

## Diseases of the Blood vessels (Continue)

### Vascular Tumors

#### Benign tumors:

##### 1- Hemangioma.

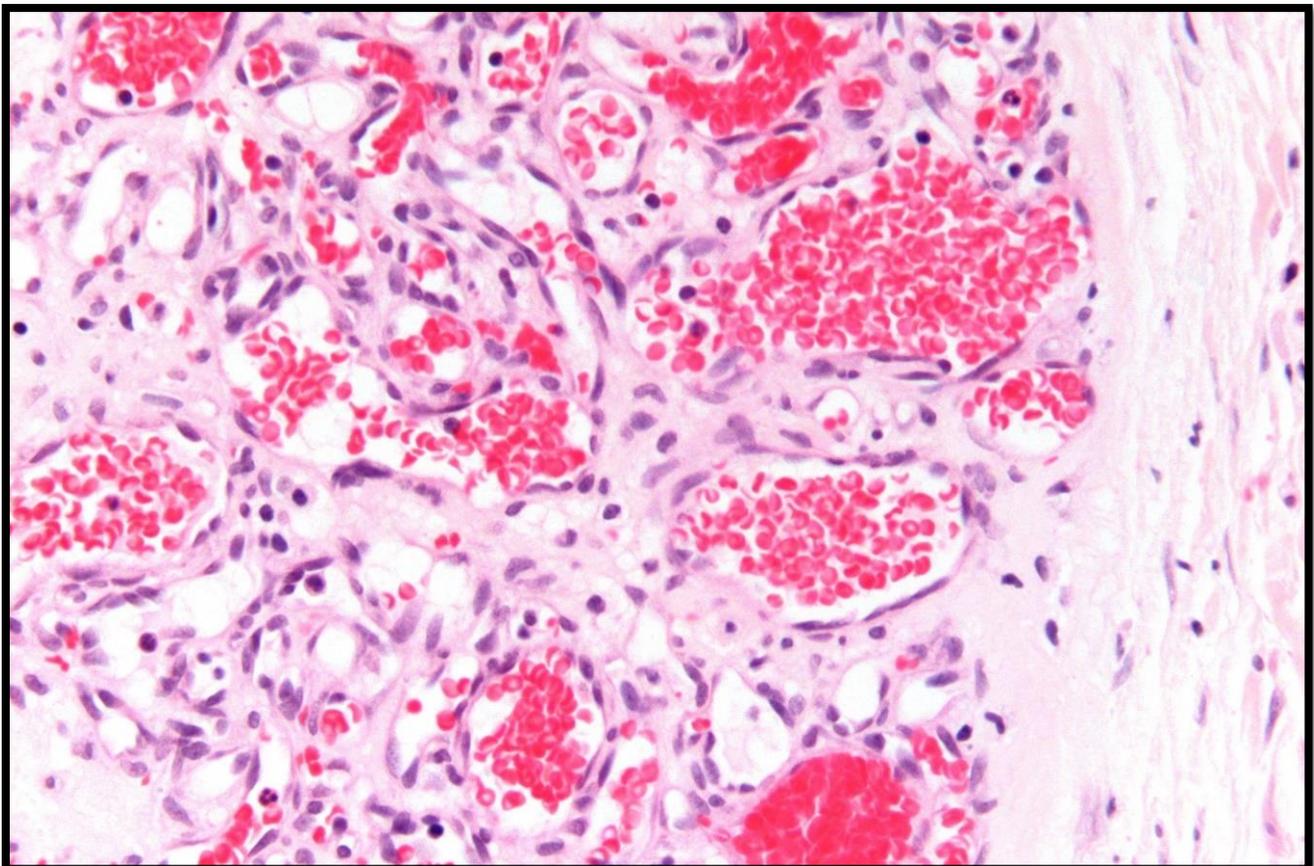
Are very common tumors characterized by increased numbers of vessels filled with blood, these tumors constituting 7% of all benign tumors of infancy and childhood.

Most are present at birth but may regress spontaneously, the majority are superficial lesions often in the head & neck but can occur internally (1/3 in the liver), malignant transformation is rare.

