

44th ICRO QUIZ

ADULT & PEDIATRIC SOFT TISSUE SARCOMA

Sri Guru Ram Das Hospital, Amritsar

Quiz Rules

- There are total 50 questions
- All are multiple choice questions
- Each question carries 1 mark
- There is no negative marking for wrong answers
- Each question to be answered within 30secs

Question No. 1

Cytogenetic abnormality observed in Alveolar RMS is

- A. $t(2;13)$ or $t(1; 13)$
- B. $t(12;15)$
- C. $t(17; 18)$
- D. None of the above

Question No. 2

Most Common type of RMS is

- A. Embryonal
- B. Alveolar
- C. Botryoid
- D. Undifferentiated

Question No. 3

NRSTS most commonly occur in this age group

- A. 0 to 10 years
- B. Adolescents
- C. Increasing age
- D. both B and C

Question No. 4

Embryonal Tumors occur in all except

- A. Orbit
- B. Head and Neck
- C. Genitourinary
- D. Retroperitoneum

Question No. 5

In Rhabdomyosarcoma Clinical group definition incomplete resection refers to

- A. Group 1
- B. Group 2
- C. Group 3
- D. Group 4

Question No. 6

Most common risk factor for local reoccurrence in Soft Tissue Sarcoma is

- A. Grade
- B. Size
- C. Age
- D. Histology

Question No. 7

Most suitable application of brachytherapy in soft tissue sarcoma is in

- A. Retroperitoneal
- B. Extremity location
- C. Trunk and Thorax
- D. Visceral

Question No. 8

Which of the following is not an indication for adjuvant radiation in soft tissue sarcoma

- A. Tumor size more than 5 cm
- B. All high-grade soft tissue sarcoma
- C. Tumor lesions deep are invading the superficial fascia
- D. Low grade completely resected

Question No. 9

The CTV margins in the tumor bed for brachytherapy in soft tissue sarcoma should be

- A. 0.5 - 1 cm
- B. 1 -1.5 cm
- C. 2 – 2.5 cm
- D. 2 – 3 cm

Question No. 10

Wound complication rate in pre operative versus post operative brachytherapy is

- A. 20 % vs 8 %
- B. 35 % vs 17 %
- C. 50% vs 12 %
- D. 5 % vs 10 %

Question No. 11

In extremity sarcoma adjuvant radiation leads to which of the following

- A. Better OS
- B. Improved DFS
- C. Limb salvage with improved OS
- D. Limb salvage without impact on OS

Question No. 12

Which of the following statement is true about Pre-operative radiation in extremity sarcoma

- A. Radiation volume is similar to adjuvant radiation
- B. Radiation dose is similar to adjuvant radiation
- C. Wound healing is better preoperative RT
- D. Pre-operative RT associated with reversible RT toxicity

Question No. 13

In which of the following histology of sarcoma, risk of lymph node metastasis is less than 5%

- A. Clear cell sarcoma
- B. Cutaneous Angiosarcoma
- C. Ewing's sarcoma
- D. Epithelioid sarcoma

Question No. 14

Which of the following is NOT considered risk factor for wound complication after preoperative RT

- A. Diabetes
- B. Size > 10 cm
- C. Upper limb
- D. Vascularized flap

Question No. 15

Lower risk of bone fracture is NOT associated with which of the following

- A. $V40 < 64\%$
- B. Mean bone dose < 37 Gy
- C. Max bone dose < 59 Gy
- D. Periosteal stripping

Question No. 16

The most common dose used in pre-operative radiation in extremity sarcoma is

- A. 50 Gy
- B. 45 Gy
- C. 60 Gy
- D. 25 Gy

Question No. 17

Desmoid Tumour has the following characteristics except

- A. It has an aggressive behaviour
- B. The lesion is generally solitary and unencapsulated
- C. It has pleomorphic fibroblasts having moderate mitotic activity
- D. It may be abdominal or extra-abdominal

Question No. 18

Which one of the following variants of rhabdomyosarcoma is seen in adulthood

- A. Embryonal
- B. Botryoid
- C. Alveolar
- D. Pleomorphic

Question No. 19

All of the following sarcomas are composed of small round cells except

- A. PNET
- B. Neuroblastoma
- C. Embryonal Rhabdomyosarcoma
- D. Synovial Sarcoma

Question No. 20

The most common soft tissue sarcoma in children is

- A. Liposarcoma
- B. Rhabdomyosarcoma
- C. Malignant Fibrous Histiocytoma
- D. Synovial Sarcoma

Question No. 21

Which of the following is associated with Gardner's syndrome?

