

CANCER

Definition / Identification

Cancer may be regarded as a group of disease characterized by an

- ❑ Abnormal growth of cells
- ❑ Ability to invade adjacent tissues and even distant organs
- ❑ Eventually death of the affected patient of the tumour has progressed beyond that stage when it can be successfully removed

Cancer can occur at any site or tissue of the body and may

CANCER



The major categories of cancer are

- ❑ Carcinomas, which arise from epithelial cells lining the internal surfaces of the various organs.(e.g. mouth, esophagus, intestines, uterus) and from the skin epithelium.
- ❑ Sarcomas, which arise from the mesodermal cells constituting the various connective tissues (e.g fibrous tissue, fat and bone)
- ❑ Lymphomas, myeloma and leukaemias arising from the cells of bone marrow and

CANCER



The term “primary tumor” is used to denote cancer in the organ of origin, while “secondary tumor” denotes cancer that has spread to regional lymph nodes and distant organs.

As the disease advances, symptoms and signs of invasion and distant metastases, becomes clinically evident.

CANCER

Magnitude of the Problem

Worldwide :

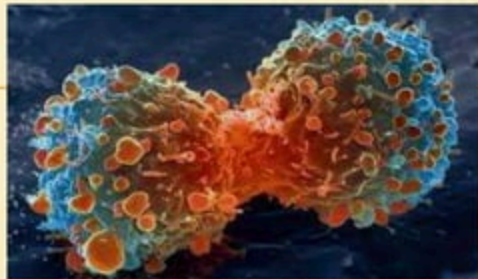
- ❑ Approximately 10 million new cases and more than 6 million deaths (12% of all deaths) occur due to cancers every year.
- ❑ It is estimated that more than 22 million people would be living with cancers, worldwide at any given point of time. These figures represent an increase of around 19% in incidence and 18% in



CANCER

Magnitude of the Problem

Worldwide :



- ❑ In terms of incidence, the most common cancers world-wide are those of lung (12.3% of all cancers), breast (10.4%) and colo rectum (9.4%).
- ❑ Lung cancer is the largest single cancer in the world (1.1 million annually).

CANCER

Magnitude of the Problem



Worldwide :

- ❑ The top three causes of death from cancer are those of the lung (17.8% of all cancer deaths), stomach (10.4%) and liver (8.8%).
- ❑ Developing countries contribute to more than half of the total cancer cases worldwide.
- ❑ By 2020, the new cases are expected to reach at least 15 million a year and deaths 10 million. The projection of new cases of cancer per year, for 2020, is 6 million and 9.3 million respectively from developed and developing countries.

MAGNITUDE OF THE PROBLEM



INDIA :

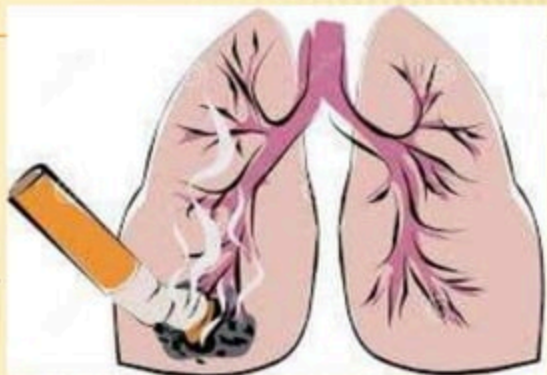
- Approximately 8 lakh new cases of cancers are expected to occur every year. Large majority of these are tobacco related and hence potentially preventable.
- It has been estimated that 48% of cancers among men and 20% in women are due to tobacco.
- Cancer incidence in India is estimated to be around 70 - 90 per 100,000 populations with 700,000 - 900,000 new cases of cancer every year.



MAJOR RISK FACTORS FOR CANCERS

TOBACCO :

- ❑ Tobacco smoking is the main known cause of human cancer-related deaths, worldwide.



