had gotten worse, with more bleeding and discomfort.

She finally went to the doctor in September 2009, who recommended she undergo a colonoscopy. She learned that she had a large tumor that had spread to her liver, meaning she had stage 4 colorectal cancer.

"This was all two weeks post having completed an Ironman at a very respectable time," says Griege, who is now 61. "When I was diagnosed … I used to say it was kind of like Lance Armstrong when he was diagnosed in the midst of his competitive cycling. But anyway, I was in fantastic (shape), best shape of my life. And I had cancer throughout my whole body."

BENEFITS OF EXERCISE

Findings from several studies have demonstrated that patients with high levels of exercise before a cancer diagnosis may have better outcomes after a diagnosis compared with those who were sedentary before diagnosis.

"Typically, this has been looked at in things like breast cancer, prostate cancer — some of the more common diagnoses, as you can imagine — because there are more diagnoses there," Lee Jones, chief of the exercise oncology service and attending physiologist at Memorial Sloan Kettering Cancer Center in New York, says in an interview with *CURE*®. "They appear to have — I wouldn't say improved — but appear to have longer overall survival (the time when a patient with cancer is still alive) compared to those individuals who reported being sedentary."

This benefit from exercising before a cancer diagnosis may be because these patients are in better shape, so they are able to tolerate therapies more effectively and are able to receive more of their treatments.

"(Elite athletes) have the perfect metabolism (and) they have the perfect (bodily) functions," Dr. Inigo San Millan, assistant professor at the University of Colorado School of Medicine and an associate professor at the University of Colorado in Colorado Springs, tells *CURE*®. "So when they have treatment for cancer … they don't suffer deterioration nearly as bad, in many instances, as other patients with cancer. For them, it's like they have better tools to deal and cope with cancer."

San Millan adds that the benefit a patient may obtain from exercise

PHOTOS PROVIDED BY GRIEGE

during cancer treatment may depend on the type of cancer they have. "(In) stage 4 metastatic cancer, eventually most patients, whether you're an elite athlete or not, they're going to have the same outcome."

These benefits may also depend on the type of treatment a patient is undergoing.

"That can really be everything, from taking an anti-estrogen pill for people with breast cancer," says Dr. Jennifer A. Ligibel, director of the Leonard P. Zakim Center for Integrative Therapies and Healthy Living at Dana-Farber Cancer Institute in Boston, in an interview with *CURE*®. "People with prostate cancer also use endocrine therapy, and in that setting, exercise is so important because there can be a lot of muscle loss. … But other people are getting really intensive chemotherapy and radiation, and the ability to remain active really does vary."

Another explanation behind the benefits of exercise and cancer outcomes may also be a heightened immune system, which can lower circulating levels of metabolic growth factors and change other factors within the body that may aid in cancer cell growth.

"We want to convert our bodies to an inhospitable place for cancer cells to live," Jones says. "If you think about exercising, it does that. It creates all these factors that cancer cells really don't like. They like being in an environment where they've got lots of growth factors; it's immune suppressed and all these other things."

Upon receiving a diagnosis of stage 4 colorectal cancer, Griege initially underwent a short course of radiation and then six rounds of FOLFOX chemotherapy, a combination regimen commonly used to treat colorectal cancer that includes leucovorin calcium (folinic acid), fluorouracil and oxaliplatin.

"I was very fortunate that my body responded well," she says. "I think this had to do with a lot of exercise and being in good shape."

After completing the FOLFOX chemotherapy, Griege underwent a colon and liver resection, followed by six more rounds of FOLFOX and maintenance chemo with Avastin (bevacizumab) and Xeloda (capecitabine) for over nine years.

TERI GRIEGE now runs and bikes to raise money and awareness for cancer and its research as a way to "pay it forward."

SIDE EFFECT MANAGEMENT

Exercise may also play a role in how patients tolerate the side effects of cancer treatment.

"(Exercise) has a lot of benefits for people," Ligibel says. "They were less tired. They didn't lose as much strength during their treatment because a lot of people do become deconditioned. And older people especially may be less able to take care of themselves after cancer treatment. So exercise really helped prevent that kind of decline."

Exercise in any amount may also help with mood disorders during a patient's cancer journey.

Griege says training for triathlons before her cancer treatment helped her break down how to approach each step of her cancer journey.

"There's a certain mentality that goes along with (training and exercise)," Griege says. "It's the perseverance and endurance. In an Ironman, if you look at that race, it's a three-sport race, and then each one has quite a distance. … So for me, the radiation was one sport, the surgery was a second sport and then chemotherapy was a third sport. You kind of get through one and then you move to the next. And even within the one (treatment), you have to break that down into something that most people are familiar with, (which) is a marathon. When you start a marathon, you don't want to think about mile 26. You're going to think about getting through mile No. 1."

Griege exercised during cancer treatment and her cancer team understood how important movement was for her.

"I wanted to keep my life as normal as possible," she recalls.

Although she had to stop exercising for a while after undergoing surgery, Griege would swim, bike and run, among other things, during the chemotherapy portion of her treatment. "I just would adapt to what my body felt I was able to do, what I could tolerate, but I continued," she says.

TOO MUCH OF A GOOD THING

Although it is understood that exercise offers benefits for patients with cancer while they are undergoing treatment, there is such a thing as too much, experts say. Current guidelines recommend 150 minutes of moderate-intensity exercise a week, consisting of 30 minutes five days a week for people regardless of cancer status. Exercise beyond 150 minutes per week may offer patients a benefit regarding heart disease and diabetes prevention, but Jones says it behaves differently for any cancer-related benefit. »

"If you go from (no exercise) and then you start exercising 30 minutes or an hour a week, you do get this nice, linear decline in risk in general," Jones says. "And if you go to about 150 minutes (a week), (the benefit) continues. But once you start to get past 150 to 200 minutes of exercise a week, it starts to plateau."

