ROYAL MARSDEN NHS FOUNDATION TRUST - HISTOPATHOLOGY REPORT
748804: [redacted] - NHS Number: 620 758 8800

Lab No	6555/20	**Reported**	7 Jul 2020	**Pathologist**	DR HALLIN/DR THWAY
Source	Internal Operation	**Sample Received**	1 Jul 2020	**Ward**	CRITICAL CARE UNIT (CHELSEA)
Sex	MALE	**Age**	50	**Branch**	FULHAM ROAD
Clinical Diagnosis		**Operation**	30 Jun 2020	**Consultant**	STRAUSS,MR D C

SITE	DIAGNOSIS
SOFT TISSUE AND OTHER CONNECTIVE TISSUE A (T1X005)	DEDIFFERENTIATED LIPOSARCOMA (Malignant) (M88583)
B SCROTUM (T79400)	DEDIFFERENTIATED LIPOSARCOMA (Malignant) (M88583)
C PELVIS (TY6000)	DEDIFFERENTIATED LIPOSARCOMA (Malignant) (M88583)

50 YEAR OLD MALE, WITH HISTORY OF SEMIOBSTRUCTIVE MASS IN DESCENDING COLON IN MARCH 2020: R0 EN BLOC EXCISION OF 90MM DEDIFFERENTIATED LIPOSARCOMA ADJACENT TO DESCENDING COLON WITH LEFT HEMICOLECTOMY, HIGH ANTERIOR RESECTION AND APPENDICECTOMY. THIS WAS PERFORMED AT BASINGSTOKE, AND DR RAWLANI SENT THE MATERIAL FOR SECOND OPINION TO PROF CYRIL FISHER AT UHB/ THE ROH BIRMINGHAM: SPINDLE CELL SARCOMA WITH SOME EVIDENCE OF ATYPIA AND MITOTIC INDEX OF 4-6/10 HPF. MDM2 WAS AMPLIFIED WITH FISH, SUPPORTING DIAGNOSIS OF DEDIFFERENTIATED LIPOSARCOMA. CLINICALLY, ALSO ENHANCING MASS NOTED IN LEFT INGUINAL CANAL; NOT RESECTED. RECENT IMAGING: HIGH-GRADE DISEASE EXTENDING INTO INGUINAL CANAL TOWARDS PUBIC BONE WITHOUT CORTICAL DESTRUCTION, AS WELL AS ENHANCING NODULE, LEFT LATERAL PELVIC SIDE WALL, WITH RESIDUAL LOW-GRADE DISEASE, AND UMBILICAL NODE. THE PATIENT HAS NOW COME TO BE SEEN HERE FOR EXCISION OF THE CURRENT DISEASE (NO NEOADJUVANT TREATMENT). THIS SPECIMEN: RESECTION OF DDL OF THE LEFT GROIN WITH LEFT RADICAL ORCHIDECTOMY AND PELVIC FAT, AS WELL AS EXCISION OF LEFT PELVIC SIDE WALL NODULE. NO PREVIOUS RMH HISTOLOGY.

MACROSCOPY
A) Left radical orchidectomy: an unorientated orchidectomy specimen measuring 275x73x52mmd. Specimen is comprised of a testis measuring 52x38x34mm with spermatic cord surrounded by firm tumor mass. Mass measures 67x57x46mm. There is also an attached piece of fatty tissue with smooth serosa on one surface. This tissue measures 142x80x38mm. The tissue surrounding the tumor mass is roughened with fragments of skeletal muscle. On slicing the testis the cut surface of the testis appears normal with a small area of ?necrotic material identified underlying the outer tunica. On slicing along the spermatic cord there are multiple focal cream tumor nodules spanning 46x42x32mm. The tumor appears homogeneous with a circumscribed appearance. The tumor abuts surgical resection margins. The tumor lies 27mm from testes and does not appear to invade into the attached fatty tissue. No obvious macroscopic necrosis is identified. Blocks 1) Vessel resection margin. 2&3) Representative sections of testis. 4) Representative section of cord adjacent to testis. 5) Representative section of cord adjacent to fatty peritonealised tissue. 6-10) Representative sections of tumor with margins. Tissue and tumor remain. B) Left pelvic sidewall nodule: an ovoid piece of fatty tissue measuring 85x45x13mm. There is a firm palpable nodule towards one side which is partially covered in fragments of skeletal muscle. Nodule measures 29x15x13mm. Nodule abuts surgical resection margin. On slicing the nodule is circumscribed and homogeneous with no obvious macroscopic necrosis. Blocks 11&12) Representative sections of nodule. Tissue and tumor remain.