An increase in risk of lung cancer (relative to a non-smoker) is consistently evident at the lowest level of daily consumption, and is also proportional to the duration of smoking.

- ❑ In general the relative risk (RR) of lung cancer due to smoking is of the order of 10 to as high as 20 times

Major Risk Factors for Cancer



Alcohol Drinking :

There have been suggestions of a possible carcinogenic effect of alcohol drinking on other organs, such as the lung, but the evidence is still inconclusive.

For all cancers caused by drinking alcohol, the risk of cancer increases with the level of consumption, up to an intake of about 80 g of ethanol / day (equal to 8 small pegs of hard drinks as Rum or whisky).

Major Risk Factors for Cancer



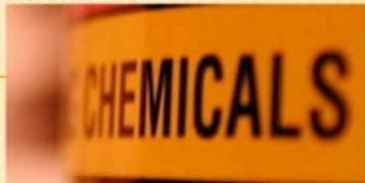
Occupational Exposures :

- 25 chemicals or mixtures, for which exposures are mostly occupational, have been established as human carcinogens, the important ones being asbestos, crystalline silica and heavy metals.
- Aromatic amines have been shown to increase the risk of Bladder cancer; benzene that of Leukemias and that of myelogenous leukaemia in particular ; Asbestos and other fibres have been associated with Lung cancer and mesothelioma. Cancer of the lung can be caused by exposure

Major Risk Factors for Cancers

Occupational Exposures :

- ❑ Nickel refining also carries carcinogenic risk. Coal tar, coal gas production and iron founding are associated with cancers of the skin and of other sites, including the urinary and respiratory systems.
- ❑ Work in iron and steel founding is also associated with an elevated risk of lung cancer.
- ❑ Nasal Adenocarcinomas are caused by exposures in the furniture and cabinet making industry, mainly among people exposed to wood dust. Similarly, among painters, 40% excess risk of lung cancer has been consistently



MAJOR RISK FACTORS FOR CANCERS



Environmental Pollution :

In the present context, “environmental pollution” refers to a specific subset of cancer causing environmental factors, namely, contaminants of air, water and soil.

The carcinogenic pollutants for which most information is available include asbestos (referring here to non occupational exposure); toxic agents in urban air; pollutants, chlorination by-products).

Various studies suggest that environmental pollution accounts of 1-4% of the total burden of cancer in developed countries.

MAJOR RISK FACTORS FOR CANCERS

Food Contaminants :

Food may be contaminated by mycotoxins. The most

studied are Aflatoxins, which occur as food contaminants in hot, humid parts of the world, with diets based upon maize and groundnuts (peanuts). Aflatoxins are products of the aspergillus fungi and particularly accumulate during storage of grains.

Together, aflatoxin exposure and HBV infection are the main risk factors accounting for the high incidence of hepatocellular carcinoma in some regions of Africa, Asia and South America .



MAJOR RISK FACTORS FOR CANCERS

Radiation :

Ionizing radiations are one of the most intensively studied carcinogens. Exposure to ionizing radiations from natural as well as from industrial, medical and other sources, can cause a variety of neoplasms, including leukaemia, breast cancer and thyroid cancer.



MAJOR RISK FACTORS FOR CANCERS

Radiation :

- ☐ Sunlight is by far the most significant source of ultraviolet irradiation and causes several types of skin cancer, particularly in highly-exposed populations with fair skin, e.g. Australians.
- ☐ Extremely low frequency electromagnetic fields generated by electrical power transmission have been associated with an increased risk of childhood leukaemia, but the findings are not conclusive.



MAJOR RISK FACTORS FOR CANCERS

Chronic Infections :

- ❑ Infectious agents are one of the main causes of cancer, accounting for 18% of cases worldwide, and the majority occurring in developing countries.
- ❑ The most frequently affected organ sites are liver (Hepatitis B and C, liver flukes), cervix uteri (Human Papilloma Viruses), lymphoid tissues (Epstein-Barr virus), stomach (*Helicobacter pylori*) and the urinary system (*Schistosoma haematobium*).



