Cancer tests and treatments

When you need them -- and when you don't
Consumer Reports is excited to work with the National Business Coalition on Health to bring you the most important health stories we have recently published. For 77 years, Consumer Reports has published information that helps consumers make better choices about the things they buy. We think it’s time that consumers approach health care the same way, including cancer care.

Some of you may have seen our article published in 2012 focusing on the country’s leading killer, heart disease. Research shows that many people get heart tests and treatments they don’t need, while others fail to get those they do.

The same is true for cancer. We have many good tests and treatments for cancer that are underused while others are overused. Millions of people are screened each year for cancer. Some screening tests, such as those for colon cancer, breast cancer and cervical cancer, can help identify cancer early and lead to lifesaving treatments. But in our zeal to prevent cancer, and in some cases stimulated by advertising and financial incentives, doctors and patients pursue other tests that are more likely to mislead and harm than clarify and cure.

We are especially pleased to combine our 2013 Cancer Screening story with a second publication we did with the American Society of Clinical Oncologists (ASCO), the nation’s professional society of cancer physicians. As part of an effort of multiple physician organizations called Choosing Wisely, ASCO has identified 5 cancer services that are often overused. The five services include tests and treatments for multiple types of cancers at both early and late stages.

Here at Consumer Reports we take the same approach to health care as we do to other kinds of products and services. Start with our own independent experts. Present meaningful comparisons along with examples from real people. Focus on safety. Give consumers simple tips to avoid problems and improve results.

We look forward to hearing any thoughts you have about this article or others you will see in the future. Contact us by sending an e-mail to HealthImpact@cr.consumer.org.

Sincerely,

John Santa MD MPH
Medical Director, Consumer Reports Health
Cancer screening is oversold. Know the tests to get—and those to skip.

EARLY DETECTION saves lives. That’s the assumption that drives aggressive cancer-screening campaigns. It’s what persuades women to host “mammogram parties” where they gather friends for wine, cheese, massages, prizes, and breast-cancer screenings. It’s what persuades men to offer up blood for prostate-cancer tests at hockey games or onboard a huge red bus parked at sporting-goods stores.

But the big red bus and other direct-to-consumer screening efforts raise big red flags, our experts say. For one, those campaigns may not be entirely altruistic. In exchange for snacks and door prizes, the radiology clinics and hospitals often behind the campaigns benefit from a new crop of paying customers. Zero, the nonprofit group that offers free prostate-cancer screening at events around the country, counts among its partners doctors and businesses that can benefit financially from cancer testing and treatment.

But most important, the message that you have nothing to lose and everything to gain from being screened for cancer—that is, to be tested for a cancer before you have any symptoms of it—simply isn’t true.

“The medical and public-health community has systematically exaggerated the benefits of screening for years and downplayed the harms,” says H. Gilbert Welch, M.D., a professor of medicine at the Dartmouth Institute for Health Policy and Clinical Practice in Lebanon, N.H.

In a recent article in the New England Journal of Medicine, Welch found that the number of early breast-cancer cases had shot up since mammography became common three decades ago but that advanced cancer cases hadn’t declined much. Welch estimated that in 2008 more than 70,000 women 40 and older were found to have small, nonaggressive cancers that were treated even though they probably wouldn’t be life-threatening.

Such treatment, including radiation or the surgical removal of all or part of the breast, can cause serious complications, such as bone loss and menopausal-like symptoms. And even when it doesn’t lead to treatment, screening can lead to unnecessary biopsies, which can cause anxiety and pose a small risk of infection.

“When it comes to screening, most people see only the positives,” says Otis Brawley, M.D., chief medical officer of the American Cancer Society. “They don’t just underestimate the negatives, they don’t even know they exist.”

Of course, for some tests, the benefits clearly do outweigh the risks. “My family’s experience illustrates how screening can make all the difference,” says Tracy Doss, an educational assistant in Austin, Texas. Doss lost her father and a grandfa-

Questions you should ask

Before undergoing any cancer screening, ask your doctor:

- If the test results are positive, will it save my life?
- Am I at higher risk for cancer than the average person, and if so, why?
- How often does the test give false alarms? How often does it provide falsely reassuring results?
- Are any other tests just as good?
- If the results are positive, what’s next?
ther to colon cancer but probably won’t develop the disease herself, because doctors found and removed precancerous growths using colonoscopy and she will continue to be screened.

But for many other cancer tests, the benefits and risks are more evenly balanced, with the final decision depending on a thorough conversation between patient and doctor. And with some tests, routine screening poses more risks than benefits, and needless expense.

“The marketing message that early detection saves lives is simple and compelling,” says Laura Nikolaides, M.S., director of research and quality-care programs at the National Breast Cancer Coalition. “But the reality as we understand it today is much more nuanced. The problem is how to get that more complex message to the public when it’s so different than what they’ve come to believe.”

