

Guide to

HealthMonitor®

Metastatic Cancer

Moving forward with hope

**24 TIPS
TO FEEL
YOUR BEST**

**Are your bones at
risk for fracture?**

See p. 14

**Know your
treatment
options**

**"I took the gloves
off to watch Gabi
grow up!"**

Determined to be there
for his daughter, Brian
Thomas found a treatment
that keeps him going strong!

COMPLIMENTS OF YOUR HEALTHCARE PROVIDER

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Guide to Metastatic Cancer

Moving forward with hope



Patients like Miranda (above) and Larry (right) share the strategies that help them feel their best during treatment and beyond.



PERSPECTIVES

- 4 **There's so much ahead of you!**
Look to the future with confidence

TRUE INSPIRATION

- 6 **"I'm superhuman, man!"**
Not even Stage IV melanoma can slow Brian down
- 24 **Thrive during treatment**
Miranda, Jeff and Larry share their strategies
- 28 **"My treatment was a miracle"**
It's been nine years since Karen was diagnosed with Stage IV colon cancer

YOU & YOUR CARE TEAM

- 10 **Your treatment options**
Learn about the different therapies
- 13 **What is targeted therapy?**
Could one of these medications work for you?
- 23 **Ask the experts**
Answers to your top questions about cancer
- 32 **Resources you need**

Help for today's visit!
Complete the tools starting after p. 8.



"I'm kicking cancer's butt for my wife, Shar, and our daughter, Gabi," says Brian Thomas.

BONE HEALTH & CANCER

- 14 **When cancer puts your bones at risk**
Understanding what happens when cancer spreads to bone
- 20 **Questions about bone mets**
Ask your doctor these questions
- 21 **Are your bones at risk?**
- 22 **How bone mets are treated**
These options can help

HEALTHY CHOICES

- 30 **"Tell me what to eat"**
Answers from oncology nutritionist Natalie Ledesma
- 31 **Wake up your taste buds!**
This roast chicken is easy to make and sure to whet your appetite

Special thanks to our Medical Review Team:

Lillie Shockney, RN, BS, MAS, administrative director of the Johns Hopkins Breast Center and the Johns Hopkins Cancer Survivorship Program

Marc B. Garnick, MD, Gorman Brothers professor of medicine, Harvard Medical School and Beth Israel Deaconess Medical Center

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STAFF

Vice President, Editor-in-Chief
MARIA LISSANDRELLO
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There's so much ahead of you!



Has your cancer spread? Take a deep breath—and know that tens of thousands have been living and thriving with metastatic cancer for years.

“When I first heard my cancer had metastasized—it was in my bones and liver—it was a shock,” says Melanie P. “Just three months had gone by since my chemo ended for Stage II breast cancer. It wasn’t supposed to come to this. *Would I be there for Marcus, my four-year-old? Would I be there when he took off on a two-wheeler for the first time, like my six-year-old, Shayna, had just done?* Thoughts like those swirled through

my mind and wouldn’t stop,” says Melanie, who worried about her husband, Sam, too. “I didn’t want to leave him alone.”

So far, she hasn’t. It’s been seven years. Marcus just started sixth grade, and Shayna’s in high school now. And Melanie? She learned that while her metastatic cancer isn’t going anywhere, for the time being she isn’t either. “It was a huge adjustment,” the 43-year-old human resources administrator admits. “Mentally, I had to get used to the idea of *living* with cancer, but not letting it be my whole life.”

Friends and family have helped. Sleeping “more than I knew I could” has helped, too. Paying attention to little things, like Marcus’s

gasps of delight during *Frozen* and the buzzing of a hummingbird in the backyard, keep Melanie grounded. And then there’s the support of her healthcare team. “My oncologist has been with me every step of the way—through chemo, surgeries, radiation—I feel really cared for,” says Melanie.

Down days. They happen, too, of course. But she bounces back. “I stop. I tell myself, ‘Today. Today, Melanie, today.’ Hey, it’s all that any of us has. Of course,” she adds with a laugh, “on good days, I picture taking Shayna for her driving test!”

As Melanie has found, your emotions may be all over the place. Like when she learned her cancer had spread to her bones. She was scared—but her

fears were eased when she learned bone metastases can be treated, too (see p. 14).

To find your place of calm, try focusing on what you can do now... today. Learn about the therapies that can work best for you. And spend time with this guide. We’ve asked experts to shed light on managing the issues that may concern you most. Troubled or confused? Talk to your oncology care team. And if all that sounds overwhelming, take it one hour at a time. Gather love and support from your family, friends and the robust community of others fighting metastatic cancer. People like Brian (p. 6) and Karen (p. 28), who urge you to focus on the people and activities you value most. **📖**

“Hey, man, *I’m superhuman!*”

Brian Thomas has run more miles than most people run in a lifetime since his diagnosis of Stage IV melanoma four years ago. What’s the secret? “You have to have the right attitude!”

“**T**hey gave me a couple months,” says Brian Thomas. “Twice they told me that. But I am alive and kicking butt!”

In fact, Brian, who ran 1,800 miles last spring—from Key West, FL, to Washington, DC—while on an immunotherapy protocol, figures he’s not going anywhere anytime soon. As founder of the nonprofit organization Road Warriors (*RoadWarriorsCorp.org*), which raises funds to help cancer patients meet expenses, he’s got a book to write, a film

of his cancer journey to produce, and more races to run. And then there’s his seven-year-old daughter, Gabi. “There was a time she’d ask me if I could play and I had to say no,” says Brian. “That killed me! Now I get to play with her and it’s awesome!”

