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*by* 78955 545

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Cancer is defined as a disease that generates excessive cell growth. The affected cancerous cells undergo several divisions. These cell replications seem uncontrollable. The uncontrolled cell division often occurs to make the surrounding cells lose the average growth and regulation (National Cancer Institute, 2021). It is noted that the mutated cells may also lose intercellular communication to make them engage in the constant division and spread into the nearby tissues without stopping. Cancer as a disease interferes with the normal functioning of the human body cells preventing them from growing and dividing into new cells normally. Cancerous cells do not die when they grow old. Additionally, the formation of new cells still occurs and may lead to the formation of extra and abnormal cells referred to as tumors.

Conventional treatment options refer to treatment practices that are widely accepted and applied by a majority of healthcare providers. A majority of the conventional therapies to treat cancer involve collective efforts to cure the affected cells (Mayo Clinic, 2021). Examples of the conventional treatment methods for cancer include; chemotherapy, radiation therapy, and surgery.

**Chemotherapy:** Combined with other treatment options, conventional chemotherapy involves the use of chemical substances to treat cancer. Chemotherapy is usually used alongside radiation therapies. These conventional practices significantly inhibit the proliferation of cells. In a sense, it is essential to note that chemotherapy represents an important treatment option to destroy cancerous cells.

**Surgery:** Surgery on cancer patients is usually performed with the particular aim of removing the affected cells.

Radiation therapy: Radiation therapy, as the name suggests, uses high amounts of radiation to destroy cancerous cells. The common types of energy used in radiation therapy include X-rays and protons. However, other types of energy can also be used. Although external radiation only involves temporary exposure to these powerful beams of radiation, internal radiation involves the placement of permanent radioactive material.

<sup>2</sup> James Allison and Tasuku Honjo were jointly awarded a Nobel prize in 2018 for their discovery in the treatment of cancer by inhibiting negative immune regulation (Allison & Honjo, 2019). It is noted that their discovery has since enabled the development of contemporary therapy for cancer that uses the immune system to attack cancerous cells. It is observed that the two researchers developed a complete principle that has proved to be essential in the treatment of cancer through the imitation of a blockade by the immune system's T-cells to treat cancer. In conclusion, the discovery has resulted in the pioneering of immunotherapy.

Compared to the conventional treatment options for cancer, immunotherapy is considered a universal treatment option that treats various types of cancer. The treatment option is essential because it's not cancer-specific but works to help the body's immune system recognize and target the cancer cells. The main rationale for using immunotherapy over the other conventional options to treat cancer is that this method only targets the affected cells and spares the healthy and normal cells. Chemotherapy and radiation therapies have all been associated with secondary effects on the surrounding healthy cells after treatment (Ventola, 2017).

Even though cancer may be passed from parent to offspring, exposure to carcinogens might lead to the development of cancer in some situations. It is essential to note that carcinogens are either physical or chemical agents that enhance our possibility of developing cancer. Carcinogens do not cause cancer but rather make an individual more susceptible to cancer (Elridge, 2021). For instance, carcinogens such as UV light radiation interfere with the skin's normal gene expression and may result in skin cancer. Exposure to chemicals such as nickel, asbestos, and benzene may also increase the likelihood of developing cancer. Asbestos, in particular, enhances the likelihood of developing lung cancer.

To effectively reduce the chances of developing cancer over a lifetime, it is essential to engage in the following proven practices: avoiding tobacco use; this is because smoking has been closely associated with the enhanced chances of developing cancer. The lungs, mouth, thorax, and pancreas are at risk of developing cancer because of smoking (Issa, 2008). Similarly, chewing tobacco also enhances the chances of developing cancer of the oral cavity and even pancreatic cancer. For this reason, as part of a cancer prevention plan, it is essential to reduce the use of tobacco or even stop using it altogether.

Eating a healthy diet: Research has shown that eating low-calorie foods is essential to help reduce the chances of developing cancer. Fruits and vegetables are recommended as opposed to foods obtained from animals. It is also essential to avoid taking alcohol because alcohol increases the risks of developing breast and liver cancer (Britt *et al.*, 2020).

Physical fitness is necessary to prevent developing cancerous cells. Thirty minutes of physical workout is recommended. Being overweight and very inactive has been linked to the development of breast and colorectal cancer (Batty & Thune, 2000).

Regular cancer screening can also be important as this can help healthcare professionals detect cancer in its early stages, hence easy treatment. Actually, routine screening helps in detecting the precancerous cells they develop into cancer.

Lastly, it is essential to overexposure to harmful radiation. The first crucial initial step to take is to avoid exposure to UV radiation from the sun as this may lead to the development of skin cancer that is considered the common type of cancer. Staying away from the intense midday sun can be beneficial. Additionally, it is essential to use sunglasses and other protective equipment when working in areas where your body is exposed to constant radiation.

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