MAJOR RISK FACTORS FOR CANCERS

Chronic Infections :

- The mechanism of carcinogenicity by infectious agents may be direct, e.g., mediated by oncogenic proteins produced by the agent (e.g., human papilloma virus) or indirect, through causation of chronic inflammation with tissue necrosis and regeneration.
- Strategies for prevention include vaccination (Hepatitis B virus), early detection (cervical cancer) and eradication of the infectious agent (*Helicobacter pylori*).



MAJOR RISK FACTORS FOR CANCERS

Diet and Nutrition :

Based on available evidence, the major factors in diet related to cancers are :

- ❑ Vegetables and Fruits
- ❑ Salt and salt-preserved foods
- ❑ Meat
- ❑ Refined Sugars
- ❑ Fat Intake
- ❑ Micronutrients
- ❑ Food Additives

TOP 5 CANCER - CAUSING FOODS

Fried Potatoes



Doughnuts



Sweetened Beverages



Burned Meat



Hot Dogs



TOP 5 ANTI - CANCER FOODS

Noni



Turmeric



Green Leafy Vegetables



Tomatoes



Sour - Sop



MAJOR RISK FACTORS FOR CANCERS

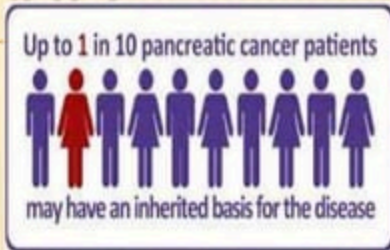
Overweight, Obesity and Reduced Physical Activity :

Western type of diet (characterized by high calorie food rich in animal fat and protein), often combined with a sedentary lifestyle and hence energy imbalance and obesity, increases the risk of colon, breast, prostate, endometrial and other cancers. Epidemiological studies have shown, with varying degrees of consistency, that excess body mass is associated with an increased cancer risk.



MAJOR RISK FACTORS FOR CANCERS

Genetic Susceptibility :



Inherited cancer

syndromes(e.g.retinoblastoma, neurofibromatosis etc.), usually involving germline mutation in tumour suppressor or DNA repair genes, may account for up to 4% of all cancers.

Inherited mutations of the BRCA 1 gene account for a small proportion of all breast cancers, but affected family members have a greater than 70% lifetime risk of developing breast or ovarian cancer.

MAJOR RISK FACTORS FOR CANCERS

- ❖ Reproductive Factors and Hormones :
 - ❑ Female sex hormone metabolism, reproductive factors and menopausal status affects the development of endometrial, ovarian and breast cancer.
 - ❑ Use of combined oral contraceptives accounts for a slight increase in risk of breast cancer, but is protective against ovarian and endometrial cancers. Hormone replacement therapy is associated with increases in risk of breast and endometrial cancers.
 - ❑ For breast cancer, incidence rates rise more steeply with age before menopause than after, when ovarian synthesis of estrogen production gradually diminishes. Furthermore, breast cancer risk is increased in women who have early menarche, or who have late menopause, whereas an early age at first full term

MAJOR RISK FACTORS FOR CANCERS

- pregnancy and high parity are associated with reduced risk of cancers of breast, ovary and endometrium.
- Ovarian cancer risk does not show strong relationship with menstrual history, but is clearly and inversely

EPIDEMIOLOGY OF COMMON CANCERS



Lung Cancer :

- ❑ Lung cancer is the most common tumour worldwide, with 900,000 new cases each year in men and 330,000 in women. It is leading causes of death from cancer. In India also, it is the commonest form of cancer among males.
- ❑ In men more than 80% of lung cancer cases are caused by smoking; in women the attributed risk is less (about 70% in Northern Europe; 45% worldwide). Some occupational exposures and air pollution (including passive tobacco smoke) make a minor contribution to incidence.
- ❑ No population-based screening procedures have been established. No effective treatment is available; the five-

EPIDEMIOLOGY OF COMMON CANCERS

Breast Cancer :



Breast Cancer

- Breast cancer is the most common malignancy affecting women, with more than one million cases occurring worldwide annually. Affluent societies carry the greatest risk, with incidence rates of >80 per 100,000 population per year.
- In India, it is the second commonest cancer among females. Though it can be detected early and treated with effective measures like self / Clinical Breast examination or mammography, in our country, only 15% patients present in the localized stage; in 75% regional lymph nodes are already involved while 10% have distant spread at the time of reporting.