- A. Abdominal desmoids
- B. Extra-abdominal desmoids
- C. Intra-abdominal desmoids
- D. Plantar fibromatosis

Question No. 22

All are histologic variants of liposarcoma except

- A. Mixed Liposarcoma
- B. Round Cell Liposarcoma
- C. Pleomorphic Liposarcoma
- D. Dedifferentiated Liposarcoma

Question No. 23

The risk of lymphatic spread in Soft Tissue Sarcoma is the least in

- A. Angiosarcoma
- B. Epithelioid Sarcoma
- C. Liposarcoma
- D. Synovial Sarcoma

Question No. 24

Which of the following acts as a natural barrier to the sarcoma spread

- A. Skin
- B. Adipose Tissue
- C. Subcutaneous Tissue
- D. Periosteum

Question No. 25

Which amongst the following types of resections, is the most oncologically sound for soft tissue sarcomas

- A. Biopsy
- B. Wide Excision
- C. Marginal Excision
- D. Intralesional Excision

Question No. 26

All are the indications of postoperative radiotherapy for an extremity soft tissue sarcoma, except

- A. Tumor size > 5cm
- B. Close margins
- C. Low-Grade Tumor
- D. Non-oncologic Resection

Question No. 27

All the following are more frequently seen in postoperative radiotherapy as compared to preoperative radiation in soft tissue sarcoma, except

- A. Large target volumes
- B. Bone fracture
- C. Increased late toxicities
- D. Acute wound complications

Question No. 28

An ideal total dose for postoperative external beam radiotherapy for an extremity soft tissue sarcoma with negative margins would be

- A. 60-66 Gy
- B. 50Gy
- C. 70-80 Gy
- D. 45-50.4 Gy

Question No. 29

You should suspect a uterine sarcoma in all patients except

- A. Premenopausal lady with bleeding disproportionate to uterine size
- B. Doubling in size of uterus over 3-6 months
- C. Increase by 6 weeks gestation size in a year
- D. Large uterus

Question No. 30

Percentage Risk of nodal involvement in early stage Low Grade Endometrial Stromal Sarcoma (LGESS) is

- A. 5
- B. 10
- C. 15
- D. 20

Question No. 31

Recommended adjuvant treatment for Stage I High Grade Endometrial Stromal Sarcoma is

- A. Radiotherapy
- B. Chemotherapy
- C. Observation
- D. Hormonal therapy

Question No. 32

Uterine sarcoma which is nowadays treated like endometrial cancer is

- A. Adenosarcoma
- B. Carcinosarcoma
- C. Endometrial stromal sarcoma
- D. Leiomyosarcoma

Question No. 33

Standard local treatment for localized uterine sarcoma is

- A. Total hysterectomy
- B. TAH with BSO + Lymphadenectomy
- C. TAH with BSO
- D. Laparoscopic hysterectomy with morcellation + BSO