For this investigation, we pored over reams of research, consulted medical experts, surveyed more than 10,000 readers, and talked with patients. We found that too many people are getting tests they don’t need or understand, and too few are getting those that could save their lives. Many patients, and even some doctors, can be confused by cancer screening. That’s because:

**Cancer is different than once thought.**

Doctors used to view cancer as uniformly deadly, but researchers now understand that cancer cells can appear and then disappear on their own, or never spread. Most screening tests don’t discriminate between the harmless and deadly kinds.

**Statistics can mislead.** “Doctors and patients don’t understand numbers,” says Jeffrey Starke, M.D., director of infection control at Texas Children’s Hospital in Houston. “You can take the same set of data and either scare people or reassure them depending on how you represent the numbers.” Starke knows firsthand about the potential harm of screening. He almost died of an infection following what he now views as an unwarranted biopsy triggered by prostate-cancer screening.

**Some tests just aren’t very good.** For example, screening for pancreatic and ovarian cancers doesn’t save lives in part because tests rarely find them at a curable stage.

**Bottom line.** Weighing the risks and benefits of cancer screening is best done in the context of a doctor-patient relationship, not at a party or a sporting event. “It’s wrong to promote these tests for everybody,” says Roger Chou, M.D., an associate professor of medicine at the Oregon Health and Science University in Portland. “Truth is, sometimes the choice to screen or not is a close call.”

**Cancer 2.0**

Cancer screening and treatment are at a crossroads. As tests become more sensitive, they find increasingly tinier cancers, and more of them. But many of those abnormal cells don’t fit our conventional notion of how cancer behaves.

“The popular understanding of cancer—that if you have even a single cancer cell, it will multiply to the point that it eventually kills you—is fundamentally wrong,” says Virginia Moyer, M.D., a professor of pediatrics at the Baylor College of Medicine in Houston and chairwoman of the U.S. Preventive Services Task Force, an independent panel that provides evidence-based guidelines on health care. “What we’ve learned in the last decade or so is that cancer doesn’t always act like that. Lots and lots of cells in our body turn cancerous and then disappear; others look like cancer but do absolutely nothing.”

For example, in younger women, cancer-like changes in the cervix are more likely to clear up on their own. That’s one reason the task force no longer recommends Pap smears for women younger than 21.

In fact, no screening test is right for everyone. To reduce the number of false alarms, guidelines target those at increased risk for a disease. So, for example, screening CT scans for lung cancer have only been found to help people at the highest risk, those age 55 to 74 who were heavy smokers for many years. Screening those at lower risk wouldn’t reduce mortality rates, research suggests, but would expose people to radiation, as well as follow-up tests and procedures to chase down false alarms.

Focusing on high-risk populations alone, however, doesn’t solve the problem of tests that are pretty good at finding suspicious changes but don’t tell much about whether they can actually hurt you, such as mammograms for breast cancer and prostate-specific-antigen (PSA) blood tests for prostate cancer. And that leaves many people in a quandary, trying to decide whether the risk of treatment is worth the slight chance of finding a deadly cancer.

“People are compelled toward screening and prevention as a means to secure their health,” says Kimberly Lovett, M.D., of the Center for Patient Safety at the University of California at San Diego. “It’s frustrating that we don’t have the data to address these uncertainties.”

Some people are even taking matters in their own hands, seeking tests through

### Doctor knows best?

When it comes to cancer screening, most people do what their doctor recommends. Unfortunately, health care providers don’t always agree on which tests are necessary. In fact, research suggests that advice often varies among medical practices.

Although health care providers rarely publish information on the percentage of their patients who are screened for specific cancers, we were able to get that information from organizations in Massachusetts, Minnesota, and Wisconsin. Because of differences in the data collected from each organization, we can’t compare results. But the numbers illustrate the variation within states, as shown below for colon-cancer screening.

**Bottom line.** Don’t assume that your doctor will bring up cancer screening or follow guidelines. So educate yourself using our Ratings as a starting point.

If you live in one of the states shown below, you can see how practices compare on the organizations’ websites: for Massachusetts, mhap.org; Minnesota, mhealthscores.org; Wisconsin, wchq.org.

<table>
<thead>
<tr>
<th>State</th>
<th>Number of medical groups*</th>
<th>Lowest group rate</th>
<th>Highest group rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Massachusetts</td>
<td>150</td>
<td>47%</td>
<td>95%</td>
</tr>
<tr>
<td>Minnesota</td>
<td>130</td>
<td>15%</td>
<td>97%</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>19</td>
<td>63%</td>
<td>81%</td>
</tr>
</tbody>
</table>

*A medical group is one or more medical clinics that operate as a single business."
companies that advertise directly to consumers. They include blood tests for prostate cancer, stool tests for colon cancer, and even self-referrals for breast-cancer screening, including thermographic (heat) imaging, which the American Cancer Society says should never be used in place of mammography.

Bypassing your doctor is a mistake, Lovett says, because she has found that almost no screening test marketed directly to consumers is clearly supported by evidence-based guidelines. “The system is breaking under consumer demand for screening and preventive care,” she adds. “Truly, there is dissatisfaction among both patients and physicians.”

