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55 YEAR OLD MALE. HISTORY OF PELVIC EXENTERATION FOR PROSTATIC SARCOMA, WITH BLADDER, URETHRA AND RECTUM IN 2010 (5933/10): PROSTATIC STROMAL SARCOMA (SPINDLE AND PLEOMORPHIC SARCOMA POSSIBLY OF NERVE SHEATH TYPE ON RECTAL CORE BIOPSY, AT LEAST GRADE 2 ON BIOPSY, 5292/10, SEEN BY PROF CYRIL FISHER. 2012: SOLITARY LUNG METASTASIS, LEFT METASTASECTOMY IN 2013. RIGHT METASTASECTOMY FOR FURTHER LUNG METASTASES IN 2014. 2016: FURTHER LUNG METASTASECTOMY. 2017-2020: SURVEILLANCE. MARCH 2020: SURVEILLANCE PET-CT SCAN DEMONSTRATED PET-POSITIVE DISEASE, WITH RIGHT ADDUCTOR COMPARTMENT LESION, LEFT ADDUCTOR COMPARTMENT LESION AND SMALL-VOLUME LUNG LESION (NOT PET-AVID). CORE BIOPSY RIGHT ADDUCTOR MASS ELSEWHERE: RELAPSED SARCOMA, ALTHOUGH AWAITING FINAL PATHOLOGY REPORT AT TIME OF CASENOTES ENTRY. RECOMMENDATION FOR PRE-OPERATIVE RADIATION TREATMENT TO BOTH THIGH LESIONS, FOLLOWED BY SURGERY. HE HAS COMPLETED HIS RADIOTHERAPY TO THE ADDUCTOR COMPARTMENT LESIONS. POST-RADIOTHERAPY MRI SHOWED THAT BOTH LESION IN RIGHT UPPER THIGH AND THAT IN LEFT UPPER POSTERIOR THIGH HAD HAD A GOOD RESPONSE, WITH BOTH LESIONS STABLE; RIGHT LESION WOULD BE EASIER TO RESECT, GIVEN ITS LOCATION IN PROXIMAL ADDUCTOR MUSCLE, WHILE LEFT LESION IS MORE POSTERIOR AND LIES CLOSE TO LESSER TROCHANTER, SO MAY BE MORE DIFFICULT. THIS SPECIMEN: EXCISION OF SARCOMAS FROM THE RIGHT AND LEFT ADDUCTORS OF THE THIGH, POST-RADIOTHERAPY

MACROSCOPY

A) Sarcoma right thigh: an unorientated ovoid specimen measuring 92x83x65mm. The outer surface is partially covered in skeletal muscle and appears to contain a multilobulated tumor measuring 86x73x62mm. The tumor is entirely encapsulated in smooth connective tissue. The surgical resection margins have been inked black. Specimen is serially sliced across the short axis revealing a large circumscribed predominantly homogeneous myxoid tumor mass with a small area of focal hemorrhage towards one end. The tumor is measured above. No obvious macroscopic necrosis is identified. The tumor appears to be completely excised macroscopically. Blocks 1) Cruciate of end. 2) Cruciate of other ends. 3-6) Representative sections of tumor. Tissue and tumor remain. B) Sarcoma left thigh: an unorientated ovoid tumor mass measuring
57x50x48mm. There are small fragments fatty tissue attached to one aspect. The remainder of the tumor mass is encapsulated in connective tissue. The surgical resection margins have been inked black. Specimen is serially sliced revealing a homogeneous cream circumscribed tumor mass will walled appearance. The tumor mass occupies the entire specimen. No obvious macroscopic necrosis is identified. Blocks 7&8) Cruciates of ends. 9-12) Representative sections of tumor. Tissue and tumor remain.

HISTOLOGY

A1-6) Sarcoma, right thigh

Sections show skeletal muscle enclosing moderately cellular tumor, composed of patternless arrays of markedly atypical ovoid to spindle cells with hyperchromatic ovoid nuclei and fibrillary cytoplasm in variably collagenous to focally myxocollagenous stroma and myxoid stroma. Tumor giant cells and bizarre cells are interspersed. There is variable surrounding fibrosis, infarct and necrosis, consistent with changes secondary to previous radiotherapy. No definite mitotic figures are identified in 10 hpf. Very focally within degenerate foci are areas of cellular debris, possibly representing some tumor necrosis.

The morphology is similar to that described in the previous material from the pelvic/ prostatic tumor in 2010 (5292/10, 5933/10), and the features are consistent with metastatic pleomorphic and spindle cell sarcoma, with post-treatment changes. Viable tumor is estimated to represent approximately at least 60% of the tumor area. Viable tumor is focally approximately 0.6mm from the nearest circumferential/peripheral margin (separated by fibrous tissue/ skeletal muscle), and approximately 1.8mm from the nearest longitudinal margin.

B7-12) Sarcoma, left thigh

Sections show fibrous tissue containing largely viable cellular tumor with essentially similar features to those in specimen A, and composed of sheets or loose fascicles of markedly atypical spindle to ovoid cells with large, markedly pleomorphic, hyperchromatic nuclei, with occasional intranuclear inclusions, and some of the pleomorphism may be secondary to the radiotherapy. The mitotic index is up to 3/10hpf with atypical forms. There is focal fibrinoid necrosis, although conclusive features of true tumor necrosis are not seen. There is interspersed fibrosis and hyalinized with fibrinoid material, in keeping with treatment changes.

The features are consistent with viable pleomorphic sarcoma, with viable tumor estimated to account for approximately at least 75% of the tumor area. Viable tumor appears excised, although is focally approximately 0.5mm from the nearest circumferential/ peripheral and longitudinal margins, being separated from these by a thin layer of connective tissue.

Dr Khin Thway

T: soft tissue t thigh m sarcoma