Question No. 34

Heterologous Carcinosarcomas are all except

- A. Rhabdomyosarcoma
- B. Leiomyosarcoma
- C. Chondrosarcoma
- D. Liposarcoma

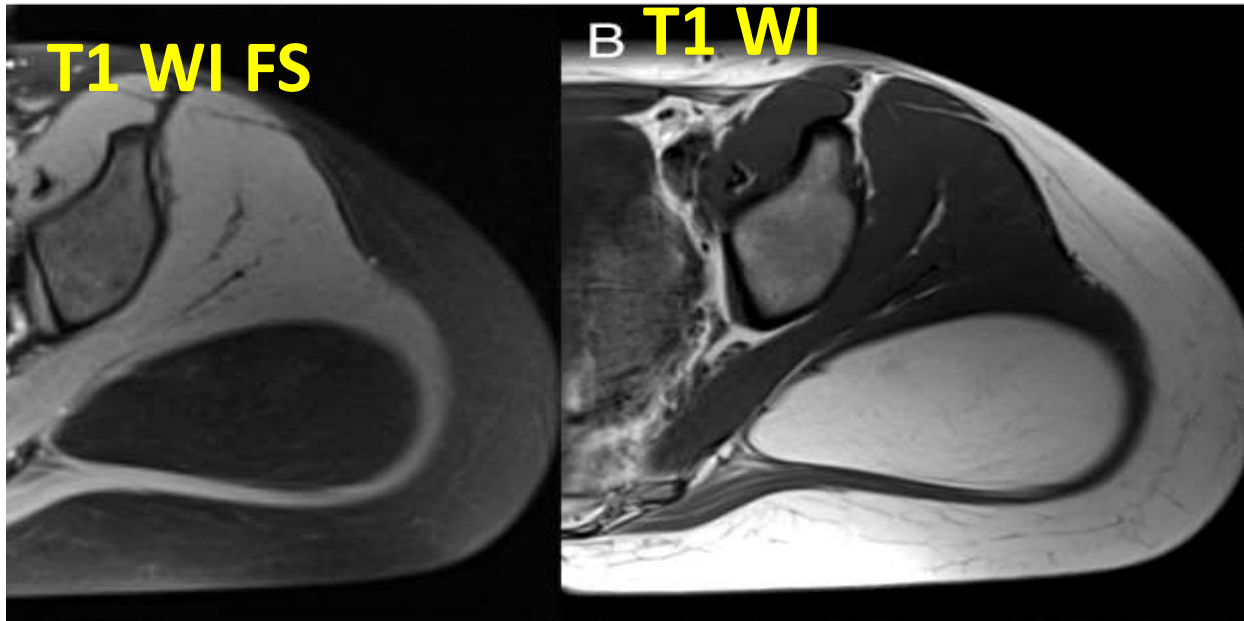
Question No. 35

Which of the following is not commonly seen in soft tissue tumor with hemorrhage

- A. Peripheral enhancement
- B. Nodular walls
- C. No hemosiderin ring
- D. Heterogenous enhancement