“I thought I was just overdoing it”

The middle school science teacher from Lakeworth, FL, had no clue what he was dealing with nearly five years ago, when he started to feel some stomach discomfort. “I thought I

was just overdoing it,” he says. When the teacher, track coach, husband to Shar, and father to then two-year-old Gabi, wasn’t with his family or students, he was running or racing. But when discomfort progressed to pain and vomiting, he wanted answers.

Astonishingly, tests revealed he had a grapefruit-sized tumor causing partial obstruction of his intestine. It was Stage IV melanoma. (Most melanomas occur on the skin, but 4% to 5% of them are found in





other parts of the body.) Surgery followed. “They removed the bottom third of my stomach, the top portion of my small intestine, eight inches of my large intestine, my gallbladder, and they scooped out the inside of my abdomen.”

“I went looking for help!”

Brian flew around the country, visiting doctors and treatment centers as


his condition worsened. “I had daily fevers and night sweats. I could walk, but I was fatigued.”

Finally, a Texas doctor prescribed a chemotherapy protocol he was able to continue at home in Florida. It got his cancer under control so that Brian could push himself physically. A short walk became a longer walk, and then a walk-jog, and then a run-walk.

“After my last infusion, I got in the car, drove 14 hours to South Carolina, and ran a 31-mile ultramarathon,” says Brian. “Everyone is different, but you have to push the envelope. If you’ve been told you’re going to die, you’ve got to take chances.”

“I didn’t stop there”

Brian pressed his doctors for other treatment options and entered a clinical trial. He gets scans regularly.

“I was never anxious about tests. They’re sleep time for me! The only anxiety I’ve ever had was when I was waiting for my doctor to tell me I was in remission [i.e., scans show no evidence of cancer]. Finally, he wrote it on a medical release for a 170-mile race. I looked at it and said, ‘Am I really in remission?’ He said, ‘Yes you are!’” 

HARNESS BRIAN’S AMAZING SPIRIT!

► **Find your motivation.** “This is the hardest battle of my life. I cry, get angry, curse into my pillow, yell at the top of my lungs. But after that I say, *The gloves have got to come off so I can be here to watch my daughter grow up.*”

► **Fight hard.** Everything Brian did, he saw it as another attack on his cancer. “I’d envision the toxic chemicals going to work to kill the tumors. I envisioned those cancer cells being blown up. And every time I fell asleep, I felt that I was gaining vital energy!”

► **Breathe.** “That’s been my mantra: *Breathe. Relax.* I’d look at anything green because I thought it was healing. I dropped any kind of stress, every day. Mortgage, car payment, bills—my wife, mom and sister took care of all of that. Things that used to bother me don’t matter as much any more.”

► **Get help for the fight!** “I tell people battling cancer, you’re going to be exhausted at times—you need a network of family and friends who are able to research treatment options for you. Throw your ego out the window. Be honest and say, *I need you right now.*”

► **Move your body.** “It’s important to get those muscles working and to get oxygen into your body. When I first started battling cancer, I wanted to get out to walk, to get my blood circulating and to get some fresh air and sunlight. So I pushed the envelope—in micro. I started out walking to the end of my driveway. Then, to the end of the road.”



► **Treat yourself to a massage.** “I had one every other week during treatment. It relieved a lot of stress. My cancer went from my sternum to my belly button. I found a massage therapist who specialized in abdominal massage that really made me feel great.”

Understanding your treatment options

Your doctors can now call on an array of powerful treatments to customize therapy to your unique cancer.



When cancer spreads beyond its primary site to distant parts of your body, such as your lungs, liver or bones, some questions are probably top of mind. Things like, *What's going to happen to me? Will I see my children grow up? Am I going to be in pain?*

You may even wonder if anything can be done for you. Happily, the answer is a resounding YES! Treatments are getting better every day. Therapy for metastatic cancer has two important objectives: (1) to eliminate the tumor, or to shrink it and control its growth, and (2) to give you the best quality of life possible. To

accomplish these goals, your doctor has a range of options, including therapies that can shrink or eradicate tumors, medication that eases pain and procedures that work on healing the places where tumors have spread.

Along the way, it can help to remember this: Your doctors, nurses, counselors and, of course, your loved ones are with you on this journey. And in this Internet age, you can easily connect with others who have experienced the therapies you are contemplating and who can share tips for making life more comfortable right now.

How is metastatic cancer treated? The treatments you and your healthcare team decide upon depend on several factors—your age and general health, the type of cancer you have, specific features of the tumor, where the cancer has spread and how extensively it has spread. Your doctor also considers your response to any previous treatments you may have had.

SYSTEMIC THERAPIES treat cancer throughout the entire body. Some of the following therapies may not be right for fighting *your* type of cancer. Your doctor will tell you the treatments that will work best for you.

- **Hormone therapy** may be used if your cancer has hormone receptors on it. Hormone therapy is often used in patients whose cancer has spread to the bone or soft tissue. For breast cancer, hormone therapies include antiestrogen medications that stop cancer cells from getting estrogen, aromatase inhibitors that stop or inhibit estrogen from being produced and ovarian suppression treatments that stop the ovaries from producing estrogen. For prostate cancer,

androgen deprivation therapy may be used to stop or lessen the production of androgens or block the ability of the body to use androgens.

- **Chemotherapy (chemo)**, administered orally or into a vein, can kill cancer cells, slow cancer's growth and control your symptoms, but can also harm or kill normal cells along with the cancer.


- **Immunotherapy** uses agents that work with the body's own immune system to fight cancer. Immunotherapy stimulates your immune system to attack cancer cells or marks them so they're more easily found and destroyed. Treatments are in the forms of pills, injections or infusion.

