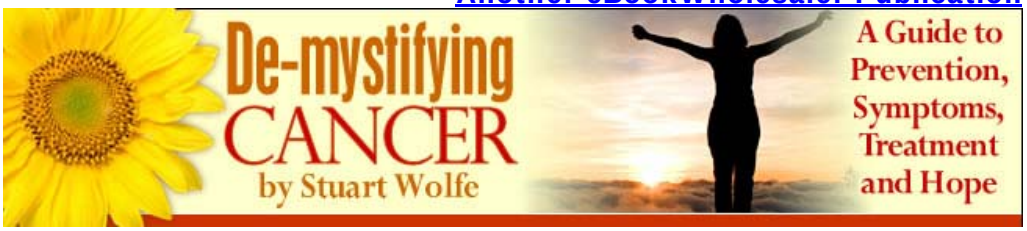

De-mystifying Cancer

by Stuart Wolfe

A Guide to Prevention, Symptoms, Treatment and Hope

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Recommended Resources

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- **Internet Marketing**
- **Affiliate Program**

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About the Author

Stuart Wolfe is a person whose family has been touched by cancer, like most Americans, friends and other relatives who have had various kinds of cancer.

He needed to know more about the current state of knowledge of cancer, its effects and recommended treatments. Now, he has put what he found into this ebook.

He feels that this material has helped him to deal with his family and friends who suffer from cancer and also been helpful to their close family and friends.

Stuart emphasizes that he is not an expert, just a lay person with some knowledge and experiences that can help other people to cope with the disease and help those close to them.

He hopes that you will find this material useful and benefit from it.

Part-I: Introduction

1. Cancer – An Overview

Cancer is a deadly disease and one of the leading causes for death in developed countries. Cancer can affect people across all age groups, although it is predominant in the elderly. Cancer develops due to an unrestricted and uncontrollable division of body cells. Normal body cells grow, divide, and die systematically. Cancerous cells follow no set pattern. These cells form, develop, and spread anywhere and at any rate too. These cells outlive normal cells and thereby cause harm to body organs and their functioning.

Types of Cancer

There are numerous types of cancer. You can arrive at a proper diagnosis only after a pathologist conducts a histological examination of specific tissue. A biopsy or surgery can help doctors obtain such tissue. A thorough examination of such tissue can detect the presence of specific type of cancer.

How Cancer Starts

Your body consists of innumerable small cells. These cells are the living units and control all your body functions. All these cells contain DNA. These cells grow, divide, and die according to set patterns. They confirm to strict regulations. However, changes in the DNA structure of any single cell can cause drastic changes in this set pattern.

Mutations in DNA structure of your cells could happen due to many reasons. This causes changes in the organized working of your body cells. Cells start growing and dividing without any control or system.

Such uncontrolled division can lead to growth and development of tumors. Tumors are an accumulation of such diseased cells.

Tumors can be benign or malignant. Benign tumors do not spread and are not cancerous. Malignant tumors are cancerous and spread to different body parts. Sometimes, you can contract cancer through organ transplants. Tumors remain within the transplanted organs and start creating problems after transplantation.

Symptoms of Cancer

There are three predominant groups of cancer symptoms. Although these are generalized symptoms, occurrence or presence of such symptoms may or may not cause cancer.

These are:

1. **Metastasis symptoms:** These cancerous symptoms arise due to continued spreading and multiplication of cancerous cells. Common symptoms include enlarged liver, enlarged lymph nodes, pain in the bones, fracture of affected bones, and other neurological symptoms.
2. **Local Symptoms:** These symptoms include excessive and unusual swellings like tumors, pain, bleeding and internal hemorrhage, and compression of tissues leading to jaundice.
3. **Systemic symptoms:** Active cancer in your body could cause continued weight loss, lack of appetite, anemia, excessive sweating and night sweats, and striking hormonal changes too.

How Cancer Develops

DNA damage is the predominant cause for cancer. Such damage causes mutations in the genes. These genes are responsible for controlling cell division through proper regulation of proteins. A single mutation to DNA cannot and does not result in the development of cancer. It is necessary for many mutations to take place before a normal cell will transform into a malignant cell.

Mutations occur due to various reasons like viruses inserting their DNA into your genome, or radiation, or the presence of carcinogenic chemicals or physical agents, and other causes.

Mutations can pass from one cell generation to the other. Cancer can also occur due to excessive exposure to specific factors like alcohol, tobacco, certain viruses, and others.

Appearance of Cancerous Tissues

Cancerous tissue has a distinct appearance under the microscope. You can easily distinguish a cancerous tissue from a normal tissue. Striking features include differences in cell sizes and shapes, numerous dividing cells, absence of specific cell features, lack of normal tissue organization, absence of definite tumor margin, and other similar factors.

Microscopic examination and later biopsy can reveal if specific cells are cancerous. Sometimes, cells continue to grow and divide at an excessive rate. However, these may not be cancerous. Such cell division is according to a set pattern. This is hyperplasia and it is possible to reverse the situation too.

Although cancer is not hereditary, there are instances of heredity related cancer occurrences. Certain inherited mutations cause

ovarian cancer and breast cancer. Retinoblastoma is an example of inherited cancer in young children. Endocrine tumors, brain tumors, and colon cancers are examples of such inherited cancers.

Prevention of Cancer

Cancer prevention centers on simple remedial measures. You can make small changes in your lifestyle and restrict exposure to cancer risks like smoking, alcohol consumption, and controlling body weight. Nevertheless, smoking and alcohol consumption do not necessarily cause cancer, as statistics indicate otherwise. More than twenty percent of women and ten percent of men developed lung cancer without smoking.

Restricting body weight and being physically active can prevent the incidence of cancer. Occupational and chemical exposures and infectious agents also cause cancer. Although studies indicate a link between diet and the occurrence of cancer, there is no conclusive evidence of any specific diet leading to the incidence of cancer. Different types of cancer are prominent in different parts of the globe. Immigrants face exposure to such risks in a new country and therefore could develop cancer.

Treatment

Not all cancers are fatal. It is possible to treat and cure cancer. Normal treatment options for cancer include chemotherapy, radiation therapy, surgery, and medications. All treatment options cause many side effects too.

Cancer treatment depends on the extent of damage in your body. In some cases, doctors prefer to remove diseased organs to arrest further spread of cancer in your body. There is no single cure or

treatment option for cancer as a whole. Recent research has been able to detect a cure for specific types of cancer. If untreated, cancer can lead to imminent death.

Part-II: Understanding Cancer

2. What is Cancer?

Cancer is fast evolving as one of the major causes of death.

Estimates say that more than half of the male population and one-third of the female population in the United States will develop cancer sometime in their lives. It therefore becomes imperative to understand what cancer is.

What is Cancer?

Your body consists of millions of small cells. Cells are the smallest biological units of every living being. Normal cells grow, divide, stop growing at a specific time, and die too. All such processes take place systematically and in accordance with your biological constitution.

However, at times, certain abnormal cells start growing at an alarming rate. These are cancerous cells. These cells do not follow any pattern and keep on growing. They divide uncontrollably and do not die. Normally, such abnormal cells accumulate together to form a lump or a tumor. These cells destroy other healthy cells within your body and hamper the normal functioning of body organs. Resultantly, you feel sick.

How Do Cancer Cells Develop?

Every cell contains DNA, which regulates cell activities and body functioning. If DNA in your body cells suffers damages due to smoking or other causes, your body is unable to repair this damage. Many a time, this leads to the formation and development of cancerous cells. You can inherit damaged DNA and thereby inherit cancerous cells too.

Certain cancers like leukemia do not form tumors or groups of cells. It circulates in your body using your blood as a medium. It forms and develops cancerous tissues in different parts of your body too. Irrespective of where it spreads, cancer takes the name of its origin. Therefore, leukemia is blood cancer and remains so even if it causes cancer in the liver or the stomach.

Spread of Cancer

Cancerous cells do not follow any particular pattern. Sometimes, cancerous cells break away from their original lump and form new lumps at different parts of your body. This is metastasis. This process continues and leads to the spread of cancer.

When you are young, the growing and division of normal cells is rapid in your body. As you grow into an adult, such growing of cells stops. Your body cells grow and divide only if you injure yourself and require new cells to replace damaged or worn-out cells.

However, abnormal cells keep on growing and often outlive normal cells. Such growth can be benign or malignant. Benign growth is non-cancerous and does not spread. You can remove these cells too. Malignant growth is cancerous and dangerous.

Cancerous cells in different parts of your body behave and react differently. Their response to treatment also differs. Hence, it is essential to diagnose prevalent cancer correctly and thereafter administer suitable treatment. Early diagnosis and treatment can ensure fast recovery.

3. What are the Causes of Cancer?

With the evolution of new techniques and ongoing research, you must realize that what we “know” about cancer is being revised constantly. Our understanding of the causes of cancer is still far from complete.

But, there are certain facts which seem quite clear about cancer. Some believe that certain viruses increase the risk of cancer, but cancer is not contagious and is not due to any form of injury.

Environmental factors, heredity, and lifestyle seem to be very significant in the development of cancer.

Let us study in detail the conditions that are responsible for causing cancer.

1. Tobacco: Using tobacco and continual exposure to its smoke is largely responsible for cancer deaths around the world. However, cancer caused by tobacco is preventable, but the irony is people do not quit this habit at all.

Smoking accounts to 85% of lung cancer deaths. If you are a smoker, the risk of lung cancer in you depends on the type of cigarette you smoke and the number of cigarettes you smoke per day.

2. Your Diet: The kind of food you consume also affects your chances of developing cancer. There is evidence of a link between a high-fat diet and breast, uterus, colon and prostate cancer.

If you are obese or overweight, there are chances that this might lead to colon, ovary, pancreas, prostate or breast cancer in woman.

However, enough researches also suggest that food rich with fibers and particular nutrients are responsible to curb certain forms of cancer.

3. Sunlight: Ultraviolet radiation from any source be it sun or tanning booths and sunlamps, damages the skin to cause skin cancer. If your skin is fair and you easily freckle, then the chances are higher for you to develop skin cancer if you continuously expose yourself to ultraviolet radiations.

During summer, the sun's ultraviolet rays are strongest from somewhere around eleven in the morning to three in the afternoon. This means that the risk is highest at this time.