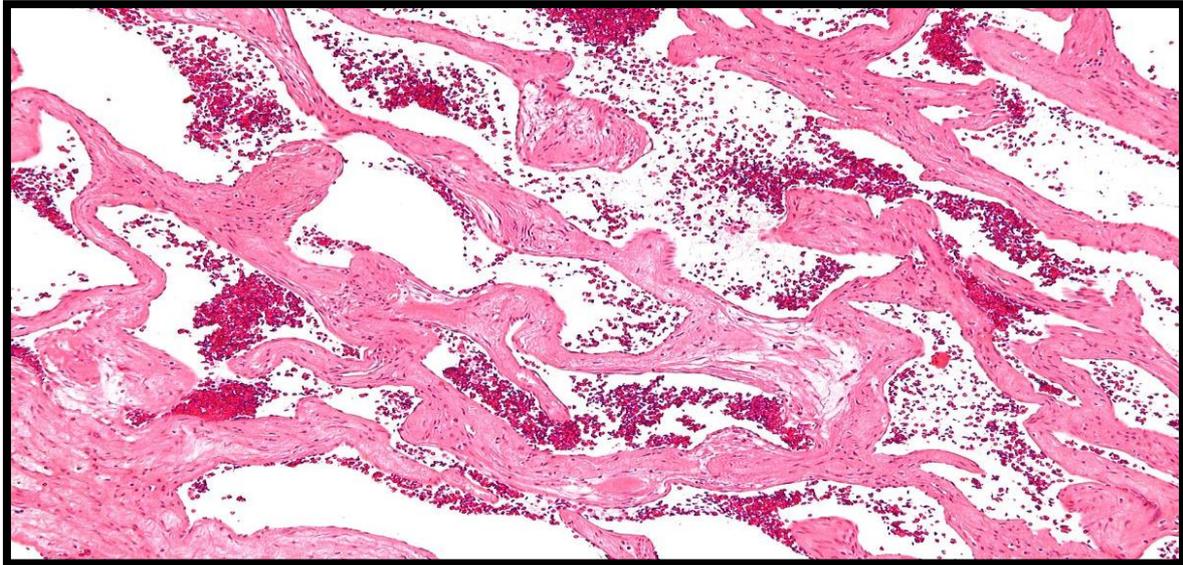
#### The histological variants are:

A- Capillary hemangioma. It is the most common variant occur in the skin, subcutaneous tissue, mucous membrane of oral cavities.

Histologically there are unencapsulated aggregates of closely packed thin walled capillaries filled with blood with scant connective tissue stroma.



**B- Cavernous hemangioma:** these are characterized by large dilated vascular channels unencapsulated and involving deep structures. Histologically composed of cavernous blood filled vascular spaces separated by mild to moderate connective tissue stroma.



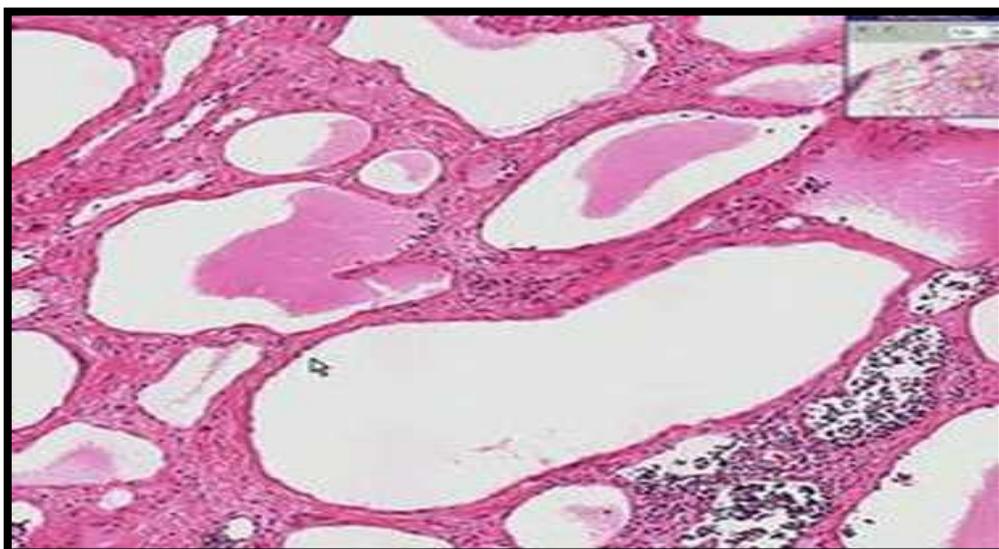
**2- Lymphangiomas** are benign lymphatic tumors analogue of hemangioma.