- **Targeted therapy**, which may be used if your cancer has a specific biomarker (a molecule found in the body that is a sign of a normal or abnormal process, or of disease) that can be easily targeted. Targeted therapies can block signals or proteins that cancer cells need in order to grow, while sparing healthy cells. To learn more, see p. 13. ▶

LOCAL THERAPIES (which target a specific area of the body) include:

- **Radiation therapy**, which uses high-energy rays to target tumors and ease symptoms. Stereotactic radiosurgery (SRS) focuses high doses of radiation on tumors in the brain or spine. Stereotactic body radiotherapy (SBRT) aims radiation on tumors in other areas of the body.
- **Surgery**, which may be used to remove a tumor, relieve pressure on tissues, or treat or prevent a bone fracture or spinal compression. Your doctor may use a series of different treatments to halt cancer growth and ease symptoms.

How will I feel? It is not easy to predict how your cancer or your treatment will affect you. Be sure to tell your care team about all your symptoms—especially pain. Therapies are available that can ease the symptoms of metastases throughout the body and make life more enjoyable by preserving your quality of life.

How will I know the treatment is working? Scans and blood tests can help your doctors assess how you are responding to treatment. Your doctors will also consider the health history you report and may physically examine you to determine whether your treatment needs adjustment. 



WHO IS ON YOUR TEAM

Medical oncologist—doctor who treats cancer with medicine

Radiation oncologist—doctor who treats cancer using radiation

Radiologist—doctor who performs imaging studies on your cancer

Surgical oncologist—doctor who treats cancer through surgery

Palliative care doctor—a doctor with expertise in pain relief methods who can ease your symptoms and improve your quality of life

Psychiatrist/psychologist—a mental health professional who can provide counseling; psychiatrists can also prescribe medication

Oncology nurse practitioner—an advanced practice nurse who has received specialized training in oncology and is licensed to practice medicine and write prescriptions

Nurse navigator—an RN who educates you and provides resources you and your family may need during treatment

Understanding targeted therapy

Abnormal changes in genes, also called gene mutations, can spur cancer to grow. As researchers have learned more about these mutations, they've developed newer drugs that specifically target them. To learn more, read on.

What is targeted therapy?

Targeted therapy refers to medications that take aim at a specific abnormality of the tumor driving the growth of cancer. Taken orally or intravenously, targeted therapy delivers toxic drugs to tumors.


How do targeted therapies work?

Some block the enzymes that signal cancer cells to grow, while others block the development of new blood vessels that “feed” tumors. Still others alter proteins within cancer cells, causing them to die. Several types also stimulate the immune system to destroy cancer cells. Because targeted therapy drugs zero in on a specific gene mutation rather than a specific type of cancer, a single drug may treat more than one type of cancer.

How is targeted therapy different from chemotherapy?

Chemo kills tumors. Targeted therapy keeps cancer from *spreading*. Chemo acts on *all* rapidly dividing cells—both cancerous and normal. Targeted therapy takes aim at specific molecular targets.

Can targeted therapy treat metastatic cancer?

Several targeted therapies are already approved by the Food and Drug Administration to treat metastatic cancer. You might be a candidate if you have the specific biomarkers a targeted therapy is designed to treat. Sometimes two targeted therapies are given in combination with chemotherapy. Also: Many other targeted therapies are being tested in clinical trials. Ask your doctor if you may be eligible. 



When cancer puts your bones at risk

Learn your treatment options to help safeguard your bone health.

Many people battling cancer will go on to face another challenge: bone metastasis. That’s when cells travel away from the initial tumor and settle in bone. While doctors can’t predict who will get metastases (aka “bone mets”), they are able to offer new hope in treating them. “Treatments have traditionally included hormonal therapy, chemotherapy and targeted

therapy, as well as radiation and even surgery in some instances,” notes Marc B. Garnick, MD, Gorman Brothers Professor of Medicine, Harvard Medical School and Beth Israel Deaconess Medical Center. “Today, we have bone-targeting agents, which can strengthen bones, reduce the number of fractures that occur and, in some instances, even prevent further cancer spread.”

What is bone metastasis?

Bone metastasis occurs when cancer cells break away from a primary tumor and enter the blood and lymph vessels. From there, they may travel to distant parts of the body. How long the process of metastasis takes can vary greatly. Sometimes bone mets are a patient’s first sign of cancer; other times, they occur years after initial treatment.

Certain cancers—most notably prostate, breast, lung, thyroid and kidney—are more likely to spread to bone. In fact, prostate and breast cancers account for about 80% of cases, according to research in the journal *Oncology*. Between 65% and 75% of patients with advanced prostate or breast cancer and 30% to 40% of advanced lung cancer patients develop bone mets.

When patients develop bone metastases, it is crucial to determine which bones are affected, says Dr. Garnick. “Metastases in the weight-bearing areas, such as the hips and

femur (the long bone of the leg), can result in fractures, while those in the vertebrae can affect the spinal cord.”

How bones are affected

Bones are constantly renewing and rebuilding themselves, thanks to two cells: osteoblasts, which create new bone, and osteoclasts, which break down old bone. Cancer cells can send both into overdrive, causing either an abnormal buildup of bone or small holes that weaken bones. When doctors suspect metastasis, they typically order imaging tests, such as X-rays, scans or MRIs, and may run blood tests.

It’s important to note that bone mets are made up of cells from the original cancer site. For example, if breast cancer has spread to the bones, the tumor is made up of breast cancer cells and it’s known as metastatic breast cancer.