EPIDEMIOLOGY OF COMMON CANCERS



Breast Cancer :

The worldwide breast cancer epidemic has many etiological factors, including

- ❑ Diet and diet related lifestyle factors including obesity (for post-menopausal breast cancer),
- ❑ Western type of high caloric diet, low intake of dietary fibre,
- ❑ Physical inactivity,
- ❑ Low intake of fruits and vegetables,
- ❑ Alcohol use and, tall stature; hormone related and reproductive factors (early menarche, late or no pregnancy, late menopause,
- ❑ Use of oral contraceptives, and lack of breast feeding); previous history (family history of breast cancer; history of benign breast disease);
- ❑ Exposure to ionizing radiations at the time of development of breasts.

EPIDEMIOLOGY OF COMMON CANCERS

Cancers of the Female Reproductive Tract :

- ❑ Cervical cancer is the second most common cancer of women worldwide with more than 470,000 new cases per year, of about 230,000 deaths every year.
- ❑ More than 80% occur in developing countries. In India, it is the commonest cancer among females, with more than a lakh new cases being detected and 75000 deaths every year.



EPIDEMIOLOGY OF COMMON CANCERS

Cancers of the Female Reproductive Tract

:

- Sexually transmitted infection with human papilloma virus (HPV) is fundamental to development of carcinoma of the cervix. HPV prevalence increases with multiple sexual partners and poor genital hygiene.
- Early age at first sexual intercourse and multiparity are other risk factors.
- Population based screening with pap smear has improved early detection and survival.



EPIDEMIOLOGY OF COMMON CANCERS

Oral and Other Head & Neck Cancers : The most common cancer in the head and neck, namely oral cancer, ranks eleventh worldwide (390,000 new cases per year), while cancers of the pharynx (65,000 cases) and larynx (160,000 cases) are less common.



EPIDEMIOLOGY OF COMMON CANCERS



Oral and Other Head & Neck Cancers

- ❑ In India, oral cancer is the commonest cancer among males. In India, oral cancer is mainly due to smokeless tobacco (tobacco chewing), which is the single most important risk for oral cancer.
- ❑ Other risk factors include alcohol use, betel nut chewing, and chronic trauma to oral mucosa by sharp teeth or ill-fitting dentures.

EPIDEMIOLOGY OF COMMON CANCERS

Oral and Other Head & Neck Cancers :

- Oral cancer is eminently suited to early detection and treatment by regular inspection of oral cavity for leukoplakia or ulcers. Early-stage tumours can be surgically resected, However, in developing countries like ours, many patients present late in the disease. Overall, oral cancer patients have a five-year survival rate of less than 50%.



EPIDEMIOLOGY OF COMMON CANCERS

Cancers of the Male Reproductive Tract :

- ❑ Prostate cancer accounts for about 200,000 deaths annually worldwide, predominantly afflicting older men in developed countries.
- ❑ Risk factors include high caloric intake and low physical activity.
- ❑ Black men have the highest, white men intermediate and Asian men a lower risk.



EPIDEMIOLOGY OF COMMON CANCERS

Cancers of the Male Reproductive Tract :

Recorded incidence is increasing in many countries, partly as a result of screening for elevated serum levels of prostate-specific antigen. Testicular cancer mainly affects young men, with close to 50,000 new cases each year worldwide

TESTICULAR CANCER
IS THE **MOST COMMON CANCER**
IN **MALES 15-35 YEARS OLD.**

PREVENTION AND CONTROL OF CANCERS

The modern knowledge is certain that cancers represent serious maladies which have great potential for prevention, as well as early diagnosis and effective treatment in many instances. Prevention of Cancers should be a totalistic approach, targeting all levels of prevention, viz., primary, secondary as well as tertiary levels.



