



[cancer.org](https://www.cancer.org) | 1.800.227.2345

How to Interpret News About New Cancer Treatments

Before a new medicine or device can legally be marketed to treat a disease such as cancer, it must be approved by the US Food and Drug Administration (FDA). This requires in-depth research through [clinical trials](#)¹ to show that the treatment is safe and effective. However, it is common for reports about a new treatment to be shared in the media (such as websites, social media, and print publications) before clinical trials are complete and the treatment is approved by the FDA.

Finding good information about the results of research studies can be tricky – especially if you are not a scientist or health care provider. But there are questions you can ask about the information you find that can help you decide whether to pursue a new cancer treatment.

Where did the information about the new cancer treatment come from?

It's important to consider where the information is coming from. It is best to find sources that cite research found in medical journals that are reviewed by experts in the field.

Be careful when you find information about cancer treatments on social media or [online](#)². Research has shown that 1 in 3 articles on social media about medical treatment contain incorrect or even harmful information.

Can the news source provide the right context?

Major news sources generally try to provide accurate, unbiased information. They tend to have reporters and journalists who have experience covering health-related issues and who understand what's important. But smaller news sources might not have as

much experience and may have a harder time interpreting the research for people.

Are there space limitations?

Even when the news comes from a source you trust, headlines often simplify a complex topic into something short, simple, and catchy. A headline can't convey how complex or uncertain some study findings are. Even full articles can have space limits that might mean key details are left out. Often the whole story can't be told in a short article or a 60-second news clip.

Is the source biased?

Sometimes what looks like a news story is really a press release from a medical journal, medical group, drug or device maker, or other organization. Some groups promoting new findings might have a vested interest in the product that makes it hard for them to be unbiased.

This doesn't always mean the information isn't true. But if you're not familiar with the source of the information, do some research. An online search can reveal a lot about who's in a group and what their goals are. Try to keep their goals in mind as you look at their information to see if they might be emphasizing results that benefit them.

Also watch for promotions from a seller or someone who can benefit from you buying a treatment. Many companies that sell treatments online talk about the curative powers of treatments that have never been proven to work in people. Some might use outright lies and fraud to make their websites look official. They might even include fake quotes from doctors. Others might report on studies that were either never done or were misrepresented, claiming that they were done at well-known cancer treatment centers. Learn more about what to watch for in [Alternative Medicines](#)³.

Can the original source of the information be traced?

Chain emails, texts, blog posts, and social media are increasingly common sources of information for many people. These posts and emails often spread exciting information and ask people to share them with friends. The original source of the story is often impossible to find, and the actual content can change over time. This type of information needs to be checked against more reliable sources.

What's the research behind the treatment?

Getting past the headlines (or article, news story, email, social media post, etc.) to important details isn't always easy. Here are some questions you should ask:

Is the news actually based on new research?

Often it is, especially if it's being reported in reliable news media outlets. But sometimes it's not clear where the information actually came from. Rumors passed around in chain emails are a good example of this. If a source is cited, can it be verified? Can you find this same information in trustworthy sources?

Who conducted the research? Who paid for it?

Most cancer studies are done by researchers at universities, medical centers, or government agencies. Some research is done by other groups, such as advocacy organizations. Funding for studies can come from federal or state funds, non-profit groups, or other interests. Finding out where the study was done and who funded it can give you a better idea of how trustworthy the results might be. Be careful about studies funded or done by groups who might benefit from certain results.

What kind of research was it?

If you want to use a cancer treatment with a proven track record, look at how the treatment was tested. The way clinical trials are set up can affect the outcome, and sometimes can make a treatment look like it works when it really doesn't.

Lab and animal studies

New treatments are studied on cells in a lab and in animals before they are studied in people. Usually, the researchers make it clear that more studies are needed to see if the treatment is safe and works in people. But if a news group picks up the story and publishes it, the story may not clearly say what kind of study was done. Sometimes the news reports on very early research make it sound like the method will work in people, even though this hasn't been tested yet. This is why it helps to look at the whole printed story, and then see if you can find out more about the details of the research. Always keep in mind that there's a huge difference between positive results in lab or animal studies and results in human studies.

