

# *Oncology*

*Under Supervision*

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# Outlines:

- Oncology and terminology
- Benign and malignant neoplasm
- Different types of cancer
- Common investigation
- Signs and symptoms of cancer
- Cancer treatment
- Who is the Caregiver
- Tips for Being a Successful Caregiver
- Prevention and management of cancer

# *Definition*

- ***Tumor***

It is the formation of abnormal mass of tissue caused by local uncontrolled multiplication of cells

- ***Benign Tumor***

A tumor that is not cancerous. The tumor does not invade nearby tissue or spread to other parts of the body.

- *Malignant*

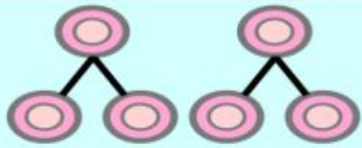
A tumor that is cancerous. The tumor may invade nearby healthy tissue or spread to other parts of the body.

- *Metastasis*

The spread of cancer from where the cancer began to another part of the body.

# *Microscopic Appearance of Cancer Cells*

**Normal**      **Cancer**



**Large number of irregularly shaped dividing cells**



**Large, variably shaped nuclei**



**Small cytoplasmic volume relative to nuclei**



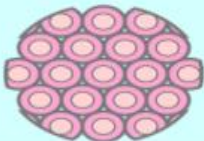
**Variation in cell size and shape**



**Loss of normal specialized cell features**



**Disorganized arrangement of cells**



**Poorly defined tumor boundary**

# Difference between benign and malignant

	<b>Benign</b>	<b>Malignant</b>
<b>1-Tumour cells:</b>	Highly differentiated i.e: resemble cell of origin.	Well or poorly differentiated i.e. doesn't resemble cell of origin.
<b>2- Rate of growth :</b>	slow	Rapid
<b>3- Capsule:</b>	present	Absent
<b>4- Size :</b>	small	Large
<b>5- Mode of growth :</b>	Expansion or compression of surrounding tissue.	Infiltration.
<b>6- Necrosis:</b>	Absent	Present
<b>7- Recurrence:</b>	Absent	Present (need safety margin)
<b>8- Metastasis:</b>	Absent	Present
<b>9- Danger:</b>	Not dangerous except in vital organ ex: brain	Fatal
<b>10- Blood vessels:</b>	well formed	Poorly formed, multiple → hemorrhage

# ***Different types of cancer***

## **1-Solid cancer**

It include all cancers at any parts of body except blood.