Hope for the future

While bone mets are usually incurable, current treatments can shrink or stop the growth of tumors. “Several new classes of drugs can strengthen bones and help prevent fractures. This is an exciting development, as some of the disability caused by bone metastases can now be lessened or even eliminated,” says Dr. Garnick. There’s reason to be optimistic that new therapies will be developed that prevent bone metastases from occurring at all. **10**

Metastatic cancers most likely to spread to the bone

Cancer	Percentage of cases
Breast	65%-75%
Prostate	65%-75%
Lung	30%-40%
Kidney	about 33%
Thyroid	25%

Bone metastases from breast and prostate cancer can lead to broken bones.¹ Protect them with XGEVA.²

XGEVA
(denosumab) injection

Indication

XGEVA[®] is a prescription medicine used to prevent fracture, spinal cord compression, or the need for radiation or surgery to bone in patients with bone metastases from solid tumors. XGEVA[®] is not used to prevent these bone problems in patients with multiple myeloma.

Important Safety Information

Do not take XGEVA[®] if you have low blood calcium (hypocalcemia). Your low blood calcium must be treated before you receive XGEVA[®]. XGEVA[®] can significantly lower the calcium levels in your blood and some deaths have been reported. Take calcium and vitamin D as your doctor tells you to. Tell your doctor right away if you experience spasms, twitches, cramps, or stiffness in your muscles or numbness or tingling in your fingers, toes, or around your mouth.

Do not take XGEVA[®] if you are allergic to denosumab or any of the ingredients of XGEVA[®]. Serious allergic reactions have happened in people who take XGEVA[®]. Call your doctor or go to your nearest emergency room right away if you have any symptoms of a serious allergic reaction, including low blood pressure (hypotension); trouble breathing; throat tightness; swelling of the face, lips, or tongue, rash; itching; or hives.

What is the most important information you should know about XGEVA[®]?

XGEVA[®] contains the same medicine as Prolia[®] (denosumab). If you are taking XGEVA[®] do not take Prolia[®].

Severe jaw bone problems (osteonecrosis)

Severe jaw bone problems may happen when you take XGEVA[®]. Your doctor should examine your mouth before you start, and while you are taking XGEVA[®]. Tell your dentist that you are taking XGEVA[®]. It is important for you to practice good mouth care during

Bone metastases from solid tumors can lead to serious bone problems that are²:

- Broken bones (fractures)
- Need for surgery to prevent or repair broken bones
- Need for radiation treatments to the bone
- Pressure on the spinal cord (spinal cord compression)

XGEVA[®] is proven to prevent these serious bone problems. It's a convenient injection in your doctor's office once every 4 weeks.

By prescription only. Individual results will vary.

Ask your doctor about XGEVA[®].

Visit XGEVA.com for more information.

treatment with XGEVA[®]. In studies of patients with bone metastases, the rate of severe jaw problems was higher the longer they were being treated with XGEVA[®].

Unusual thigh bone fracture

Unusual thigh bone fracture has been reported. Symptoms of a fracture include new or unusual pain in your hip, groin, or thigh.

Risk of high calcium levels in patients who are still growing

Patients with bones that are not fully matured are at a greater risk to develop high blood calcium levels after they stop taking XGEVA[®], that can be serious.

Possible harm to your unborn baby

You should not become pregnant while taking XGEVA[®]. Tell your doctor right away if you are pregnant, plan to become pregnant, or suspect you are pregnant. XGEVA[®] can harm your unborn baby. Women of child bearing age should use highly effective contraception while taking XGEVA[®] and for at least 5 months after the last dose of XGEVA[®].

Tell your doctor if you:

- Are taking a medicine called Prolia[®] (denosumab) because it contains the same medicine as XGEVA[®]
- Have symptoms of low blood calcium such as muscle stiffness or cramps
- Have symptoms of severe jaw bone problems such as pain or numbness
- Have ongoing pain or slow healing after dental surgery
- Have symptoms of high blood calcium such as nausea, vomiting, headache, and decreased alertness
- Are pregnant, plan to become pregnant, suspect you are pregnant, or breastfeeding

While taking XGEVA[®], you should:

- Take good care of your teeth and gums and visit a dentist as recommended
- Tell your dentist that you are taking XGEVA[®]
- Tell your doctor if you plan to have dental surgery or teeth removed
- Women of child bearing age should use highly effective contraception while taking XGEVA[®] and for at least 5 months after the last dose of XGEVA[®]

What are the possible side effects of XGEVA[®]?

The most common side effects in patients receiving XGEVA[®] for the prevention of serious bone problems were tiredness/weakness, low phosphate levels in your blood, and nausea. The most common serious side effect of XGEVA[®] was shortness of breath.

These are not all the possible side effects of XGEVA[®]. For more information, ask your doctor or pharmacist.

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.

Please see brief summary of Prescribing Information on the adjacent page.

References

1. American Cancer Society. Bone metastasis. <http://www.cancer.org/acs/groups/cid/documents/webcontent/003087-pdf.pdf>. Accessed February 12, 2015.
2. XGEVA[®] (denosumab) prescribing information, Amgen.

BRIEF SUMMARY OF PRESCRIBING INFORMATION

XGEVA[®]
(denosumab)

XGEVA[®] (X-gee-va) (denosumab) Injection

This brief summary of the package insert provides information for people who will be receiving Xgeva or their caregivers. This brief summary does not tell you everything about Xgeva. You should discuss any questions you have about treatment with Xgeva with your doctor.

What is Xgeva?

Xgeva is a prescription medicine used to prevent certain bone problems that are fracture, spinal cord compression, or the need for radiation or surgery to bone in patients with bone metastases from solid tumors.

Xgeva is not used to prevent these bone problems in patients with multiple myeloma.

Who should not take Xgeva?

Do not take Xgeva if you:

- Have low blood calcium (hypocalcemia)
- Are allergic to denosumab or any of the ingredients of Xgeva

What are the ingredients of Xgeva?

Active ingredient: denosumab.