One concern that many health care professionals have regarding exercise, especially in patients who have trained before receiving a diagnosis, is doing too much exercise during treatment.

"You're not eating as well, you're not sleeping as well, and you've got all these poisons in the system. And then you're trying to exercise on top of that," Jones says. "I think we normally think about exercise being in that context that it's obviously going to be beneficial. … I think we need to be a little bit careful with that, knowing full well what treatment is doing (to the body). It's very easy, in that context, for exercise to start to become pathologic. You can go over your body's ability to recover."

Jones says it's important to keep in mind that a person benefits from exercise when the body is able to recover, not during exercise itself.

San Millan compares the dosing of exercise to the dosing of over-the-counter medications like ibuprofen.

"You go to a doctor and they say, 'You need to take ibuprofen,' but they didn't tell you how much and how often," he says. "Then go you, 'I think maybe half a bottle a day will work.' And in one month … you have liver disease or a big stomach ulcer. This is why I think that when you have to prescribe exercise, you need to tell the patient, 'You need to do it this way, this intensity, this amount of days a week and for this duration.'"

This past fall, Griege was five years without treatment and considered to have no evidence of disease. Although she doesn't train for Ironman competitions as much as she did when she was younger, she still runs, bikes and swims at least twice a week, what she calls "movement" instead of "training." Griege uses this movement to raise money for cancer research and advocacy as her way to "pay it forward," she says.

TAKING IT SLOW

Whether a patient was training for marathons, for example, before receiving a cancer diagnosis or is interested in moving around more during treatment, experts say it is never a bad time to start exercising.

"It's always time to improve your metabolic health and your own health through exercise," San Millan says. "The important thing, though, is to do it correctly. … It's important to find the right professionals who can help you out with the right exercise prescription. … You need to have exercise in the right, individualized way."

Ligibel emphasizes the importance of listening to one's body during cancer treatment and learning when exercise may be ideal and when the body needs a break.

"If you're finding that a day after your workout, you're in bed for three days, that probably means that you need to modify your regimen a little bit," she says. "Make sure that you're getting enough hydration, enough food, enough sleep. It's really a balance."

If a patient did not have some sort of exercise regimen before a cancer diagnosis, Ligibel recommends starting slow. For example, patients can start by doing 10 minutes of exercise three or four times a week and building that up slowly. She also says it may help for patients to find out what kind of exercise they like to do so they keep up the routine.

Experts also advise patients to speak with their health care team before starting any type of exercise regimen to determine what they may be capable of.

"Movement is key," Griege says. "Chemo was extremely tough, and my surgery was really, really tough. But you can just start by walking to the mailbox and getting the mail. Just inch by inch, little changes are so important. If it's a beautiful day, go to the mailbox and go to the end of the street. … Something is better than nothing."

SCAN THE QR CODE
to hear more about Teri Griege's cancer journey.

ALYSSA STEFEK

cure® EDUCATED PATIENT® SUMMIT

EVENTS THAT EDUCATE AND INSPIRE

CURE® hosts Educated Patient® Summits virtually throughout the year. We invite expert physicians and advocates to share the latest information regarding a cancer diagnosis, treatment options, clinical trials, genomics, survivorship, and long-term effects. We invite you to be a part of the half-day summits to learn and empower your healing journey.

Summits are held on weekends at 11am ET | 8am PT

HERE'S OUR UPCOMING SCHEDULE:

- **Multiple Myeloma -** April 8
- **Lung Cancer -** April 29
- **MPN -** May 20
- **Skin Cancer -** May
- **Breast Cancer -** June

Summits are free to attend, register today!

Scan the QR code or visit
curetoday.com/events

cure®
curetoday.com

LEARN MORE ONLINE
SCAN the QR code for a collection of content on lung cancer.

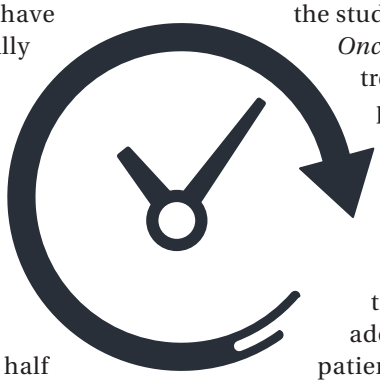
Despite Rapid Increase in Immunotherapy Use, Survival Benefit for Older Patients Is Modest

Since 2015, the use of immunotherapies has increased for both younger and older patients, but the survival benefit is more evident in younger patients, findings demonstrated.

By DARLENE DOBKOWSKI, M.A.

OVER THE PAST DECADE, the use of immunotherapy as treatment for advanced non-small cell lung cancer (NSCLC) has increased rapidly, although survival benefits from these therapies have been limited, especially in older patients, according to recent study findings.

"We found that within a couple years of the introduction of (immune checkpoint inhibitor) treatments into the market, over half of patients with lung cancer were getting these treatments regardless of their age," Dr. Cary P. Gross, professor of medicine at Yale School of Medicine in New Haven, Connecticut, said in an interview with *CURE*®. "But we also found that while survival improved in younger patients in a substantial way, in older persons, there was only a minimal change in survival. This suggests that we need to look more closely at whether older people are truly benefiting from these agents."



'EXCITING NEW MEDICINES'

There have been over 20 new Food and Drug Administration (FDA) approvals for the treatment of NSCLC, according to the introduction of the study published in *JAMA Oncology*. This increase in treatment options for patients with NSCLC may have decreased the rate of lung cancer deaths in the U.S.