4. Alcohol Consumption: Large amounts of alcohol consumption leads to cancer of the mouth, throat, larynx, and esophagus. Here, your chances of developing cancer become higher if you smoke cigarettes too. Alcohol can damage your liver and as a result lead to liver cancer. There has been research which shows that the high consumption of alcohol tends to lead to breast cancer.

5. Radiation: Frequent exposure to radiation, which is from medical X-rays, can lead to cancer. However, X-rays used for cancer diagnosis involves very little radiation, but repeated exposure is harmful.

Early X-rays were a diagnosis for adenoids, enlarged tonsils and an enlarged thymus, acne, and ringworm of the scalp, in children and young adults. Moreover, in such conditions there are higher chances of developing thyroid cancer later in life. If you have a history of such treatment, it is advisable that you go for a careful examination of the neck once every year or two.

6. Exposure in the workplace to Chemicals and Other Substances: If you work in an environment where you continuously expose yourself to dust, metals, pesticides, chemicals, etc., then you definitely stand the chance of developing cancer one day. The most well-known carcinogens are nickel, asbestos, uranium, cadmium, radon, vinyl chloride, benzene, etc. These may or may not need other carcinogens to ignite cancer in your body. For example, inhalation of asbestos fiber increases the chances of developing lung diseases, and here one cannot wipe out cancer either. However, smoking in such circumstances only acts as a catalyst to causing cancer.

7. Hormone Replacement Therapy: Estrogen therapy is used by many women to control vaginal dryness, hot flashes, and osteoporosis, which may occur during menopause. However, there are studies that reveal that the use of estrogen increases the risk of cancer of the uterus. There is also enough research, which suggests that breast cancer in women is the result of the high dose of estrogen.

8. Diethylstilbestrol (DES): Diethylstilbestrol or DES is a type of estrogen, which prevents miscarriage. However, it is seen that the daughters born to women who used estrogen during pregnancy, did not have a normally developed vagina, uterus, and cervix. These baby girls also have also the chance of dysplasia, (development of abnormal cells). In addition, it has also come to light that a rare type of cervical and vaginal cancer and a slightly higher risk of developing breast cancer has existed in women exposed to DES.

9 Certain Types of Cancer in Close Relatives: Ovary, breast, and colon cancer most often occur in the same family. It is however

not clear whether similar form of cancer that occur in the family due to hereditary reasons or the environment. Therefore, if these forms of cancers are there in your family it is advisable that you are cautious enough and go for proper checkups regularly.

4. Types of Cancer

There are over more than 200 types of cancer, but they are grouped into five main types.

1. Carcinomas

This form of cancer arises from the epithelial cell. 85% of the cancers in the world are carcinomas. They are malignant and invade the tissues surrounding them and other organs too. This type of cancer starts from the cells that line the body surface, both internal and external. Some of the common carcinomas are breast cancer, bowel cancer, and lung cancer.

2. Sarcomas

Sarcoma is the cancer of soft tissue and supportive or connective tissues, for example, cartilage, muscle, fat, bone, and blood vessels.

This form of cancer is treated differently because of its different microscopic and clinical attributes.

Osteo sarcoma or osteogenic sarcoma is the common form of bone cancer among children. However, soft tissue sarcomas are mostly common in adults than in children.

Less than one percent of cancer is sarcoma. However, treatment of this form of cancer is slightly difficult because it has more than seventy different varieties. The most common form of sarcoma is gastrointestinal stromal tumor.

3. Leukemia

Leukemia is the cancer of the bone marrow or the blood. The abnormal production of blood cells, mostly the white blood cells, is

the main characteristic of this form of cancer. They cause damage to the bone marrow by displacing the normal bone marrow cells by multiple white blood cells, which are immature and lack blood platelets. The blood platelets help mostly in the clotting of the blood. This means that a person suffering from leukemia may develop petechiae, bruise, or bleed excessively.

4. Lymphomas

The malignant tumors of the lymph system are lymphoma. This is the serious form of cancer because the disease can spread throughout the body through the lymph vessels. The lymph vessels are a chain of glands or nodes that are located throughout the body and connect via multiple vessels that carry lymph fluids. This is the reason why this form of cancer spreads throughout the body.

5. Adenomas

The source of adenoma is glandular and it is a benign form of tumor. Adenoma cancer forms when there is an excessive growth of epithelial cells. These cells actively participate during secretion and spread throughout the body. However, it is not necessary for adenomas to develop into a cancerous form but the chances are always there.

5. The Immune System and Cancer

People get cancer because of a defect in their immune system. In a normal person, the immune system destroys foreign cells like cancer cells. Conventional cancer treatment involves lethal doses of chemotherapy and medicines that leave the patient weak.

Studies are underway at the premier Cancer Research Centers around the US to modify this defect in a bid to cure cancer in patients. These clinical trials work on the premise of strengthening the body's defenses to fight cancer. The results are promising and hold hope for millions of cancer sufferers towards a new lease of life.

Scientists are currently testing a vaccine to prevent an HPV infection that is a major cause of cervical cancer. This next generation of research is developing vaccines that prepare the body to attack cells with a cancerous tag. The vaccine fools the body's immune system into attacking cancerous cells and thus stops the growth of the tumor. This research adopts a constructive approach by not harming healthy living tissue in a patient already debilitated by the disease and holds hope for patients of brain tumors, melanoma and blood cancer.

Patients who fail to respond to chemotherapy and have a remission of cancer respond well to immune therapy, especially for different types of leukemia. Another type of treatment involves customization of the vaccine for every patient. In this, doctors use a combination of the patient's lymphatic cells and specific antigen-carrying cells and give them to the patient with an immune system booster. These

cells then help the body fight the cancer cells, thus improving the patient's survival rate.

Thus, advances in immune system research hold a ray of hope for several cancer patients.

6. Who Gets Cancer?

Cancer is a major cause of death among American men and women and about half a million people succumb to it annually. Cancer afflicts men and women above the age of fifty-five years. There are different types of cancer that occur in men and women. Most women have breast cancer, cancer in the large intestine, ovarian cancer and lung cancer. Men on the other hand suffer from lung cancer and prostate cancer mostly, followed by cancer of the large intestine and bladder.

The risk of cancer increases with age and rarely occurs in children. Children between the ages of three and fourteen who develop cancer rarely survive. About a million people suffer from cancer in America and its incidence depends on the gender and race of the person. Some groups like women are more prone to breast cancer. African-Americans have a greater chance of developing cancer than whites.

Hence, they must be aware of steps for early detection and treatment. The key to beating cancer lies in recognizing one's risk profile. It is advisable to refrain from smoking, having a healthy diet and avoiding exposure to the sun to minimize the chances of developing cancer. However, it is possible to treat cancer if detected early. Patients enjoy a better quality of life with the latest anti-cancer drugs and advanced anti-cancer treatments.

7. Signs and Symptoms of Cancer

Symptoms indicate any disease, injury, or illness in the body.

There is something wrong going within the body that causes physical and mental disturbance in the body for example cough, aches, weakness and chills are common symptoms of pneumonia.

Signs also indicate that something is wrong in the body. Signs are observations made by doctors or health care experts to draw any conclusion of any of the diseases in a human body, for example fever, an increase in breathing rate, etc., and abnormal breathing could be signs of pneumonia

At times, these signs and symptoms are just not enough to provide clues to determine any kind of illness. For verification of the particular illness, the doctors recommend medical tests, X-rays, blood tests, or biopsy.

Signs and Symptoms in Cancer depend upon various things:

- Where the cancer is?

- What is the size of the cancer?

- How much it affects the other organs, blood vessels and the nerves of the body.

- Sometimes, cancer exists in places where there are no symptoms found. Cancer cells have grown in large amounts. Cancer in the pancreas is not visible from the outside the body; they begin to grow nearby, within the nerves, causing backache. It also grows around bile duct, blocking the flow of bile thus leading to jaundice.

By the time this pancreatic cancer shows these signs and symptoms it has reached the advanced stage.

General Signs and Symptoms of Cancer:

Unintentional weight loss: A person suffering with cancer will lose a lot of weight at the first stage of cancer. This weight loss is more prominent in cancers of the stomach, pancreas, and lungs.

Fever: Cancer patients are often prone to fever. The cancer indirectly affects the immune system and reduces the resistance of the body to fight against any diseases.

Fatigue: Fatigue or tiredness is noticeable in cancer patients as it spreads, especially in the case of leukemia and in stomach cancers, which causes acute loss of blood.

Pain: Unbearable pain in the body is the symptom of bone and testicular cancer.

Skin Changes: Some internal cancers can produce skin changes like -

- Darkening of skin (hyper pigmentation)

- Yellowing of skin (jaundice)

- Reddening of skin (erythema)

Some Specific Cancer Signs and Symptoms:

Change in the bowel habits or functioning of the bladder

1. Acute constipation or diarrhea and change in the size of stool indicate colon cancer.

2. Pain while urinating, blood in the urine, frequent or less frequent urination patterns is due to malfunctioning of the bladder. These symptoms indicate bladder or prostate cancer.

Sores that do not heal

Skin cancers lead to bleeding thus resembling sores that do not heal. A chain-smoker, a person who drinks alcohol and chews tobacco have the problem of continual sores that do not heal, leading to oral cancer. Sores on the penis and vagina can also be signs of cancer.

Unusual bleeding or discharge

1. Blood in the sputum may be a sign of lung cancer.

2. Blood in the stool or dark stool could be a sign of rectal or colon cancer.

3. Vaginal bleeding may be a symptom of cancer in the lining of the uterus.

4. Blood in the urine may be a symptom of kidney or bladder cancer.

5. Blood discharge from a nipple may lead to breast cancer.

Lumps in the breast or other parts of the body.

A lump is an early or late sign of cancer. Any lump if grown into a big size with time needs medical aid. Lumps are present in the breast, testicles, glands, and soft tissues of the body.

Problem of indigestion

Cancer patients are always complaining about indigestion and swallowing of food. These are the symptoms of stomach, esophagus, and throat cancer.

Change in the Mole

If there are any changes in the color, shape or size of the mole consulting the doctor is very important.

Constant Coughing

A long continuous and prolonged cough that extends for a month is not good for the health and may be a sign of lung cancer.

The effects of many cancers may be reduced if they are detected and treated at an early stage. Early medical review often proves effective. If anyone notices any of these signs and symptoms, they must not delay but seek immediate medical aid to check whether the cause is some kind of cancer or not.

