

G.S MANDAL'S
MIT NURSING COLLEGE, AURANGABAD

WORLD CANCER DAY

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Theme: - "I am and I will"

(All About Your Story And Your Commitment)

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(III YEAR BASIC BSC NURSING)



World Cancer Day is celebrated by the **WHO** to make the people aware of the Cancer to cure the Cancer. World Cancer Day is used to develop the people to get them every information about the Cancer and to cultivate a better attitude towards the people.

Importance of World Cancer Day Celebration

World Cancer Day is used to celebrate to make thousands of people to make aware about the Cancer Disease and to make them cure by providing them with every treatment for the better cure.

World Cancer Day is the only day on the global health calendar where we can all unite and rally under the one banner of cancer in a positive and inspiring way.

It is essential for people to carry out any task with proper care and dedication. World Cancer Day is used to send the message to the people that they should remain healthy by eating the healthy food and Water to prevent from the Cancer Disease. It is necessary for people to get every information regarding Cancer Disease to get better protection from the ill effects of Cancer Disease.

Nowadays in some areas, there are lots of people who are a victim of Cancer Disease and are not allowed to touch or sit beside some people who believe that by touching them by the Cancer Patient will also make them a Cancer patient, So this is not a good sign in the minds of the people, and people should not fear the Cancer disease as no one can be the victim of the Cancer by touching a Cancer Patient.

People in India still believe this type of things as they lack the knowledge of the Cancer Disease. **World Cancer Day** is organised to make the people aware of the thing that they should be able to treat Cancer Patient like a normal person who doesn't possess any disease. So it is important for the people to have Cancer Events in their area to cultivate a positive attitude towards looking at the Cancer Patient.

People should not make feel the Cancer Patient like they are the only Cancer Patient who is not well in the society and rest of all are the normal people. So this will make them feel bad and unhappy. So people should be able to make such type of Cancer Patients to provide them better treatment by providing them with self-confidence and happiness in every term of life.

How people can help themselves:

- Make healthy lifestyle choices that include avoid using tobacco products, getting plenty of physical activity, eating a healthy diet, limiting alcohol, and staying safe in the sun.
- Know about signs and symptoms of cancer and early detection guidelines because finding cancer early often makes it easier to treat.
- Share stories about their own cancer experiences, communicate with decision-makers, and join support groups to help make positive change for all people affected by cancer.
- When possible, use work and other daily activities during and after cancer treatment as opportunities to maintain normality, routine, stability, social contact, and income.

How people can help others:

- Support cancer patients and survivors with the physical and emotional impacts of cancer even after treatment ends.
- Call on government leaders to commit adequate resources to reduce cancer deaths and provide a better quality of life for patients and survivors.
- Educate themselves and others about the link between certain lifestyle behaviours – including smoking, poor diet, and lack of physical activity – and cancer risk.
- Dispel rumours and myths that lead to stigma and discrimination against people with cancer in some communities.

- Encourage schools and workplaces to implement nutrition, physical activity, and no smoking policies that help people adopt healthy habits for life.



Know About CANCER

- ❖ **9.6 million** People die from cancer every year.
- ❖ **At least one third** of common cancers are preventable.
- ❖ Cancer is the **second-leading** cause of death worldwide.
- ❖ **70%** of cancer deaths occur in low-to-middle income countries.
- ❖ Up to **3.7 million** lives could be saved each year by implementing resource appropriate strategies for prevention, early detection and treatment.

HOW CANCER BEGINS

Cells are the basic units that make up the human body. Cells grow and divide to make new cells as the body needs them. Usually, cells die when they get too old or damaged. Then, new cells take their place.

Cancer begins when genetic changes interfere with this orderly process. Cells start to grow uncontrollably. These cells may form a mass called a tumour. A tumour can be cancerous or benign. A cancerous tumour is malignant, meaning it can grow and spread to other parts of the body. A benign tumour means the tumour can grow but will not spread.

Tumours can be divided into two groups:

- ❖ **Benign,**
- ❖ **Malignant**

Benign tumours –Are not cancerous and rarely threaten life. They tend to grow quite slowly, do not spread to other parts of the body and are usually made up of cells quite similar to normal or healthy cells. - For example a brain tumour inside the skull.

Malignant tumours- Are faster growing than benign tumours and have the ability to spread and destroy neighbouring tissue. Cells of malignant tumours can break off from the main (primary)

tumour and spread to other parts of the body through a process known as metastasis. Upon invading healthy tissue at the new site they continue to divide and grow. These secondary sites are known as metastases and the condition is referred to as metastatic cancer.