"These are exciting new medicines, and they have been rapidly adopted into the care of patients with cancer," Gross said. "This is true for all age groups. It's fair to say that checkpoint inhibitors have become a standard of lung cancer care for young and old patients alike."

Gross and colleagues analyzed data from 53,719 patients (mean age, 68.5 years) from approximately 280 community-based clinics in the U.S. In particular, these patients had stage 3B, 3C or 4 NSCLC that was diagnosed between 2011 and 2019.

"The majority of patients with cancer are over the age of 65 years," Gross said. "We can think about cancer as an aging-related disease in many ways. That is why our research team is particularly interested in this group, in understanding the risks and benefits of new cancer treatments when they are used in older people."

The percentage of patients receiving cancer-directed therapy increased from 69% in 2011 to 77.2% in 2019. After the FDA approved the first immune checkpoint inhibitor for the treatment of NSCLC, the use of these therapies increased from 4.7% in 2015 to 45.6% in 2019. The use of immunotherapy for NSCLC was similar in 2019 between patients younger than 55 years and those aged 75 years and older (45.2% versus 43.8%, respectively).

SURVIVAL WITH IMMUNOTHERAPIES

The probability of two-year survival from 2011 to 2018 in patients younger than aged 55 years increased from 37.7% to 50.3%. In contrast, these rates modestly increased in patients 75 years and older (30.6% versus 36.2%).

The median survival in patients younger than 55 years increased during the study (11.5 months to 16 months). For patients 75 years and older, this increased from 9.1 months to 10.2 months.

"Our study wasn't designed to answer (why survival gains were modest in older patients), but it's crucial to understand why," Gross said. "It could be because their overall life expectancy is shorter. It could be because they have a different risk of (side effects) than younger people. Future work is needed, but unless we redesign our system of research to focus more on the older patients — the ones who are actually taking these medications — we'll never know."

FIGHT COLORECTAL CANCER

YOUR GUIDE IN *The Fight*

LOOKING FOR *a* *Clinical Trial or Provider?*

The Trial Finder is a one-stop place to search for and learn about high-impact research studies for colorectal cancer patients. The Provider Finder is a digital tool that helps patients find healthcare providers.

These tools show clinical trials and providers who are actively seeing and treating colorectal cancer patients around the country based on factors such as:

- Geographic accessibility.
- The volume of colorectal cancer patients they treat.
- Clinical trial experience.
- Whether they have a strong referral network to support interdisciplinary care pathways.

We're delivering on our mission to provide patients with the education and resources they need to find the best treatment options and providers for them, as well as support innovative uses of data and further groundbreaking research.

SCAN HERE
to find a clinical trial
Learn more at
TrialFinder.FightCRC.org

SCAN HERE
to find a provider
Learn more at
ProviderFinder.FightCRC.org

How Biomarker Testing May Help Inform Your Advanced Ovarian Cancer Treatment

This article is sponsored by AstraZeneca and Merck.

BEING DIAGNOSED WITH OVARIAN CANCER

When you receive an ovarian cancer diagnosis, it's normal to feel overwhelmed with emotions about this new information and how it will change your life. You and your loved ones may have many questions, including:

- What caused the cancer?
- What are the treatment options for my specific type of ovarian cancer?
- How can my healthcare team and I decide on the best treatment plan for me?

Remember that you are not alone. Nearly 20,000 women in the U.S. are expected to be diagnosed with ovarian cancer this year.

"When facing a diagnosis of ovarian cancer, it's important to keep in mind that your healthcare team will be there with you – every step of the way – to answer any questions you may have about your diagnosis and to help you move forward with your treatment," said Dr. Sarah Adams. Dr. Adams is a professor at the University of New Mexico and a scientific advisor for the Ovarian Cancer Research Alliance. Merck & Co., Inc. and AstraZeneca are corporate partners of the Ovarian Cancer Research Alliance.

WHAT IS OVARIAN CANCER?

The ovaries are made up of three kinds of cells, and each of these can develop into a different type of tumor, including germ cell tumors, epithelial tumors and stromal tumors – epithelial tumors being the most common. Tumors from ovarian cells can be:

- Non-cancerous (benign), which may never spread past the ovaries, or
- Cancerous (malignant), which may spread to other parts of the body

Healthcare professionals will determine the stage of your cancer based on imaging studies and surgical findings. The stage of a cancer is a way of describing whether it has spread outside of the ovary or to distant sites in your body. This is important information in developing a treatment plan.

Some symptoms of ovarian cancer – such as bloating, pelvic or abdominal pain, trouble eating, or urinary symptoms – may not be present or noticeable or can sometimes be mistaken as signs of more common and less serious conditions, such as stomach, digestive or urinary issues. This often leads to ovarian cancer being diagnosed in more advanced stages of disease – after the cancer has spread.

In addition to other risk factors, you may be at increased risk of developing ovarian cancer if you have:

- A family history of certain cancers
- Certain gene changes (mutations) that are passed down through families (inherited), such as a mutation in the *BRCA* gene (the breast cancer gene)

It's important to know as much as possible about your cancer, so your healthcare team can recommend an appropriate treatment plan for you. One way to do this is through biomarker testing, which may be conducted by your healthcare team to determine specific information about your tumor.

BIOMARKER TESTING MAY HELP INFORM TREATMENT OPTIONS FOR ADVANCED OVARIAN CANCER

A biomarker is a biological molecule (e.g., genes, proteins) found in body fluids (e.g., blood) or tissues that may be used to help identify possible treatment options. Biomarkers can give your healthcare team important information about your ovarian cancer, including which treatments may be an option for you.

Biomarker testing may be conducted by your healthcare team in a variety of ways, including biopsies of the tumor, or a blood sample. It's important to talk to your doctor about biomarker testing to see if it's right for you.