Key Messages - Community Education for Cancer Control

Stop Tobacco in any form.

Eat at least half a Kg of fresh, seasonal fruits and vegetables every day

Eat plenty of whole grains, pulses, beans & legumes in diet

Keep salt consumption to < 5 grams a day; avoid food items which are salt-preserved, smoked or cooked in re-heated oils

Exercise briskly : at least 2 miles (3.2 Kms) of brisk walk in 30 minutes every day

Avoid Ghee, butter, deep fried, thick-gravied, creamed and sugary foods

Avoid "Red Meat" (lamb, beef, pork)

Maintain body weight with proper combination of diet and exercise (BMI at < 25; waist at < 90 for males & < 80 for females)

Avoid sexual promiscuity

Maintain hygiene of genital organs

Take vaccination against hepatitis - B

Do a self examination of oral cavity and breast (females) once a month

Report if any have "Warning Signs"

Ensure proper protections in occupational settings

PREVENTION AND CONTROL OF CANCERS

- ❑ Tobacco Control
- ❑ Alcohol
- ❑ Sexual and Reproductive Factor
- ❑ Diet, Physical Exercise and Avoidance of Obesity
- ❑ Occupation
- ❑ Environmental Pollution
- ❑ Radiation Protection
- ❑ Infection
- ❑ Reduction of Exposure to Ultraviolet Radiation
- ❑ Chemoprevention



TOBACCO CONTROL



- ❑ Tobacco induced death and diseases are preventable; halving current smoking rates would avoid 20-30 million deaths before 2025 and 150 million by 2050.
- ❑ Smoking cessation is very effective in reducing risk of lung cancer even in later life. The greatest saving of life would result if rates of smoking uptake by children and adolescents were decreased.

TOBACCO CONTROL



- Comprehensive tobacco control, including implementation of regulatory measures and encouraging personal commitment, requires coordinated involvement of government, professionals and planners.
- Tobacco control involves health promotion and education, advocacy, support for cessation, community mobilization, taxation and other fiscal measures, livelihood alternatives, regulation, legislation and enforcement.

ALCOHOL

Control of alcohol requires actions similar to those for tobacco control. The action should be targeted towards individuals and communities and include taxation, general public education, encouraging highly vulnerable groups like young people to avoid starting consumption, etc.

SEXUAL AND REPRODUCTIVE FACTORS

- ❖ Human Papilloma Virus (HPV) has now been identified as the etiological agent responsible for cervical cancer. HPV prevalence increases with high risk sexual behaviour and poor sexual hygiene.
- ❖ Education regarding sexual hygiene and safe sexual behaviour should be provided for prevention of cancer cervix. Safe sexual behaviour protects women from the risk of cancer by preventing infection with HPV.
- ❖ Breast cancer is not much amenable to primary prevention, to any large extent. Early detection of cancer is the main strategy for improving survival in breast cancer.

DIET, PHYSICAL EXERCISE AND AVOIDANCE OF OBESITY

Certain basic measure may help in reducing risk of cancer :

- ❑ Avoid being underweight or overweight.
- ❑ Engage in regular, brisk physical activity.
- ❑ Consumption of alcohol is not recommended.
- ❑ Limit consumption of salted, deep fried foods.
- ❑ Choose predominantly plant based diets rich in grains, legumes and fruits and vegetables.
- ❑ Restrict the intake of red-meat (beef, pork, lamb) and preserved meat.

aim to be a healthy weight throughout life

WEIGHT

**CANCER
PREVENTION**

DIET

**PHYSICAL
ACTIVITY**

choose mostly plant foods, limit red and avoid processed meat

be physically active every day in any way for 30 minutes or more

OCCUPATION

- Occupational cancers constitute 5 - 10% of all cancers.
- Limiting exposure to potentially carcinogenic substances through personal protective gear, rotation of workers and mechanized handling of such chemicals may help reduce cancers from occupational exposures.