8. What Are the Risk Factors for Cancer?

Several factors increase a person's chances of getting cancer.

These may relate to the environment or the person's lifestyle. Sometimes a person who encounters many risk factors may not develop some form of cancer, while others with less apparent risk may. The risk factors are simply things we should minimize as far as possible our exposure to.

Factors that could affect the incidence of cancer could include the age, gender, diet and lifestyle, or race of the person.

Some African-American men are more prone to cancer than Caucasian men are.

A family history of cancer may increase your chance of getting certain types of cancer. Women with a sister or mother with breast cancer seem to have a greater chance of getting it. The occurrence of breast cancer may be affected by the varying hormone levels throughout life, onset of menstruation and menopause and the number of pregnancies among other factors.

Environmental factors, like long-term, unprotected exposure to direct sunlight can cause skin cancer.

Exposure to specific chemicals or gas fumes that are known to be carcinogenic in the workplace is a major environmental risk factor.

Excessive alcohol consumption seems to lead to higher rates of the development of certain types of cancer.

Most researchers accept that there is a direct link between smoking and the incidence of lung cancer. Tobacco and snuff consumption cause oral cancer, bladder, cervical and kidney cancer.

A sedentary lifestyle, coupled with a fat-rich diet, can increase the risk of cancer in later life.

Some viral infections can increase the incidence of cancer occurring.

Awareness of risk factors goes a long way in mitigating the risk of getting cancer.

Part-III: The Top Three Cancer Killers in Men

9. Lung Cancer in Men

Lung cancer is one of the most common types of cancer afflicting men all over the world. Lung cancer rose to be a major cause for death after the 1930's. It's now believed this was linked to the increasing consumption of tobacco products. Tobacco remains a significant factor in the occurrence of lung cancer.

What is Lung Cancer?

Lung cancer is due to excessive growth of cells in the patient's lungs

Can Lung Cancer Spread?

Yes, lung cancer can spread to other areas of the patient's body such as the brain, liver, adrenal glands and bones. The cancerous cells spread from the lungs through lymphatic tissue or blood. This spreading process is commonly referred to as metastasis.

How Lung Cancer Starts

Normally, each incidence of cancer is named according to where in the body it originated. Lung cancer can start in any part of the lung and may spread to the prostate or colon, but most doctors will refer to it still as lung cancer.

Humans have two lungs. The left lung has two lobes and lingual (a small structure, similar to a middle lobe). The right lung has three lobes.

The major functions of your lungs is the intake and processing of oxygen to circulate through your blood and exhalation of carbon dioxide from your body.

Pleura form a protective covering for your lungs and chest wall.

Trachea brings in air and enters your lung through bronchi.

Bronchi are small tubes that branch into minute airways, popularly known as **bronchioles**. Each bronchiole ends in a tiny sac which are called **alveoli**. The exchange of gases takes place in the alveoli.

Lung cancer can start from any of these parts and afflict both lungs.

However, more than ninety percent of lung cancers start from the inner lining of the bronchi and bronchioles. These are bronchogenic carcinomas. Sometimes, lung cancer starts from the outer covering of pleura. In very rare cases, lung cancer starts from blood vessels and other supporting tissues within your lungs.

Causes of Lung Cancer in Men

Smoking

Smoking is accepted by many researchers as a dominant cause of lung cancer, due to inhalation of tobacco through smoking or ingestion from chewing tobacco and other products. Pipe and cigar smoking also cause lung cancer. They may be less significant but some research indicates that pipe and cigar smokers are five times more prone to lung cancer than nonsmokers are.

Cigarette smokers could be as much as twenty-five times more prone to lung cancer than nonsmokers are.

There are more than four thousand carcinogenic chemical compounds in tobacco smoke. The two primary carcinogens are **polycyclic aromatic hydrocarbons** and **nitrosamines**.

You may reduce chances of lung cancer by quitting smoking but it could take over fifteen years for former smokers to grow new and normal cells to replace those damaged in their lungs due to smoking and there is no guarantee that full normal function will be achieved.

Passive Smoking

Passive smoking refers to inhalation of the chemicals released from other people's cigarettes and other tobacco products by non-smokers who share living or working areas with smokers.

Passive smoking increases non-smokers' risks of contracting cancer. About ten percent of those affected by lung cancer are nonsmokers.

Radon gas

This is believed to cause around twelve percent of lung cancers. This is a chemically inert gas produced by the natural decay of uranium. This gas can travel through gaps in foundation, drains, and pipes or through soil. Although this is an odorless and invisible gas, kits are available to help people detect it.

Asbestos fibers

Asbestos was widely used for years in thermal and acoustic insulation materials of homes and workplaces.

Lung cancer and mesothelioma may result due to asbestos exposure years earlier. Mesothelioma is cancer of pleura or the peritoneum (the lining of the abdominal cavity). Smokers who work in areas that are contaminated with asbestos have a much higher chance of

developing lung cancer than nonsmokers in the same type of environments.

Most countries now ban the use of asbestos.

Lung Diseases

Sufferers of lung diseases like chronic obstructive pulmonary disease also have an increased chance of lung cancer. People that have previously had a bout of lung cancer, must be aware that it can recur.

Air pollution

Around one percent of lung cancer incidents are due to air pollution which can be from industries, power plants, vehicles or other sources.

Prolonged exposure to such air pollutants poses a similar risk of lung cancer as that faced by passive smokers.

Family History

Genetic factors also play a role in the incidence of lung cancer in men. Non-smoking relatives of smokers may have a higher risk of suffering from lung cancer than the general population.

A specific human chromosome of number 6 contains a gene that is believed to increase a person's susceptibility to lung cancer.

Types of Lung Cancer in Men

Bronchogenic carcinomas, or lung cancer, has two main types. These are **Small Cell Lung Cancer** (**SCLC**) and **Non-Small Cell Lung Cancers** (**NSCLC**).

Small Cell Lung Cancer

Some researchers refer to small cell lung cancer as **oat cell carcinomas**.

This cancer mainly occurs in smokers, but up to one percent of non-smokers may contract this cancer.

It constitutes around twenty percent of all lung cancers but the percentage is growing rapidly.

Detection of this type of cancer is normally possible only after it has spread widely.

Non-Small Cell Lung Cancer

This cancer currently accounts for more than eighty percent of all lung cancers.

These are the main types:

Adenocarcinomas

More than fifty percent of **Non-Small Cell Lung Cancers** (**NSCLS**) cancers are of this type. It is prevalent in smokers and nonsmokers.

This cancer normally occurs in the outer areas of the lungs. **Bronchioloalveolar carcinoma** is one of the most common types of Adenocarcinoma. It develops at various places in the lungs and across alveolar walls.

Squamous Cell Carcinomas

This type of lung cancer presently accounts for thirty percent of lung cancer cases**.** This starts in the central chest region of bronchi. It is also known as **epidermoid carcinoma**.

Large cell carcinomas

This is the least common type of NSCLC. Many refer to this as **undifferentiated carcinoma**.

Less Common Lung Cancers

These lung cancers constitute only five to ten percent of the known types of lung cancers.

Bronchial Carcinoids

This lung cancer is common in people below forty years old. The tumors are small, about one to one and a half inches in diameter. They can metastasize and some secrete hormonal substances.

This type usually spreads very slowly and it is sometimes possible to remove it surgically if detected in the initial stages.

Metastatic tumors: These tumors spread into the lungs from any part of your body and develop cancerous tendencies. These normally concentrate in the central part of your lungs but, sometimes, remain scattered throughout your lung.

Symptoms of Lung Cancer in Men

Lung cancer often does not show any symptoms until a routine CT scan or chest X-ray reveals a small mass of cancerous cells.

Other symptoms of lung cancer may include:

It is important to realize that not all occurrences of these conditions indicate the presence of any kind of cancer. There may be many other reasons for these symptoms.

- Shortness of breath
- Chest pain
- Cough
- Wheezing
- Coughing up blood
- Paralysis of vocal cords making your voice hoarse
- Pain in the shoulders
- Difficulty in swallowing due to blocking of esophagus
- Infections like abscesses and pneumonia

Lung cancer that spreads into the brain may cause different symptoms like headaches, blurred vision, strokes, seizures, and loss of sensation in parts of the body.

Lung cancer spreading into bones could cause severe pain in bones and joints.

Other symptoms of lung cancer may include weakness, excessive weight loss, fatigue, mood changes and depression.

Diagnosis of Lung Cancer in Men

The first diagnosis in lung cancer is often through a chest x-ray. Doctors take x-rays which could detect the presence of any abnormality in the lungs from all sides.

But, standard chest x-rays may not pinpoint the existence of cancerous cells in your lungs.

Where results are inconclusive, doctors advise a **CT scan** of the chest, brain and abdomen to detect the presence of any tumor. These machines are more sensitive than x-ray machines and radiation exposure is less. They can detect the presence of lung nodules and metastatic cancer in adrenal glands, brain, or liver.

Magnetic resonance imaging (**MRI**) scans help to indicate the exact location of any tumor. MRI scans use radio waves, magnetism and computer enhancement to produce body images. MRI scans do not cause any radiation or other side effects.

If you have a heart pacemaker, artificial heart valves, or any metal implants, it is better not to opt for MRI scans as magnets could move metal parts within your body.

Positron emission tomography (**PET**) scans can detect metabolic activity and functioning of tissue within the lungs. Doctors inject a little radioactive material within the bone during a bone scan to detect abnormalities within the bones due to cancer.

Sputum cytology is another simple diagnostic procedure to detect the presence of a tumor. However, it is not conclusive as tumor cells are not always present in your sputum making a precise cancer diagnosis difficult.

Prostate Cancer in Men

The **Prostate** is a gland in the male reproductive system.

Prostate cancer is the second most common type of cancer affecting men, after lung cancer. Incidences of prostate cancer is high in Europe and The United States, but it is less common in Asia.

It normally affects men over the age of fifty.

Start of Prostate Cancer

Prostate cancer is commonly referred to as a glandular cancer. Cells in the prostate gland normally produce semen. With prostate cancer, some of these cells start multiplying and growing without any set pattern. They initially form clumps of cells in the prostate gland. This situation is referred to as 'carcinoma in situ'.

Although there is no clear evidence that this leads to prostate cancer, it has a close association to cancer causing agents in the prostate gland.

