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73 YEAR OLD MALE. HISTORY OF LEFT LOWER ABDOMINAL/ MESENTERIC Pleomorphic sarcoma with myoid immunophenotype, ?DDL AT THIS SITE, IN 2002 (Prof Cyril Fisher SECOND OPINION). THIS SPECIMEN: EXCISION OF CLINICALLY RECURRENT RETROPERITONEAL LIPOSARCOMA With COLON AND PROXIMAL JEJUNUM, With NODULE IN FRONT OF LEFT URETER.

MACROSCOPY

A) Recurrent liposarcoma (retroperitoneal) with colon and proximal jejunum: the specimen comprises two sections of bowel with attached firm solid tumour mass. The portion of colon measures 213mm in length and 32mm in diameter with an area of possible stricture located 70mm from one stapled resection margin. The jejunum measures 370mm in length and 25mm in diameter. On opening the segments of bowel the colonic mucosa appears normal with thickening noted on area of stricture. On opening the jejunum there is ulcerated polyp measuring 17 x 15 x 10mm and located 104mm from closest stapled resection margin. Underlying this portion of the bowel segment is the main tumour mass. There is a further lobule attached to the side of the colon which measures 64 x 60 x 40mm. On slicing the two mass the one underlying the jejunum is solid with extensive calcification and measures 90 x 73 x 72mm. The lobule attached to the colon is soft and lipomatous showing bland yellow homogenous tumour. Tumour abuts the smooth serosal resection margin with no obvious breach of the colon. No obvious macroscopic necrosis is seen throughout the specimen. Blocks: 1) jejunum resection margin closest to ulcerated polyp; 2) jejunum resection margin away from polyp; 3) ulcerated polyp with underlying tumour; 4) section of tumour adjacent to jejunum with smooth serosa; 5) colon resection margin closest to ? stricture; 6) colon resection margin closest to lipomatous nodule; 7) colon mucosa to tumour; 8) ? stricture; 9&10) representative section of tumour adjacent to colon; 11&12) representative section of tumour mass adjacent to jejunum; 13) representative section of calcified portion of tumour adjacent to jejunum. Tissue and tumour remains.

B) ?nodule in front of ureter: pot contains an unorientated ovoid piece of fibroid fatty tissue measuring 65 x 37 x 17mm. There are fragments of ?serosa ?skeletal muscle on one surface. The extra margins are inked blue. Specimen is serially sliced revealing a small cream lesion measuring 6mm in diameter surrounded by normal fatty tissue and ?fibrosis. no obvious necrosis is seen. 14) cruciate of ends; 15-17) transverse sections. Tissue remains

HISTOLOGY

A) Recurrent liposarcoma (retroperitoneal) with colon and proximal jejunum:

Sections show fibroadipose tissue with cellular tumour, composed of loose fascicles of moderately to markedly atypical spindle cells with elongated vesicular nuclei, and focally prominent nucleoli in collagenous stroma. Infiltration of the small bowel wall is noted (eg slide 4). Lymphoid aggregates are prominent in areas, and focally there is also further mixed chronic inflammatory infiltrate, including eosinophils (slide 11), in keeping with a component of inflammatory dedifferentiated liposarcoma. Mitotic figures are not prominent, with an index of up to 1/10hpf. No definite necrosis is seen.

The features are consistent with well-differentiated liposarcoma and dedifferentiated liposarcoma liposarcoma (grade 2). The previous material at RMH was from 2002. **FISH for MDM2 amplification**

status is awaited, with a further report to follow. The section taken from the jejunal polyp noted macroscopically shows focally ulcerated small bowel mucosa with a morphologically varied tumour, much of this composed sheets of adipocytes of mature type, most likely representing well-differentiated liposarcoma. Within and splaying the small bowel wall, and appearing to be present on either side of it, and also present underneath small bowel mucosa, is similar adipocytic tumour, containing mildly to moderately atypical spindle cells morphologically well-differentiated and (where the septa are more pronounced) dedifferentiated liposarcoma.

The dedifferentiated component is focally <5mm from the inked margin.

The section from the macroscopically calcified portion of tumour adjacent to the jejunum show a prominent, essentially nodular, mature-type, relatively sparsely cellular mature metaplastic type bone, with trabecular spaces showing moderately atypical cells consistent with part of dedifferentiated liposarcoma; this is difficult to interpret but is interpreted as a nodule of dedifferentiated liposarcoma, with extensive metaplastic bone, possibly representing chronicity. No definite osteosarcomatous component is noted (slide 13).

Apparent well-differentiated liposarcoma extends to the smooth serosal margin.

The proximal and distal jejunal margins show unremarkable small bowel wall, with surrounding adipose tissue of mature type, and there is mild serositis. The colonic resection margins show unremarkable lateral border wall surrounded by adipose tissue of mature type, without definite surrounding well-differentiated liposarcoma. One of these margins show thinning of the large bowel wall, although no significant pathology is noted within it.

The section from the stricture noted macroscopically shows muscularis propria which shows apparent merging with cellular fascicles showing mildly to moderately cellular spindle cells likely representing dedifferentiated liposarcoma infiltrating the bowel wall, with a component of well-differentiated liposarcoma adjacent to this. There is some serositis and some adjacent differentiated adipocytic tissue, which may represent well-differentiated liposarcoma.

B) <u>?nodule in front of ureter</u>:
Sections show a tumour, largely comprising lobules of mature fat with fibrous septation. Focally, the septa are expanded, and contain moderately to markedly atypical spindle cells, and the features are in keeping with nodule of well- and dedifferentiated liposarcoma. Focally, the likely dedifferentiated component of tumour is seen to apparently infiltrate skeletal muscle (slide 15). The tumour extends to the inked peripheral margin/ aspects examined.

A similar tumour nodule is also present within this larger nodule (eg slide 16), and there are small peripheral aggregates of lymphoid tissue, but this likely reflects tumour with surrounding inflammatory infiltrate, and is insufficient for a nodal metastasis of dedifferentiated liposarcoma.

Dr Magnus Hallin/Dr Khin Thway

T: soft tissue T RETROPERITONEUM M well-differentiated liposarcoma dedifferentiated liposarcoma