**Misleading numbers**

Americans’ understanding of cancer screening is rooted in simplistic advertising campaigns from the 1950s and 1960s that focused almost exclusively on early detection, according to Brawley of the American Cancer Society. “Those messages were appropriate in their time, but the science has evolved and our ability to detect tumors earlier and earlier has progressed,” he says. “Unfortunately, the message hasn’t changed.”

Consider this message from a 2011 promotional campaign run by the breast-cancer nonprofit Susan G. Komen for the Cure: “Early detection saves lives. The 5-year survival rate for breast cancer when caught early is 98%. When it’s not? 23%.”

Those numbers deserve an Oscar for best use of misleading statistics, according to an August 2012 editorial in the British Medical Journal. “Just because you are diagnosed earlier doesn’t mean that you will ultimately live any longer,” says co-author Steven Woloshin, M.D., a director at the Center for Medicine and Media at the Dartmouth Institute.

He provides an example: Imagine that 100 women receive a diagnosis of breast cancer after feeling a lump at age 67 and die at age 70. Their five-year survival rate is 0 percent. Now imagine that their cancer is detected at age 64 but they still die at age 70. Their five-year survival is now 100 percent, “even though,” Woloshin says, “no one lived a second longer.”

Survival statistics also tend to be inflated by overdiagnosis or by finding cancers that won’t become deadly. The more cases detected, even harmless ones, the more people are designated as survivors.

**Cancer screening remains stuck in a 1960s view of the disease.**

That leads to what Welch calls the popularity paradox. “The more overdiagnosis, the more effective a test appears and the more popular it becomes,” he says. “It’s a vicious cycle.”

Komen still runs those confusing numbers on its website, and other messages that make screening seem more effective than it really is still abound. “This shows how numbers can trick you to believing that screening has a really big benefit even when it is small or even nonexistent,” Woloshin says.

If you find disease-related statistics confusing, don’t feel bad. Many doctors don’t get them, either. In one study, researchers presented 412 doctors with what appeared to be data from two tests. The first showed a five-year survival rate that improved from 68 percent to 99 percent; the other, that the mortality rate dropped from two deaths per 1,000 people screened to 1.6 deaths. The doctors were three times more likely to recommend testing based on the first set of data than the second. But here’s the kicker: The data applied to the same test, PSA screening for prostate cancer. Many doctors didn’t understand that the five-year survival rate could make a test look better than it really was.

Experts we talked with said that there is a need for statistics to be presented more clearly. “We just need to be honest,” Chou says, “In the end, it’s about trusting people with the information and empowering them to make good decisions.”

**So what’s the harm?**

For many people, the risks of screening—over treating harmless cancers or undergoing additional tests and procedures only to discover a test was a false alarm—isn’t a big concern. After all, it’s better to be safe than sorry, right? If following up on those red-herring results was simple and risk-free, that would be true. But you don’t have to look far to find cautionary tales.

For example, even though most men with prostate cancer will never die of the disease, many are understandably uncomfortable living with it. Research has found that almost 90 percent of men with PSA-detected prostate cancer wind up treating it with hormone therapy, radiation, or surgery. But treatment can have...
Three tests to get—and eight to avoid

Screening tests for cervical, colon, and breast cancers are the most effective tests available, according to our first Ratings of cancer-screening tests. But most people shouldn’t waste their time on screenings for bladder, lung, oral, ovarian, prostate, pancreatic, skin, and testicular cancers.

Note that our recommendations often differ with age. For example, colon-cancer screening gets our highest Rating for people age 50 to 75 but our lowest Rating for those 49 and younger, because the cancer is uncommon among younger people.

In addition, the Ratings are for people who are not at high risk; those who are at increased risk, as well as those who have signs or symptoms of cancer, may need the test or should be tested sooner or more often.

Our Ratings are based mainly on reviews from the U.S. Preventive Services Task Force, an independent group supported by the Department of Health and Human Services. We also considered other factors: evidence that emerged after the task force’s report; the number of people affected by the cancer; the cost of testing and treatment; and the benefits of a test beyond its ability to detect cancer.

Get these screenings

**Cervical cancer**

**RATINGS**

- for women age 21 to 65
- for women of all other ages

**WHAT’S INVOLVED** A Pap smear (a microscopic analysis of cervical tissue samples) and a human papillomavirus (HPV) test, which looks for the virus that can cause the cancer.

**WHO NEEDS IT** Women age 21 to 30 should have a Pap smear every three years. Those 30 to 65 can go five years between Pap smears if they have had HPV testing. High-risk women may need to be screened more often. Women 65 and older don’t need to be tested as long as they’ve had regular screenings when they were younger. Women under 20 don’t need to be screened because the cancer is uncommon before then and the tests are not accurate for them.