TYPES OF CANCERS

Cancer can be classified according to the type of cell they start from. There are five main types:

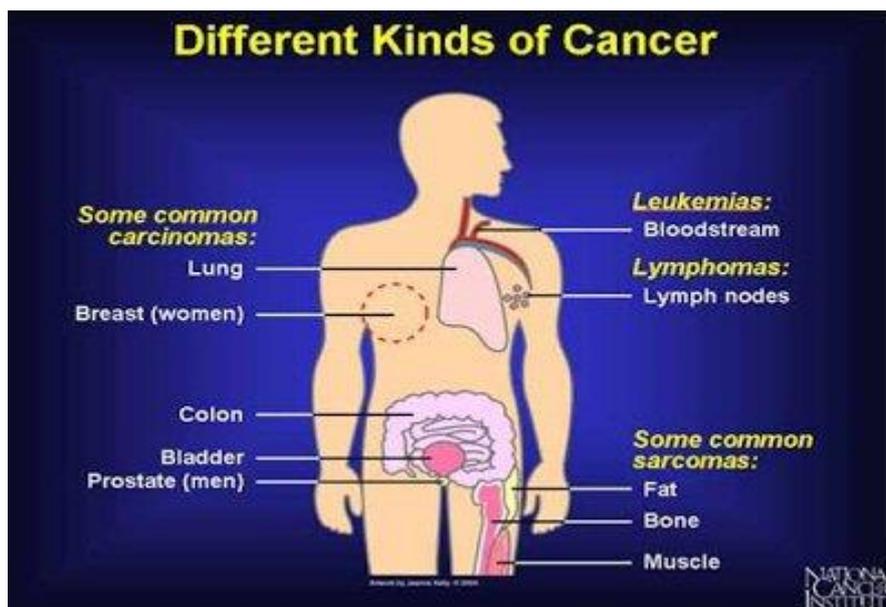
Carcinoma – A cancer that arises from the epithelial cells (the lining of cells that helps protect or enclose organs). Carcinomas may invade the surrounding tissues and organs and metastasise to the lymph nodes and other areas of the body. **The most common forms of cancer in this group are breast, prostate, lung and colon cancer**

Sarcoma – A Type of malignant tumour of the bone or soft tissue (fat, muscle, blood vessels, nerves and other connective tissues that support and surround organs).

Lymphoma and Myeloma – Lymphoma and Myeloma are cancers that begin in the cells of the immune system. Lymphoma is a cancer of the lymphatic system, which runs all through the body, and can therefore occur anywhere. Myeloma (or multiple myeloma) starts in the plasma cells, a type of white blood cell that produces antibodies to help fight infection.

Leukaemia – Leukaemia is a cancer of the white blood cells and bone marrow, the tissue that forms blood cells. There are several subtypes; common are lymphocytic leukaemia and chronic lymphocytic leukaemia.

Brain and spinal cord cancers – These are known as central nervous system cancers. Some are benign while others can grow and spread.



HOW CANCER SPREADS

As a cancerous tumour grows, the bloodstream or lymphatic system may carry cancer cells to other parts of the body. During this process, known as metastasis, the cancer cells grow and may develop into new tumours.

One of the first places a cancer often spreads is to the lymph nodes. Lymph nodes are tiny, bean-shaped organs that help fight infection. They are located in clusters in different parts of the body, such as the neck, groin area, and under the arms.

Cancer may also spread through the bloodstream to distant parts of the body. These parts may include the bones, liver, lungs, or brain. Even if the cancer spreads, it is still named for the area where it began. For example, if breast cancer spreads to the lungs, it is called metastatic breast cancer, not lung cancer.

CANCER STAGES

Most types of cancer have four stages: stages **I (1) to IV (4)**. Some cancers also have a stage 0 (zero).

- **Stage 0**-This stage describes cancer in situ, which means “in place.” Stage 0 cancers are still located in the place they started and have not spread to nearby tissues. This stage of cancer is often highly curable, usually by removing the entire tumour with surgery.
- **Stage I**- This stage is usually a small cancer or tumour that has not grown deeply into nearby tissues. It also has not spread to the lymph nodes or other parts of the body. It is often called early-stage cancer.
- **Stage II-** and Stage III. In general, these 2 stages indicate larger cancers or tumours that have grown more deeply into nearby tissue. They may have also spread to lymph nodes but not to other parts of the body.
- **Stage IV**-This stage means that the cancer has spread to other organs or parts of the body. It may also be called advanced or metastatic cancer.

CAUSES / RISK FACTORS

Modifiable risk factors include:

Alcohol – The evidence that all types of alcoholic drinks are a cause of a number of cancers is now stronger than ever before. Alcohol can increase the risk of six types of cancers, including bowel (colorectal), breast, mouth, pharynx and larynx (mouth and throat), oesophageal, liver and stomach.

Being overweight or obese – Excess weight has been linked to an increased risk of developing 12 different cancers, including bowel and pancreatic cancers. In general, greater weight gain, particularly as adults, is associated with greater cancer risks.