Question No. 36

What is the probable diagnosis

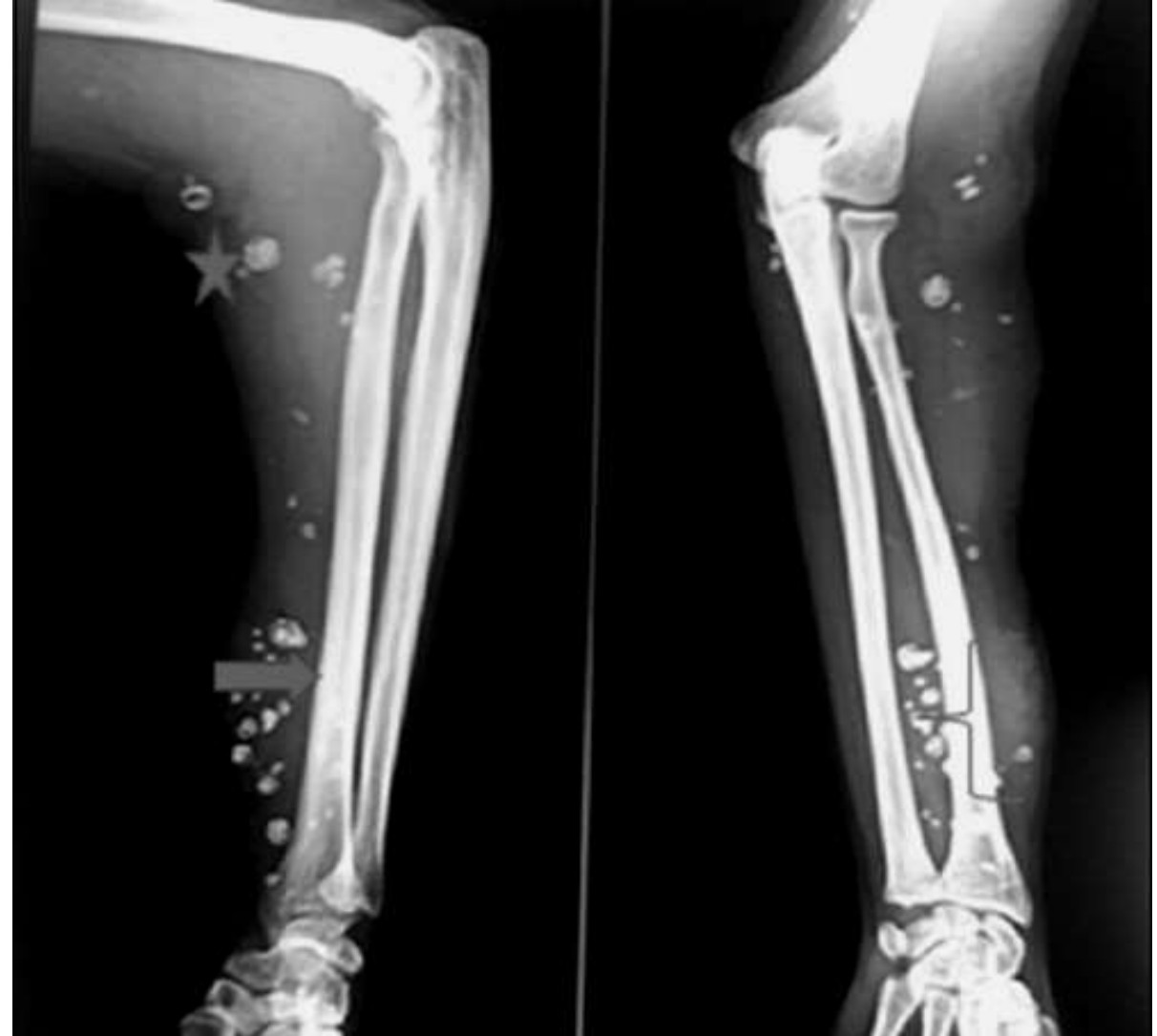


- A. Hemangioma.
- B. Synovial sarcoma
- C. Lipoma
- D. Atypical Lipomatous tumor

Question No. 37

What is the probable diagnosis

- A. Hemangioma.
- B. Lipoma
- C. Synovial sarcoma
- D. Ewing sarcoma



Question No. 38

Which of the following findings is in favor of a benign lesion?

- A. Layered periosteal reaction in bone.
- B. Moth eaten pattern of bone destruction.
- C. Pressure erosions and remodeling of bone.
- D. Permeative pattern of bone destruction.

Question No. 39

Which of the following combinations is not true for specific distribution of soft tissue sarcomas

A	Shawl distribution- Posterior Neck, shoulder and back.	Spindle cell lipoma
B	At Inferior medial tip of scapula deep to latissimus dorsi & rhomboid major muscles	Elastofibroma
C	Tufts of the fingers at nail bed	Fibromatosis
D	Associated with plantar fascia	Fibroma

Question No. 40

Which of the following signs is not seen in peripheral nerve sheath tumors on MRI

- A. Target sign
- B. Fascicular sign
- C. Split –fat sign
- D. Skin tail sign

Question No. 41

A 47-year-old man sees the physician because he has had dull, constant pain in the midsection of the right thigh for the past 4 months. On physical examination, there is pain on palpation of the anterior right thigh, which worsens slightly with movement. The right thigh appears to have a larger circumference than the left thigh. A radiograph of the right upper leg and pelvis shows no fracture, but there is an ill-defined soft-tissue mass anterior to the femur. MRI shows a $10 \times 8 \times 7$ cm solid mass deep to the quadriceps, but it does not involve the femur.

What is the most likely diagnosis?

- A. Nodular fasciitis
- B. Liposarcoma
- C. Osteosarcoma
- D. Rhabdomyosarcoma

Question No. 42

A 30-year-old female presents to you with an ultrasound report suggesting large, bulky and firm masses in the retro-peritoneal cavity. The patient does not feel any pain. Upon excision of the mass the histopathologist reveals that the mass has eosinophilic spindle cells with blunt ended hyperchromatic nuclei arranged in interweaving fascicles. Mitotic figures, including atypical ones, are present.

Immunohistochemical stains for h-caldesmon, SMA and desmin are positive in tumour cells, while all of the following are negative: TLE1, CD99, HMB45, MelanA, S100, SOX10, EMA and AE1 / AE3I.