Testing in humans (clinical trials)

If results of lab and animal studies look encouraging, the treatment may be tested in people, in clinical trials. Clinical trials are usually conducted in phases that build on one

another. Earlier phase trials usually include fewer people and focus more on safety, whereas later phase trials include more people and look more closely at how useful a treatment might be for a specific use. Knowing the phase of the clinical trial is important because it can give you some idea about how much is known about the treatment being studied and how much more study will be needed before the new treatment can be approved for general use. Encouraging results in early phase clinical trials do not always mean that the treatment will be safe and effective in larger, later phase trials.

Is the study published and peer reviewed?

When research findings are published in a respected, peer-reviewed journal, it means that the methods and results of the study were looked at by other doctors or scientists. When they look at the information, they want to be sure that proper scientific procedures were followed.

Most of the time, doctors give more weight to research published in peer-reviewed journals. Summary reports and guidelines created by experts from government agencies or other respected groups are also typically trusted sources of information. Research reported at a medical conference is often important as well, but it has not undergone the same level of review.

Sometimes you might find news about studies that comes from other sources, such as magazines or journals that are not peer reviewed, or books and letters that are supposed to have been written by experts. Be extra careful basing any decisions on this type of information.

Are they reporting anecdotal information?

If someone tells you about what happened with a friend of a friend, or if you read about someone who got better with a certain treatment, this is called **anecdotal information**. This is often a second or third-hand account of the treatment working for a certain person.

Can you check the story and find its source? Is there a way to be sure that what you were told really happened? For example, do you know if the person was getting other treatments along with the newer treatment? Keep in mind that even if one person got better on the treatment, it can be very hard to tell exactly what caused the improvement.

People with good intentions can sometimes come to the wrong conclusion from a single person's experience. This is why scientists test new cancer treatments under careful conditions, typically including many people who are known to have the disease, so they

can be sure whether it works and is safe.

What if there isn't any research data reported?

If you aren't able to find any research data to support a new treatment, it could be that the treatment either has not been put through careful clinical trials, or it was found not to work against cancer. This is a particular concern with many alternative therapies. If you can't find research data, ask your doctor, nurse, or pharmacist to help you find more information.

What were the actual study results?

On purpose or not, news reports often end up sounding more promising than the study findings actually are. It's not always easy to correctly convey a new research finding in a short news story. Some people who report the news might not have a scientific or medical background, so they can sometimes have trouble putting the findings into the proper context.

For example, a new treatment might make tumors shrink in animal studies. However, when studied in people the treatment may not have the same effect. Or the new treatment might cause side effects in people that aren't seen in animals.

Have other studies of the same treatment had the same results?

It usually takes more than one study to prove a treatment works. In fact, it's rare for cancer doctors to recommend a new treatment based on just one study. Most often, treatment recommendations are based on the outcomes of several clinical trials. By the time a new treatment is approved, hundreds to thousands of people have received the treatment. So, if a news report focuses on one research study, look at how many people received the treatment and whether there have been other clinical trials with similar results.

Sometimes when multiple studies are done of a treatment, researchers can get different and sometimes opposite results. Sometimes a treatment looks great in the first study, but then other studies have different outcomes. This is why it's important to look for information beyond one promising study result.

Does the new cancer treatment really make a difference?

Even if a study finds that the difference between an old treatment and a new one is

statistically different, it may not make that much difference in people's lives. For instance, a large clinical trial might show that a new treatment improves survival by an average of a couple of weeks more than an older treatment, and that this result was very unlikely due to chance. Even though this result is significant statistically, for most people, a treatment that extends life by a couple of weeks may not mean that the treatment is worth it for them, especially if it has major side effects.