**RISK FACTORS** A family history of the disease, a history of HPV infection, using birth-control pills for five or more years, having three or more children, and having weakened immunity because of HIV infection or other causes.

Avoid these screenings

**Bladder cancer**

**RATING**

- for adults of all ages

**WHAT’S INVOLVED** A test to check for blood or cancer cells in urine.

**WHO NEEDS IT** Most people don’t need to be screened unless they are at high risk, because it has not proved to be effective, and most cancers found without screening are curable.

**RISK FACTORS** Smoking, a family history of the disease, and exposure to workplace chemicals.

**Colon cancer**

**RATINGS**

- for people age 50 to 75
- for people 76 to 85
- for people 65 and older
- for people 49 and younger

**WHAT’S INVOLVED** Colonoscopy (exam of the entire colon with a flexible scope) every 10 years, sigmoidoscopy (exam of the lower third of the colon) every five years plus a stool test every three years, or a stool test every year.

**WHO NEEDS IT** People age 50 to 75 should be regularly screened. Older people should talk with their doctor about the benefits and harms of the test based on their health and risk factors. Younger people should consider testing only if they are at high risk, because the cancer is uncommon before age 50.

**RISK FACTORS** A family history of the disease or a personal history of precancerous polyps, inflammatory bowel disease, obesity, smoking, type 2 diabetes, excessive alcohol consumption, and a diet high in red or processed meats.

**Breast cancer**

**RATINGS**

- for women age 50 to 74
- for women 40 to 49
- for women 75 and older
- for women 39 and younger

**WHAT’S INVOLVED** Mammogram (an X-ray of the breast).

**WHO NEEDS IT** Women age 50 to 75 should have mammograms every two years. Women in their 40s or those 75 and older should talk with their doctor to see whether the benefits outweigh the harm based on their risk factors. Women younger than 40 should consider testing only if they are at high risk, because the cancer is uncommon at that age.

**RISK FACTORS** A personal or family history of the cancer, a personal history of benign breast conditions such as atypical hyperplasia, dense breasts, menstrual periods before age 12 or after age 55, not having a child before age 30, postmenopausal hormone-replacement therapy, obesity, excessive alcohol consumption, smoking, or genetic susceptibility.

**Lung cancer**

**RATING**

- for adults of all ages

**WHAT’S INVOLVED** A low-dose CT scan.

**WHO NEEDS IT** Most don’t need the test unless they are at the highest risk, because the cancer is uncommon in nonsmokers and the test is not very accurate.

**RISK FACTORS** Smoking, a family history of the disease, and long-term exposure to radon, asbestos, or arsenic.

**Skin cancer**

**RATING**

- for adults of all ages

**WHAT’S INVOLVED** A visual exam of your skin by a physician looking especially for signs of melanoma, the deadliest form of skin cancer.

**WHO NEEDS IT** Most adults don’t need the exam unless they are at high risk, because the effectiveness of screening has not been proved. But see a doctor if you notice suspicious changes in the color, size, shape, or number of moles.

**RISK FACTORS** A family history of melanoma, a personal history of frequent sunburns, a large or increasing number of precancerous moles, and being fair-skinned or heavily freckled.

**Ovarian cancer**

**RATING**

- for women of all ages

**WHAT’S INVOLVED** A transvaginal ultrasound or the CA-125 blood test, which measures a protein possibly associated with ovarian cancer.

**WHO NEEDS IT** Women don’t need to be tested unless they are at high risk, because neither test is likely to detect the disease at a curable stage.

**RISK FACTORS** A family history of ovarian, breast, or colon cancers, and possibly use of estrogen after menopause for more than five years.

**Pancreatic cancer**

**RATING**

- for adults of all ages

**WHAT’S INVOLVED** Genetic tests or imaging tests of the abdomen.

**WHO NEEDS IT** People don’t need to be tested unless they are at high risk, because no test is likely to detect the disease at a curable stage.

**RISK FACTORS** A family history of the disease, smoking, obesity, and possibly type 2 diabetes.

**Testicular cancer**

**RATING**

- for men of all ages

**WHAT’S INVOLVED** A physical exam of a man’s testicles by a health-care professional.

**WHO NEEDS IT** Men don’t need to be tested unless they are at high risk, because most cancers found without screening are curable.

**RISK FACTORS** A family history, an undescended testicle, or HIV infection.
Colon-cancer screening: Just do it

Of the estimated 52,000 people who died of colorectal cancer last year, screening could have saved more than half, according to the American Cancer Society. Yet around 40 percent of people 50 and older don’t get recommended screening tests.

Not surprising, our readers, who tend to be a health-savvy bunch, do better than that, according to a survey of more than 10,000 subscribers 50 and older conducted by the Consumer Reports National Research Center.

Eighty percent of them had been screened for colon cancer in the last five years. But our survey also found worrisome gaps in their knowledge of the tests used.