"No two people with cancer are the same. It's important to know about the unique characteristics of your cancer to inform decisions about your treatment in partnership with your healthcare team," said Dr. Adams. "Biomarker testing can be a helpful tool that allows you and your healthcare team to learn more about your cancer. The results of these tests may help identify what treatment options may be right for you."

Currently, there are several available treatment options for advanced ovarian cancer. Some common options include:

- Surgery
- Chemotherapy
- Targeted therapies

"If your results show that you test positive for certain biomarkers, you and your healthcare team may decide that targeted therapies may be an option for you," said Dr. Adams. "I encourage people to ask about biomarker testing, and to discuss their treatment options with their healthcare team."

TALKING TO YOUR DOCTOR

It's important to ask your doctor about biomarker testing. When you receive a biomarker test following your diagnosis, you and your healthcare team will have additional information to help inform your treatment plan.

Talk to your doctor to learn more about how biomarker testing may help inform your treatment plan for advanced ovarian cancer.

US-70922 Last Updated: 11/22

Clinical Trial CORNER

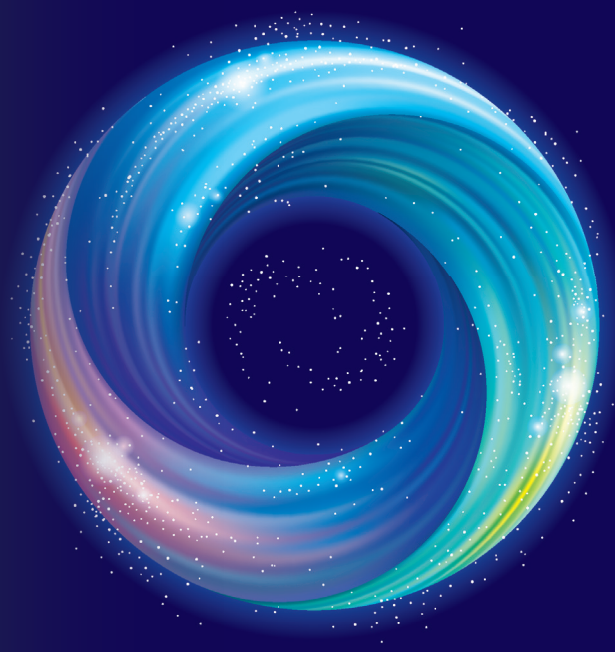
Be the first to hear the latest news on clinical trial availability and enrollments!

Visit to stay up-to-date on clinical trials.

cure®

curetoday.com/clinical-trial-corner

Falling Into the 'ALICE IN WONDERLAND' GOOGLE HOLE



A federal law now allows patients with cancer to review their test results as they become available; however, that instant access may cause some patients to have unnecessary concerns.

By KATHLEEN O'BRIEN

ANXIOUS ABOUT THE results of her recent lumpectomy and unable to sleep, Lisa Koncz reached for her cellphone in the middle of the night.

She saw a new message on her patient portal announcing the pathology report from the tumor that was removed from her breast.

Unable to resist checking her results, she clicked and saw the very news she'd dreaded: Her tumor was HER2 positive, which is often more aggressive. She knew that meant she'd need chemotherapy.

Although her husband was at her side, he was sound asleep. And so she absorbed the blow alone, at 4 a.m.

Two years before her diagnosis — stage 1, lobular triple-positive breast cancer in 2018 at 60 years of age — she would have heard the news directly from her surgeon, most likely in a phone call or at a follow-up appointment.

But as a result of a part in the 21st Century Cures Act — which was signed into law on December 13, 2016 — she was able to see her test results before her doctor before her doctor could discuss them with her.

That is because the information-blocking rule of the federal law requires specific categories of clinical notes created in electronic health records to be immediately available to patients. Those categories include imaging, lab report and pathology report results.

While considered a reform that would give patients their test results in a timely fashion, this portion of the law has frustrated oncologists as patients often are left making sense of their results. In fact, some patients, including Koncz, have learned they have cancer this way.

"The portal itself is a wonderful tool because it provides you with all sorts of knowledge," she says. "And I think of knowledge as power. The downside is what I experienced.

"I fell right into the 'Alice in Wonderland' Google hole," says Koncz, who lives in Duncansville, Pennsylvania. "The portal can be very daunting and overwhelming because you can misinterpret it. And you are getting that information before your doctor can talk you off the ledge."

SHEER VOLUME

Oncologists are unable to quickly interpret a patient's test results because of the number of patients they see in a day, according to Dr. David Gerber, a lung cancer specialist at the Harold C. Simmons Comprehensive Cancer Center in Dallas.

For instance, Gerber notes, an oncologist may get hundreds of test results a day, all while juggling in-person appointments with two dozen or so patients. And there isn't enough time to interrupt those appointments to personally notify a patient of their lab results as they come in.

By contrast, a patient is naturally interested in results for only one person: themself. As a result, many patients will read their results before their doctors do.

Gerber was one of the first to flag this problem in a 2021 article in *JCO Oncology Practice*, an American Society of Clinical Oncology journal.

"Radiology and pathology reports are not written with a patient audience in mind," he wrote. "They may contain bewildering and misleading language, or transcription errors. Confusion and unnecessary distress result."

What patient could grasp the meaning if a test reported "ground-glass opacities" or "guarding rebound bruits?" How about finding "without vegetations" or "d-dimer" levels?

"It's excruciating," Koncz says about reading pathology reports throughout her breast cancer

YEWKEO / STOCK.ADOBE.COM

experience. "You're picking out words, Googling words, which to the layperson sound horrible, but to a radiologist would be, 'We see this all the time. It's nothing to worry about.' And that's where we get in trouble as laypersons."