Inactive ingredients: sorbitol, acetate, Water for Injection (USP), and sodium hydroxide.

How will I receive Xgeva?

- Xgeva is injected under your skin (subcutaneous).
- You will receive Xgeva 1 time every 4 weeks.

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

Xgeva contains the same medicine as Prolia[®] (denosumab). If you are taking Xgeva do not take Prolia[®].

Xgeva can cause serious side effects including:

1. Low calcium levels in your blood (hypocalcemia)

Your low blood calcium must be treated before you receive XGEVA[®]. XGEVA[®] can significantly lower the calcium levels in your blood and some deaths have been reported. Take calcium and vitamin D as your doctor tells you to. Tell your doctor right away if you have symptoms of low blood calcium such as:

- Spasms, twitches, cramps, or stiffness in your muscles
- Numbness or tingling in your fingers, toes, or around your mouth

2. Serious allergic reactions

Serious allergic reactions have happened in people who take Xgeva. Call your doctor or go to your nearest emergency room right away if you have any symptoms of a serious allergic reaction, including low blood pressure (hypotension); trouble breathing; throat tightness; swelling of the face, lips, or tongue; rash; itching; or hives.

3. Severe jaw bone problems (osteonecrosis)

Severe jaw bone problems may happen when you take Xgeva. Your doctor should examine your mouth before you start, and while you are taking Xgeva. Tell your dentist that you are taking Xgeva. It is important for you to practice good mouth care during treatment with Xgeva. In studies of patients with bone metastases, the rate of severe jaw problems was higher the longer they were being treated with Xgeva.

4. Unusual thigh bone fracture

Unusual thigh bone fracture has been reported. Symptoms of a fracture include new or unusual pain in your hip, groin, or thigh.

5. Risk of high calcium levels in patients who are still growing

Patients with bones that are not fully matured are at a greater risk to develop high blood calcium levels after they stop taking Xgeva, that can be serious.

6. Possible harm to your unborn baby

You should not become pregnant while taking Xgeva. Tell your doctor right away if you are pregnant, plan to become pregnant, or suspect you are pregnant. Xgeva can harm your unborn baby. Women of child bearing age should use highly effective contraception while taking Xgeva and at least 5 months after the last dose of Xgeva.

Call your doctor right away if you have any of these side effects.

Tell your doctor if you:

- Are taking a medicine called Prolia because it contains the same medicine as Xgeva
- Have symptoms of low blood calcium such as muscle stiffness or cramps
- Have symptoms of severe jaw bone problems such as pain or numbness
- Have ongoing pain or slow healing after dental surgery
- Are pregnant, plan to become pregnant, suspect you are pregnant, or breastfeeding. Pregnancies should be reported to Amgen at 1-800-77-AMGEN (1-800-772-6436).
- Have symptoms of high blood calcium such as confusion, nausea, or chills.

While taking Xgeva, you should:

- Take good care of your teeth and gums and visit a dentist as recommended
- Tell your dentist that you are taking Xgeva
- Tell your doctor if you plan to have dental surgery or teeth removed
- Women of child bearing age should use highly effective contraception while taking Xgeva and at least 5 months after the last dose of Xgeva

- If you are a man and you receive Xgeva: Small amounts of Xgeva may be in semen. If your sexual partner is pregnant, some Xgeva from your semen may reach the unborn baby. While the risk is likely to be low, it is important to talk to your doctor if your partner becomes pregnant while you are taking Xgeva.

What are the possible side effects of Xgeva?

Xgeva may cause serious side effects.

- See “What is the most important information I should know about Xgeva?”

The most common side effects of Xgeva for the prevention of serious bone problems are:

- tiredness/weakness
- low phosphate levels in your blood
- nausea

The most common serious side effect of Xgeva for the prevention of serious bone problems is shortness of breath.

Tell your doctor if you have any side effect that bothers you or that does not go away.

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

General information about Xgeva

The Prescribing Information summarizes the most important information about Xgeva. If you would like more information, talk with your doctor.

For more information, go to www.xgeva.com or call Amgen at

1-800-772-6436.

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03-16



Bone metastases: Key questions to ask your doctor

1. How extensive are my bone metastases? _____

2. What can I do to prevent broken bones? _____

3. What tests or scans will I need? How often will I need them? _____

4. What treatment do you recommend for my bone mets and why? _____

5. What are the risks, benefits and side effects of this treatment? _____

6. How will we know if this treatment is working? _____

7. What symptoms, such as new back pain, should I report to you? _____

8. What can I do about bone pain? _____

9. Will I need a bone mineral density test? How is this different from a bone scan? _____

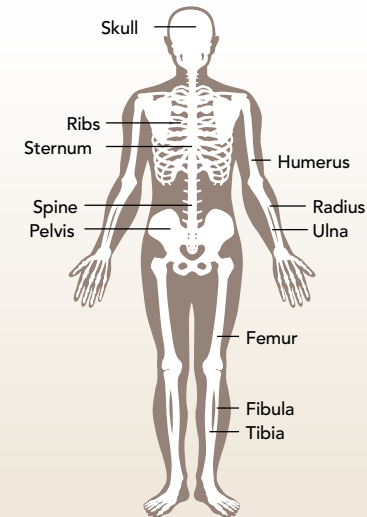
10. What kind of exercise, if any, is safe for me? _____

Are your bones at risk for fracture?


Check any of the below statements that apply to you.