Sometimes, it's even hard for doctors to know how helpful a treatment may be when balancing its benefits with its side effects and other possible downsides. Still, if you ask your doctor about a certain treatment that was found to be helpful in a good study, they may be able to talk to you about whether it might be worthwhile for you.

What if the treatment isn't approved by the FDA to treat my type of cancer?

Even if a treatment hasn't been approved by the FDA yet, you may decide that you would like to try it. If you choose to do this, talk with your doctor about the treatment. See what you can find out about how well it might work, possible side effects, drug interactions, and other possible effects.

The most common way to get a treatment that has not yet been approved is to take part in a clinical trial. These research studies are done to evaluate whether a new treatment is safe and works in a certain disease. However, sometimes a clinical trial may not be an option.

Sometimes people can get a treatment even before the FDA has approved it if “**expanded access**” or “**compassionate use**” are allowed. If this is the case, doctors can give the treatment under certain conditions, usually when other treatments are not working.

There are other situations where a medicine may be used even if the FDA hasn't approved it for the specific condition you have. Sometimes a new medicine that has already been approved for one disease (such as a certain type of cancer) can be used to treat another. This means it might be available to you if your doctor agrees it might help you. This is called **off-label use**.

Unfortunately, insurance plans sometimes refuse to pay for treatments that are used to treat conditions for which they were not approved. See [Off-Label Drug Use⁴](#) and [Compassionate Drug Use⁵⁶](#) to find out how to deal with this and to learn more about these options.

If you are thinking about getting an alternative treatment, be sure to find out as much as you can about it and talk to your doctor before deciding.

Hyperlinks

1. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials.html
2. www.cancer.org/treatment/understanding-your-diagnosis/cancer-information-on-the-internet.html
3. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/alternative-medicine.html
4. www.cancer.org/treatment/treatments-and-side-effects/treatment-types/off-label-drug-use.html
5. www.cancer.org/treatment/treatments-and-side-effects/clinical-trials/compassionate-drug-use.html
6. www.cancer.orgwww.cancer.org/treatment/treatments-and-side-effects/clinical-trials/compassionate-drug-use.html

References

American Society of Clinical Oncology. Understanding Cancer Research Study Design and How to Evaluate Results. Accessed at <https://www.cancer.net/research-and-advocacy/introduction-cancer-research/understanding-cancer-research-study-design-and-how-evaluate-results> on September 10, 2021.

American Society of Clinical Oncology. Understanding the Publication and Format of Cancer Research Studies. Accessed at <https://www.cancer.net/research-and-advocacy/introduction-cancer-research/understanding-publication-and-format-cancer-research-studies> on September 10, 2021.

Johnson SB, Parsons M, Dorff T et al. Cancer misinformation and harmful information on Facebook and other social media: A brief report. *J Natl Cancer Inst.* 2021 Jul 22: djab141. Epub ahead of print.

Ong J, Penm J. How to understand and interpret clinical data. *PJ.* 2019;303(7927). Accessed at <https://pharmaceutical-journal.com/article/ld/how-to-understand-and-interpret-clinical-data> on September 20, 2021.

Sonbol MB, Firwana BM, Hilal T, Murad MH. How to read a published clinical trial: A practical guide for clinicians. *Avicenna J Med.* 2019;10(2):68-75. Published 2019 Apr 1.

Van Norman GA. Drugs, devices, and the FDA: Part 1: An overview of approval processes for drugs. *JACC Basic Transl Sci*. 2016; 1(3):170-179.

Last Revised: September 27, 2021

Written by

The American Cancer Society medical and editorial content team
(www.cancer.org/cancer/acs-medical-content-and-news-staff.html)

Our team is made up of doctors and oncology certified nurses with deep knowledge of cancer care as well as journalists, editors, and translators with extensive experience in medical writing.

American Cancer Society medical information is copyrighted material. For reprint requests, please see our Content Usage Policy (www.cancer.org/about-us/policies/content-usage.html).

cancer.org | 1.800.227.2345