These cells slowly start growing and spreading to surrounding tissue. This affects nearby organs like the rectum or seminal vesicles.

It later spreads to other body parts like the lymph nodes, bladder and bones.

Causes of Prostate Cancer in Men

There is no proven, single cause for prostate cancer in men. Many factors, like age, lifestyle, genetics, diet, race and medical history are believed to play important roles.

Age is a significant factor in the development of prostate cancer. Particular genes also seem to play an important role. There are many cases of twins both developing prostate cancer. Identical twins carry the same genes.

Hereditary factors also seem to have a bearing. Men whose father and/or grandfather suffered from prostate cancer, could have a greater chance of having prostate cancer.

Dietary research may indicate that a high-level of trans-fatty acids in your body could be a possible factor for prostate cancer.

Low levels of vitamin D and vitamin E, low levels of omega-3 fatty acids and the mineral selenium could increase the possible occurrences of prostate cancer.

Obesity and high blood levels of testosterone may also encourage the development of prostate cancer.

Lowering your intake of animal fat and increasing your intake of leafy green vegetables and fruits may reduce prostate cancer risks.

Symptoms and Detection of Prostate Cancer in Men

Prostate cancer in early stages often does not display any obvious symptoms. They develop slowly. Many men may not notice any specific symptoms although they have developing prostate cancer.

Some symptoms that should be referred to your medical professional for checking about the possibility of the presence of prostate cancer include:

- Difficulty in urinating
- Pain in the abdomen and prostate gland
- Erectile dysfunction (unable to have or maintain an erection).
- Excessive urination at night
- Blood in urine
- Very frequent urination
- Difficulty starting and maintaining a steady stream of urine.

In the advanced stages, this cancer spreads beyond the prostate to other body parts. Additional symptoms develop. These may include:

- Pain in the bones (mainly the spine, ribs, and pelvis)
- Weakness in the legs
- Urinary and fecal incontinence.

Detection and Diagnosis of Prostate Cancer in Men

Prostate cancer screening can help in locating cancer of the prostate gland. The screening may require follow-up tests such as a biopsy to clarify the results.

In the biopsy, doctors remove a small piece of the prostate for detailed investigation.

Other detection procedures include:

- Digital rectal examination
- Measuring the blood level of prostate-specific antigen
- Cystoscopy
- Trans rectal ultrasonography.

A biopsy is almost always needed to confirm the presence of prostate cancer. A biopsy involves removal of small pieces of prostate through a biopsy gun. Close microscopic examination of these samples can confirm presence of cancerous cells and help in the analysis of what stage the prostate cancer is at.

Treatment of Prostate Cancer in Men

Prostate cancer treatment currently centers on options like:

Radiation therapy

Surgery

Watchful waiting

Chemotherapy

Hormonal therapy

High Intensity Focused Ultrasound (HIFU)

Cryosurgery

…….. or a combination of treatments.

Your doctor and medical specialist will advise treatments according to the patient's medical condition and the state of the prostate cancer.

Most of the treatments may sometimes cause side effects like urinary and fecal incontinence, erectile dysfunction and others.

So, doctors consider lifestyle, general health and age, before administering treatment for prostate cancer. Hormonal therapy and chemotherapy are often used for advanced cases but also in some other circumstances, especially if prostate cancer has spread to other body parts.

Most advanced tumors require radiation therapy.

A combination of cryotherapy, hormonal therapy, and chemotherapy may help if an initial treatment does not yield positive results and cancer starts spreading.

Prevention of Prostate Cancer in Men

Some people believe that you can sometimes reduce the incidence of prostate cancer by simple medications and dietary regulations. But, you must never use these methods or change your current medication or lifestyle without first consulting and accepting the advice of your doctor or qualified medical specialist.

That's because there is a huge amount of research under way and theories and even "facts" are being revised as a result of new information.

Your doctor must always be consulted for the latest available information and advice about any questions you have on cancer or other medical matters.

Some people believe that ensuring their diet includes daily intake of vitamin E and selenium can prove beneficial.

Phytoestrogens, as present in soybeans and other plant sources, may help to reduce the occurrence of prostate cancer.

Intake of green tea is sometimes recommended but there is no conclusive evidence to support it.

Some people say that frequent masturbation may help to reduce the development of prostate cancer.

The medications, dutasteride and finasteride, are recommended by some people but the benefits are not confirmed. They are still in the early testing stages and you should not do any self-testing.

In the early stages of prostate cancer, doctors may prefer to wait and watch without starting any serious treatments.

Colorectal Cancer in Men

Colorectal cancer is the same as bowel cancer. This cancer of the large intestine is the third most common form of cancer in men. More than 70,000 men die of colorectal cancer every year in the United States.

It is due to cancerous growth in the colon, appendix and rectum. Normally, it starts as a benign growth in the colon, some of which turns cancerous later.

Symptoms of Colorectal Cancer in Men

Colorectal cancer does not always exhibit any early signs or symptoms.

Symptoms may include:

- Change in bowel habits, like constipation, diarrhea or it could be a feeling of retained stools.
- There could be a change in quality of stools such as narrower stools and stools with mucus.
- Stools with blood in them
- Regular rectal bleeding
- Reduction in fecal caliber
- Extreme weakness and tiredness
- Excessive weight loss for no apparent reason
- Feeling anemic with palpitations, dizziness and low levels of hemoglobin

- Vomiting and abdominal cramps with extreme discomfort due to abdominal gas, bloating or fullness.

Risk Factors of Colorectal Cancer in Men

Certain factors pose high risks for development of colorectal cancer in men.

These include:

Age: Colorectal cancer often affects men in their sixties and seventies. In very few cases, it affects men in their fifties. However, such men normally have a family history of colon cancer.

History of colon cancer: Men diagnosed with colon cancer once have a risk of developing it again.

Hereditary factors also affect the level of risk for men over the age of fifty-five. If any of your close relatives have colon cancer, you might have a slightly higher than average risk that you could develop it after the age of forty too.

Polyps of the colon: If you have adenomatous polyps, you have a higher than average risk of developing colon cancer. Having an ulcerated colon can increase the chance of suffering colon cancer.

Diet: A diet rich in red meat but low in fresh vegetables, fruits, fish, high-fiber foods and poultry may increase the risks of colon cancer.

Smoking: Men who smoke have a thirty percent higher chance of contracting colon cancer than non-smokers.

Lack of regular physical activity: Absence of regular physical activity can increase the risk of colon cancer in men.

Consumption of alcohol: Regular, excessive alcohol consumption may increase the risk of colon cancer. This risk may be higher if you

consume beer and spirits. Some people believe that wine drinkers have a lower risk but that may be the influence of other individual factors.

Diagnosis and Detection

Early detection of colorectal cancer can help. However, it is not possible to detect colon cancer in the early stages. Colorectal cancer develops over a long period.

These tests can help doctors detect its presence:

Fecal occult blood test: Doctors conduct this test to detect blood in stool.

Digital rectal exam: Doctors insert a gloved and lubricated finger into the patient's rectum to feel for abnormal growth. This is not a screening test and it is possible to feel abnormal growth only if tumors are large and distinct enough.

Endoscopy: This is, at the time of writing, the most preferred form of colon cancer testing. It could be a **sigmoidoscopy** or a **colonoscopy**.

Sigmoidoscopy consists of inserting a lighted probe, a sigmoidoscope, into the rectum and lower colon to check for any abnormalities or polyps.

Colonoscopy refers to inserting a colonoscope into the rectum and the whole colon to check for any abnormalities. It can immediately remove any polyps or abnormalities. It is also possible to take tissue for biopsy.

PET imaging of the whole body: This is a very cost-effective method of testing for colon cancer. This test can provide an

accurate evaluation of the presence of tumors and the extent of the spread of disease.

Stool DNA testing: Pre-malignant adenomas and cancers do not degrade during the digestion process and remain stable even in the stool. Such testing, in combination with **Polymerase Chain Reaction**, can help to detect the presence of colon cancer with a high rate of accuracy.

Treatment of Colorectal Cancer in Men

Colorectal cancer is sometimes curable in the early stages. Chances of a successful cure diminish in the more advanced stages of colon cancer.

Common treatment options include surgery, chemotherapy, and radiotherapy. Doctors advise these treatments individually or as a combination according to the degree and the progress of the cancer.

Surgery: Colorectal cancer could require palliative, curative, bypass, fecal diversion or 'open and close' surgery according to location of tumor.

In very early stages, polyps may be removes through surgical techniques. In advanced cases, it is necessary to remove a section of the colon that contains the tumor to reduce the possibility and extent of recurrence.

Curative surgery involves total mesorectal excision.

Palliative surgery can prevent further morbidity due to bleeding of tumor and its effects. Doctors prefer a proximal fecal diversion through bypass surgery if the tumor affects other adjacent organs in the vicinity.

If it is a serious and very advanced stage of colorectal cancer, doctors remove the colon through open and close surgery.

Laparoscopic-assisted surgery can reduce size of incision and thereby minimize risks of infection.

Chemotherapy: This can shrink the tumor or slow its growth. This is the primary form of therapy if colon cancer is in the initial stages. Doctors may also advise this form of treatment after surgery.

Radiation therapy: This is not commonly used with colon cancer. It might cause radiation enteritis. It is sometimes used to reduce pain and if the tumor perforates the colon.

There are various support therapies to aid treatment of colorectal cancer. These include counseling through cancer support groups, social support groups etc.

Part-IV: The Top Three Cancer Killers in Women

12. Lung Cancer in Women

Lung cancer is a major cause of death in women. Although it is the second most common cancer after breast cancer, it causes more deaths in women than the other cancers, like ovarian cancer and breast cancer, put together.

Lung cancer has been steadily increasing in women while lung cancer in men has registered a decline over the years.

Causes for Lung Cancer in Women

Lung cancer in women is believed to mostly be due to smoking which is showing an alarmingly increasing trend among females. Women start smoking in their teens. There are around more than 500,000 teenage girls in the USA using tobacco products.

A major attraction towards smoking is the belief that smoking can control weight. There are many advertisements that cater to this belief too.

These advertisements use the approach that smoking can boost your confidence, show you as more independent and boost your circle of friends.

Smoking advertisements featuring women also exudes an exclusive sense of relaxation, pleasure, and higher social acceptability.

When you start smoking, you develop an addiction. It becomes difficult to quit smoking, although it is possible to do so. Women often find it more difficult to quit smoking than men do.