For example, less than half of them were told what the test was looking for, about a third weren’t told of potential complications, and a quarter weren’t told what would happen if the tests had abnormal results. Only 10 percent of people who had colonoscopy or sigmoidoscopy, invasive forms of testing that use a scope to inspect the colon, were told there was a simpler option. And only 55 percent were told of the main risk of the procedures, a perforated colon.

Last, some patients got tests that are not proved effective, including fecal DNA tests and CT colonography (also called virtual colonoscopy). That’s unfortunate, because there are a number of good colon-cancer tests to choose from. The chart below shows the pros and cons of each.

<table>
<thead>
<tr>
<th>Test</th>
<th>How it works</th>
<th>Cost*</th>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Colonoscopy</td>
<td>Every 10 years; starting at age 50. Sooner or more often for some high-risk people or if results are abnormal.</td>
<td>$1,120</td>
<td>Allows immediate removal of polyps and biopsies; shows entire colon; needs to be done just once a decade for most.</td>
<td>Risk of bowel infection, perforated bowel, and other complications; requires full-day preparation with laxatives and dietary restrictions; sedation required; full-day recovery likely.</td>
</tr>
<tr>
<td>Flexible sigmoidoscopy</td>
<td>Every five years, with stool test (below) every three years.</td>
<td>$740</td>
<td>No sedation required; can return to work same day; simpler bowel preparation than for colonoscopy; few complications than for colonoscopy.</td>
<td>Coloscopy required if positive; shows only the lower third of the colon, so not as thorough as colonoscopy.</td>
</tr>
<tr>
<td>Stool testing (immunochemical or guaiac-based)</td>
<td>Every year. Detects traces of blood in stool from tumors and polyps that tend to bleed.</td>
<td>$5 to $25</td>
<td>Noninvasive; lowest risk of complications; samples are taken at home.</td>
<td>Coloscopy required if positive; can’t detect most polyps; requires yearly testing; some people might find the test unpleasant.</td>
</tr>
</tbody>
</table>

*Costs vary widely depending on location and practice and are estimated based mainly on data from healthcarebluebook.com.

Risks and benefits of two tests

The data below show that the risks of prostate-cancer screening probably outweigh the benefits and that the benefits of breast-cancer screening are smaller than many women may suspect.

Breast cancer

Screening 1,000 women every two years from age 50 to 69 results in:

- 5 breast-cancer deaths prevented
- 780 false-positive results
- 55 unneeded biopsies
- An unknown number of complications from breast-cancer treatment, including infection, nausea, and exposure to radiation, which may itself cause cancer.

Starting screening at age 40 instead of 50 will prevent one additional death but cause an additional 470 false positives and an additional 33 unneeded biopsies.


Prostate cancer

Screening 1,000 men every one to four years from age 55 to 69 results in:

- 0 to 1 prostate-cancer deaths prevented
- 3 serious complications caused by treating the cancer, including death, heart attacks, and blood clots in the legs or lungs
- 40 men becoming impotent or incontinent from treatment complications


devastating repercussions, including incontinence and impotence.

At age 62, John James of Houston had his prostate removed after a PSA test and follow-up biopsy found cancer. “My initial reaction was joy that I was cancer free,” he says, “but I do believe that the side effects of surgery were vastly underrepresented.

“There’s no point in brooding, and in the end, I am still happy to not have cancer, but did it save my life? Truth is, I’ll never know.”

Jeffrey Starke’s experience is less typical but underscores the idea that testing itself poses risks. Even though he described his PSA numbers as “on the low side,” Starke didn’t question his doctor’s recommendation to do a biopsy, then a follow-up about three years later when his reading inched up. “Once you decide to go down the road of testing, you follow it where it takes you,” he says. After the second biopsy he developed sepsis, a systemic infection that almost killed him.

The experience has left a mark. “I’m of an age when I should be going in for a colonoscopy, but I’m finding that I’m resistant to it,” he admits. “I’m a physician. I’m supposed to be rational, but that kind of experience has a long-lasting emotional effect.”

Though the numbers for mammography look better than those for PSA testing, the benefits for women in their 40s aren’t as significant as they are for older women. As a result, even experts disagree. For example, the American Cancer Society says that women should be screened every year starting at age 40. But the U.S. Preventive Services Task Force says they should generally wait until age 50 and then be screened every two years. European guidelines agree, as does the World Health Organization, though it
recommends screening every year or two. “Something we all agree on is that mammography saves lives,” Brawley says. “But women need to know the limitations up front. They need to know the risks of false positives and overdiagnosis.” And, he adds, presented with that information, “some women will choose to say no.”

Susan Kesler, 47, a teacher in Fredericksburg, Va., knows the downside of screening. After undergoing mammography for a few years, she switched to a clinic that recommended more aggressive follow-up for breast calcifications, abnormalities that are typically worrisome only when they form suspicious clusters. Kesler was called back for mammograms every six months and eventually a biopsy. But what should have been a simple procedure to obtain a tissue sample turned into a 4-hour ordeal in which she was strapped to a table, subjected to multiple punctures, and X-rayed so many times she lost count. The tests found no cancer. “I am normally very tough, but the experience left me totally shaken,” Kesler says. “And I still can’t get anyone to tell me how much radiation I was exposed to.”

