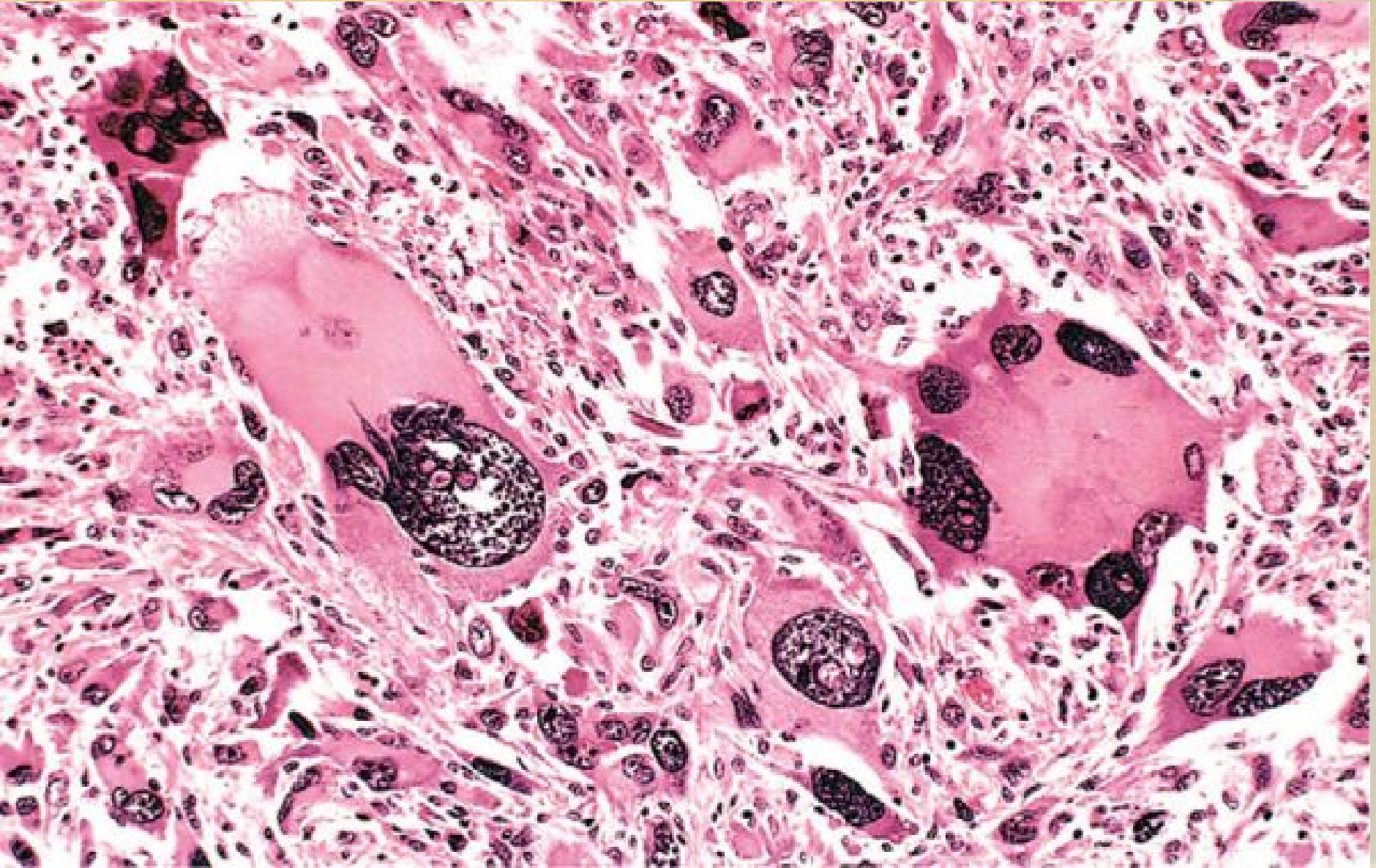


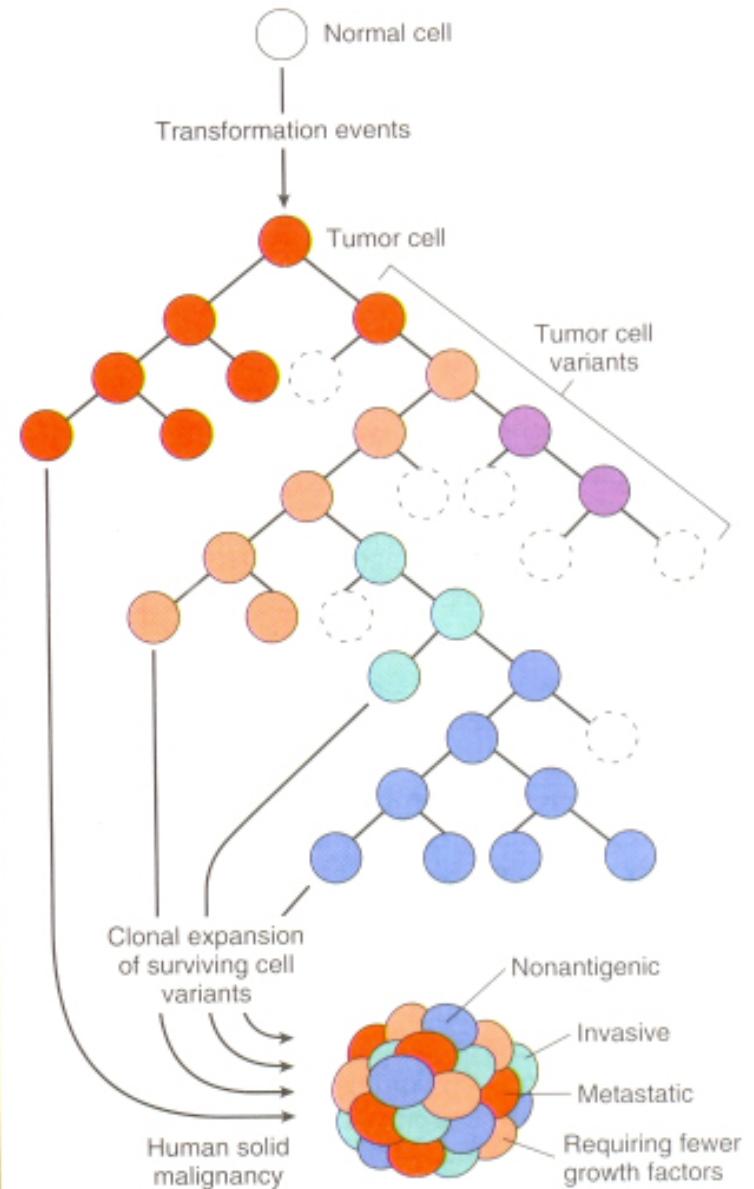
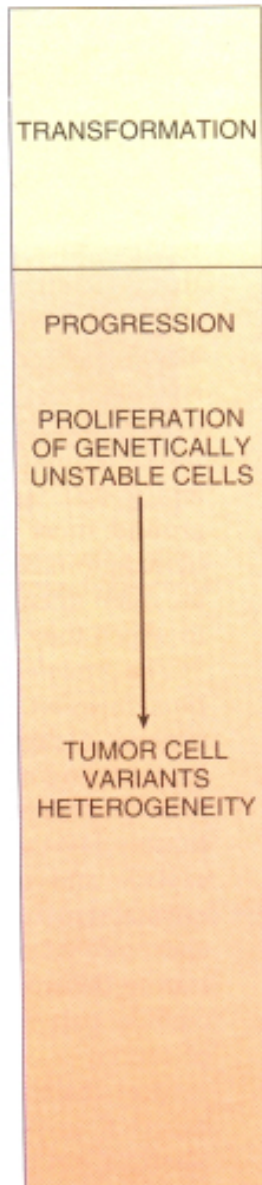
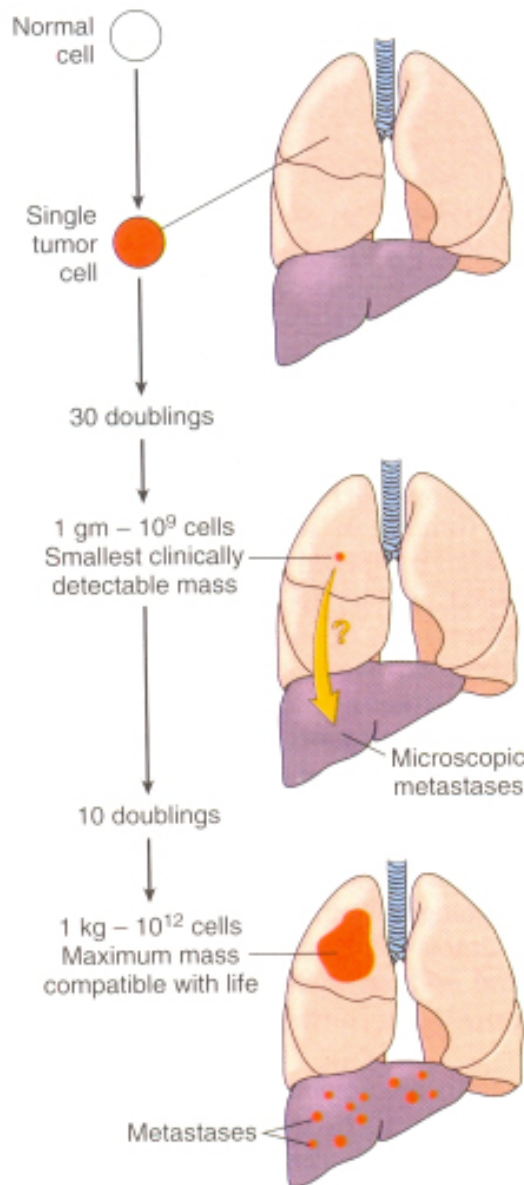
Anaplastic tumor of the skeletal muscle (rhabdomyosarcoma). Note the marked cellular and nuclear pleomorphism, hyperchromatic nuclei, and tumor giant cells.