Safety Helmets



**High Visibility
Clothing or Vest**



Foot Protection



Dust Mask



Hand Protection



Welding Mask



Hearing Protection



**Safety
Harness**



Respirator



Safety Glasses



Respirators



Face Shield



**Protective
Clothing**

ENVIRONMENTAL POLLUTION

Maintaining proper vehicle emission standards, promoting alternative sources of energy instead of biomass fuel, taking measures to reduce the emissions of CFCs and anti-tobacco measures in home / public places will be of help.



RADIATION PROTECTION

Personal protective devices and dosimeters by personnel engaged in radiological procedures, avoidance of exposing patients to unnecessary X-rays and adequate safeguards in nuclear facilities should be ensured.



RADIATION PROTECTION



INFECTION

The important infections in relation to cancer prevention, in Indian context, are HBV, HPV, and H pylori. Vaccination against

HBV, use of universal precautions in health care settings, proper sterilization of syringes, needles and other medical equipment, blood safety, safe sexual practices, avoidance of sexual promiscuity, maintenance of genital hygiene, and treating the patients with symptomatic infections of H pylori are the mainstays in this regards.



REDUCTION OF EXPOSURE TO ULTRAVIOLET RADIATION

- ❑ Encouragement of sun-protective behaviour is the most effective public health measure to reduce incidence of skin cancer in populations, especially in children.
- ❑ Available options include sun avoidance by using shade, wearing protective clothing and using sunscreens.
- ❑ Efficacy is expressed through the “sunscreen protection factor” (SPF). Most commercial preparations are presented as having SPF values of up to 15-20.
- ❑ Sunscreen formulations typically contain UVA absorbers (examples being cinnamates and derivatives of para-aminobenzoic acid) and UVB

REDUCTION OF EXPOSURE TO ULTRAVIOLET RADIATION

Sun
Screen

A stylized sun logo with a spiral center and radiating lines, positioned to the right of the text.

CHEMOPREVENTION



- ❑ Chemoprevention is defined as reduction of the risk of cancer development through the use of pharmaceuticals or micronutrients.
- ❑ The breast cancer drug tamoxifen reduces the risk of developing a second cancer in the other breast.
- ❑ A lower risk of colon cancer has been observed following regular use of aspirin and related non-steroidal anti-inflammatory drugs which reduce the risk of recurrence of adenomas.

CHEMOPREVENTION

- ❑ Trials to establish chemo-preventive activity by micronutrients, including carotenoids and retinoids, among people at high risk, have been inconclusive.
- ❑ At present, tamoxifen is the only cancer prophylactic drug being used in medical care, under close supervision of a specialist.

SECONDARY PREVENTION

- ❑ Secondary prevention aims at diagnosing the condition at a very early, preferably asymptomatic stage and effectively treating it. In context of cancer prevention, it takes two forms :
- ❑ firstly by educating the community at large regarding “early danger signs” so that they could report to medical facility for further evaluation, should these signs appear.
- ❑ Secondly, secondary prevention uses certain well established screening procedures for early detection.

CANCER'S EARLY WARNING SIGNS

C
A
U
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O
N

Change in bowel or bladder

A lesion that does not heal

Unusual bleeding or discharge

Thickening or lump in breast or elsewhere

Indigestion or difficulty swallowing

Obvious changes in wart or mole

Nagging cough or persistent hoarseness

SCREENING FOR BREAST CANCER

- ❑ Early diagnosis of breast cancer, by promoting breast awareness among all women and clinical breast examinations for women, preferably in the age group 40-69 years, should be encouraged.
- ❑ Women should be educated and encouraged to inspect and manually examine all quadrants of the breasts with the flat of hand, and the axillae, once a month, ten days after the menstrual period.