What’s being done
Getting patients and doctors to change their approach to cancer screening is hard. But a number of organizations are working on the problem.

For example, in an initiative called Choosing Wisely, Consumer Reports is working with more than two dozen medical organizations to identify overused interventions, including screening tests such as Pap smears for women younger than 21. Other organizations, such as the Informed Medical Decisions Foundation, have developed brochures and videos in plain language to help patients navigate complex medical choices. And the U.S. Preventive Services Task Force and other groups are working to provide more nuanced, accurate information on cancer-screening tests.

“Cancer turns out to be a much more complicated and unpredictable disease than we used to think,” says Virginia Moyer of the task force. “And the tests we have available to us don’t work as well as we’d hoped, and can even cause harm.”

“Scientific evidence shows that some cancer-screening tests work, and people should focus on those tests rather than on screening tests that are only supported by theories and wishful thinking.”
Care at the end of life for advanced cancer patients

When to choose supportive care

When you have cancer and you have tried many treatments without success, it’s hard to know when to stop trying. Sometimes, even with the best care, cancer continues to spread. Although it is hard to accept, the best thing for you at that point may be to stop treatment for the cancer and get care to keep you comfortable and out of pain. This fact sheet explains how to know when it is time to stop treatment and focus on end-of-life care. You can use this information to talk with your doctor about your options and choose the best care for you.

Cancer responds best to treatment the first time. When you treat a tumor for the first time, there is hope that the treatment will destroy the cancer cells and keep them from returning. But if your tumor keeps growing, even with treatment, there is a lower chance that more treatment will help. This is especially true for solid-tumor cancers, like breast, colon, and lung cancer, and sarcoma. Doctors know a lot about how these cancers grow or shrink over time and how they respond to treatment. They have found that treatment after treatment offers little or no benefit.

When is more treatment probably not going to be helpful?

If you have had three different treatments and your cancer has grown or spread, more treatment usually will not help you feel better or increase your chance of living longer. Instead, more treatment could cause serious side effects that shorten your life and reduce the quality of the time you have left. However, almost half of people with advanced cancer keep getting chemotherapy—even when it has almost no chance of helping them. They end up suffering when they should not have to.
**How do you know when to stop treatment?**

It can be hard for both the patient and the doctor to talk about stopping treatment for the cancer and focus on end-of-life care. You may need to start the discussion. Doctors do not always know how much the patient wants to know. But if you ask questions, the doctor should give you clear answers.

You need to understand how advanced your cancer is. Ask your doctor about the stage of your cancer and how much it has spread. You also need to know your prognosis, or how long you have to live. No one can say exactly how long this is, but your doctor should be able to tell you a range of months or years.

And you need to know if more treatment for cancer will help you live longer. Ask your doctor to explain the risks and benefits of any treatment. Otherwise, you may think you have to keep fighting your cancer, even when it’s not best for you.

Sometimes, if there are no more known treatments and you want to continue trying, you may be able to join a clinical trial. Clinical trials offer new, experimental treatments. Ask your doctor if you are eligible for a clinical trial. Or check [www.clinicaltrials.gov](http://www.clinicaltrials.gov).

If you decide that you do not want more treatment, then it’s time to talk about supportive care.

**Supportive care improves your quality of life.**

Care near the end of life is called supportive, or hospice, care. It is care for your physical, mental, and spiritual needs at the end of life. It does not treat your cancer, but it helps keep you free of pain and other symptoms. And it helps you and your family get the most out of the time you have left together.

Hospice care can be in your home, in a hospice facility, or at a hospital. It includes many services, such as:

- Doctor and nursing care
- Pain management
- Physical and speech therapy
- Counseling for family and friends about grief
- Social worker services
- Respite care, which gives your caregivers a break

**When is the right time for hospice care?**

If you have reached a point where nothing more can help, the American Society of Clinical Oncology (ASCO) recommends that you turn to hospice care. You may have reached that point if:

- Your doctor does not think you will live for more than six months.
- There are no other proven treatments.
- You can no longer care for yourself and spend most of your time in bed or a chair.

**Questions to ask your doctor**

Let your doctor know how much you want to know about your cancer and when you are ready for discussion about end-of-life care.

**Ask your doctor:**

- How long do I have to live if I have more treatment? What will happen if I do not have more treatment?
- What is the goal of more treatment? Will treatment stop or slow my cancer, or will it help with the symptoms?
- What is the best way to manage my symptoms and side effects?
- Are there things I can do to make my quality of life better?
- Should I meet with someone who knows about hospice care?

If you would like to know more about hospice care:

- Ask your doctor for a referral to hospice. Or go to [www.cancer.net/coping/end-life-care/hospice-care](http://www.cancer.net/coping/end-life-care/hospice-care).
- Talking to hospice does not mean you have to sign up. And, even if you decide to be on hospice care, you can always change your mind.

