

# Immune Surveillance System

- \* During neoplastic transformation, new antigen develops
- \* The host recognizes them as non-self antigens
- \* Cell mediated immune reactions attack these non-self tumor cells
- \* Immune response act as surveillance system to detect and eliminate newly arising neoplastic cells

# Tumor Markers

\* Tumor markers :

\* They are either

or

Tumor antigens

Tumor products  
(enzymes and hormones)

\* Tumor products are released in the serum of patients

\* They are used to confirm diagnosis and follow up the response to therapy

# Tumor Products

## a) Hormones :

- Human chorionic gonadotrophins (HCG) are secreted in cases of choriocarcinoma
- Thyroxin (T<sub>3</sub> & T<sub>4</sub>) is secreted in cases of cancer of thyroid gland

## b) Enzymes :

- Acid phosphatase enzymes in cases of cancer of prostate
- Alkaline phosphatase, lipase and amylase enzymes in cases of cancer pancreas

**b. Specific:**

- i. Hepatitis B vaccine
- ii. Human Papilloma virus (HPV) vaccine