- I have cancer of the breast, prostate, lung, kidney or thyroid.** These cancers are more likely to spread to the bone—i.e., cause bone metastasis, which makes bones vulnerable to breaks.
- I have been noticing certain symptoms.** Constant dull bone aches with intermittent sharp pain are often the first symptoms of bone metastasis. Other signs include numbness, tingling and weakness in the extremities.
- I am using hormone therapy to control my cancer.** Androgen deprivation therapy (ADT), used to control prostate cancer in men, and medicines that deplete estrogen in women, such as aromatase inhibitors, can lead to bone loss and occasionally fractures, especially if you had low bone mineral density before starting treatment with these medications.

Bones commonly affected by metastasis



If you checked even one box, your bones may be in jeopardy. Here's what you can do:

- **Report all symptoms to your healthcare provider.** Keep your doctor in the loop if you experience any of the symptoms listed above, or if you notice any changes in existing symptoms.
- **Ask about what you can do to promote healthy bones.** Your doctor may suggest supplemental calcium and vitamin D, not smoking, limiting alcohol, regular exercise and/or medication.
- **Ask about bone-mineral density testing.** Your physician may want to schedule regular DXA scans to monitor bone loss. 

How bone mets are treated

In addition to chemotherapy, radiation and hormone therapy, your doctor may consider these options to treat bone metastases.

BISPHOSPHONATES

You might be a candidate if... your bones are thinning.

How they work: Bisphosphonates approved to treat bone mets help build up bone to reduce pain and fracture risk.

DENOSUMAB

You might be a candidate if... your bones are thinning.

How it works: Denosumab helps to prevent fractures by inhibiting a protein that leads to excessive bone breakdown.

IMMUNOTHERAPY

You might be a candidate if... your bones are thinning.

How it works: Immunotherapy helps bolster a patient's immune system so it's better able to kill bone-destroying cancer cells.




RADIOPHARMACEUTICALS

You might be a candidate if... you have abnormal bone growth.

How they work: These drugs are injected and travel to bone tumors, where they emit radiation that kills cancer cells and halts tumor growth.

SURGERY

You might be a candidate if... you have a fracture.

How it works: If a bone has broken or is in danger of breaking, doctors can stabilize it by inserting screws, rods or pins or by injecting cement into bones or collapsed vertebrae to strengthen them. 



CHEMO IS KEEPING ME FROM CLEANING

Q I'm adamant about keeping my house clean. But I'm going through chemo, and fatigue is drastically taking over. How can I vacuum, mop and make beds when I can't even get *out* of my bed?

A It can be distressing to be unable to function at your usual level. One approach is to prioritize the jobs—try to do the ones that are most important to you first. Allow yourself to let go of those that aren't as important. Many people undergoing treatment find that their energy is best early in the day, so if it's similar for you, plan to do one job first thing in the morning and then give yourself a break. Can you get some help from family or friends? If someone asks if they can do anything for you, delegate a chore. There's also the option of hiring professional help.

—Jamie Von Roenn, MD, director, Palliative Care, Northwestern University Feinberg School of Medicine, Chicago

HOW SHOULD I TELL MY CHILD?

Q I just found out I have metastatic lung cancer. What's the best way to tell my 5-year-old?

A It's important to remember that you know your child best. Most 5-year-olds have their own unique ways of thinking and tend to see the world from their own perspective. When telling him or her about your diagnosis, it's best to pick a quiet time and to be open and honest. Try saying something like, "I have cancer, but my doctors are going to treat it and I'm going to fight it with everything I've got." Allow time for your child to ask questions (don't worry if you don't have all the answers yet!). What's important is that your child knows that he or she can come to you if need be. If you need outside help, social workers or school counselors may be able to talk with your child or suggest support groups for children in your area.

—Karen Liaw, MD, clinical assistant professor, Child and Adolescent Psychiatry, Child Study Center, NYU Langone Medical Center

Thrive during treatment!

Miranda, Jeff and Larry share the strategies that helped them feel their best during treatment and beyond. Perhaps they can also provide you with the calm confidence that can help see you through!

“Just stay fabulous”

MIRANDA SIMARD was 19 when she was diagnosed with pheochromocytoma, a rare adrenal gland cancer. A year ago, Miranda, who lives with her husband, Serge, in Gatineau, Quebec, learned it had metastasized. “My mission statement for this journey is to stay fabulous,” she says. “Cancer can’t take that away from me!”

• **Do what brings you joy.** “Blogging used to be an outlet for me, but as I started to get more bad news about my cancer, I saw that blogging no longer brought me comfort. I had to adjust and decided to focus only on things that bring me joy—like our recent trip to a cottage in the

mountains. Serge and I love to cook great meals together. We watch



movies and our favorite shows on Netflix. We’ve got a great television package! As much as possible, we try to forget about cancer.”

• **Get pampered.** “I love spa treatments, but certain things, like hot baths and massages, are off the table right now. So Serge will give me a ‘spa day’ and pamper me with a pedicure and a facial instead.”

• **Doll up for doctor’s appointments.** “I never think, *I’m only going to*



my doctor’s office. I’m only going for treatment. That is my life! My doctor is my hot date! It’s important to do what you can—even if it’s just taking off the sweat pants—to make yourself

feel less sick. For my last treatment, I had my hair fully done! That’s what brings *me* comfort.”

• **Get support from survivors.** “Your friends

and family can’t fully grasp what you’re going through, and it’s unfair to expect them to. Right after my diagnosis, I found an online support community for my disease on Facebook. It’s been a huge comfort to know there are others like you, and to be able to share thoughts and feelings with them. I can’t tell you the number of times I’ve had to ask, *Is this normal? What do you do?*”

• **Find the silver lining.** “Recently, I’ve had to use a wheelchair. It was hard for me to come to terms with that, but I decided to focus on the freedom it has given me. I had been trying to go for walks at night, but I couldn’t make it to the corner. Now, Serge and I can go for walks together. I can get some fresh air. I can even grocery shop a little!” ▶

“Hope takes it from Stage IV terminal to Stage IV possible”

A little more than a year ago, JEFF STUDZINSKI thought he was cancer-free after treatment for squamous cell carcinoma. That’s when he was diagnosed with Stage IV Non-Hodgkin’s lymphoma. Jeff, who lives in Tinley Park, Illinois, insists: “I believe in looking at all our challenges as blessings, and I’m determined to find the blessings in my cancer.”