While rewriting medical reports for the layperson might be tempting, it is not the solution, according to Gerber. Medical practitioners use their own precise language to communicate with each other. Words that seem mysterious to the average person are vital in the world of oncology. Gerber likened it to the specialized, highly technical language of the aerospace industry. "It serves a purpose," he said.

72 HOURS

The drawbacks of the information-blocking rule from the federal bill — which mostly dealt with spending more money on cancer research — were so obvious to Dr. Susanne M. Arnold and colleagues that they successfully petitioned Kentucky legislators to pass a law giving doctors 72 hours to post test results involving cancer or serious genetic abnormalities.

"Terminal illnesses shouldn't be discovered alone," they wrote in an essay published in *Oncology Practice*. "Now, in Kentucky, they won't be."

Now, in Kentucky, oncologists and other physicians have time to interpret test results, consult their colleagues and come up with a treatment plan or a clinical trial before telling someone they have cancer. They also have the option to release results more rapidly in the case of normal results.

"We really had no opposition," Arnold, associate director of clinical translation at Markey Cancer Center in Lexington, Kentucky, recalls. "Everybody had a story about someone hearing about their cancer diagnosis or recurrence alone or on a weekend. And nobody thought that was a good idea."

AS OF OCTOBER 2022, health care providers and health technology and information networks are prohibited from blocking patients' access to their medical records — except for certain rare exceptions.

That means most patients who see a medical provider or are given any kind of test can see clinical notes and test results as soon as they are posted online.

For some, that access may lead to an abundance of stress knowing if the results reveal a person's cancer has returned or progressed. Others, however, may welcome the availability of those findings even if an oncologist has not yet read the results.

"If it's bad news, (people) can grieve a little bit and therefore be prepared and have a more productive conversation," says Lila Pereira, a pediatric psychologist at Maria Fareri Children's Hospital in Valhalla, New York.

Pereira adds that parents of children with cancer may be more welcoming of knowing their child's test results before an appointment so they can prepare a list of questions.

This new right to see test results before hearing from one's doctor means every patient must now come up with a strategy for handling this shift in how they receive news.

Pereira recommends that people who are anxious wait until the doctor's office or clinic is open before clicking on the email that holds their test results.

"You want to delay your curiosity until you have access to people for support or to ask questions in the event of confusing or bad news," she says.

Experts also suggest people take control over when — and in what setting — they read the results.

Dr. Christine Masterson, a gynecologist who serves on the Cures Act committee at Summit Health, a large practice, advises patients who know they will see an email before hearing from their doctor might want to have some emotional support lined up in case the news is bad.

"Open it with a family member," she said, "Or have someone on speed dial."

Short of state-by-state actions, however, there are no easy fixes.

While some have suggested institutions could post good news quickly but institute a short delay for bad news so a doctor can inform their patient personally, that isn't practical, Gerber says.

The first obstacle is that for some patients with cancer, what may look to be an alarming scan result might actually be an improvement. A result showing nine lesions could be welcome news or devastating, for example, depending on whether the last scan showed fewer or more. A radiologist wouldn't necessarily know that if tasked with deciding what news is "good" or "bad."

The second problem is that any institutionally imposed »

IRINA STRELNIKOVA / STOCK.ADOBE.COM

delay would quickly start to have its own meaning.

"If it's good news, (patients) want to get it fast, electronically. But if it's concerning, (patients) want to hear from a person first," Gerber says. "If we released good news automatically, but didn't release bad news, pretty soon everyone's going to figure out, 'I had a scan yesterday and I didn't hear the result yet, so it must be really bad.'"

IN CERTAIN INSTANCES, *WAIT*

Implementation of the law prompted Summit Health, a mega-practice of more than 2,800 providers across five states, to inform patients about the new law. Its message went so far as to suggest that in some cases, patients might want to avoid reading messages from the lab entirely until contacted by their doctor.

> If it's good news, (patients) want to get it fast, electronically. But if it's concerning, (patients) want to hear from a person first.
>
> —DR. DAVID GERBER

"This is an especially important consideration late in the evening or on a Friday," the letter continued. "This can make the evening or weekend very stressful."

Obstetrician-gynecologist Dr. Christine Masterson, who serves on the Cures Act committee at Summit Health, said the company realized that patients might now get information they didn't understand or even stumble upon an unexpected cancer diagnosis.

At the very least, patients needed to be warned of that possibility.

The portal problem has changed how she practices, she said. In the past, when ordering a biopsy to rule out an unlikely case of cancer, she might not have even mentioned that as a possibility. Now, however, she explicitly tells patients, "I'm doing this to rule out cancer," so they can brace themselves for the remote chance that's what results will show.

"I try to set the stage so that they at least have some preparation if they're going to open the email," she says.

CURE® Salutes Eight Individuals' Efforts During 10th Annual MPN Heroes® Program

CURE® celebrated the work of eight individuals who go above and beyond to better the lives of people living with myeloproliferative neoplasms. *By* RYAN MCDONALD

DURING ITS 10TH ANNUAL MPN Heroes® recognition event, CURE® honored the contributions of eight individuals who have made a difference within the field of myeloproliferative neoplasms (MPNs).

They received their awards during an in-person celebration that was livestreamed to a virtual audience hosted around the 64th American Society of Hematology Annual Meeting and Exposition in New Orleans.

Support for the 2022 MPN Heroes® was provided by Incyte.

Kerry Fraser, retired National Hockey League referee and patient with an MPN, was the host and emcee for the recognition event. He faced many irate hockey fans throughout his three-decade career but said the scariest, toughest thing he ever had to face was when he received his MPN diagnosis in November 2017.

He thanked the honorees for their tireless efforts in pushing the needle forward in the space and showing compassion for all patients with an MPN.