SCREENING FOR BREAST CANCER

Every woman should also be made aware of the following signs -

- ❑ A change in size
- ❑ A nipple that is pulled in or changed in position or shape
- ❑ A rash on or around the nipple.
- ❑ Discharge from one or both nipples
- ❑ Puckering or dimpling of skin
- ❑ Lump or thickening in the breast
- ❑ Constant pain in the breast or armpit

MAMMOGRAPHY

- ❑ The epidemic increase in breast cancer incidence has led to the introduction of population-based mammography screening.
- ❑ The analysis of large randomized trials has shown that in women aged 50 to 69 years, mammography screening can reduce mortality from breast cancer by 25-30%.
- ❑ For women in the age group 40-49 years, the screening efficacy is significantly less.

SCREENING FOR CERVICAL CANCER

- ❑ In most developed countries, cytological screening (Pap test) has led to significant reduction in the incidence of and mortality from cervical cancer in a number of developed countries.
- ❑ Screening should preferably begin at 35 years of age, as at younger ages dysplasia detected through screening rarely progresses to cancer, but adds to programme cost in treatment.
- ❑ Alternative strategies such as visual inspection are being tested for use in low-resource settings where laboratory facilities for cervical cytology are inadequate.

SCREENING FOR ORAL CANCER

Oral cancer and its precancerous lesions, including leukoplakia, can be readily detected by visual inspection of the oral cavity not only by trained health workers and doctors, but to a large extent by the subject himself.

POPULATION SCREENING

Population screening for oral cancer results in the diagnosis of large numbers of oral pre-cancers and early stage tumours. However, a reduction in incidence of and mortality from oral cancer resulting from such interventions remains to be demonstrated.

PROSTATIC CANCER

- ❑ Prostate-specific antigen (PSA) testing is now being widely used in developed countries, for the early detection of prostate cancer.
- ❑ Elevated levels of PSA are closely, but not definitely, associated with prostate cancer.

PROSTATIC CANCER

- ❑ False positive results may lead to unnecessary treatment. PSA analysis should be combined with a digital rectal examination, the latter providing an assessment of the volume of the gland, since PSA is also released into the bloodstream of patients with benign prostate hyperplasia and other prostatic diseases.
- ❑ The typical cut-off values are : 40-49 years, < 2.5 ng/ml; 50-59, < 3.5 ng/ml, etc

TUMOUR MARKERS

Certain cancers release biological products into the circulation, which can be measured for increasing the level of diagnostic suspicion. The common ones are :

- ❑ Alpha fetoprotein (α - FP)
- ❑ Beta Human Chorionic Gonadotrophin (β - hCG)
- ❑ Carcino Embryonic Antigen (CEA)
- ❑ CA - 125
- ❑ Prostate Specific Antigen (PSA)

TUMOUR MARKERS

- ❑ Alpha feto protein (α - FP) : This is increased in Liver cancer and certain tumours of testis and ovary. It is also increased in cirrhosis and hepatitis.
- ❑ Beta Human Chorionic Gonadotrophin (β - hCG) : Increased in choriocarcinoma and testicular tumours. Also increased in hypogonadism and hydatiform mole.
- ❑ Carcino Embryonic Antigen (CEA) : Increased in colorectal, breast and stomach cancers and Cholangiocarcinoma. Also raised in liver disease and among smokers.
- ❑ CA - 125 : Raised in epithelial ovarian cancers. Also raised during pregnancy, menstruation, endometriosis, ascites and pleural effusion.
- ❑ Prostate Specific Antigen (PSA) : Raised in prostatic cancer as also in prostatitis and BHP.

TERTIARY PREVENTION

- ❑ Tertiary prevention is also quite important in cancers.
- ❑ It consists of proper treatment of disease, especially advanced disease.
- ❑ The available options are Surgery, Radiotherapy and Chemotherapy. It also involves specialized issues as palliative care, terminal care and pain relief and reassurance / advise to the patient and family.



Thank You