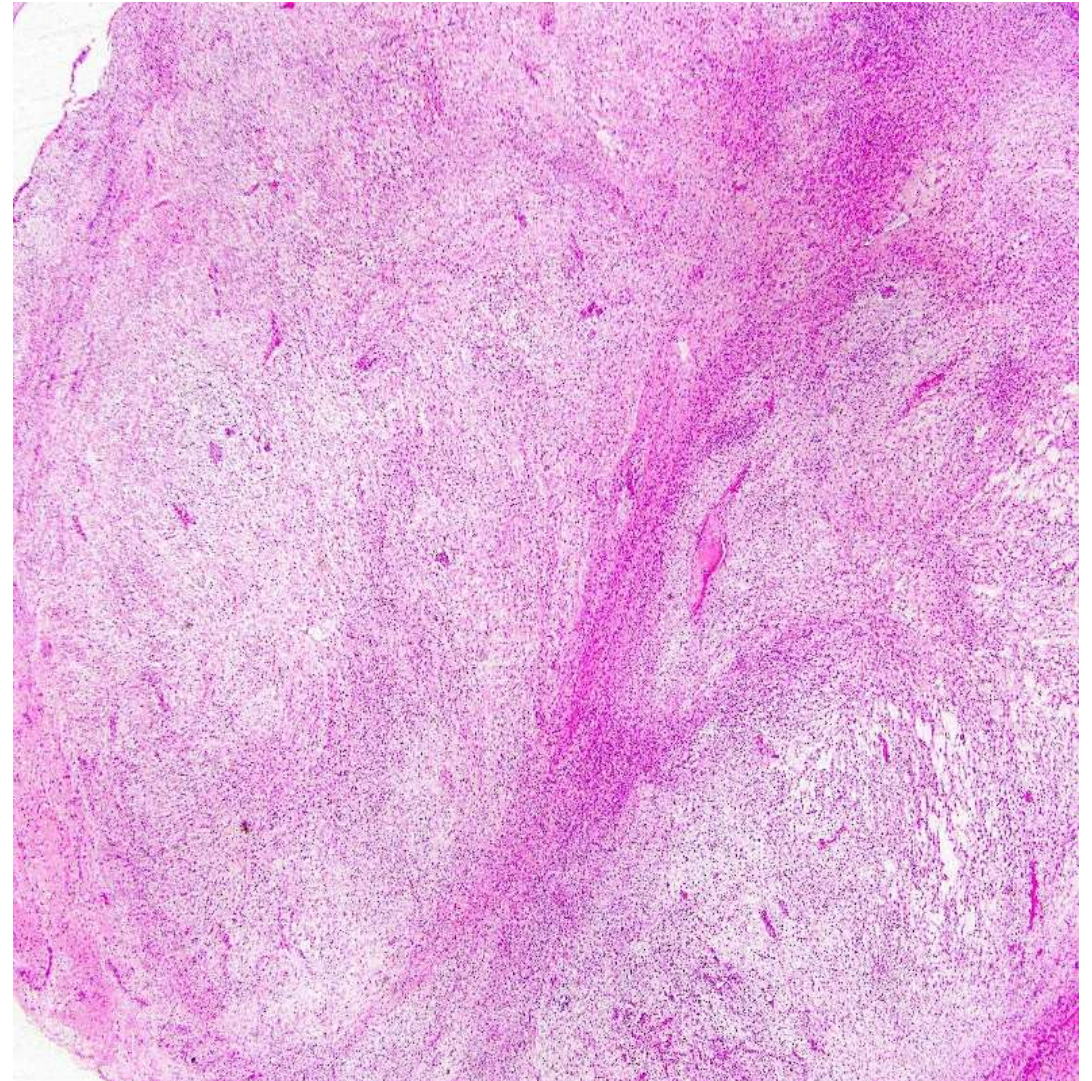
What is your diagnosis?

- A. Leiomyoma
- B. Rhabdomyosarcoma
- C. Leiomyosarcoma
- D. Synovial Sarcoma

Question No. 43

Which of the following is true about low grade fibromyxoid sarcoma?

