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60 YEAR OLD MALE. THIS SPECIMEN: EXCISION OF INTRA-ABDOMINAL/ INTRAPERITONEAL SOLITARY FIBROUS TUMOR + SMALL BOWEL RESECTION. PREVIOUS BIOPSY NOT REVIEWED AT RMH: SFT, COMPOSED OF SPINDLE CELLS WITH MILD NUCLEAR PLEOMORPHISM, WITH STRONG EXPRESSION OF CD34 AND NEGATIVITY FOR CD117, S100 AND DESMIN. MITOTIC INDEX 2/10 HIGH POWER FIELD, WITH PROLIFERATIVE KI67 INDEX OF 2%. NO PREVIOUS RMH HISTOLOGY

#### MACROSCOPY

Intra-abdominal SFT plus small bowel: Pot contains an unorientated multilobulated tumor mass with attached small bowel segment and possible omental tissue. The specimen measures 210 x 213 x 132mm. The attached segment of bowel measures 135mm in length and 25mm in maximum diameter. On opening the bowel, the bowel mucosa appears macroscopically normal. The mucosa surface abuts the tumor with no obvious macroscopic breach. On slicing the tumor, the tumor appears heterogenous with cream necrotic and myxoid areas throughout. The tumor measures 185 x 195 x 125mm. Macroscopically the tumor appears to be completely excised. Necrosis is comprised of approximately 30- 40% of the tumor. There are also large cystic areas and areas of focal hemorrhage. Blocks: 1-2) Small bowel resection margins; 3) Small bowel to tumor; 4) tumor at omental resection margin; 5) tumor at smooth serosa resection margin; 6-15) representative sections of remaining tumor. Tissue and tumor remain.

#### HISTOLOGY

Sections show predominantly hyper cellular tumor, composed of patternless arrays or sheets of ovoid to spindle cells with vesicular nuclei and moderate amounts of amphophilic cytoplasm. Focally there are small areas of myxoid stroma. The cells are plump, but atypia appears at most focal and mild. Foci of incipient (slide 3) and prominent overt tumor necrosis are present (slides 8 and 10). Mitotic figures are not prominent, with an index of up to 2/10hpf without atypical forms. Focally, the stroma is sparsely cellular and collagenous, and there are areas of infarct, with fibrinoid material and occasional interspersed osteoclast-like giant cells, although no tumoral giant cells. There is prominent stromal vascularity, including dilated hemangiopericytic vessels. The tumor is present within adipose tissue surrounding the small bowel, with an infiltrative border in areas, and focally abuts the small bowel, without definite infiltration seen.

The tumor is multifocally positive for CD34, with areas showing loss of expression. There is diffuse nuclear STAT6 positivity. The tumor is negative for CD117, DOG1, desmin, SMA, myogenin ,SOX10, S100 protein, CDK4, p16 and AE1/AE3.

The features are consistent with solitary fibrous tumor, with the necrosis, hypercellularity and focal infiltrative border in keeping with malignant potential, although no areas of frank sarcomatous transformation are noted. No features of dedifferentiation are seen. The tumor is present at the inked 'omental resection margin' and at the smooth serosal resection margin. The small bowel longitudinal margins are free of tumor or other significant pathology, and show focal fibrinoid material and mild serositis with granulation tissue only.

Dr Khin Thway

T: soft tissue t abdomen m solitary fibrous tumour malignant