



Cancer Awareness

Syllabus:

- (i) Recognise *Carcinogens encountered in daily life.
- (ii) Know the broad outlines as to how Cancer Patients are treated and palliated.
- (iii) Draw up a plan to create public awareness for the following :
 - (a) The “Seven” signs & symptoms of Cancer.
 - (b) Cancer is curable if detected early.
 - (c) Avoidance of harmful habits which could cause cancer.
 - (d) To dispel the myths attached to Cancer.

*Carcinogens – any substance that produces Cancer.

*Palliated to make disease less severe without removing its cause.

(i) Recognise *Carcinogens encountered in daily life.

Carcinogens are substances or exposures that can increase the risk of cancer. Many carcinogens are encountered in everyday life, and while some exposure is unavoidable, there are ways to reduce risk. Here are some common carcinogens you might encounter:

1. **Tobacco Smoke:** Smoking cigarettes and exposure to secondhand smoke are major risk factors for various cancers, particularly lung cancer.
2. **Alcohol:** Excessive alcohol consumption is linked to an increased risk of cancers, including those of the mouth, throat, esophagus, liver, and breast.
3. **Certain Foods:**
 - o **Processed Meats:** Products like bacon, sausages, and ham contain preservatives that can form carcinogenic compounds.
 - o **Grilled or Charred Foods:** Cooking meats at high temperatures can produce harmful chemicals like heterocyclic amines and polycyclic aromatic hydrocarbons.
4. **Asbestos:** Used in building materials and insulation in older buildings, asbestos exposure is a known cause of lung cancer and mesothelioma.
5. **Formaldehyde:** Found in some building materials, household products, and certain types of furniture, formaldehyde is a recognized carcinogen.
6. **Certain Chemicals in Cleaning Products:** Some cleaning agents contain chemicals like bleach or ammonia that can be harmful with prolonged exposure.
7. **Sun Exposure:** Ultraviolet (UV) radiation from the sun can increase the risk of skin cancer, including melanoma.
8. **Radon:** This naturally occurring radioactive gas can accumulate in homes, especially in areas with poor ventilation. Long-term exposure to high levels of radon increases the risk of lung cancer.
9. **Pesticides:** Some pesticides used in agriculture and gardening are linked to an increased risk of cancer, although the risk from occasional exposure is generally lower.
10. **Air Pollution:** Long-term exposure to air pollutants, such as particulate matter and nitrogen oxides, can increase cancer risk, particularly lung cancer.

11. **Certain Plastics and Packaging:** Some plastics, especially those containing BPA or phthalates, can release harmful chemicals. Choosing BPA-free products can help reduce exposure.
12. **Certain Workplaces:** Jobs involving exposure to specific chemicals, such as benzene or vinyl chloride, can pose cancer risks.

Reducing exposure to these carcinogens where possible, such as quitting smoking, using sunscreen, and choosing less processed foods, can help lower cancer risk.

(ii) Know the broad outlines as to how Cancer Patients are treated and palliated.

The treatment and palliation of cancer depend on various factors, including the type and stage of cancer, the patient's overall health, and their preferences. Here are the broad outlines:

Cancer Treatment

1. **Surgery**
 - Purpose: To remove the tumor and possibly some surrounding tissue.
 - Approach: Can be curative, where the entire tumor is removed, or palliative, aimed at relieving symptoms.
2. **Radiation Therapy**
 - Purpose: To kill cancer cells or shrink tumors using high-energy radiation.
 - Types: External beam radiation (targeted from outside the body) and internal radiation (brachytherapy, where a radioactive source is placed inside or near the tumor).
3. **Chemotherapy**
 - Purpose: To kill or inhibit the growth of cancer cells using drugs that target rapidly dividing cells.
 - Administration: Can be given orally, intravenously, or through other methods depending on the drugs and the type of cancer.
4. **Targeted Therapy**
 - Purpose: To target specific molecules involved in cancer cell growth and survival.
 - Approach: Uses drugs or other substances to specifically attack cancer cells while minimizing damage to normal cells.
5. **Immunotherapy**
 - Purpose: To boost or restore the body's natural immune system to fight cancer.
 - Types: Includes checkpoint inhibitors, CAR-T cell therapy, and cancer vaccines.
6. **Hormone Therapy**
 - Purpose: To block or remove hormones that fuel certain cancers, like breast or prostate cancer.
 - Approach: Can involve medications that lower hormone levels or surgery to remove hormone-producing organs.
7. **Bone Marrow/Stem Cell Transplant**
 - Purpose: To replace damaged bone marrow with healthy cells.
 - Types: Includes autologous (using the patient's own cells) and allogeneic (using donor cells) transplants.