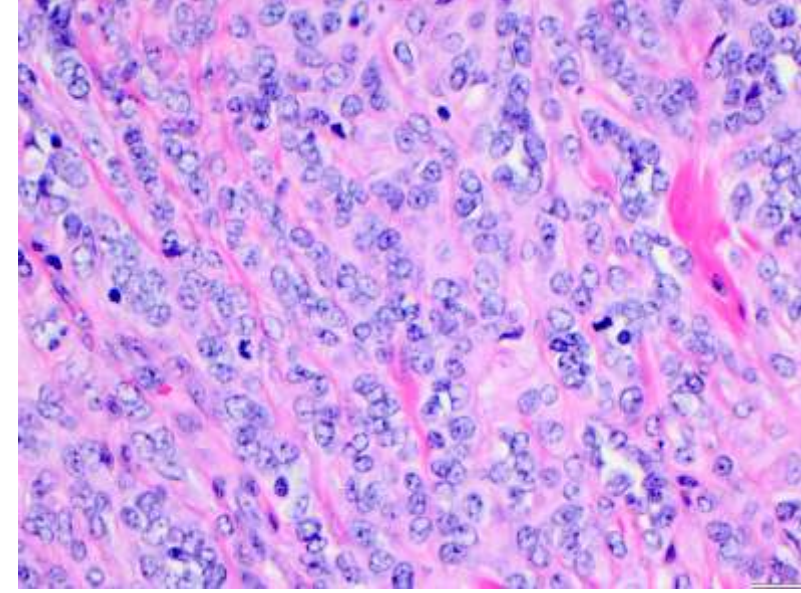
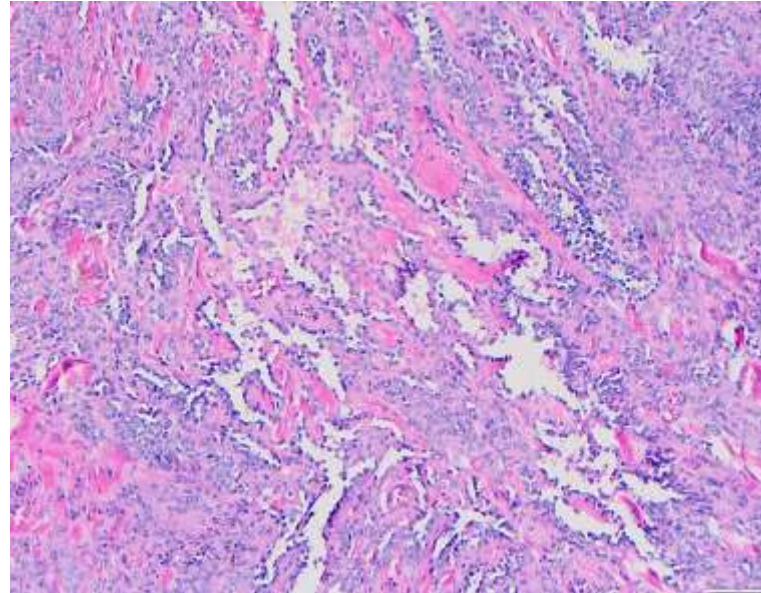
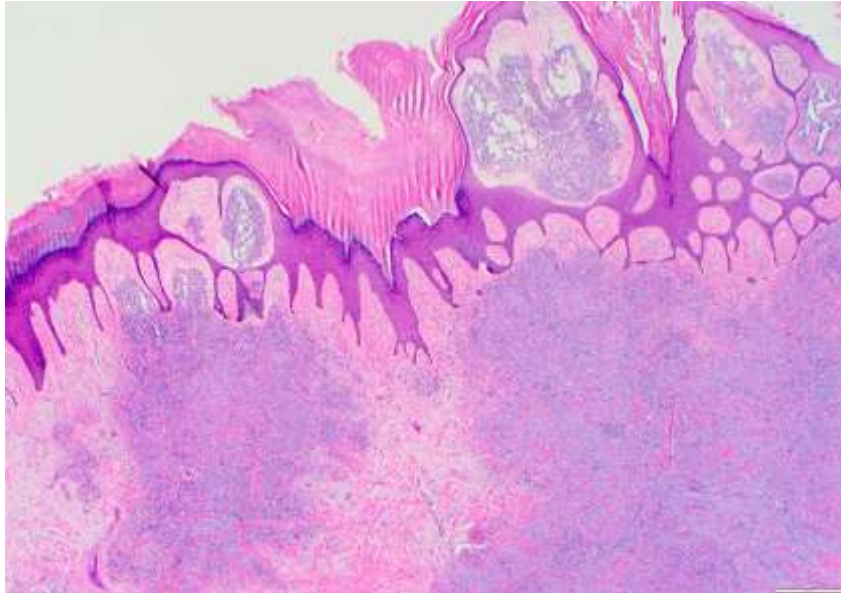
- A. It appears related to synovial sarcoma
- B. It has a characteristic gene fusion
- C. It is often metastatic at presentation
- D. The fibrous and myxoid areas are intimately intermixed on histology



Question No. 44

A 78-year-old man presents with a rapidly growing purpuric and nodular cutaneous lesion on the left forehead. The H&E histological images of the biopsy of the lesion are shown below.