"(Without your) determination and your compassion, the MPN community would not be what it is today," Fraser said. "Patients like me would not be thriving. So on behalf of all MPN patients in the entire MPN community, thank you for all you've done and all you will continue to do."

Cancer Leads to Determination

Vanessa Bayer, former "Saturday Night Live" cast member and co-creator of Showtime's new comedy series "I Love That for You," was the keynote speaker during the event.

Bayer, who received a diagnosis of acute lymphoblastic leukemia — a type of blood cancer and the most common pediatric cancer — at 15 years old, explained how her diagnosis shaped who she is today.

"Having cancer gave me a determination not to be underestimated," she said during her keynote. "And I think that has a lot to do with where I am today."

She highlighted the significance of events such as these and what they represent.

"It's about the patients, caregivers, researchers and doctors who are making a difference in the world of MPNs," she concluded. "Thank you for all of the incredible work that you do."

Life's Mission

Nominated by Kapila Viges, Dr. Raajit Rampal, an associate attending physician at Memorial Sloan Kettering Cancer Center in New York, serves as a scientific adviser to the MPN Research Foundation. He works with other specialists to develop ideas and initiatives in hopes of bringing change to the rare blood cancer space.

"Those are lofty goals, but in order to try to solve these problems, you have to have a critical mass of people who are highly invested and passionate about this," Rampal said. "Part of what the foundation does is bring these people together. And that gives patients hope; that gives me hope."

He noted that although the space is changing and improving, he still thinks about the people who couldn't access those developments.

"That has to continue to drive us forward," he concluded. "Everybody sort of has their mission that they have to fulfill in their life. And I, for whatever reason, have (the) ability to do science and to take care of patients. I don't know what could be better for me than that." »

PHOTOS BY LARRY REMIKER

MPN HEROES® HONOREES

KERRY FRASER (far left) and **VANESSA BAYER** (far right) honored and congratulated the nominees and nominators present at the event.

30-Year Partnership

Dr. Steven Applebaum, a hematologist oncologist at UCLA Health in Pasadena, California, has been a physician for more than three decades, and one patient has been with him the entire time.

Stephanie Covington Armstrong presented to the emergency department more than 30 years ago with severely elevated hemoglobin levels. Applebaum, who was a fellow at the time, oversaw her case and told her she needed to live her life to the fullest. That conversation, she recalled, made her realize he needed to be her health care provider.

"I nominated him because I realized that (he is the) reason I have such a great life," she said. "And the reason I'm such a healthy, happy individual has a lot to do with him being my doctor and his outlook on life. I really, really love the way he shows up for his patients."

Whatever It Takes

Health care providers have the moral obligation to not only find and develop treatment breakthroughs but also to bring them to those who need them most, according to Dr. Naveen Pemmaraju.

"The whole goal here is can you move the field forward, each and every day," said Pemmaraju, an associate professor of medicine at The University of Texas MD Anderson Cancer Center in Houston. "We work late nights, weekends, holidays — whatever it takes for patient care, for research demands and also for ideas and thinking."

For Pemmaraju, who was nominated by Dr. Gabriela S. Hobbs, being a hematologist oncologist is not just a job.

"I'm available 24/7 … this is a calling or a passion," he said. "So I look at myself as an ambassador for my hospital, my institution, my patients and my rare disease fields, and I take that with great honor."

'This Is Why We Do It'

Natasha Johnson, who was nominated by Dr. Andrew Kuykendall, is a malignant hematology nurse practitioner at Moffitt Cancer Center and Research Institute in Tampa, Florida.

As a nurse intern, Johnson spent time on an oncology unit where she met a patient with acute lymphocytic leukemia. She would eventually marry him, and they went on a treatment

FROM LEFT: **KERRY FRASER,** nominee **MAYRA ANDUJAR DELGADO** and **VANESSA BAYER.**

journey together that consisted of bone marrow transplants.

He died of complications from a transplant, but she said that experience made her a better provider.

"Because of my experience, I definitely can try to put myself in the same role as the caregivers and look at the whole picture when I'm taking care of the patient," she said. "I really try to get engaged (with them) and I tell them, 'I'm a safe space, so just lay it out.' (And) we'll talk about it and do what we can to make things better."

Connecting With Others

Jessica Kuhns, who was nominated by her son Jaden Persaud, received a diagnosis of a myeloproliferative neoplasm, not otherwise specified, in 2016.

A resident of Gibsonia, Pennsylvania, Kuhns credited several advocacy organizations with guiding her during her journey. Following her diagnosis, she joined the Facebook group MPNs R US for further clarity regarding her disease. Now she is an Imerman Angel, connecting with people who have similar cancers and serving as a sounding board.

"I try to connect with them on a personal level and let them know that I've been there, that I feel what they're going through, ... and let them know that they're not alone," she said.

Treat the Whole Patient

Dr. Ghaith Abu-Zeinah, nominated by Jeffrey S. Puglisi, is an assistant attending physician at NewYork-Presbyterian Hospital and specializes in the treatment and research of MPNs and related blood disorders.

Abu-Zeinah, who is originally from Jordan, said his interest in the field is rooted in his desire to establish long-term relationships with his patients.

"It's important to have that strong relationship with patients so they feel comfortable expressing their fears and their anxiety," he said. "We have to understand at a personal level how patients are doing and not just deal with the objective numbers and objective bone marrow results and things like that."

Abu-Zeinah also serves on the medical advisory board of the Cancer Research & Treatment Fund. During his tenure, the group put together a podcast around the »

The 10th annual MPN Heroes® event took place at the National WWII Museum in New Orleans.

topic of mental health in patients with MPNs. He explained that not many health care professionals are adequately trained in mental and emotional well-being.