Diet and nutrition – A study shows that diets and nutritional intake, particularly diets high in red meats, processed meats, salted foods and low in fruits and vegetables have an impact on cancer risks, particularly colorectum, nasopharynx and stomach.

Physical activity – Regular physical activity not only helps to reduce excess body fat and the cancer risks associated with this, but being physically active can help to reduce the risks of developing colon, breast and endometrial cancers.

Tobacco – Tobacco smoke contains at least **80** different cancer-causing substances (**carcinogenic agents**). When smoke is inhaled the chemicals enter the lungs, pass into the blood stream and are transported throughout the body. This is why smoking or chewing tobacco not only causes lung and mouth cancers but is also related to many other cancers. The more a person smokes, the younger they start, and the longer they keep smoking, all further increase the risk of cancer. **Currently tobacco use is responsible for around 22% of cancer deaths.**

Ionising radiation – Manmade sources of radiation can cause cancer and are a risk for workers. These include radon, x-rays, gamma rays and other forms of high-energy radiation. Prolonged and unprotected exposure to ultraviolet radiations from the sun, sunlamps and tanning beds can also lead to melanoma and skin malignancies.

Work place hazards – Some people risk being exposed to a cancer-causing substance because of the work that they do. For example, workers in the chemical dye industry have been found to have a higher incidence than normal of bladder cancer. Asbestos is a well-known workplace cause of cancer.

Infection – Infectious agents are responsible for around 2.2 million cancer deaths annually. This does not mean that these cancers can be caught like an infection; rather the virus can cause changes in cells that make them more likely to become cancerous. Around 70% of cervical cancers are caused by Human papillomavirus (HPV) infections.

Non-modifiable risk factors include:

Age – Many types of cancer become more prevalent with age. The longer people live, the more exposure there is to carcinogens and the more time there is for genetic changes or mutations to occur within their cells.

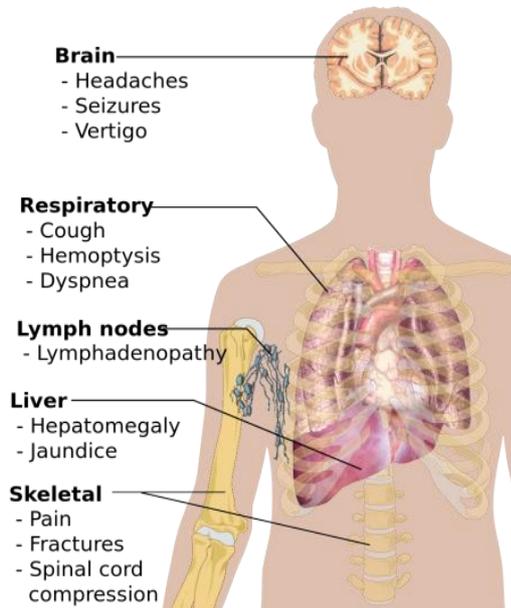
Cancer-causing substances (carcinogens) – are substances which change how a cell behaves, increasing the chances of developing cancer. Genes are the coded messages inside a cell that tell it how to behave (i.e. which proteins to make), mutations or changes to the gene, such as damage or loss, can alter how that cell behaves making it more likely to be cancerous.

Genetics – Some people are unfortunately born with a genetically inherited high risk for a specific cancer ('genetic predisposition'). This does not mean developing cancer is guaranteed, but a genetic predisposition makes the disease more likely.

The immune system – People who have weakened immune systems are more at risk of developing some types of cancer. This includes people who have had organ transplants and take drugs to suppress their immune systems to stop organ rejection, plus people who have HIV or AIDS, or other medical conditions which reduce their immunity to disease.

SIGNS AND SYMPTOMS

Common sites and symptoms of Cancer metastasis



Cancer. Early detection saves lives.

Key signs and symptoms of bowel cancer:

Bleeding from your bottom – either in the toilet, in your poo, or when wiping.
Going for a poo more often or your poo being more watery than usual for over three weeks.

Pain in your stomach that happens most days, lasts for more than a few minutes and isn't helped by having a poo.



Key signs and symptoms of breast cancer:

A lump in either your breast or armpit.

Change in appearance of your breast or nipple – such as skin dimpling or denting.
Discharge from one of your nipples – possibly blood-stained.



Key signs and symptoms of lung cancer:

A persistent cough that you've had for more than three weeks.

Coughing up blood – any amount of blood in your spit or phlegm should be checked out straight away.

Shortness of breath – feeling very out of breath, or more out of breath than is normal for you.



