

# Cancer's Signs and Symptoms Vary Depending on Which Region of the Body is Impacted

Adams Lewis\*

Department Of Biological Sciences,  
University Of Leeds, UK

**Key words:** Gene; Mutations

**Received:** July 09, 2021, **Accepted:** July 22, 2021, **Published:** July 29, 2021

**\*Corresponding author:**

Adams Lewis

✉ Lewisadam@yahoo.com

**Citation:** Lewis A (2021) Cancer's Signs and Symptoms Vary Depending on Which Region of the Body is Impacted. Genet Mol Biol Res Vol No: 5 Iss No:4:52

## Introduction

Cancer is a broad term for a variety of disorders characterised by the uncontrollable division of aberrant cells with the ability to infiltrate and destroy normal human tissue. Cancer has a high proclivity for spreading throughout the body.

Cancer is the world's second-leading cause of death. However, because to advancements in cancer detection, therapy, and prevention, survival rates for many types of cancer are improving.

## Symptoms

The following are some generic indications and symptoms that are linked to cancer but are not specific to it:

- Difficulty swallowing
- Skin changes, such as yellowing, darkening or redness of the skin, sores that won't heal, or changes to existing moles
- Weight changes, including unintended loss or gain
- Persistent cough or trouble breathing
- Lump or area of thickening that can be felt under the skin
- Changes in bowel or bladder habits
- Fatigue

## Causes

Changes (mutations) in the DNA of cells are the cause of cancer. Each gene in a cell contains a set of instructions that teach the cell what functions to execute as well as how to grow and divide. Errors in the instructions can cause a cell to stop functioning normally and even get aggressive.

## What do gene mutations do?

A gene mutation can instruct a healthy cell to:

- **Fail to stop uncontrolled cell proliferation:** Normal cells know when to cease growing so that the number of each type of cell is just perfect. Tumor suppressor genes, which tell cancer cells when to stop growing, are lost in cancer cells.
- **Allow for rapid expansion:** A gene mutation might cause a cell to divide and expand more quickly. This produces a large number of new cells with the same mutation

- **When repairing DNA errors, make mistakes:** DNA repair genes look for and correct mistakes in a cell's DNA. Other errors may not be fixed as a result of a mutation in a DNA repair gene, leading to malignant cells.

These are the most common types of cancer mutations. However, numerous other gene alterations can have a role in the development of cancer.

## What causes gene mutations?

Gene mutations can occur for several reasons, for instance:

- **You're born with certain gene mutations:** You could be born with a genetic mutation that your parents passed down to you. Only a small fraction of tumours are caused by this mutation
- **Gene mutations that develop after a child is born:** Most gene mutations happen after you're born and aren't passed down through your family. Smoking, radiation, viruses, cancer-causing chemicals (carcinogens), obesity, hormones, chronic inflammation, and a lack of exercise are only some of the factors that can trigger DNA alterations.

During normal cell growth, gene mutations occur regularly. Cells, on the other hand, have a mechanism for detecting and correcting errors. A blunder is occasionally made. A cell may become malignant as a result of this.

## Risk Factors

While doctors have an understanding of what variables may increase your cancer risk, the majority of malignancies are

diagnosed in patients who have no known risk factors. The following are some of the factors that have been linked to an increased risk of cancer:

**Your Age:** It can take decades for cancer to form. That's why the majority of cancer patients are 65 or older. While cancer is more common in older persons, it is not limited to them. Cancer can strike anyone at any age.

**Your Habits:** Certain lifestyle choices have been linked to a higher risk of cancer. Cancer can be caused by smoking, drinking more than one drink per day for women and up to two drinks per day for males, excessive sun exposure or frequent blistering sunburns, being fat, and having unsafe sex.

You can reduce your cancer risk by changing these behaviours; however some are simpler to modify than others.

**Your Family History:** Only a small percentage of malignancies are caused by a genetic mutation. If your family has a history of cancer, it's probable that mutations are passed down from generation to generation. You might be a good candidate for genetic testing to check if you have any hereditary mutations that increase your risk of cancer.

**Your Environment:** The environment you live in may include dangerous substances that raise your cancer risk. If you go places where people smoke or live with someone who smokes Asbestos and benzene, which can be found in your home or workplace, have also been linked to an elevated risk of cancer.

## Prevention

Doctors have identified several ways to reduce your risk of cancer, such as:

**Maintain a healthy weight.** Being overweight or obese can raise your cancer risk. By combining a nutritious diet and regular exercise, you can achieve and maintain a healthy weight

**Eat a healthy diet.** Choose a fruit and vegetable-rich diet. Choose whole grains and lean meats. Processed meats should be consumed in moderation.

**Exercise most days of the week.** Regular exercise has been related to a lower cancer risk. On most days of the week, try to get in at least 30 minutes of exercise. Start cautiously and work your way up to 30 minutes or longer if you haven't been exercising consistently.

**Avoid excessive sun exposure.** The sun's harmful ultraviolet (UV) radiation can raise your risk of skin cancer. Stay in the shade, wear protective gear, or apply sunscreen to reduce your sun exposure.

**Stop smoking.** Quit smoking if you're a smoker. Don't start smoking if you don't already. Smoking has been related to a variety of cancers, including lung cancer. Stopping now will lower your cancer risk in the future.

## References

1. Niederhuber JE (2020) Genetic and epigenetic alterations in cancer. In Abeloff's Clinical Oncology (6<sup>th</sup> Edn.). Elsevier.
2. How cancer is treated (2021) Cancer.Net. <https://www.cancer.net/navigating-cancer-care/how-cancer-treated>.
3. <https://www.cancer.gov/about-cancer/understanding/what-is-cancer>
4. How cancer is diagnosed (2021) National Cancer Institute. <https://www.cancer.gov/about-cancer/diagnosis-staging/diagnosis>