"It's important that instead of focusing only on blood counts … we have to understand if going through this experience, the diagnosis itself and the treatment course, has affected their lifestyle, their mental well-being," he added.

Becoming Best Friends

Justine Hallahan was a caregiver to her mom's partner, Matt, who had polycythemia vera.

Hallahan stepped in because her mom, Barb — who nominated her for the award — had to maintain her full-time job as Matt's diagnosis made it difficult for him to work. Hallahan would take Matt to his appointments and serve as his advocate when the pair believed physicians were not actively listening to his concerns.

Although Hallahan said it was a depressing time because they knew there was no cure for the disease, she said the diagnosis ended up being a blessing. "He grew into my best friend," she recalled.

Matt died in a house fire on Jan. 12, 2020. Hallahan she said she didn't consider herself Matt's caregiver. Instead, she explained, she considered Matt to be her caregiver, providing her son with life lessons.

"I don't feel as though I am a hero," Hallahan said. "This is humanity. This is what we do for the people we care for."

'Mayra With a Purpose'

After receiving a diagnosis of primary myelofibrosis, Mayra Andujar Delgado said she made the choice to not feel sorry for herself but instead make a difference.

One of the first things she decided to do was participate in a 5K for breast cancer research. An avid baker, she sold baked goods during the event and became the top fundraiser thanks to her coconut rum cakes.

Recently she participated in a local radio show in Orlando, Florida, to provide insight into the rare blood cancer.

"I'm here to bring awareness to the community in Central Florida," she said. Everywhere that I go, I say, 'Mayra with a purpose.'"

Recognizing Dedication

Erik Lohrmann, vice president of CURE Media Group, said the event is an opportunity to recognize those who dedicate their careers and lives to serving the community of patients living with MPNs.

"We see their collective passion and commitment to the MPN community," he said. "Their stories are inspirational. Each is worthy of being called an MPN Hero."

LEARN MORE ONLINE

SCAN THE QR CODE
to see a list of *CURE*®'s Healer and Heroes events.

Scan to learn more.

cure® *cares*

A cancer diagnosis can transform a person's life in an instant, forcing you to become an educated patient overnight in order to be involved in the decision-making process of your care.

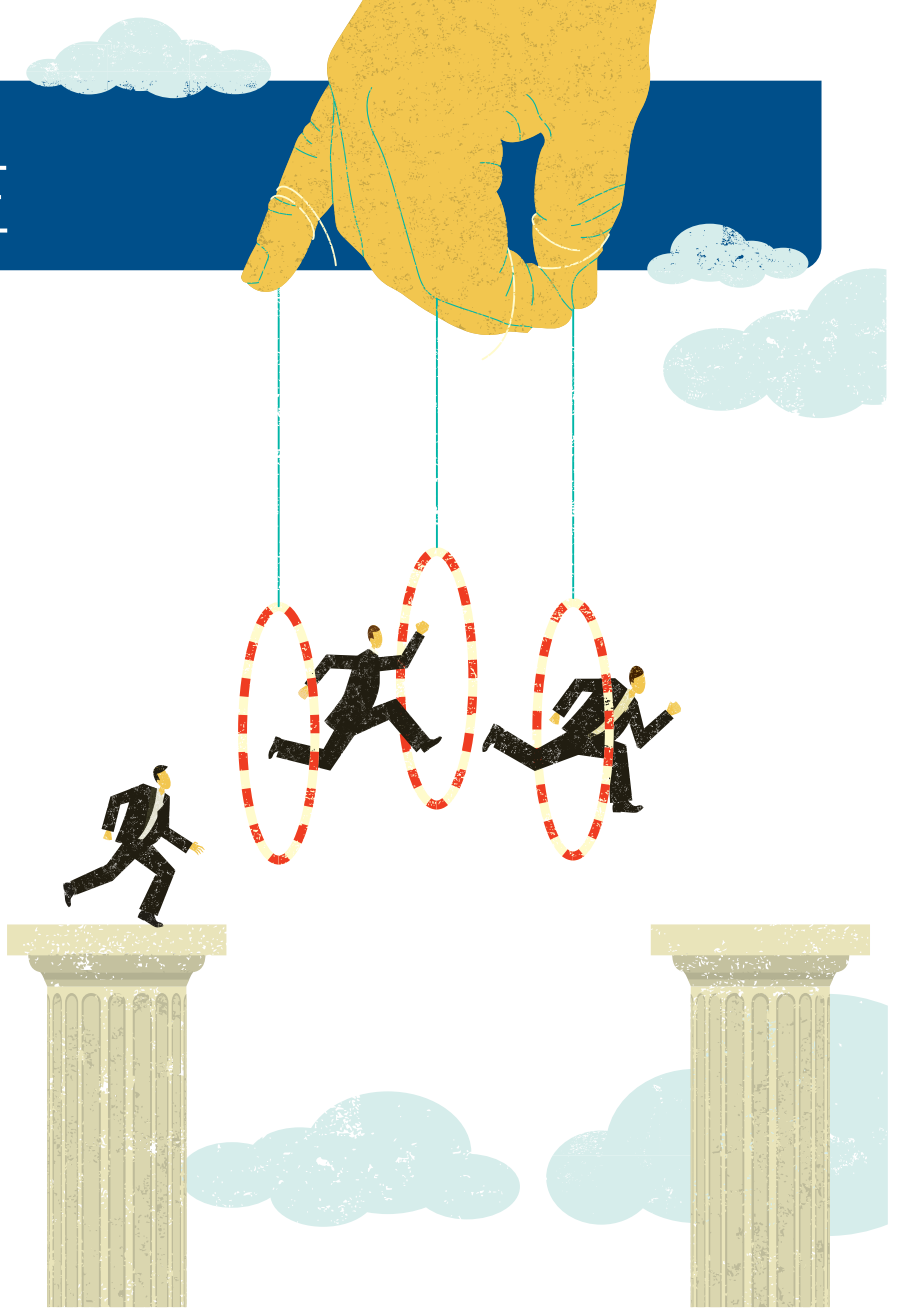
We are proud to share a new online resource, Cancer Horizons, which provides patients and caregivers with a thorough overview of:

- the cancer type
- potential diagnosis
- available treatments
- guidance on living with cancer

Learn more and share with others:
curetoday.com/cancer-horizons

cure®
curetoday.com

AN MJH life sciences® BRAND



JUMPING THROUGH Insurance Hoops During Cancer Care

How and why patients can advocate for themselves when it comes to insurance and treatment costs during cancer care.