This report is for you to use when talking with your health-care provider. It is not a substitute for medical advice and treatment. Use of this report is at your own risk.

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When you learn that you have breast cancer, it’s normal to want to do everything you can to treat it and be sure it doesn’t come back. But it’s not always a good idea to get all the tests that are available. You may not need them. And the risks may be greater than the benefits. This fact sheet explains when cancer experts recommend imaging tests and tumor marker tests—and when they don’t.

Imaging tests, such as CT, PET, and bone scans, take pictures to help find out if the cancer has spread in your body. Another test, called a tumor marker test, is a kind of blood test. Tumor markers are also called biomarkers or serum markers. They are higher than normal in some cancer patients. The tests you need depends on the stage of your breast cancer.

What is breast cancer staging?
To determine the stage of your cancer, doctors look at how large your tumor is, where it is, and if it has spread. They also look at your medical history, physical exams, diagnostic tests, and tests of your tumor and lymph nodes.

- **Early-stage breast cancer** includes stages 0, I, II and IIIA (zero, one, two, and three-A).
  - In stage 0, there are abnormal cells in the ducts or lobes of the breast. They have not broken through the wall of the duct or spread.
  - In stages I, II, and IIIA, there is a tumor. It may have spread to lymph nodes under the arm, but it has not spread anywhere else.

- **Later-stage breast cancer** is stages IIIB and IV (three-B and four). The cancer has spread beyond the breast and lymph nodes under the arm.
What if you have early-stage breast cancer?
If you have early-stage breast cancer but no symptoms to suggest the cancer has spread, you should not get an imaging test to look for cancer in other places in your body. The chance that your cancer has spread is very small. Studies show that breast cancer spreads to the liver and bones in fewer than 6 out of 100 people. And this is usually in patients with stage III breast cancer.

Imaging tests have risks and costs.
The biggest risk is that imaging tests expose you to radiation. The effects of radiation add up over your lifetime and can increase your risk of cancer.

Imaging tests can also show a “false positive.” This means a test shows something unusual, but after more testing, is not a problem. False positives can lead to stress, more tests, and a delay in getting needed treatment.

Imaging tests can also add thousands of dollars to your treatment costs. Not all insurance companies pay for them for early-stage breast cancer.

What if you have already had breast cancer?
If you had early-stage breast cancer and have no signs that your cancer has returned, you may not need imaging or tumor marker tests. It is not likely that your cancer has returned. These tests usually do not help you live longer. And they can lead to a wrong diagnosis and unneeded treatments.

Usually, the best way to monitor your cancer is to have a mammogram each year and a physical exam every six months. And watch for symptoms, such as a new lump or pain in the breast. Studies show that most breast cancer that returns is found through symptoms, not imaging tests.

Do you need tests for later-stage breast cancer?
Imaging tests. If your cancer is stage IIIB or IV, you should get an imaging test to look for cancer in other parts of your body. Treatment can depend on how much and where the cancer has spread.

Tumor marker tests. If you have later-stage breast cancer, your doctor may also use blood tests to look at tumor markers. These tests should be done only when it is known that you have advanced cancer.
If you are being treated for cancer, it’s normal to want to do everything you can to become cancer-free. Many cancer treatments save lives. But most people do not need every treatment there is. The treatment may not be helpful. And the side effects and costs may be greater than the benefits.

One treatment is called white blood cell growth factors or colony-stimulating factors (CSFs). CSFs are drugs that help prevent infection during chemotherapy. They increase the number of white cells in your blood.

This fact sheet explains when cancer experts recommend taking these drugs, and when they recommend not taking them. You can use this information to talk with your doctor about your choices and decide what’s best for you.

What are white blood cells?
Your blood has white cells and red cells. Both kinds of cells are made in the bone marrow. This is the soft tissue inside some bones. White blood cells help your body fight infection. If you have too few white blood cells, you are more likely to get sick.

Chemotherapy can kill some bone marrow.
With less bone marrow, your body makes fewer white blood cells. This raises your chances of getting a serious fever called febrile neutropenia. With this fever, you usually have to stay in the hospital and get high doses of antibiotics. This may delay your chemotherapy treatments. However, most chemotherapy treatments do not increase your risk of febrile neutropenia very much.
**How do you know if your white blood cell count is low?**

The number of white blood cells you have is called your white blood cell count. A low count usually does not cause symptoms, unless your count is very low or you get an infection.

To learn if your white blood cell count is low, your doctor will draw some blood and test it. Some chemotherapy treatments destroy bone marrow more than others. Ask your doctor if your chemotherapy treatment is likely to reduce your white blood cell count, and how often your count should be tested.

**How do CSFs help?**

CSFs help your body make more white blood cells. This lowers your risk for febrile neutropenia.

CSFs include Neupogen (filgrastim), Neulasta (pegfilgrastim), and Leukine and Prokine (sargramostim). They are usually given as shots 24 hours after a chemotherapy treatment.

