Cancer of Unknown Primary Causes, Risk Factors, and Prevention

Risk Factors

Since the exact type of cancer is not known, it's hard to identify factors that might affect risk. But research has provided some information about possible risk factors for these cancers.

- What Are the Risk Factors for a Cancer of Unknown Primary?
- Do We Know What Causes a Cancer of Unknown Primary?

Prevention

Even though the origin of this cancer is unclear, certain lifestyle changes may help to reduce your risk.

- Can a Cancer of Unknown Primary Be Prevented?

What Are the Risk Factors for a Cancer of Unknown Primary?

A risk factor is anything that affects a person’s chance of getting a disease such as cancer. Different cancers have different risk factors. For example, exposing skin to strong sunlight is a risk factor for skin cancer. Smoking is a risk factor for cancer of the lung and many other cancers.

But risk factors don’t tell us everything. Having a risk factor, or even several, does not mean that a person will get the disease, and many people get cancer without having any known risk factors.
Since the exact type of cancer is not known, it’s hard to identify factors that might affect risk for cancer of unknown primary (CUP). These cancers are also a very diverse group, making this issue even more complicated. But there is research that provides some information about CUP risk factors.

**Smoking** is probably an important risk factor for CUP. More than half of patients with CUP have a history of smoking. When autopsy studies are done, many cancers of unknown primary are found to have started in the pancreas, lungs, kidneys, throat, larynx, or esophagus. Smoking increases the risk for all of these cancers.

Some other cancers of unknown primary are eventually found to have started in the stomach, colon, rectum, or ovaries. Diet, nutrition, and weight are factors that have been linked to these cancers. (For more information, see our documents on these cancer types.)

**Melanoma** (an aggressive type of skin cancer) is another source of cancer of unknown primary. An important melanoma risk factor is exposure to ultraviolet radiation in sunlight.

Overall, however, there are no factors that specifically increase the risk of cancer of unknown primary. Even in people who may have one or more of the risk factors above, it’s not possible to know for sure if these factors contributed to the cancer.

- **References**
  See all references for Cancer of Unknown Primary

Last Medical Review: July 2, 2014 Last Revised: January 27, 2016

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**Do We Know What Causes a Cancer of Unknown Primary?**

Cancers of unknown primary (CUP) include a variety of cancers, which may each have a number of different causes. This is why it’s hard to assign a particular cause to CUP.
Cancer is the result of changes in a cell's DNA. DNA is the chemical in each of our cells that makes up our genes – the instructions for how our cells function. It's packaged in chromosomes – long strands of DNA in each cell. We normally have 23 pairs of chromosomes in each cell in our body (one set of chromosomes comes from each parent). We usually look like our parents because they are the source of our DNA. But DNA affects more than how we look.

Some genes control when our cells grow, divide, and die. Certain genes that promote cell division or make cells live longer than they should are called oncogenes. Others that slow down cell division, or make cells die at the right time, are called tumor suppressor genes. Cancers can be caused by DNA mutations (changes) that “turn on” oncogenes or “turn off” tumor suppressor genes. In most cases, a number of mutations are needed before a cell becomes cancerous.

Most of the DNA mutations related to CUP probably occur during a person’s lifetime rather than having been inherited before birth. These acquired mutations may sometimes result from known exposures such as tobacco smoke, ultraviolet light, radiation, or certain cancer-causing chemicals, but often they occur for no apparent reason.

As scientists learn more about how cancers develop, they are also beginning to understand why some cancers tend to grow and spread so quickly that they are diagnosed as cancers of unknown primary.

- References
See all references for Cancer of Unknown Primary

Can a Cancer of Unknown Primary Be Prevented?

Cancer of unknown primary (CUP) represents a number of different cancers, so there is no known way to prevent it. Still, certain lifestyle changes may reduce the risk of many
types of cancer. This might in turn reduce a person’s risk of CUP.

Smoking is one of the most significant risk factors that a person can control. About 1 out of 3 cancer deaths is thought to be the direct result of smoking. Quitting or never starting reduces the risk of cancers of many types, including those of unknown primary. Please call us if you need help quitting tobacco. You can also learn more in our Guide to Quitting Smoking, and our Guide to Quitting Smokeless Tobacco. All of these, and a lot more information about tobacco, can be read online or mailed to you.

Factors linked with body weight, physical activity, and nutrition are also thought to cause about 1 out of 3 cancer deaths. Staying at a healthy weight throughout life, being physically active, eating a healthy diet with an emphasis on plant-based foods, and limiting alcohol intake can all help reduce your risk of cancer.

Because the exact type and the origin of a CUP are unknown, it’s not possible to say how any particular case might have been prevented. It is important to realize that many people with cancer have no apparent risk factors, and there’s nothing they could have done to avoid the disease.

- References

See all references for Cancer of Unknown Primary

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