HISTOLOGY
A1-10. Left radical orchidectomy:

Sections from the tumor mass show a variably, predominantly cellular neoplasm with an infiltrative border, focally seen to invade skeletal muscle (eg slide 6), and composed in areas of loose fascicles of moderately to markedly atypical cells with ovoid to spindled hyperchromatic and vesicular nuclei, often with large nucleoli, and moderate amounts of palely eosinophilic cytoplasm, in collagenous stroma. Bizarre and multinucleate forms are focally present. In areas (eg slide 6), the tumor is hypercellular and solid, and composed of sheets of markedly atypical, somewhat discohesive polygonal cells with ovoid vesicular nuclei and darkly eosinophilic to amphophilic cytoplasm. There is prominent focal clear cytoplasm (eg slide 9), but no lipoblasts are seen. The mitotic index is variable, but focally exceeds 20/10hpf, with atypical forms (slide 6). A mild to moderate chronic inflammatory infiltrate is intermingled in areas, and there are occasional lymphoid aggregates. There are areas of hemorrhage, and the tumor is focally close to large vessels, but no definite lymphovascular invasion is noted. A relatively sparsely,

densely collagenous area with atypical cells, consistent with part of the tumor, possibly with an element of infarct/ fibrosis, is present (slide 7). Focal necrosis is present (eg slide 6), associated with areas of acute inflammation, amounting to microabscess formation. The surrounding adipose tissue appears of mature type and is focally septated, with focal moderately atypical ovoid and spindle cells with enlarged hyperchromatic nuclei, in keeping with adjacent well- differentiated liposarcoma.

The features are of a high-grade spindle, ovoid and polygonal cell neoplasm, consistent with residual dedifferentiated liposarcoma, grade 3. FISH for MDM2 amplification status is awaited, with a further report to follow. Moderately cellular tumor in densely collagenous fibrous tissue is present at the inked peripheral/ circumferential margin (eg slide 7); this is in keeping with dedifferentiated (rather than sclerosing well-differentiated) liposarcoma at this margin. The vessel resection margin shows a large vessel, smaller vessels and unremarkable spermatic cord, surrounded by mature fibroadipose tissue with mature fat; no tumor is seen. The section taken of tissue adjacent to fatty peritonealised tissue shows adipose tissue with lobules of adipocytes of mature type, including large vessels; focally loosely collagenous fibrous tissue shows scattered atypical cells, in keeping with tumor (slide 5). Tissue adjacent to the cord shows fibroadipose tissue with large vessels and lobules of adipose tissue of mature type; this tissue shows infiltration by pleomorphic tumor, with myxoid or fibrous stroma. The tumor is close to the cord (eg slide 7), but separated by a small amount of fibrous tissue, and infiltration of this is not noted. The testis shows normal spermatogenesis. No ITGCN is noted. No infiltration of the testis or its surrounding structures by tumor is seen, and no significant abnormality is noted within its surrounding tissue.

B11-12. Left pelvic side wall nodule:
Sections show fibroadipose tissue, with an ill-defined lesion, comprising moderately cellular, densely collagenous tissue containing scattered moderately atypical cells with ovoid vesicular nuclei, prominent nucleoli and moderate amounts of lightly amphophilic cytoplasm. This is intermingled with a very florid chronic inflammatory infiltrate, including focally, a marked
lymphoplasmacytic infiltrate; all of this shows a prominent infiltrative appearance, including into skeletal muscle (e.g. slide 11). The surrounding adipose tissue is of mature type, without discernible atypia.

Although given the history and findings in specimen A, this would more likely represent a variant of dedifferentiated liposarcoma with inflammatory component (inflammatory dedifferentiated liposarcoma), further opinion will be sought from Dr Wotherspoon, to assess for the possibility of a hematolymphoid neoplasm. FISH for MDM2 amplification status is awaited, with a further report to follow. This process focally extends to the margins of the material examined.

Dr Magnus Hallin/Dr Khin Thway