**What are the risks and costs of CSFs?**

CSFs lower the risk of being in the hospital for febrile neutropenia. However, they can make you ache and feel tired. They can cause a fever and a general sick feeling. And they can cost as much as $4,000 a shot.

**Who should have CSFs?**

CSFs are only recommended for people who are at high risk for infection. You may be at high risk if:

- Your chemotherapy treatment has a risk of causing febrile neutropenia in more than one out of five people who get it, and CSFs are the only way to raise your white blood cell count.
- You are older than 65.
- Your body is weakened and your immune system does not work well.

CSFs are not recommended for chemotherapy patients who do not have a high risk. But if you have any of the risks listed above, you may need the drugs.

Unfortunately, many patients who actually need these drugs don’t get them. If you are at high risk, and your doctor does not recommend CSFs, ask why.

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**Advice from Consumer Reports**

**Questions to ask your doctor**

If you are being treated for cancer with chemotherapy, make sure to ask your doctor if your type of chemotherapy puts you at high risk for infection. And remember that your risk is affected by your age, your overall health, and whether you have had chemotherapy before.

**Ask your doctor:**

- Can my chemotherapy treatment cause low levels of white blood cells or infection?
- What is my risk of getting a febrile neutropenia infection?
- Do I have other factors that could put me at risk for infection, such as age or a weak immune system?
- What are the signs and symptoms of an infection?
- What side effects should I report right away?
- Do you recommend that I take a drug to help my body make more white blood cells? Why or why not?
- Is there a different type of chemotherapy that would not lower my white blood cell count?

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It is normal to want to do everything you can to treat prostate cancer. But it’s not always a good idea to get all the tests that are available. You may not need them. And the risks from the tests may be greater than the benefits.

This fact sheet explains why cancer experts usually do not recommend certain imaging tests if you are diagnosed with early-stage prostate cancer. You can use this information to talk about your options with your doctor and choose what’s best for you.

**How is prostate cancer usually found?**
Prostate cancer is cancer in the male prostate gland. It usually grows slowly and does not have symptoms until it has spread. Most men are diagnosed in the early stages when their doctor does a rectal exam or a PSA blood test. PSA is a protein made in the prostate. High levels of PSA may indicate cancer in the prostate.

If one of these tests shows that you might have prostate cancer, you will be given more tests. These tests help your doctor find out if you actually have cancer and what stage your cancer is.

**What are the stages of prostate cancer?**
Prostate cancer is divided into stages one to four (I, II, III, and IV). Cancer stages tell how far the cancer has spread.

Stages I and II are considered early-stage prostate cancer. The cancer has not spread outside the prostate. However, stage II cancer may be more likely to spread over time than stage I cancer. In stages III and IV, the cancer has already spread to other parts of the body.
What tests are used to stage prostate cancer?
The easiest and least risky way to find out the stage of prostate cancer is to take tissue samples from the prostate and do tests on the cancer cells. This is called a Gleason test.

If the Gleason test shows that you have early-stage prostate cancer, you usually do not need more testing. The cancer is not likely to have spread.

You do not need all imaging tests to stage prostate cancer.
Imaging tests take pictures inside the body. Specific imaging tests, such as a CT, PET, or bone scan, can help show how far cancer has spread. You may like the idea of having an imaging test to reassure yourself that your cancer has not spread. But if you have early-stage prostate cancer, it is highly unlikely that your cancer has spread to other organs. Your doctor should only use imaging tests if your Gleason score and PSA level suggest that the cancer has spread.

Imaging tests have risks.
The greatest risk from imaging tests is that they expose you to radiation. The effects of radiation add up over your lifetime. Having many tests that use radiation can increase your risk of cancer.

Imaging tests can also show a “false positive.” This means a test shows something that looks unusual, but after more testing turns out not to be a problem. False positives can lead to stress, more tests, and treatments you don’t need.

Imaging tests cost a lot.
Imaging tests are costly. They can add thousands of dollars to your treatment costs. If you do not need them, why spend the money?

When should you have an imaging test?
If your Gleason score is 7 or above and your PSA level is above 10 nanograms/mL, your cancer may have spread. In these cases, your doctor should order a CT, PET, or bone scan to find out whether the cancer has spread outside the prostate gland. If your doctor does not recommend one, ask why.

Advice from Consumer Reports
Questions to ask your doctor

If you are newly diagnosed with prostate cancer, ask what tests your doctor will use to determine the stage of your cancer. Make sure you understand how those tests will be used to decide on your treatment. Some doctors still order imaging tests for all men with prostate cancer, even if there is a very small chance that the cancer has spread.

Ask your doctor:
- What are my Gleason scores and PSA levels?
- What do those numbers tell about the stage of my cancer and whether it has spread?
- Why do you recommend a CT, PET, or bone scan? If my cancer is early-stage, what new information will the test give?
- How will you use the test to decide on my treatment?

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