Nonsmokers and Lung Cancer in Women

Although smoking is a dominant cause for lung cancer in women, non-smoking women also fall prey to lung cancer. This is primarily due to passive smoking, radon gas, hormonal levels of estrogen and certain genetic factors that cause different responses to carcinogenic substances.

Lung cancer is reaching alarming levels in women and is sometimes more severe than in men.

Detection of Lung Cancer in Women

Although women normally undergo chest x-rays annually to detect the presence of lung cancer, these tests do not always deliver effective results.

X-rays cannot detect small tumors and there are sometimes some mis-interpretation of x-ray findings.

A lung-cancer screening technique using a CT scanner delivers better results in detecting cancer. Such scans present a three-dimensional picture of your lungs and indicate the exact location and presence of all internal organs.

This scan can detect very minute tumors and, therefore, detect malignancy in its early stages.

Effect of Lung Cancer in Women

Although lung cancer is a common disease in men and women, it may assume greater significance in women, due to biological and genetic differences between males and females.

These differences include:

Women have high levels of estrogen. Smoking causes serious changes in these levels. This affects the growth of cancer cells in a woman.

The genetic make-up of a woman is more susceptible to harmful effects of tobacco smoke. Changes in their genetic build-up may mean that their body is unable to control unwanted cell growth. This might lead to uninhibited growth of cancerous cells.

The metabolism of tobacco products and chemicals present in them are different in men and women. A woman's body is less able to repair damaged DNA, which is a major cause for lung cancer in women.

But, women seem to show a higher rate of survival with lung cancer than men do.

Effects of Quitting Smoking and Lung Cancer in Women

The best way to escape from lung cancer is to quit smoking. This act can sometimes produce goods results including:

Pulse rate and blood pressure register high levels during smoking. When women quit, these may register a sharp fall and start dropping, even returning to normal levels with some people.

Carbon monoxide levels in the blood remain very high in women smokers. These carcinogen levels often drop after they quit smoking.

You become more energetic within few weeks of quitting smoking.

Nerve endings start growing and therefore, your sense of taste and smell improves.

Within a year of quitting smoking, you may feel a marked change in any breathlessness, cough or tiredness that you were having, as you are able to breathe in and better process more oxygen.

If you stay smoke-free for five years, your risks of developing mouth, esophageal or bladder cancer and lung infections like pneumonia and bronchitis could fall by more than fifty percent.

The levels could be similar to those of a nonsmoker after ten to fifteen years of nonsmoking. You reduce changes of strokes, heart ailments, and premature death by around fifty to seventy percent.

Survival Rates of Lung Cancer in Women

As in any disease, early detection of symptoms of lung cancer can yield positive results of a longer and more comfortable future. Patients survive up to about five years at the time of writing though there are promising signs of improved treatments in current research.

The main cause for this is the low rate of early detection. Lung cancer does not show any early warning signs. Often, incessant cough, chest pain, or wheezing come to the fore after the disease spreads extensively.

The best way is to not smoke. If you already have developed an addiction to smoking, it is best to quit immediately.

Breast Cancer in Women

Breast cancer is the most common form of cancer among women and the second most common cause for death in women in the United States.

Many men also suffer this disease.

This starts as a lump in your breast or there could be changes in the structure of your breast. This type of cancer is more prevalent in white women with a lesser incidence in Asian and African women.

Anatomy of the Breast

Each breast is on chest muscles covering your ribs. There are around fifteen to twenty lobes in each breast. These contain smaller lobules, which contain many small milk-producing glands. Milk flows through lobules and ducts to nipples.

The dark area around the nipple is the areola. Breasts have many lymph vessels with small round shaped organs called lymph nodes. There are groups of such lymph nodes in the underarm, chest, collarbone and other body parts. These lymph nodes arrest bacteria, some cancer cells and other harmful substances.

Start of Breast Cancer

The breast and every body part consist of tiny cells. These cells, grow, divide and die on their own. New cells form when your body needs them.

Cells follow specific patterns. However, sometimes this orderly arrangement changes. New cells form when there is no need and

old cells do not die. The process of growth continues more rapidly than there is a need. Extra cells clump together to form a tumor.

Tumors can be benign or malignant. Benign tumors are harmless and it is possible to remove them. They do not usually grow again.

Malignant tumors cause a lot of harm. The cells of these tumors damage nearby organs and tissues. These cells continue to grow. Although it is possible to remove these tumors, they often grow again soon.

Sometimes, cancerous cells break away from their original lump and start forming lumps in other body parts. Breast cancer cells can spread to any part of the body.

Symptoms of Breast Cancer in Women

Common symptoms of breast cancer include:

- Change in size or shape of breast like nipple turning inward
- Swelling of breast or breast skin turning reddish
- Scaly and swollen nipples or development of tenderness in nipples
- Formation of lump in breast or near the underarm
- Pain in the breasts

Risk Factors for Breast Cancer in Women

There is no specific, known cause of breast cancer. However, there are certain risk factors that could possibly encourage the start of breast cancer.

These include:

Family History: If any of your family members or paternal or maternal relations have breast cancer, there is a possibility of you having it too. If a family member develops breast cancer before the age of forty, your risk may be higher.

Age: The risk for breast cancer may increase with age. Women over the age of sixty face a higher risk of developing breast cancer. If you develop cancer in one breast, there is a stronger possibility of developing it in the other too.

Genetic Causes: Changes in specific genes like BRCA2, BRCA1 and others could increase breast cancer risks.

Menstrual History: Women having their first menstrual period before the age of twelve may have a higher than average risk of breast cancer.

Women entering menopause after fifty-five also develop a higher risk for breast cancer.

Conceiving the first child after the age of thirty can prove risky. Women without any children show a higher rate of breast cancer.

Women on estrogen and progestin therapy after menopause may have a higher risk of developing breast cancer.

Other Factors: If you undergo radiation therapy for any reason, you may face a higher risk of breast cancer in later life.

Excessive weight gain after menopause could increase chances of breast cancer.

Women with dense breast tissues may be more likely to develop breast cancer.

Lack of physical activity could increase the chance of breast cancer too.

Some researchers believe that excessive intake of alcohol may be a factor in some cases of breast cancer.

Screening to Detect Breast Cancer

Early detection of breast cancer can help you secure remedial measures in the early stages.

Breast cancer screening can be through regular screening mammogram (an x-ray picture of your breasts), clinical breast examination and self-examination of breasts.

You should have **mammograms** every one or two years if you are in your forties. This may show a breast lump even before you can feel it. Such lumps may or may not be cancerous, but further detailed tests like biopsy can determine abnormalities.

Clinical breast examination takes around ten minutes and a professional health care provider can check your breasts for any abnormalities. Such checking involves looking for dimpling, rashes or any abnormalities in your breasts.

Additionally, health care providers also check under your arms for enlargement of any lymph nodes.

Self-examination of breasts is a good way to check for breast cancer. However, there can be small changes in your breasts due to aging, before and during menstrual periods, menopause, birth control treatments and others natural reasons.

Diagnosis of Breast Cancer

Doctors prescribe detailed screening, mammograms and other imaging procedures to detect the presence of breast cancer.

If there were lumps in your breasts, doctors would try to feel its size and texture. Benign lumps move easily while cancerous lumps are usually hard and may have odd shapes.

Ultrasound imaging is another technique of diagnosing breast cancer. Waves from ultrasound devices bounce off tissues. The computer uses echoes to create a picture. This shows if lumps are solid or filled with fluid. Solid masses of lumps may be cancerous.

Magnetic resonance imaging (MRI) makes detailed pictures of breast tissue using magnets. These produce more detailed results and help diagnosis too.

A biopsy involves removing small pieces of suspected tissue from your breasts to conduct detailed microscopic examination. Doctors prescribe additional tests if your biopsy tests are positive. These tests can help doctors determine the stage of your breast cancer.

Treatment Options for Breast Cancer in Women

Before starting treatments for your breast cancer, you can get a second opinion and then decide on the most suitable treatment options.

Common treatment options include chemotherapy, surgery, radiation therapy, biological therapy and hormone therapy**.**

Often, it is necessary to have a combination of treatments rather than a single type of treatment.

Surgery

Surgery is among the most common forms of treatment for breast cancer.

Breast sparing surgery is where doctors remove cancerous cells through surgical methods without removing the breast. They make incisions to remove the whole lump or make a separate incision at the lymph nodes to remove cancerous cells from the lymphatic system.

Radiation therapy is often used as a follow-up treatment.

Mastectomy surgery involves removal of the infected breast. Doctors also remove lymph nodes from underneath the arm.

Radiation therapy is a follow-up treatment.

You may choose to have breast reconstruction, a plastic surgery to rebuild and reshape your breast.

Breast removal surgery may cause some imbalance and discomfort in your neck and back. Surgery often causes tenderness and pain. You can take pain relievers to control your pain. Other side effects

of surgery include tingling and numbness in underarm, chest, upper arm and shoulder.

Although most such effects go away after few months, numbness does not go away in some cases.

Radiation therapy: This treatment option uses high-energy rays to kill cancerous cells. Doctors normally prescribe this treatment after performing surgery for breast cancer. The amount of radiation therapy depends on the spread of cancer within your body. This therapy can destroy any remaining cancerous cells in your breast.

Radiation therapy can be external radiation or internal radiation.

External radiation is through outside machines. You need to go to hospital for a specific number of days to receive treatment.

Internal radiation is through implanting of plastic tubes with radioactive substance in your breast. You need hospitalization while you have these implants within your body.

Normally, such therapy extends for many days. Then, the doctors remove the implants and allow you to go home.

Common side effects of radiation therapy are heavy breasts, tenderness, itchiness in the area and redness and dryness.

Wear loose clothing initially to help your wounds heal well. Although it is necessary to remain active during radiation therapy, you will feel very tired and exhausted.

Chemotherapy: This treatment option uses a combination of drugs to kill cancerous cells. Doctors either inject these drugs intravenously or prescribe pills. According to the severity of breast cancer, you can have chemotherapy treatment at home, as an

outpatient or under hospitalization. Drugs travel throughout your body in your blood. Therefore, you feel exhausted, bleed or bruise easily and may develop infections.

Common side-effects of chemotherapy include hair loss, nausea, vomiting, lack of appetite, diarrhea and mouth and lip sores.