RATE OF GROWTH

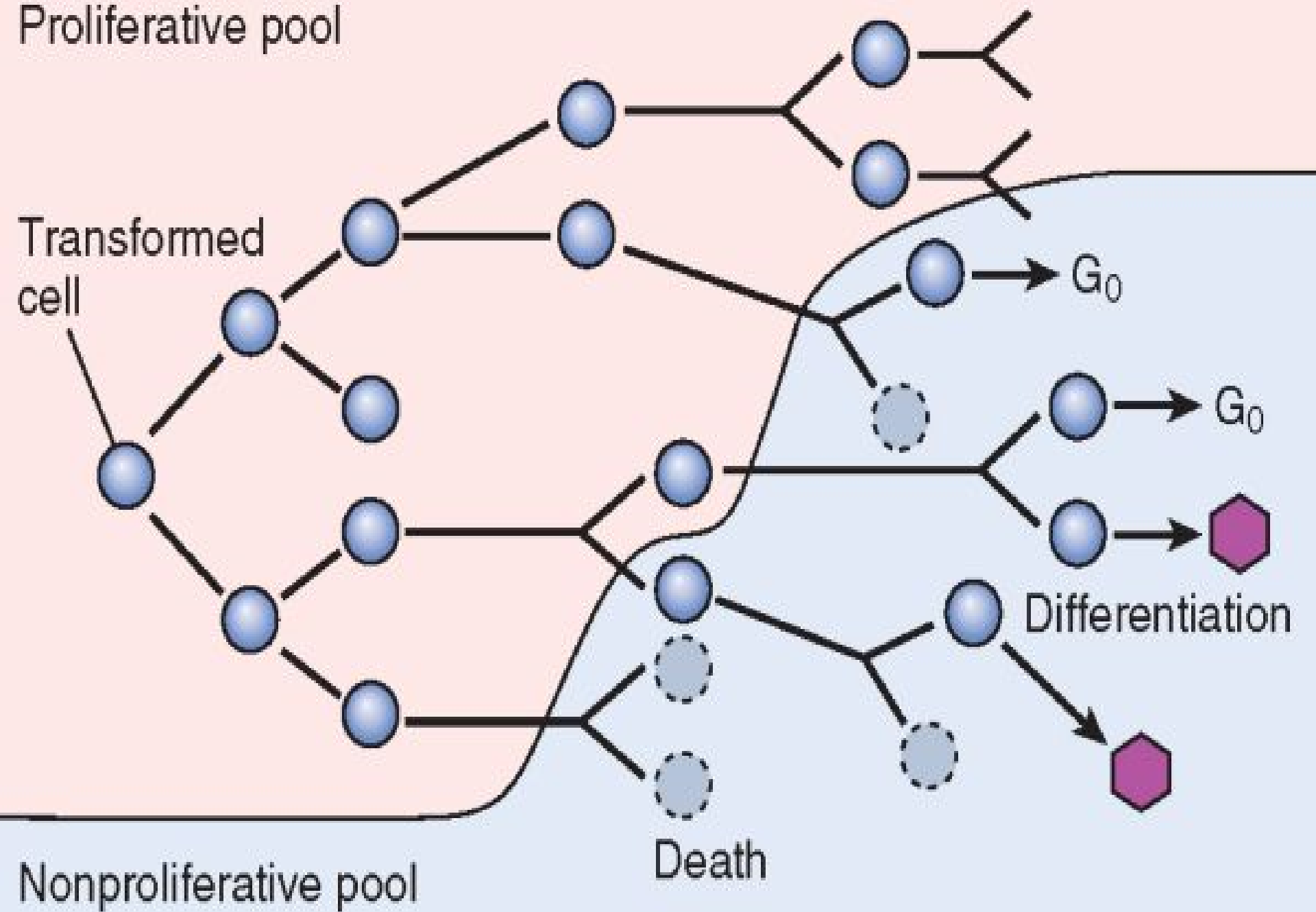
- ⊙ Determined by three main factors...
 1. Doubling time of tumor cells
 2. Fraction of tumor cells which are present in replicative pool
 3. Rate at which cells are shed
- ⊙ Minimum tumor size detectable is usually seen after 30 doublings of neoplastic cells (1 gm in weight) and maximum size of 1 kg is seen after 10 doublings of the previous detectable mass

Rate of Growth



Proliferative pool

Transformed cell



- ① Growth rate of tumors correlates with their level of differentiation thus most malignant tumors grow more rapidly than benign lesions
- ① The growth fraction of tumor cells has a profound effect on their susceptibility to cancer chemotherapy.

LOCAL INVASION

- ⦿ Benign Tumors grow as expansile masses that remain localized and do not invade or metastasize
- ⦿ A well defined cleavage plane exists around most benign tumors but Hemangioma is an exception
- ⦿ Malignant tumors grow by progressive infiltration, invasion & destruction of surrounding tissue, a well defined cleavage plane is lacking so are invasive