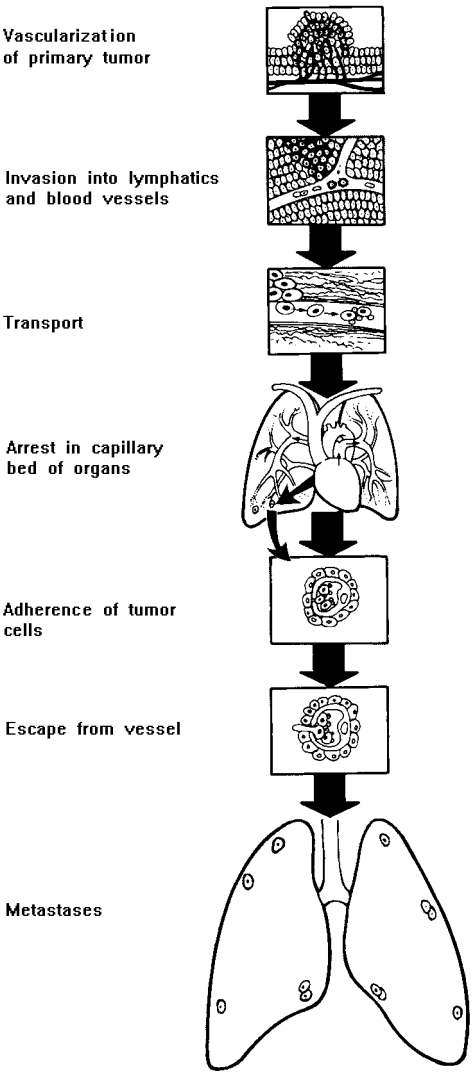

Figure 10.7: Pathogenesis of metastasis (from Poste & Fidler, 1980)

organs can often be found in cancer patients with metastases.

Some tumor types preffer certain sites of secondary growths (e.g. breast carcinoma and carcinoma of the prostate, kidney metastasize to bone, melanoma-skin cancer metastasizes to liver). The mechanical theory of metastasis explain the spread of cancer cells to certain organs to such factors as metastatic cell size, pressure, size of vessels, direction of bloodstream or lymphatic drainage etc. The selective affinity theory of metastasis correlates higher afinity of metastatic cells to certain enviroment with immunologic characteristics, local growth factors, specific glycoprotein surface components of favorable tissue cells etc.

10.5 Predisposing factors of cancer cells

Epithelial tissue sometimes shows such deviation from normal tissue growth as **hyperplasia, metaplasia and dysplasia**. These changes may predispose to cancer. They occur as dysplasia of cervix uteri, polyposis coli, chronic cystic mastitis etc.

Carcinoma in situ represents preinvasive epithelial tumor with atypical cell changes without disruption of basement membranes. Some preinvasive lesions may progress to invasive forms, some are unchanged and some may spontaneously regress.

10.6 Characteristics of benign tumors

Benign tumor is classified on the basis of **well differentiated cells, which do not invade and cannot set up a new growths – metastases**. Benign tumors are usually **separated** from the surrounding host tissue by a capsule of connective tissue. Benign tumor **growth is slow**. Necrosis and ulcerations of these tumors are unusual. However, benign tumor can represent sometimes extremely serious problem (if it obstructs a bronchus, vessel, truct, if it interferes with oxygenation, nutrition or elimination, if it has functional endocrinal activity etc.)