• **Take pictures of your care team.** “Throughout my treatment, I took photos of the people on my care team, and my wife, Cheryl, had the photos made into a collage. One copy is on the wall of the hospital lunchroom, and one is in my bedroom. If I have a tough day or want to feel inspired, I look at the collage and my heart swells with thanks. It shifts my focus to gratitude.”



life! I began to bring in chocolates and pastries, and you could see the ripple effect. Appreciation and simple enjoyment spread through the room.”

• **Bring treats to treatment.** “It started when a young lady in treatment remarked, ‘Wouldn’t it be great if we had turkey sandwiches?’ After that, someone on my care team brought in turkey sandwiches. That sandwich changed my

• **Be the person you want your children to remember.** “I think of my legacy to my children. What would I want them to walk away with? Not that dad had cancer, but how he lived with it. Did he smile more often? Was he kinder? I plan to leave a legacy of love, compassion and caring.”

• **Find the humor.** “I suffered from aggressive diarrhea during treatment. When I’d get up from the dinner table, my son would say, ‘Dad, are you going up to change again?’ I’d laugh and say ‘yes,’ and then he could laugh, too. It goes back to this: You have two choices—you can cry or you can laugh. I chose to laugh. It’s healing, and it helps you fight cancer better.”

• **Volunteer.** “When I felt better and my strength had returned, I went out and volunteered. I find that the more I give, the better I feel. Now, at the end of the day, I ask myself, *What did I do today to make a difference for someone else?*”

“Let others in”

LARRY AXMAKER of Beavercreek, Oregon, has gone through quite a few treatments since his diagnosis with prostate cancer in 2003. In 2015, he learned that the cancer “has metastasized to all sorts of places in my body, including my lungs, bones and bladder.” What helps him through it? His family, of course—along with “having the right attitude!”

• **Enjoy the company of others.** “The biggest thing is, we’re around a lot of people that we love. My wife, Carol, has been my best friend for practically forever. My children, now adults, visit us frequently. My oncologist is a family friend. The nurses from the hospital have visited me at home. I have a group of friends who participated in a prostate



cancer clinical study—we discovered we liked each other and still keep getting together. On any given day, half a dozen people call to ask, ‘How are you doing today?’ We are incredibly fortunate. Other than the cancer, my life is pretty good.”

• **Laugh and have fun.** “Our approach to coping with cancer is to laugh and have fun. Rather than feel depressed when I have felt weak and stumbled, I’d get my cane and laugh about being old and decrepit. It has worked pretty well at keeping our spirits up! People get upset with me for making jokes about my cancer. I understand that cancer is not funny, but I hope that the last thing I do is laugh.”

• **Keep moving.** “I can’t run marathons any more, but any day that I can walk a mile is a good day—and there are days I can even walk two or three! For about an hour a day I work in the yard, split wood for the fireplace, haul it to the house and stack it. It feels good to do that!”

• **Enlist help.** “I lost 40 pounds over the past year and had to go to the boys’ department to buy pants, but I’ve regained 15 since last spring. Carol’s job is to make me eat. We make smoothies with yogurt, fruit and fresh spinach. As long as I have a smoothie between meals, Carol doesn’t worry as much about how much I’m eating during lunch and dinner.”

“My treatment was a miracle!”

After being diagnosed with stage IV colon cancer at just 31, Karen Shanahan was told she may only have months to live. But after fighting back with chemo, radiation and other therapies, she's cancer-free and loving life—nine years later. —by LINDSAY BOSSLETT

It all began when Karen Shanahan went to the ER one afternoon in early April 2007. She had been experiencing a mysterious pain in her right side. The doctor didn't have good news—they found large lesions on her liver.

After an initial biopsy produced a negative result, a second biopsy confirmed that not only did she have cancer, but it had spread—the lesions on her liver had come from her colon, meaning her cancer was stage IV. She was only 31 years old.

“My gastroenterologist called me at home and gave us the news. I had to hand the phone to my husband, Francis, because I was sobbing and couldn't speak. I was in shock. In the days that followed, all that was going through my head was worry for my children.”

Although Karen had a hundred questions floating around her head, she knew one thing—she wasn't about to take a stage IV diagnosis lying down. Due to her young age and (otherwise) good health, her doctor recommended an aggressive course of chemo, and Karen agreed.

I still have days where I think maybe I'll wake up tomorrow and this will all be a dream, Karen wrote at the time on “Karen's Cancer” (karencancer.blogspot.com), the blog she keeps with Francis. I sit in chemo and think and genuinely wonder “what the heck am I doing here?”

The chemo, as well as an immunotherapy drug, knocked Karen off her feet—but it knocked the cancer off its feet, too. She was in the 5% of people with stage IV colon cancer



Karen credits the support of her family—husband, Francis; son, Ethan; and daughter, Sydney—with helping her thrive during treatment.

whose primary tumor disappeared from chemo. *After 18 months of uphill emotional and physical battle, Karen's gone from terminal cancer to having a possible curative surgery* [she would still need the tumors in her liver removed], Francis announced on their blog.

“Once I knew that the chemo was working and the tumors were shrinking, I couldn't get myself low enough on the ground in thankfulness to God,” Karen says. “Before that news it was like I was in a pitch-black suffocating cave, and now a crack of light was coming through. My

response was akin to a miracle.”