Some cancer drugs could initiate menopause, causing vaginal dryness, hot flashes and permanent infertility too.

In some cases, you could become fertile during chemotherapy treatment.

Hormone therapy: This curative therapy prevents cancerous cells from gaining access to certain natural hormones like progesterone and estrogen they require for growing and developing within your breast.

Doctors use drugs like estradiol, tamoxifen and others to prevent your ovaries from making estrogen. Doctors could also remove your ovaries surgically to prevent supply of such hormones to cancerous cells within your breast.

Common side effects of hormone therapy include hot flashes, vaginal discharge, headaches, nausea, fatigue, vomiting, irritation of skin around vagina, irregular menstrual periods and skin rash.

Biological therapy: This therapy involves strengthening the immune system to fight cancer. Doctors use Herceptin through the patient's veins. Common side effects include pain, vomiting, weakness, diarrhea, nausea, rashes, breathing problems.

In some cases, there may be some damage to the heart.

Colorectal Cancer in Women

Many women may believe colorectal cancer to be a man's disease and do not pay attention to any possible symptoms.

The truth is that colorectal cancer can affect women too. One in every seventeen women in the United States could develop colorectal cancer.

The risk increases with age. Women over sixty-five are equally susceptible to breast cancer and colorectal cancer.

Women often express greater concern for breast cancer and are ready to undergo screening tests for it. It is equally important to understand that colorectal cancer can also prove to be a major health concern for women and not only men.

Colorectal Cancer

This is cancer of the colon. Certain body cells in the colon do not function normally. They divide very fast and produce excessive tissue which accumulates as a tumor.

The colon and rectum together complete the process of digestion. Cancerous growth in the colon is colon cancer and cancerous growth in the rectum is rectal cancer. Together, they are termed colorectal cancer.

Symptoms of Colorectal Cancer

In the early stages of colorectal cancer, there are hardly any symptoms. They develop much later.

Common symptoms include:

- Abdominal pain
- Blood in the stool
- Unexplained weight loss
- Changes in bowel habits
- Iron deficiency anemia
- Excessive tiredness

Common Factors that may Encourage Colorectal Cancer

Factors that could incite colorectal cancer in women include:

- **a high or low fiber diet.** If you eat a diet rich in refined products and many sugary products, you have a higher risk of contracting colorectal cancer.
- **Menopause**. Menopause could bring in marked changes in your body constitution and could cause cancer too.
- **family history of colon cancer.** If there is a family history of colorectal cancer, there is a stronger possibility that you could develop it too.
- **lack of physical activity.** If you do not follow any regular exercising pattern and lead a sedentary life, risk of such cancer is high.
- **Age.** Women over fifty have a higher risk of contracting colorectal cancer. Risk doubles with every additional five years.

- **presence of other cancers**. If you already suffer from any other type of cancer like breast cancer or lung cancer, it is possible to develop colorectal cancer faster.

Additionally,

Obese women have a higher chance of developing colorectal cancer.

Regular exercises can help reduce weight and thereby reduce risks of developing this type of cancer.

If you have hormonal replacement therapy for your post menopause problems, you can reduce risks of colorectal cancer.

Intake of regular calcium supplements, lots of fresh fruits and vegetables and a diet rich in fiber can reduce colorectal cancer risks.

Diagnosing Colorectal Cancer in Women

Common methods for diagnosing colorectal cancer include:

- **Colonoscopy** (every ten years). Colonoscopy delivers accurate results for detecting colorectal cancer. Women over the age of fifty should undergo this screening test. If you have a family history of colon cancer, it is best to go for a colonoscopy after the age of forty.
- **Sigmoidoscopy**
- **Fecal occult blood test** (yearly)
- **Barium enema** (every five to ten years). A barium enema test requires injection or ingestion of barium, which then settles as a lining in the colon wall. This helps in getting a clear picture of infections, tumors, and other abnormal growth in the colon. Doctors check for hidden blood in stools through fecal occult blood tests.

The major hindrance in screening methods is that women are often reluctant to go in for screening of colon cancer. Plus, there is a wide presumption that colorectal cancer affects men only.

This delay often allows cancer to grow. Colorectal cancer in the early stages is often curable but it presents a different picture in the later stages.

Very few women realize the high-risk factor of colon cancer and go in for regular screening.

Treatment Avenues for Colorectal Cancer

It is possible to treat colorectal cancer. There are numerous remedial therapies and medications for this cancer.

Estrogen replacement therapy, common among menopausal women, is one such therapy.

Many recommend drinking lots of water to help reduce the incidence of colorectal cancer.

Extensive diet restriction can bring in lot of relief for those suffering from colorectal cancer. Staying away from red meat and other animal fats is advised by some people. We should all include more legumes, fish, poultry, and whole grains in our diet unless advised otherwise by our doctor.

Chemo-preventive agents like nonsteroidal anti-inflammatory drugs may bring in marked relief from colorectal cancer symptoms and, some believe, may help with the disease itself.

Colorectal cancer develops in stages and early treatment produces best results. Treatment in stage I projects a 95% chance of five-year survival which goes down to three percent if the cancer

advances to stage IV. So, it is best to look for early treatment for colorectal cancer in women just as it is with all forms of cancer.

Part-V: Diagnosis and Treatment

Detection and Diagnosis of Cancer

Detection and diagnosis of the cancer is done through the following processes.

Imaging Techniques

Through imaging techniques, doctors can get a detail picture of what is going on without making any incisions. The various imaging techniques include:

1. X-rays:

X-rays are a type of electromagnetic radiation that helps us get a clear picture of the inside of our body. The dense structures of our body, such as cartilage and bones easily absorb, these electromagnetic rays but lighter substances (for example, blood) do not absorb them. So, any form of abnormal growth or cancer should appear as a shadow on the photograph.

A mammogram is a form of an X-ray and is the basis of screening for breast cancer.

2. CT scans:

A CT scan or CAT scan takes various X-ray photos from various angles of the body and then compiles them together, through a powerful computer and 3D imaging programs. The slices, showing cross sections of the patient's body help the doctor to locate exactly where any tumor is.

A CT scan can be a great help in planning radiotherapy or surgery.

3. MRI scans:

MRI or Magnetic Resonance Imaging uses magnetism to form a picture of the inside of your body. The body is exposed to a magnetic force that is 20,000 plus times stronger than the earth's magnetic field.

The body responds by vibrating slightly to release radio waves, which the scanner captures.

The waves are analyzes to form a picture of the inside of your body. It gives doctors a more detailed view than an X-ray. Therefore, doctors use them for head and brain examination and for measuring blood flow.

4. PET scans:

PET or Positron Emission Tomography is a recently developed technology, in which tiny 'tracers' are injected in the patient. These tracers release positrons, a subatomic particle, which collides with the atoms in your body to release energy in tiny bursts. The scanner picks up these energy bursts and forms a picture of the areas where the tracer has traveled.

A PET scan can help medical specialists to find out whether the tissue remaining after treatment of cancer is living or dead tissue.

5. Ultrasound:

This scan produces pictures of the inside your body through sound waves. This process involves sending sounds waves through small speakers, which rebound off the internal organs. There are microphones that pick up these reflected sound waves and transmit to the computer program which helps to give an informative image.

Endoscopy:

Endoscopy is a process in which an instrument is used to look into the internal parts of your body to check if there is any problem. This instrument is an endoscope; a thin, long, flexible tube which has a camera and a light on the end. The endoscope is most often inserted in the body through the gullet or anus. Sometimes, the surgeon makes a small incision to insert it.

The surgeon can also take samples of any abnormal tissue inside the patient's body.

Tissue samples through biopsy:

A microscopic examination of the tissue or, at times, blood (such as when testing for leukemia) of the suspected area may help to confirm whether it is cancerous.

Biopsy is the process of obtaining the tissue from the suspected cancerous area. A small piece of tissue is cut with a scalpel or a hollow needle can be used to obtain the sample. The needle finds its way to the suspected area with the help of an ultrasonography or CT scan.

Though the process does not require much time, most biopsies are painful, which is why the doctors numb the area by using local anesthetic.

Different types of Biopsies

1. Fine Needle Aspiration: This technique is quite popular in Sweden but it is now spreading to other countries also. This process involves an injection to draw the cells from the tumor or lump in the body.

2. Excisional Biopsy: This is the process of removing the entire organ or the lump in the body for testing. This technique is not widely used today, but may be used for breast lumps, spleen and lymphoma tests.

3. Incisional Biopsy:

This biopsy process is used for soft tissue tumors (for example fat, connective tissues, and muscles). A portion of the tumor is removed for study to determine whether it is malignant (sarcomas) or benign.

4. Endoscopic Biopsy:

This the most common form of biopsy. The endoscope is inserted through the hole in the body or surgical incision. The endoscope is a fiberoptic instrument that is flexible and offers visual monitoring of the abnormal area. Forceps are attached to this instrument, which helps in extracting tissue samples.

5. Colposcopic Biopsy:

Your gynecologist will perform this test for you; it is a further assessment of the Pap smear result. A colposcope provides visual examination of the cervix and helps in removing cells for biopsy.

6. Punch Biopsy:

In this process, a small cutter is used to remove a circular tissue sample. Dermatologists use this process to evaluate the suspect area and skin rashes.

7. Bone Marrow Biopsy:

This process is similar to fine needle aspiration, but this needle is large and strong because the needle has to pass through bone. Anesthesia is used for this biopsy but there are chances of you feeling uncomfortable throughout.

Molecular diagnostics:

Molecular diagnosis help the specialists determine the presence of cancer with the help of gene chips and mass spectrometry.

It studies how the proteins and gene interrelate in the cell. It also shows the gene and protein activity on various precancerous and cancerous cell. It monitors and captures the changes and the expression patterns.

For example, prostate-specific antigen or PSA is a chemical that normal prostate cells secrete into the bloodstream. However, in prostate cells that have become cancerous, the secretion is abnormally large.

It is not always that high PSA is the indication for cancer, because men with high PSA level may not have cancer and some men have prostate cancer but may not have high-level of PSA.

Generally, molecular diagnostics with techniques such as tissue samples and imaging, specifically contribute towards a diagnosis whether a person has cancer or not.

Prognosis of Cancer

Cancer is a life-threatening disease and the patient always wants to know their chance of recovery and survival, so that they can plan their future.