**consists of 2 types:**

**1- Simple capillary Lymphangioma:** composed of small lymphatic channel predominantly in head, neck & axillary subcutaneous tissues.

**Q/ how can diff. it from capp. hemangioma ?**

**2- Cavernous Lymphangioma. (Cystic hygrom):** typically found in the neck or axilla of children & composed of massively dilated lymphatic spaces separated by connective tissue stroma containing lymphoid aggregates.



## Intermediate Grade Tumors

### Kaposi Sarcoma:

It is common in patients with AIDS, and is caused by a virus of herpes virus subfamily (**KSHV**) and is transmitted sexually.

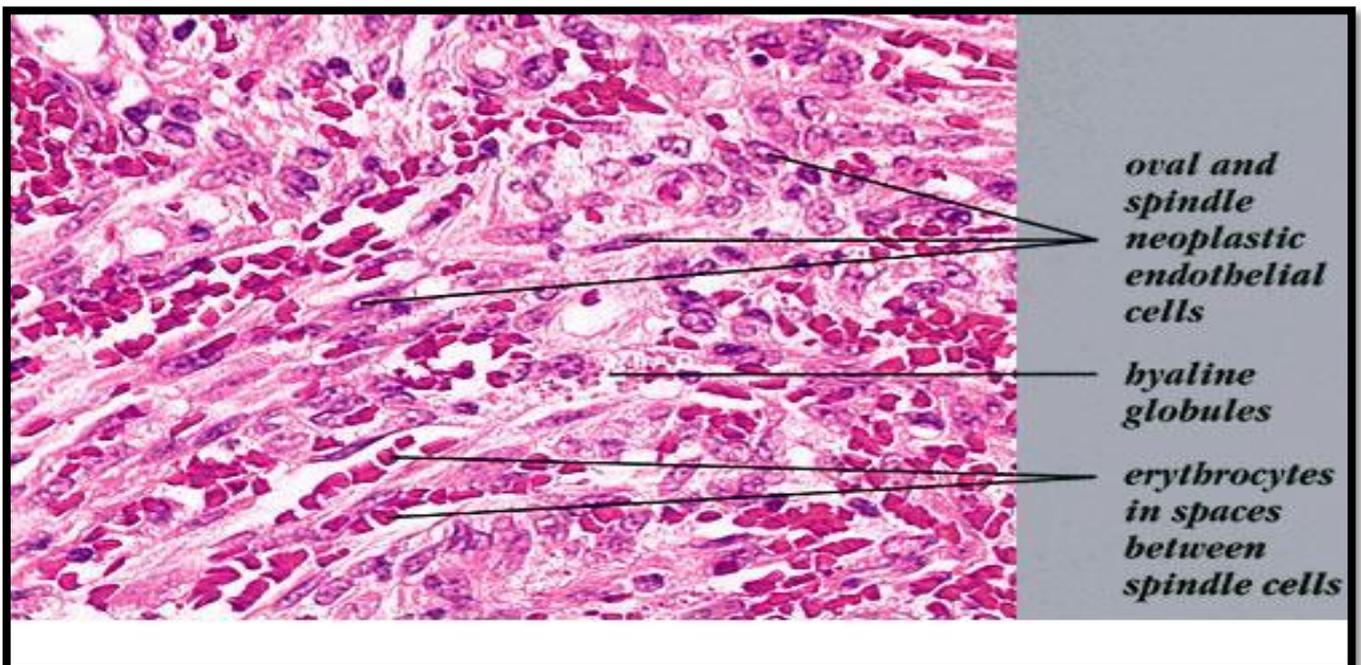
Classical Kaposi Sarcoma passes through **3 stages**:

**1- Patches:** multiple pink red macules confined to distal lower extremities, microscopically shows dilated irregular blood vessels lined by ECs.

