

← limitless replicative potential *

انه لا حيلة لا يتبدلها تنفسه في كونه ينقسم الى غيره ويتوقف

* telomerase (تعدد) ← enzyme

← Inhibition of nucleotide synthesis
DNA

* tumor cells ← inactive

← reactivation of other genes

development of sustained Angiogenesis *

* Vasculization of tumors is essential for their growth & is controlled by ⇒ the balance between angiogenic & anti-angiogenic factors

* angiogenesis ← hypoxia

hypoxia - inducible factor (HIF 1α) → activation vascular endothelial growth factor VEGF

Ability to invasion & medastasis *

malignant & benign

4 steps

loosening of cell-cell contacts -1

degradation of ECM -2

ECM =>

attachment to novel ECM components -3

[interprise content] management

migration of tumor cells -4

2 phases

Invasion Extracellular Matrix -1

vascular dissemination & homing of Tumor Cells -2

endothelial cell tumor

clumps basement membrane

other endothelial cells adhesive molecule

other basement membrane penetration

other organs

* الطريقة (2) =>

- ال tumor cells تفتقد adhesiveness

تفقد
↓

proteolytic enzymes (proteases)

تعمل
↓

degrading the basement membrane

↓

تفتتح ال basement membrane وتصلح ال blood vessels وينتزع

ال second تاني ال second ال first ال adhesive molecule.

migration: adher. endothelial cells

ال اصعب من تفتح ال تفتح ال clumps

Subject

Date

No.

← treatment 11 *

- surgery -1
- Radiotherapy -2
- chemotherapy -3
- Immune therapy -4
- hormone - therapy -5

What R the Final complications of Malignancy [Cause of death] *

- pneumonia -1
- خساره للعيزه Cachexia -2
- renal failure -3
- Bleeding -4
- severe anemia / thrombocytopenia -5
- Infections -6
- hypercoagulability -7

pain is more of a devastating symptom than a complication... -8

has to be controlled

malignant 11 no type 11 patient *بغير الاي*

صياك ينكوه حيا البانو... موفيه بادفة
يارب لكم تفلر... لقلته