Neoplastic Progression

PLAY PICMONIC

Components: Parenchyma and Supporting Stroma

Pear and Straw-man

There are two components involved in neoplastic progression: the parenchyma, which is the neoplastic cell, and the supporting stroma, which is the non-neoplastic cell—supporting stroma such as connective tissues and blood vessels.

Benign vs Malignant

Bunny vs Malignant-man

Carcinoma is a malignant tumor type. carcinoma is seen as poorly differentiated, with metastases, and there can be found as basal cells carcinomas, adenocarcinomas, squamous cell carcinomas.

Normal Cells

Normal Cell-phone

The presence of basal membrane characterizes normal cells with apical polarity.

Dysplasia

Disc-plates

Dysplasia is characterized by a loss of uniformity in cell size and shape, called pleomorphism, loss of tissue orientation, and nuclear changes.

Reversible

Reversed-hat

Dysplasia is often reversible.

Carcinoma in Situ

Car-gnome Seat (2)

Carcinoma in situ is a type of severe dysplasia. It affects the entire thickness of the epithelium and does not infiltrate the basement membrane. This makes it different from invasive carcinoma, which invades the basement membrane.

Irreversible

Lock

Carcinoma in situ is irreversible.

Entire Thickness of the Epithelium

Thick E-pick

Carcinoma in situ affects the entire thickness of the epithelium and does not infiltrate the basement membrane.

Invasive Carcinoma

Invading Car-gnome

Invasive carcinoma invaded the basement membrane. This makes it different from carcinoma in situ, which does not invade the basement membrane.

Invaded Basement Membrane

Invading Basement Membrane

Invasive carcinoma has the ability to invade the basement membrane using collagenases and hydrolases (metalloproteinases).

Loss of E-Cadherin

Loss of E-CAD-Heron

The loss and inactivation of e-cadherin occur in invasive carcinoma, resulting in cell connection loss.

Metastasis

Metastasis-mitt

Metastasis is characterized by the ability of cancer cells to surpass the basement membrane and enter lymphatics or blood. It can spread to distant organs.