A few weeks later she was in the OR having parts of her liver, colon and several lymph nodes removed. And after some further chemo and radiation in 2011, Karen has been NED (no evidence of disease) ever since. She is still raising her children, enjoying date nights with her husband and even working as a dental hygienist, now going on nine years since her diagnosis.

“Even before cancer, I knew life was a gift,” Karen says. “But perhaps I live it more now than I think it.” 🍷

“TELL ME WHAT TO EAT!”



Natalie Ledesma, MS, RD, CSO, board-certified specialist in oncology nutrition, is the clinical nutrition specialist at Smith Integrative Oncology in San Francisco and senior dietitian with the University of California, San Francisco Helen Diller Family Comprehensive Cancer Center.

LOSING TOO MUCH WEIGHT

Q I am in treatment for Stage IV breast cancer and have lost 37 pounds over the last few months. The problem is frequent diarrhea and nausea that’s taking away my appetite. What can I do?

A Relieving your diarrhea should be your top priority. Stick to lean protein and cooked vegetables (heat makes the fiber in vegetables easier to digest), and get your starch from rice or oatmeal. While bananas are fine, most other fruit should be cooked, too, so try a baked apple or a poached pear. Things to avoid? Raw foods (even a simple salad can wreak havoc on digestion) and high-fiber items such as beans, bran and flaxseed. If diarrhea persists, ask your doctor about the following supplements: chia seeds, probiotics, l-glutamine and digestive enzymes. As for the nausea, steer clear of sweet foods and sugary drinks and try sipping ginger or peppermint

tea. And since you’re more likely to feel queasy if your stomach is too full or empty, aim for smaller, more frequent meals throughout the day.

EATING FOR HEALTHIER BONES

Q My cancer has spread to my spine and ribs. How can I eat to protect my bones? Should I take a calcium supplement?

A A plant-based diet (think vegetables, fruits, whole grains, beans, legumes, nuts and seeds) will provide a multitude of bone-protecting nutrients, such as vitamin D, calcium, magnesium, vitamin K2, zinc, manganese and boron. (You can also ask your care team to test for the levels of these nutrients in your body; the results can help you adjust your diet accordingly.) As for calcium supplements, they’re usually not advisable during treatment, so don’t take them without talking to your medical team first. **TD**

Wake up your taste buds!

The spices in this flavorful roast chicken will stimulate your appetite, so you’ll get the nutrition you need!



Only 20 minutes of prep time!

ORANGE GINGER ROASTED CHICKEN

Makes 6 servings

- 1 4 ½- to 5-lb. organic chicken
- 1 tsp paprika
- ¼ tsp ground coriander
- ¼ tsp ground cinnamon
- 1½ tsp sea salt
- 1 orange, zested and juiced, rind reserved
- 1 tsp grated fresh ginger, plus 1 finger-length piece of unpeeled fresh ginger, halved lengthwise
- 3 cloves garlic
- 2 cinnamon sticks

Reprinted with permission from *The Cancer-Fighting Kitchen* by Rebecca Katz with Mat Edelson © 2009. Published by Ten Speed Press. Photo Credit: Leo Gong.

- Preheat oven to 400°F. Pat the chicken dry with paper towels. Stir the paprika, coriander and cinnamon together, then divide the mixture in half and stir 1 teaspoon of the salt into half. Rub the salted spice mixture all over the outside of the chicken. Sprinkle the remaining 1/2 tsp. salt inside the chicken.

- With your palm facing downward, use your first three fingers to gently lift the skin on both sides of the breast to loosen it from the meat. Rub the remaining spice mixture, the orange zest and grated ginger under the skin of each breast, massaging lightly into the meat. Place the garlic, cinnamon sticks, ginger piece and orange rind inside the cavity along with half of the orange juice.

- Place the chicken on a roasting rack in a glass or ceramic baking dish, breast side up. Roast until a meat thermometer reads 160°F when inserted in the thigh and the juice from the meat runs clear, about 1 hour.

- Let the chicken rest for at least 10 minutes before carving. Just before serving, pour the remaining orange juice over the chicken. **TD**

Nutrition facts
(per serving):
Calories 215, fat: 5 g, (sat. fat 1 g,) carbohydrates 4 g, protein 35 g, sodium 715 mg



Resources you need right now!

Are you looking for more information on metastatic cancer? Hoping to connect with others who understand you? These organizations can help!



LEUKEMIA & LYMPHOMA SOCIETY™

fighting blood cancers

The Leukemia & Lymphoma Society (*lls.org*) offers the most comprehensive array of information, resources and support to patients and families touched by blood cancers: leukemia, Hodgkin, non-Hodgkin lymphoma, myeloma, myelodysplastic syndromes, myeloproliferative neoplasms.



LIVING BEYOND BREAST CANCER®

For over 25 years, we have been providing trusted information and a community of support for people of all stages and types of breast cancer.

We host an annual conference on metastatic breast cancer and provide programming and resources throughout the year for those with MBC and their loved ones. Find resources at lbbc.org/metastatic.



METAvivor is a volunteer-led, non-profit organization that funds research, raises awareness, advocates for and provides support to people with Stage IV metastatic breast cancer. Learn more about us at metavivor.org, and follow us on Facebook, Twitter and Instagram.



MBCN is a national patient-led organization providing information and education to patients living with the disease at mbcn.org, while raising awareness and funding research aimed at those living with the disease.



The Prostate Cancer Foundation (pcf.org) funds the world's most promising research to improve the prevention, detection and treatment of prostate cancer and ultimately cure it for good.



Find these and other resources online at HealthMonitor.com/MetaCancerResources