There are many symptoms of cancer but some of the potentially-serious **warning signs** are:

- **C-changes in bladder or bowel habits**
- **A-sore that doesn't heal**
- **U-unusual bleeding or discharges**
- **T-thickening or lumps**
- **I-indigestion or difficulty swallowing**
- **O-obvious changes in warts, moles, or the skin**
- **N-nagging cough or hoarseness of voice**
- **U-unexplained anaemia**
- **S-sudden loss of weight**

Unusual lumps or swelling – Cancerous lumps are often painless and may increase in size as the cancer progresses

Coughing, breathlessness or difficulty swallowing – Be aware of persistent coughing episodes, breathlessness or difficulty swallowing

Changes in bowel habit – such as constipation and diarrhoea and/or blood found in the stools

Unexpected bleeding – Includes bleeding from the vagina, anal passage, or blood found in stools, in urine or when coughing

Unexplained weight loss – A large amount of unexplained and unintentional weight loss over a short period of time (a couple of months)

Fatigue – If fatigue is due to cancer, individuals normally also have other symptoms

Pain or ache – includes unexplained or ongoing pain, or pain that comes and goes.

New mole or changes to a mole – look for changes in size, shape, or colour and if it becomes crusty or bleeds or oozes

Complications with urinating – Includes needing to urinate urgently, more frequently, or being unable to go when you need to or experiencing pain while urinating

Unusual breast changes – Look for changes in size, shape or feel, skin changes and pain

Appetite loss – Feeling less hungry than usual for a prolonged period of time

A sore or ulcer that won't heal – Including a spot, sore wound or mouth ulcer

Heartburn or indigestion – Persistent or painful heartburn or indigestion

Heavy night sweats – Be aware of very heavy, drenching night sweats

INVESTIGATION

- Cancer diagnosis begins with a thorough **Physical Exam** and a complete medical history. Laboratory studies of **blood, urine, and stool** can detect abnormalities that may indicate cancer.
- Screening tests include **Colonoscopy, Mammography, And PAP Test**
- When a tumour is suspected, imaging tests such as **X-rays, computed tomography (CT), Magnetic Resonance Imaging (MRI), Ultrasound, and fibre-optic endoscopy**
- To confirm the diagnosis of most cancers, a **BIOPSY** needs to be performed in which a tissue sample is removed from the suspected tumour and studied under a microscope to check for cancer cells.

MANAGEMENT

Prevention

There is no sure way to prevent cancer as it is caused by various factors. Each of the 1 trillion cells of the body has the potential to be a cancer cell. However, there are some things we can do to drastically reduce this risk: eating a proper diet rich in fibre and vegetables, having regular exercise, avoidance of triggers, living in a clean environment and having regular screening drastically reduces the risks of cancer and its complications. Cancer is a debilitating and scary disease but it is also preventable. Just make the proper choices. Screening and prevention are keys.

Management of Cancer depends on the specific stages and site of the cancer.

Treatment may be primary (to kill cancer cells), adjuvant (to kill remaining cancer cells), or palliative (to treat signs and symptoms).

Some treatment modalities include:

- ✓ **Chemotherapy**- Aims to kill cancerous cells with medications that target rapidly dividing cells. The drugs can also help shrink tumours, but the side effects can be severe. The side effects of chemotherapy include hair loss. However, advances in treatment are improving the outlook for people with cancer.
- ✓ **Immune therapy** -Immunotherapy uses medications and other treatments to boost the immune system and encourage it to fight cancerous cells. Two examples of these treatments are checkpoint inhibitors and adoptive cell transfer.

- ✓ **Radiation therapy**- uses high-dose radiation to kill cancerous cells. Also, a doctor may recommend using radiation to shrink a tumour before surgery or reduce tumour-related symptoms.
- ✓ **Supportive therapy**-Supportive cancer therapy alleviates symptoms caused by cancer or its treatment. It can improve the patient's wellbeing during and after the period of treatment. For instance, the anti-nausea medication used during chemotherapy is a form of supportive therapy. Cancer pain treatment is another form of supportive therapy.
- ✓ **Palliative care**-Palliative care alleviates the patient's physical and psychological symptoms to improve the quality of life. Palliative care is used in cancer treatment or to treat the symptoms arising from cancer treatment. Palliative care can be provided for months or even years.
- ✓ **Stem cell transplants** - Stem cell transplants are procedures that restore blood-forming stem cells in cancer patients who have had their destroyed by very high doses of chemotherapy or radiation therapy. Learn about the types of transplants, side effects that may occur, and how stem cell transplants are used in cancer treatment.
- ✓ **Hormone therapy** -involves taking medications that change how certain hormones work or interfere with the body's ability to produce them. When hormones play a significant role, as with prostate and breast cancers, this is a common approach.
- ✓ **Targeted therapies**- Targeted therapy is a type of cancer treatment that targets the changes in cancer cells that help them grow, divide, and spread. Learn how targeted therapy works against cancer and about common side effects that may occur.
- ✓ **Surgery** -is often a part of a treatment plan when a person has a cancerous tumour. Also, a surgeon may remove lymph nodes to reduce or prevent the disease's spread.