Some patients have a fear of statistics while others want as much information as possible about their disease. A prognosis of cancer is a forecast about the patient's chances of recovery, the time taken for recovery, the probability of recurrence of the cancer and the survival rate for that particular type of cancer.

Based on the forecast, the patient can plan his life, financial situation and mentally prepare himself and his family for the battle ahead.

Cancer prediction depends on several factors like the kind of cancer and the affected part of the body. Other issues are the stage of the cancer, appearance of the cancer cells and the chance of its spreading to other parts of the body. Some features are specific to a patient, like his health, age, family history, and reaction to the current treatment.

The doctor supports his prediction after considering the above factors and compares them with statistical data available for the particular type of cancer over several thousand patients.

For greater accuracy, the doctor references a database similar to the patient's condition. However, each patient is different and a prognosis is only an indicator of things to come. It may or may not be fully accurate. It can change with time depending on the patient's condition.

Statistical Survival Rate

A major part of the forecast is the patient's chance of survival, based on a five-year data of similar patients. This rate indicates the number of people who live for five years after the diagnosis of cancer. Survival rates for whites are higher than for African-Americans while, on average, only half the people with cancer survive.

More than sixty percent of children with cancer manage to survive.

It also takes in to account their health, the status of cancer and their treatment. A prognosis is useful as it helps review the treatment and its modification for the benefit of the patient.

Treatment Options for Cancer

There is no single treatment option for cancer. Cancer treatment usually involves a combination of treatments to achieve the best possible level of cure and relief.

Doctors consider various factors like the stage of cancer, your lifestyle, age and endurance levels before starting with any treatment option.

Normally, doctors discuss all possible treatment options and their side effects with you beforehand. This helps you prepare for any eventualities.

Have a frank discussion with your physician before starting with any cancer treatment option. All such treatments are able to increase survival rates of cancer patients.

Cancer, most commonly, causes a total lack of appetite. Bit, you should try to eat normal amounts of the important food groups to support the effects of cancer treatments.

Some cancer treatments may also reduce your appetite. Cancer and its treatments affect your taste buds and you may not find the usual taste in your favorite foods. You may develop new tastes too.

Although there is no restriction on the type of food intake, it is essential to eat proper food; you may drink nutritional supplements to help maintain necessary level of nutrition in your body (consult your doctor first).

In extreme cases, if it is not possible to eat by yourself, doctors will insert feeding tubes to provide you adequate nutrition.

Cancer Treatment Options

Important cancer treatment options include:

- Surgery
- Chemotherapy
- Radiotherapy
- Hormone therapy
- Gene therapy
- Immunotherapy
- Surgery

Surgery

For a very long time, **surgery** was the only treatment option for any type of cancer. It was essential to remove cancerous growth surgically from body. However, with advancement of science, other options are being used in preference where practicable.

Cancer surgery or **surgical oncology** can bring in successful results for treating cancer of voice box, breast, stomach, and food pipe. This technique involves removing affected part with overlying skin and muscle. One common technique is **radical mastectomy**. Cancer surgery also involves removal of lymph nodes surrounding the affected organ. This is **regional lymphadenectomy**. This surgery minimizes recurrence of tumors and cancers of breast, bowel, and stomach.

After surgery, therapies like adjuvant and neo-adjuvant help kill any cancerous cells that could have escaped detection during surgery. Recent advances like MRI, ultrasound, and CT scanning help

surgeons understand size of tumor and spread of disease before start of surgery. Keyhole surgery is helping surgeons to carry out successful operations without making huge incisions.

Doctors suggest chemotherapy and radiotherapy as follow-up treatments after cancer surgery. However, you can start these therapies only after giving sufficient time for your body to heal from cancer surgery.

Chemotherapy

Chemotherapy involves killing cancerous cells with chemicals that disrupt cell division. Chemicals used in chemotherapy either damage the proteins that help cell division or damage the cancer cells' DNA itself. Cancerous cells normally multiply very fast and at a higher rate than normal cells. However, certain specific cells in your body like those of hair follicles, immune system and bone marrow cells multiply at a higher rate than other body cells. Chemotherapy drugs may also harm these cells.

So, common side effects of these treatments are hair loss, nausea, and vomiting. Different drugs in chemotherapy have different effects on cancerous cells. Doctors either inject these drugs intravenously or prescribe pills. Doctors use a combination of different chemotherapy drugs for the best treatment.

Radiotherapy

This treatment involves the use of high-energy rays to kill cancerous growth. These rays destruct cell components and shrink it. Break-up of the cells may lead to formation of free radicals, which might cause further destruction to the inner parts of affected cells.

Radiologists use high-energy gamma rays, from metals like radium, or use special machines that heat metallic elements to produce electrons. Such electrons react with tungsten metal within an electric field and emit similar high-energy rays. Recent advancements in science have been able to develop targeted beams that do not cause harm to neighboring normal tissues.

CT scanning helps radiologists determine exact shape and size of a tumor. This can help to reduce side-effects drastically. A very recent form of radiotherapy involves implanting tiny radioactive metal rods around the tumor. Metals used include iridium and cesium. In addition to being an effective cancer treatment option, radiotherapy may prove beneficial to curb recurrent cancer, shrink cancerous growth before surgery, control cancerous symptoms in advanced stages of cancer and complement chemotherapy cancer treatment too.

Hormone Therapy

Different hormones in your body may aid cancerous growth. Estrogen helps certain types of breast cancer cells to grow rapidly. This type of hormone therapy targets hormone system of your body to help kill cancerous cells and arrest their further growth and spread.

Estrogen-blocker **tamoxifen** is believed to be one of the most effective, currently available hormone therapy treatments for breast cancer.

Diethylstilboestrol can control some instances of prostate cancer.

Cortisone may be beneficial for leukemia and lymphomas.

Lowering testosterone in the body may help to fight prostate cancer.

Gene Therapy

Cancer often occurs due to damaged DNA. **Gene therapy** involves setting right that damage to your genes to help you fight cancer. Renewing your genes may be possible by either blocking cancer-promoting action of certain proteins of damaged DNA or further damaging DNA of cancerous cells so that they soon die off.

Scientists are still researching into various possibilities of the use of gene therapy to help fight cancer.

In some cases, they inject special gene into cancerous cells that make a new enzyme. This can help fight cancerous growth within the cells.

Immunotherapy

Boosting your immune system can help your body fight against cancer. **Immunotherapy** functions as a cancer treatment option on this basis. Immunotherapy can be local or systemic.

Local therapy involves injecting vaccine into the affected part.

Systemic therapy targets the body's entire immune system and helps to control the spread of cancer in any part of the body.

Other Cancer Treatments

These include laser treatments, cryosurgery and hyperthermia.

Cryosurgery:

This is beneficial in treating liver cancer or tumors. It freezes tumor masses and can kill them.

Laser treatment:

This is beneficial for treating cancers on the body's surface or at places which you can reach through an Endoscope.

Hyperthermia:

This involves direct application of heat to the cancer-affected part.

Cancer – Complementary and Alternative Therapies

Conventional medicine cannot cure all types of cancer at this time.

Some patients respond well to alternative and complementary systems of medicine. These therapies may take a long time to work, but supporters claim that they are safe and have no side effects.

Not everyone agrees and you must consult your doctor or other qualified medical professional before trying any such treatment or regimen.

Critics argue that they have no scientific basis. But, there are many people that believe some particular treatment helped them with their cancer.

Complementary therapies are used alongside conventional treatment while alternative treatment refers just to the use of natural products.

These therapies can be classified into different types based on their origin.

Complementary Systems of Treatment

Acupuncture:

Acupuncture may help to control vomiting and in the management of acute pain in cancer patients, by suppressing the pain centers of the brain.

Aromatherapy:

This treatment involves inhaling natural floral scents in the form of oils. It may help to relieve depression and aid tension release by inducing a sense of well-being.

Hypnosis:

This may help cancer patients fight the chronic pain.

Massage:

It helps to relieve the tension from the muscles and induces relaxation in the body.

Diet Modification:

Consuming a vegetable and fruit based diet may help to reduce the incidence of prostate cancer among men.

Raw foods contain enzymes that help in better digestion and absorption of food, and antioxidants that some claim help to fight cancer.

Go for natural fresh foods, rather than unproven food supplements for best results.

Different Types of Diets:

Consuming a macrobiotic diet, comprising whole grain, nuts, and fiber-rich foods, may lower the risk of cancer but eat the recommended quantities of the vegetables for best results.

Some therapists recommend eating vitamin A, C, and E supplements in large quantities to fight cancer.

Herbal Tea:

Drinking herbal tea made from fresh herbs like rhubarb may help to reduce swelling, and is claimed to have antioxidant properties.

Plant Derivatives:

Injections of **amygdaline**, derived from lima beans, are claimed by some people to kill cancer, but it has cyanide that can kill the patient.

Plant based treatments:

Compounds derived from plants like the Yew tree may help in the treatment of some cancers.

Derivatives of mistletoe, used with chemotherapy, may help to reduce tumors.

Detoxification:

This involves consuming large quantities of liquid and vegetables to cleanse the body of toxins. Some processes involve the use of coffee or enzymes for detoxification. This cleansing is claimed to stimulate the body's immune system and to help fight cancer. However, this sort of regimen can lead to infections and electrolyte disparity.

Anti-Cancer Compounds:

Several plant and animal-based substances are claimed by some people to inhibit or even cure cancer. But, none of the products have been supported by independent scientific blind testing.

The origin and manufacturing processes used in preparing these products may be less than safe.

If you decide to undergo alternative therapies, consult a doctor first and always only put yourself in the care of qualified and experienced practitioners. An untrained therapist can ruin your health and cause unnecessary complications.

Always take your doctor in to confidence before you opt for these treatments. He can help you in case of any problems in the future and help avoid conflicting treatments that interfere with your conventional treatment.

Study all aspects of the treatment its duration, costs, and side effects if any, before you start.

Part-VI: Prevention and Coping with Cancer

How to Prevent Cancer

Continuing research has made it theoretically possible to prevent or minimize the risk of several types of cancers among men and women.

At least, we can reduce the risk by avoiding causative factors, going for regular checkups (especially important if you have a genetic predisposition to certain types of cancer), eating a high fiber diet and adopting a healthy, active lifestyle.

Keep away from smoking, as it is a definite cause of lung cancer.

Undergoing a regular PAP smear has greatly reduced the incidence of cervical cancer among women.