Palliative Care

Palliative care focuses on improving the quality of life for patients with serious illnesses, including cancer. It can be provided alongside curative treatment or as the primary focus of care when curative options are no longer viable.

1. Symptom Management
 - Pain Relief: Using medications like opioids, non-opioid analgesics, or other interventions.
 - Nausea and Vomiting Control: Through medications and dietary changes.
 - Management of Other Symptoms: Includes shortness of breath, constipation, and loss of appetite.
2. Psychosocial Support
 - Counseling and Therapy: To address emotional and psychological issues related to cancer and its treatment.
 - Support Groups: For patients and families to share experiences and gain support.
3. Care Coordination
 - Care Planning: Coordinating care among various healthcare providers to ensure all aspects of the patient's needs are addressed.
 - Advanced Care Planning: Discussing and documenting preferences for end-of-life care.
4. Spiritual and Social Support
 - Spiritual Care: Addressing spiritual or existential concerns through chaplaincy or other spiritual support.
 - Social Support: Assistance with practical needs such as financial issues, caregiving, and navigating healthcare systems.
5. Hospice Care
 - Purpose: To provide comfort and support to patients nearing the end of life, focusing on quality of life rather than curative treatment.
 - Setting: Can be provided at home, in hospice centers, or in hospitals.

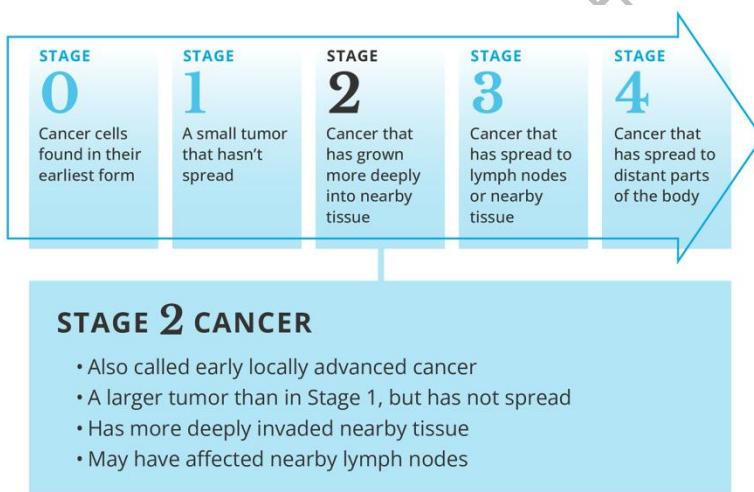
Both treatment and palliative care are tailored to the individual patient, aiming to balance effectiveness, quality of life, and personal preferences.

(iii) Draw up a plan to create public awareness for the following :

(a) The “Seven” signs & symptoms of Cancer.



(b) Cancer is curable if detected early.



Avoidance of harmful habits which could cause cancer.

Avoiding harmful habits that can increase cancer risk is an important step toward maintaining overall health. Here are some key habits to consider:

1. Avoid Tobacco Products: Smoking and using other tobacco products are strongly linked to various types of cancer, including lung, mouth, throat, and bladder cancer. Quitting or never starting is one of the most effective ways to reduce cancer risk.