What is the most likely diagnosis of this lesion



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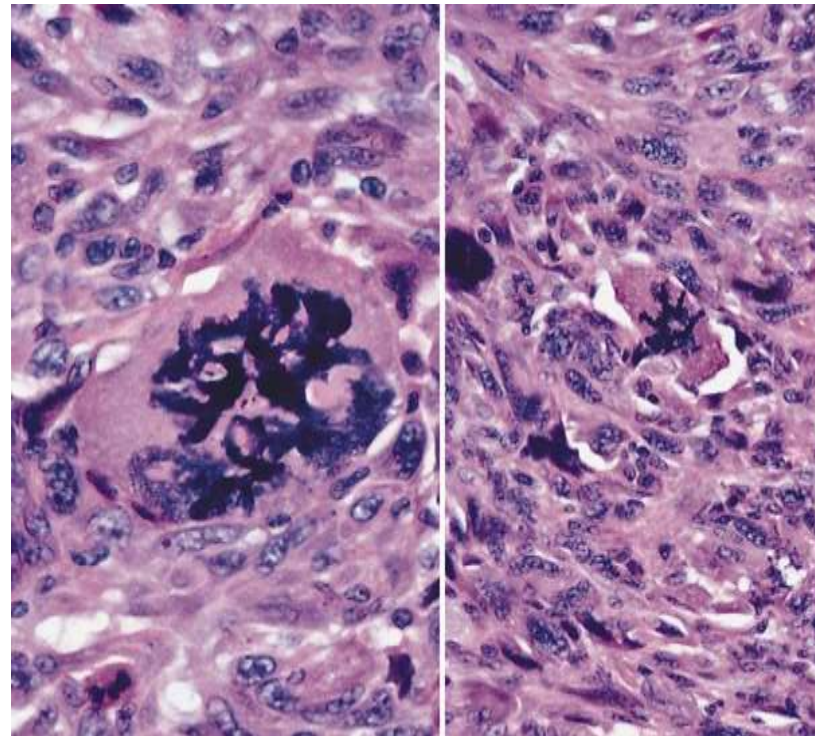
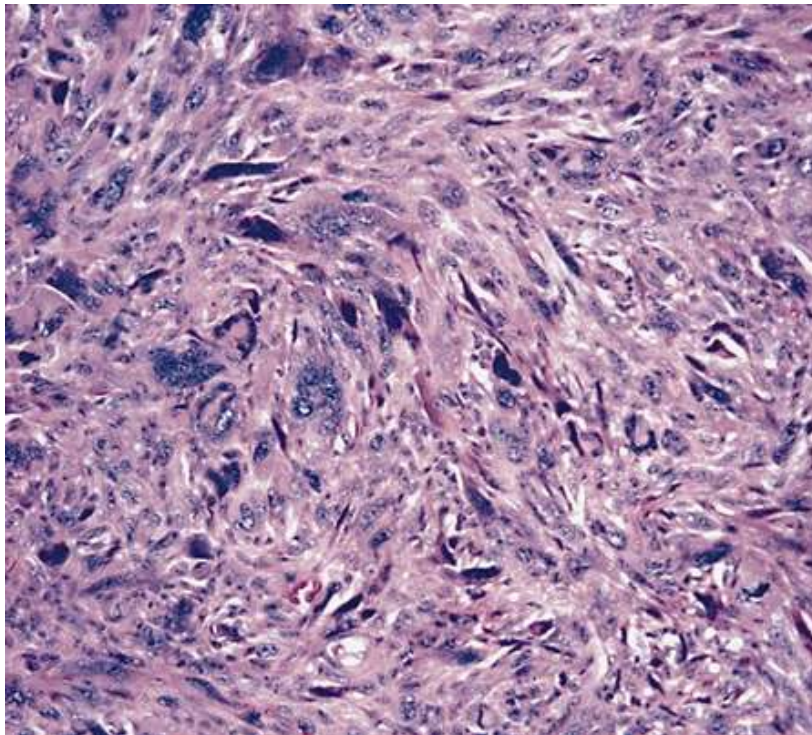
What is the most likely diagnosis of this lesion

- A. Angiosarcoma
- B. Epithelioid haemangioendothelioma
- C. Haemangioma
- D. Kaposi sarcoma

Question No. 45

A 60-year-old woman comes to her physician because she has had lower back pain for 1 month. On physical examination, there are no remarkable findings except for pain on deep palpation of the abdomen. Findings from a routine urinalysis, CBC, and serum electrolyte panel all are unremarkable. Twenty years earlier, she was treated for Hodgkin lymphoma with abdominal irradiation and chemotherapy; there has been no evidence of recurrence during regular follow-up visits. MRI now shows a 10 × 15 cm ovoid mass of the left retroperitoneum.