It is also possible to reduce cancer by surgical removal of the cancerous tissue so that it does not spread to other parts of the body.

Prophylactic screening for colon cancer can help in early detection and removal of malignant tissue.

Extensive studies by scientists reveal that reducing alcohol consumption may reduce the risk of getting cancer of the mouth, esophagus and some other types.

Maintaining a near optimum body weight may reduce the risk of getting colon and breast cancers among both men and women.

If possible, avoid work environments that contain chemicals and radiations that cause cancer. Workers in these surroundings must

have regular cancer screenings and take appropriate steps to minimize exposure to known carcinogens.

People with risky sexual behavior may get certain types of cancer.

Some studies indicate that hormone replacement therapy may bring a higher risk of some cancers but other studies give different indications.

Some viral infections like HPV may be linked to cervical cancer, and H pylori to cancer of the stomach. So, people with these viral infections should consult their doctor.

Consuming green vegetables and fruits is believed by some to reduce the risk of cancer because some substances in them may be natural cancer preventing agents that strengthen the body's immune system.

There is hope for people prone to get cancer, with the increasing availability of better medical techniques and effective medicines to fight cancer.

Action Plan for Coping with a Cancer Diagnosis

A cancer diagnosis can leave you and your family feeling helpless.

It may seem like it is the end of the road.

Dealing with cancer requires great mental strength on part of the patient and his immediate family.

Fighting cancer is as much a battle of the mind as the body.

Inform Yourself:

First, knowledge is power. So, arm yourself with all available sources of information on cancer, its treatment, costs and the side effects of every treatment.

Choose the Right Doctor:

Engage a good cancer specialist, one that is recommended by your hospital or a referral from someone who you know.

Prepare a list of questions for your first meeting with the specialist. Go with a family member or friend who can guide you and help ask the difficult questions.

A medical consultation is the time to explore the options and make decisions on the possible courses of treatment. This requires rational thought and a proper cost-benefit analysis.

Do not take hasty decisions.

Communicate with Your Family:

Take your friends and co-workers into your confidence and try to dispel all doubts from their minds.

Your attitude will determine their behavior towards you.

Expect sympathy and some doubts regarding your efficiency in the workplace, given your medical condition.

Do not hesitate to accept the help of friends and co-workers as cancer treatment can drain you physically and emotionally.

Try Innovative Approaches to Treatment:

Weigh the options and your degree of comfort dealing with, say, a conservative doctor with a fixed approach and a doctor willing to try new alternatives for cancer treatment.

Ask the doctor about the type of cancer, the stage of the disease and the chances of survival.

Enquire about all treatment options, the cost of treatment, the length of treatment, and the side effects of treatment.

You may want to know the chances of the cancer spreading to other parts of the body or to members of your family.

Be Optimistic:

Maintain a positive attitude in the face of hardship, as there will be highs and lows during the course of treatment.

Be frank with your family and share your fears and concerns with them.

Build an open communication with the doctor and other health professionals and support workers. Clarify all doubts with him before proceeding with any treatment.

Prepare Yourself for Changes in Appearance:

Cancer treatment could involve strong medication and chemotherapy that can cause nausea and hair loss. Anticipate these changes and plan ahead. Go for proper hairpieces or other accessories to maintain your normal physical appearance as far as possible.

This is important as alteration of natural appearance can greatly affect some people's self-esteem. Moreover, most of these items may be covered by insurance, so ask your insurance company about them.

Modify Your Diet:

Include green vegetables, high-fiber foods and whole grain in your diet.

Avoid processed foods and sweeteners.

Consume more fresh fruits.

Walk around to rejuvenate your body.

Continue with Your Daily Life:

Interact with friends, go out and seek entertainment and other social occasions with your friends and family whenever possible.

You need to consult your family and your doctor, then develop a plan to cope with all aspects of your cancer and its treatment.

That way, you will be better able to maintain a positive attitude and maintain your resolve to fight the disease.

Twenty Tips to Help Deal with Cancer

Getting a cancer diagnosis may seem like the end of the road for many patients, but this is not so. You can still enjoy a healthy life while undergoing treatment.

Here are a few tips to help you deal with cancer.

1. Relax: Do not be hassled. Control your stress levels by practicing some breathing techniques that help you relax.

2. Inform yourself: Learn everything possible about cancer, its causes, available treatments and their side effects. This helps you to understand your condition and make the best use of your discussions with your doctor about the best mode of treatment.

3. Enlist the help of family and peers: Involve your spouse or a close friend who can help you with difficult decisions during the course of treatment. They can help you weigh the benefits and effectiveness of various treatment options considering your physical and financial condition. Discuss the requisite medical tests that can improve your chances of survival and understand all options before choosing them.

4. Choose a Doctor that You Trust: Trust your doctor completely, but question him when in doubt. You may have to decide between a doctor who is conservative and goes by the prescribed medical protocol or someone who is open to trying new advances in cancer treatment. They will always have your best interests at heart and suggest what they believe is the most effective treatment for you.

5. Consider innovative treatments: Sometimes, your doctor may suggest alternative and new techniques that may work for you, but

does not have the approval of your insurance company. In these cases, you must use discretion, discuss the long-term benefits and the future course of treatment in all possible scenarios, and then make a decision.

6. Develop a positive attitude: Have patience as these treatments may be over a long period and you may have both successes and failures during this time.

7. **Avoid Information Overload:** So much information is available and you must decide how much you really want to know about your treatment, depending on your mental strength.

8. Take painkillers for relief: Cancer is a painful condition; so do not resist painkillers even if you feel sedated most of the time. Once the pain subsides, the doctors will modify your drug regimen. Always keep communication channels open between the doctors, nurses and you.

9. Have a normal social life: You may feel low at times. This is perfectly all right. Continue to mix with friends and family to boost your spirits and carry on with your normal activities as much as possible.

10. Slow down: Cut back on your household chores or get some help if needed. Cook more when you feel well enough to tide you over days when you are feeling less active.

Sit down to do your chores as much as possible. Get a small table to support your activities if you need to.

10. Break down daily household tasks: Take short breaks between chores and stretch activities more evenly over the week.

11. Modify your dietary habits: Cut down on excessive alcohol and coffee consumption. Avoid colas as they also contain caffeine. Choose to drink healthier fruit juices or vegetable juices instead.

12. Eat healthy: Try to eat more green fruits and vegetables as they contain enzymes that help in your digestion and absorption of food.

13. Avoid processed foods: They may contain harmful preservatives Reduce your intake of artificial sweeteners and hydrogenated foods as they may have negative effects.

A high fiber diet with plenty of water helps to relieve constipation and flushes the kidneys of the toxins generated by anti-cancer medication.

14. Prepare yourself for change in appearance: Cut your hair as it is bound to fall during chemotherapy and this will not alter your appearance so much.

15. Eat all meals to bolster your health: Never skip meals.

16. Carefully observe your body: Chemotherapy weakens your immune system, so watch out for signs of temperature changes a week after you begin chemotherapy.

17. Maintain high levels of hygiene: Wash your hands regularly and avoid contact with an ill person since your immunity is down and you may contract some infection.

18. Maintain good dental hygiene: Since anti-cancer drugs may cause mouth ulcers, brush regularly and clean your mouth with mouthwash after meals to avoid getting mouth ulcers.

19. Take more rest: Try to sleep longer as it helps the body rejuvenate. If possible, shift to a room with a bathroom and install handrails for support.

Install a phone next to your bed and keep emergency numbers handy so that you can get help immediately if required.

20. Connect with nature: Walk outside for a few minutes whenever possible to get some sunshine and fresh air. Being in touch with nature helps you to relax mentally.

If you are physically weak, have some family member or friend help you when needed.

Cancer can pull you down emotionally as well as physically, so try to enjoy a normal life without straining yourself too much.

If you keep the above tips in mind, you will be much better able to deal with your cancer and its treatment.

Part-VII: Cancer - Frequently Asked Questions

Cancer – Frequently Asked Questions

What is cancer?

Cancer is a type of disease that causes unrestricted growth of certain body cells. These cells grow abnormally and may spread to different parts of the body. These cells form clusters or tumors.

What are the Major Types of Cancer?

There are five major types of cancer. They are **sarcoma**, **carcinoma**, **leukemia**, **myeloma** and **lymphoma**. Some people suffer from more than one type of cancer too.

What are primary and secondary cancers?

Normally, cancer starts from one body part and may spread later to other parts. Cancer takes the name of the part the body where it originates.

Cancer starting at the prostate is called prostate cancer. This is a primary cancer. It could spread to the lung and cause lung cancer which would be a secondary cancer in that patient.

What is the difference between a malignant and a benign tumor?

A benign tumor is not cancerous and a malignant tumor is cancerous. Benign tumors do not cause any harm to other body tissues. Malignant tumors grow and divide beyond normal rates. They spread to different body parts and harm other body tissues.

Is cancer infectious?

No, cancer is not infectious. You cannot catch cancer from any person, nor can you pass on cancer to anybody.

What causes breast cancer?

There is no single cause yet found for breast cancer. Breast cancer can be influenced by hereditary factors in some cases. Other factors that are thought to influence a woman's chance of getting breast cancer include;

Starting menstruation at an early age,

Having no pregnancies,

Having the first pregnancy after the age of thirty,

Having a late menopause,

Having hormone replacement therapy for more than five years.

Using oral contraceptives and/or alcohol may increase the risks.

How do I detect breast cancer in its early stages?

It is important to detect breast cancer in early stages for effective treatment. Regular self-examination of breasts can help you detect any abnormalities immediately. Dense breast tissue or lumps should be checked by your doctor.

Women between 50 and 69 should have a mammogram every two years while those over 70 should have specific screening programs with the help of your doctor.

Women over forty should have a clinical examination of the breasts by trained health professionals.

How do I help people with cancer?

You can help people with cancer in many ways.

Help with their daily living so that they can get increased rest and get the best available treatments too.

Be sensitive to their needs and collect all possible information about their illness (if they ask you to as some people would not like to discuss and get detailed information about their illness.)

Do not probe too deeply.

You might help them to collect groceries

Prepare ready-to-eat meals which they can reheat and eat,

Drive them to their medical appointments

Help them to contact and use self-support and self-help groups,

Take them to the library or get books for them.

You can also take them to church if they ask you to and they feel well enough.