2. Limit Alcohol Consumption: Excessive alcohol consumption can increase the risk of several cancers, including breast, liver, and colorectal cancer. Moderation is key, and for women, this means up to one drink per day; for men, up to two drinks per day.
3. Maintain a Healthy Diet: Eating a diet rich in fruits, vegetables, whole grains, and lean proteins while limiting red and processed meats can help lower cancer risk. Foods high in fiber and antioxidants are beneficial.
4. Stay Active: Regular physical activity is associated with a lower risk of several cancers, including breast, colon, and prostate cancer. Aim for at least 150 minutes of moderate-intensity or 75 minutes of vigorous-intensity exercise each week.
5. Protect Your Skin: Excessive exposure to UV radiation from the sun or tanning beds increases the risk of skin cancer, including melanoma. Use sunscreen with SPF 30 or higher, wear protective clothing, and avoid tanning beds.
6. Get Regular Screenings: Early detection through regular screenings can catch cancers like breast, cervical, and colorectal cancer early when they are more treatable. Follow guidelines for screenings based on your age, gender, and family history.
7. Be Aware of Environmental Exposures: Limit exposure to known carcinogens, such as asbestos and certain chemicals. Ensure proper ventilation and follow safety guidelines if you work with hazardous substances.
8. Vaccination: Certain vaccines can help protect against cancer-causing infections. For example, the HPV vaccine can protect against cancers caused by human papillomavirus, and the hepatitis B vaccine can help prevent liver cancer.
9. Manage Weight: Obesity is a risk factor for several types of cancer. Maintaining a healthy weight through balanced diet and regular exercise can help reduce this risk.
10. Avoid Excessive Use of Prescription Painkillers: Long-term use of some prescription painkillers, particularly opioids, has been associated with an increased risk of certain cancers. Use such medications only as directed by a healthcare professional.

By incorporating these practices into your lifestyle, you can significantly reduce your risk of developing cancer and improve your overall health.

9 Easy Ways to Reduce Your Cancer Risk



To dispel the myths attached to Cancer

Cancer, as a disease, is surrounded by many myths and misconceptions. Here are some common myths and the truths behind them:

Myth 1: Cancer is always a death sentence.

Truth: Many types of cancer are highly treatable, especially when detected early. Advances in treatment and early detection have significantly improved survival rates. Many people live long and healthy lives after a cancer diagnosis.

Myth 2: Cancer is contagious.

Truth: Cancer is not a contagious disease. You cannot catch cancer from someone else through contact, air, or shared spaces.

Myth 3: Only older people get cancer.

Truth: While the risk of cancer increases with age, it can affect people of all ages, including children and young adults. Some cancers are more common in younger populations, like leukemia and certain types of brain tumors.

Myth 4: Cancer is caused by lifestyle choices alone.

Truth: While lifestyle factors like smoking, diet, and physical activity can influence cancer risk, many factors contribute to cancer, including genetics and environmental exposures. Some cancers occur without any apparent risk factors.

Myth 5: Chemotherapy is always a terrible experience.

Truth: Chemotherapy affects everyone differently. Advances in treatment have improved the management of side effects, and many people have tolerable or manageable experiences with chemotherapy.

Myth 6: Cancer can be cured with alternative medicine alone.

Truth: While some alternative therapies can complement traditional treatments and improve quality of life, they should not replace conventional cancer treatments. Evidence-based medicine is crucial for effective cancer treatment.

Myth 7: Eating sugar causes cancer to grow faster.

Truth: While a diet high in sugar is not healthy and can lead to obesity (a cancer risk factor), sugar itself does not cause cancer or make it grow faster. Cancer cells use glucose for energy, but this is true for all cells.

Myth 8: Cancer always causes noticeable symptoms.

Truth: Some cancers can be asymptomatic in their early stages. Regular screenings and check-ups are essential for early detection, especially for cancers that may not present obvious symptoms until they are more advanced.

Myth 9: If you have a family history of cancer, you are guaranteed to get it.

Truth: Having a family history of cancer does increase risk, but it does not guarantee that you will develop cancer. Many people with a family history never get cancer, and various factors, including lifestyle and environmental influences, play a role.

Myth 10: All cancer treatments are the same.

Truth: Cancer treatment varies based on the type, stage, and location of cancer, as well as individual patient factors. Treatments may include surgery, radiation, chemotherapy, immunotherapy, targeted therapy, and hormone therapy, tailored to each patient's needs.

Dispelling these myths can help in understanding cancer more accurately and fostering better support and treatment options for those affected.