Immune Surveillance System

* During neoplastic transformation, new antigen develops

* The host recognize 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:
  * Tumor antigens
  * Tumor products (enzymes and hormones)

* They are either
  * 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 (T3 & T4) 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