**2- Plaques:** are more large raised purple color, composed of dermal irregular dilated vascular channels lined by plump spindle endothelial cells.

**3- Nodules:** are small masses composed of proliferating spindle cells with slit-like spaces containing rows of red blood cells.

It is locally aggressive but infrequently metastatic, surgical excision is enough but sometimes it needs radiotherapy and chemotherapy.



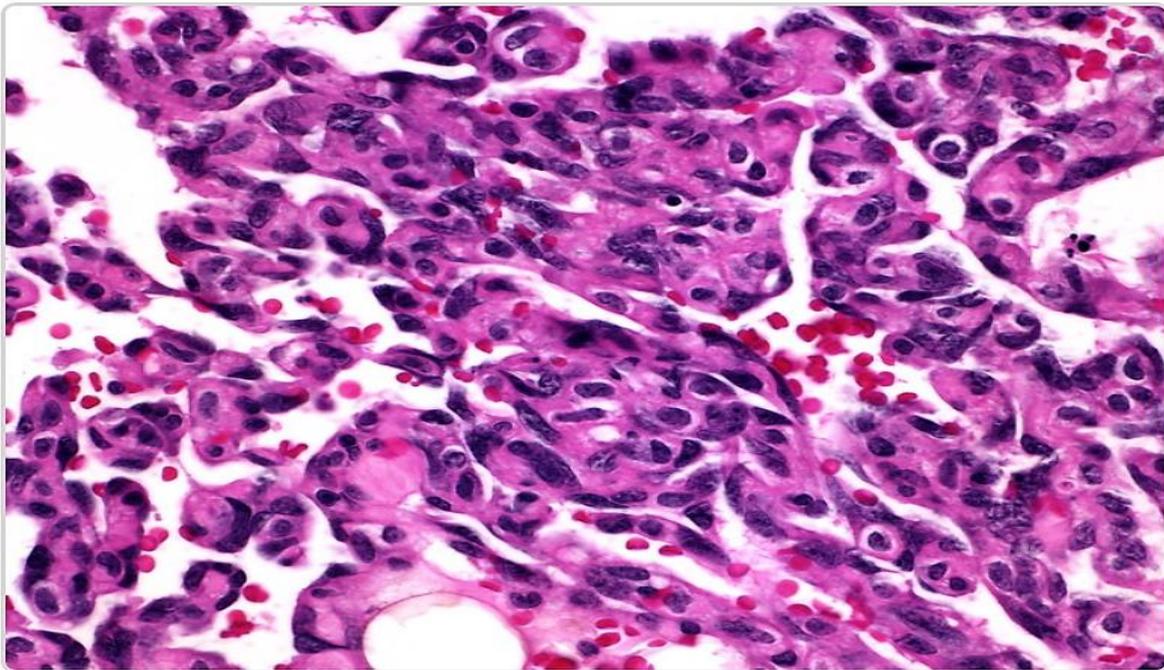
## Malignant Tumors

Angiosarcoma: It malignant endothelial neoplasms, Older adults are usually affected and equal sex distribution, can occur any where but skin, soft tissue, breast & liver the most common sites.

Hepatic angiosarcoma are associated with exposure to arsenic pesticides, angiosarcoma begin as small demarcated multiple red nodules & eventually become large fleshy red- tan masses,

Microscopically all degrees of differentiation can be found from plump endothelial cells producing vascular channels to anaplastic undifferentiated spindle cells with no definite blood vessels.

It is aggressive tumor (invasive locally & metastasize readily) with a 5-year survival rate of **30%**.



**Comments:**

Another example of intermediate grade angiosarcoma of the breast. Cytologic atypia is more pronounced than low-grade tumors. **Enlarged hyperchromatic nuclei** and **increased mitotic activity** are apparent. Numerous **papillary fronds** and **endothelial tufts** are seen. **Five-year disease-free survival rate** for intermediate-grade angiosarcomas is around **70%**.

<http://www.webpathology.com/index.asp>