Which of the following is most likely to be found in the patient's retroperitoneum?



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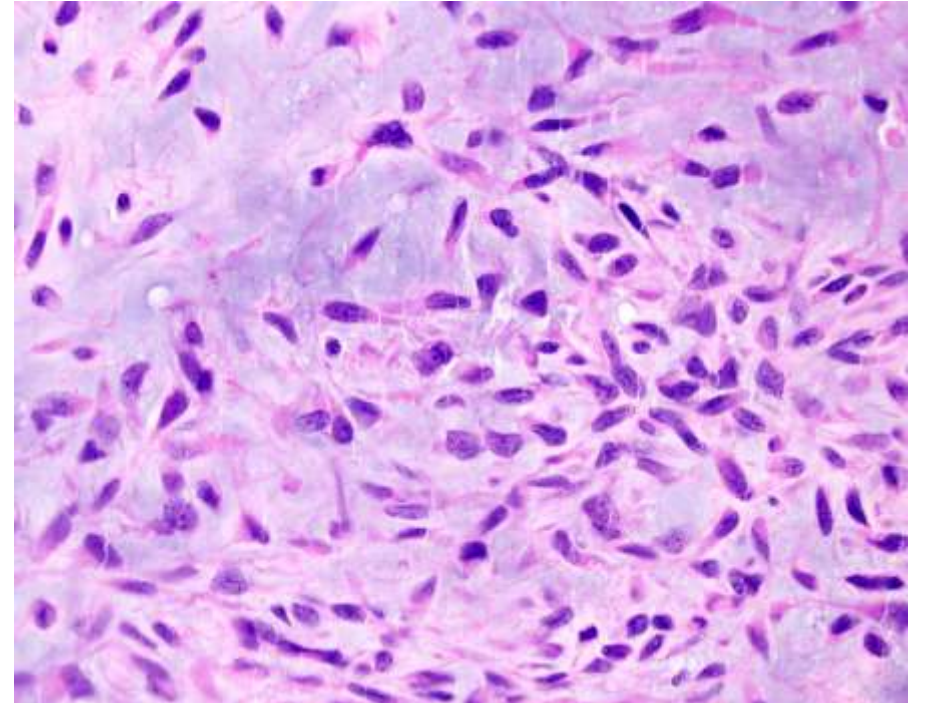
- A. Recurrent Hodgkin lymphoma
- B. Rhabdomyosarcoma
- C. Leiomyosarcoma
- D. Malignant fibrous histiocytoma

Question No. 46

A 50-year-old man presented with a left thigh mass. Haematoxylin eosin stains demonstrated hypocellular lobules with abundant pale blue myxoid matrix containing interconnecting cords and clusters of uniform cells with round to ovoid nuclei and eosinophilic or vacuolated cytoplasm. Foci of intralesional haemorrhages were seen. Occasional mitotic figures were identified (2 mitoses/10 high power fields). Immunohistochemical stain for NSE was positive in tumour cells while all of the following were negative: S100, GFAP, AE1 / AE3, desmin, CD34, ERG and h-caldesmon. FISH studies demonstrated rearrangement of the NR4AE gene at 9q22.33.

Which of the following is most likely the correct diagnosis

- A. Epithelioid sarcoma
- B. Extraskeletal myxoid chondrosarcoma
- C. Myoepithelioma
- D. Ossifying fibromyxoid tumor



Question No. 47

Most common mutation seen on IHC in hemangiopericytomas.

- A. STAT6
- B. STAT3
- C. TATS4
- D. TATS2

Question No. 48

Which is not a feature of Desmoid tumor

- A. Peak age of presentation is 30-40yrs
- B. 20% shows spontaneous regression
- C. Nuclei atypia is absent on microscopic examination
- D. Negative for beta-catenin on IHC

Question No. 49

Which statement is false for Well-differentiated liposarcoma (WDLS)

- A. Peak age of presentation is 40-60 years
- B. Focal cytologic atypia seen on microscopic examination
- C. MDM2 positive on IHC
- D. Surgery is followed by adjuvant RT

Question No. 50

Which of following is not a benign reactive sarcoma like lesion

- A. Undifferentiated Liposarcoma
- B. Dermatofibrosarcoma
- C. Infantile fibrosarcoma
- D. Aggressive fibromatosis