By COLLEEN MORETTI

PATIENTS WITH CANCER MAY often experience a delay in diagnosis or treatment during their care due to obstacles and challenges presented by insurance companies, such as prior authorizations or drug cost. Regardless, it is important that patients use their voice and understand what resources are available for them to ensure they receive the care they need.

As a part of its "Speaking Out" video series, on behalf of the Community Oncology Alliance, *CURE*® spoke with the alliance's board president Dr. Miriam Atkins about the obstacles patients and physicians face regarding insurance matters during cancer care.

Q: What insurance issues do you face when treating a patient?

A: Well, I will start with you don't have enough time for me to answer that question. There are many hoops that we have to jump through with insurance, and I'm glad we're having this this conversation because oftentimes patients are frustrated because they can't get their care when they want or those sorts of things. They think it's just us, but a lot of time it's insurance. We deal with things like prior authorizations. I apply for a scan, I want to schedule a CT scan or an MRI or PET scan, and then I have to get a prior authorization. It sounds easy, but sometimes I'll say I want this scan done tomorrow, and they may say you need a prior authorization. So they'll call me at 2 o'clock today and say you need to call us by 4 o'clock today or we'll close this case, and we deal with that a lot, so that's the diagnostic part.

As far as the treatment, they have things — I call them obstacles. They will tell us, You have to use this drug for nausea before you use the drug you want to use. Or they tell us where we can have the prescription filled. I had a patient who I wrote a prescription for medication for myeloma on October 14 — and I know the date because I'm very frustrated still — I saw him on the 31st and I said, "How are you doing with the medicine?" He said, "I don't have it." So I went

RETROSTAR / STOCK.ADOBE.COM

SCAN THE QR CODE
to see more videos from our "Speaking Out" series.

through the chart and realized that his insurance company had redirected a prescription from where I sent it to their pharmacy benefit manager, and that person had not sent the medication. Long story short, the patient got his medication on December 28. So that is unacceptable. And those are the obstacles and hoops that insurance companies put in front of us almost every day.

Q: How does that impact their care moving forward?

A: It delays everything, which could mean, No. 1, disease progression. Some cancers need to be treated right away, and it's not as simple as putting the patient in the hospital. For instance, if it's an emergency, I can put the patient in the hospital for intravenous therapy, and that can cost the patient more money and it also costs Medicare more money. If it's an oral chemotherapy, those drugs are not on the formulary for the hospital, so putting them in the hospital to start treatment is not an option.

The other thing is the psychological effect. To a patient, every day is an eternity. So even though it may not make a big deal in the body maybe to wait two weeks, three weeks, for the patient that takes a definite toll on their mental capacity and dealing with this diagnosis that's already very challenging.

Q: How can patients advocate for themselves on Capitol Hill to address this?

A: They could call their leaders. I've been to Capitol Hill many times with the Community Oncology Alliance over the past several years and the Congresspeople and their aides don't know everything, and they can't know everything. They don't deal with this system. They have their own health care, their own system, which is not like the one that the rest of us have. So I think patients should call them and keep calling them because these people want to get reelected, and these patients are their voters.

Q: Are there any resources for patients to navigate insurance matters or drug coverage during their care?

A: The local CPAN (Community Oncology Alliance Patient Advocacy Network) chapters have educational seminars about who you can call, how you can call your doctor, those sorts of things. And one thing I tell my own patients is that insurance companies pay for drugs based on tiers, so a tier 1 drug is going to be less expensive for the patients out of pocket than a tier 2 or tier 3. Most chemotherapy agents are tier 3, so the out-of-pocket can be very expensive. I tell my patients, if the drug out-of-pocket cost is something astronomical, a unit they cannot afford, find out what the cash price is.

I'll give an example. I have a patient who I wanted to put on a medication for her gastrointestinal stromal cell tumor and her out-of-pocket was going to be $2,500 per month. Well, our office sold it to her cash for $125 per month, so that's a big difference for patients. And patients are realizing they can ask the cash price and if you don't run it through the insurance, sometimes the cash price is much more economical for the patient — not all the time because oncology drugs are very expensive, but you just never know; I mean that $2,500 versus $125 is a big difference for this patient. And the good thing is my pharmacist at my practice told me about it because I didn't even know the difference was that much. C

Transcription edited for clarity and conciseness.

MANY MUTATIONS. MANY CANCERS. ONE COMMUNITY.

FORCE improves the lives of the millions of individuals and families facing hereditary breast, colorectal, endometrial, ovarian, pancreatic and prostate cancers.

Our community includes people with a personal or family history of cancer, Lynch syndrome, a BRCA1, BRCA2, ATM, PALB2, CHEK2, PTEN or other inherited gene mutation linked to cancer.

If your cancer, or the cancer in your family, could be caused by an inherited gene mutation, visit the FORCE website for resources and support.

Toll-free Helpline: 866-288-RISK (7475)
info@FacingOurRisk.org

FacingOurRisk.org

FORCE
Facing Hereditary Cancer EMPOWERED