- brain cancer
- esophagus cancer
- lung cancer
- breast cancer
- stomach cancer

# ***Different types of cancer (Cont,...)***

## **2-Haematological cancers**

It includes all cancers in blood

- Acute and chronic lymphocytic leukemia
- Acute and chronic myloid leukemia



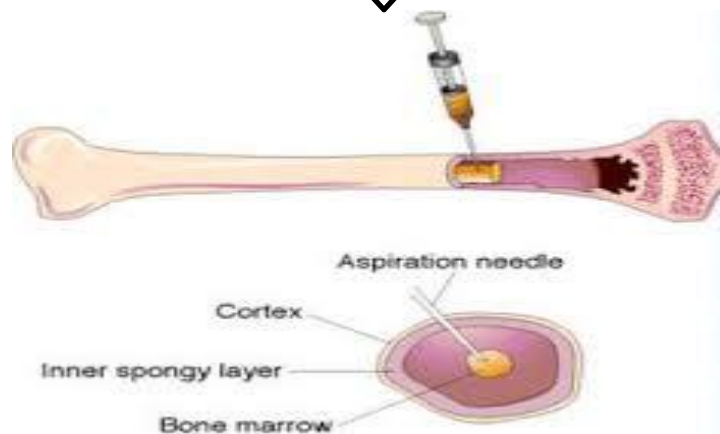
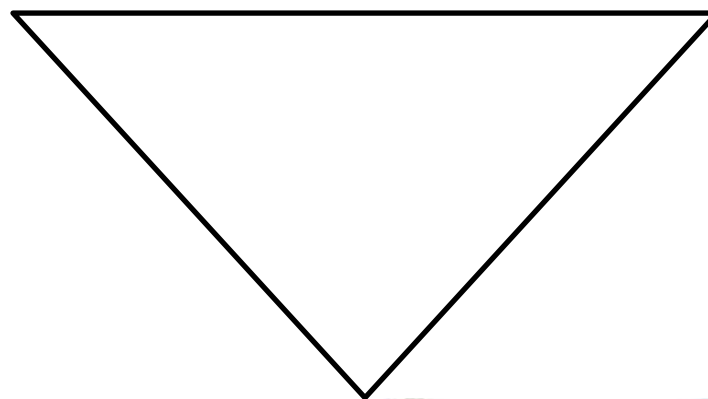
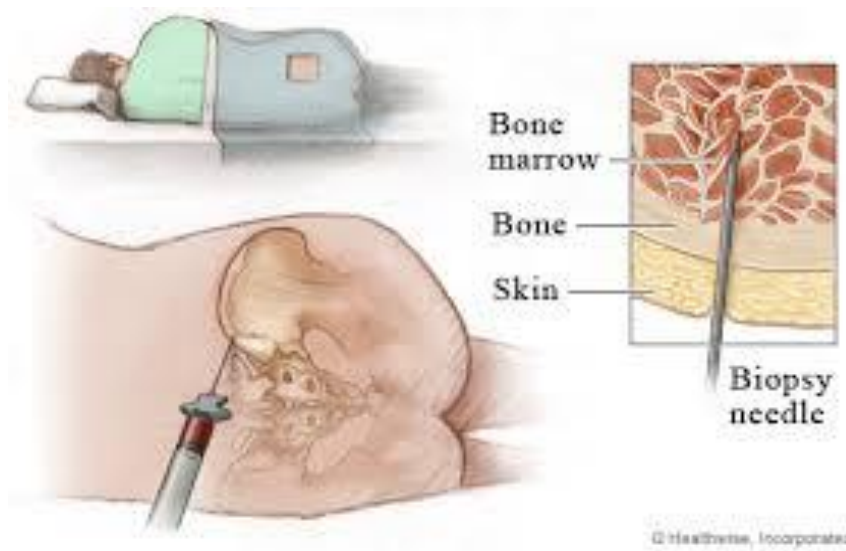
# Common investigation to diagnose cancer

- [Tumor Marker Tests](#)

Tumor markers (also known as biomarkers) are substances found at higher than normal levels in the blood, urine, or body tissue of some people with cancer.

- [Ultrasound](#)

- Biopsy
- Endoscopy
- Bone Marrow Aspiration and Biopsy (is a diagnostic examination of the bonmarrow that can provide information about the development and function of blood cells.



## **Causes of cancer(risk factor)**

- genetic factors
- smoking and tobacco
- diet
- sun exposure
- radiation exposure
- infection
- pollution
- hormonal factors

# Sings & symptoms of cancer

- C: Change in bowel or bladder habits
- A: A sore that does not heal
- U: Unusual bleeding or discharge
- T: Thickening or lump in the breast or elsewhere
- I: Indigestion or difficulty in swallowing
- O: Obvious changes in warts or moles
- N: Nagging cough or hoarseness

# Cancer treatment

## Chemotherapy

It is a cancer treatment that uses chemical substances. Chemotherapy may be given with a curative intent, or it may aim to prolong life or to reduce symptoms.

## Surgery

1- Radical surgery

2- Laser surgery

3- Electro surgery (A high-frequency electrical current can be used to destroy cells. This may be done for some cancers of the skin and mouth.

# Radiotherapy

Is therapy using ionizing radiation, generally as part of cancer treatment to **control** or **kill** malignant cells.



# Who is the Caregiver

Family caregivers may be spouses, partners, relatives, or friends who help the patient with activities of daily living and health care needs at home.



Thank you!