

ROYAL MARSDEN NHS FOUNDATION TRUST - HISTOPATHOLOGY REPORT
748808: ~~6462/20~~ - NHS Number: 404 938 5902

Lab No	6907/20	Reported	16 Jul 2020	Pathologist	DR HALLIN/DR THWAY
	Internal	Sample			CRITICAL CARE UNIT
Source	Operation	Received	10 Jul 2020	Ward	(CHELSEA)
Sex	FEMALE	Age	85	Branch	FULHAM ROAD
Clinical Diagnosis		Operation	9 Jul 2020	Consultant	JAMES, MR S E

SITE	DIAGNOSIS
SOFT TISSUE AND OTHER CONNECTIVE TISSUE	HAEMANGIOSARCOMA (Malignant)
A (T1X005)	(M91203)
	HAEMANGIOSARCOMA (Malignant)
B BREAST (T04000)	(M91203)

85 YEAR OLD FEMALE, WITH HISTORY OF WLE AND RADIOTHERAPY IN 2014 FOR ER+ HER2- RIGHT BREAST CARCINOMA. PATIENT DEVELOPED A NODULE WITH ASSOCIATED BRUISING ON THE IPSILATERAL BREAST. RECENT REVIEW OF OUTSIDE HISTOLOGY OF PUNCH BIOPSY AND CORE BIOPSIES FROM THE RIGHT BREAST FROM MAY 2020: ANGIOSARCOMA (5944/20). OUTSIDE USS: SKIN THICKNESS UP TO 6MM AT SITE OF CLINICAL CONCERN. RECENT CORE BIOPSY FROM LEFT AXILLARY NODE (JUNE 2020): MODERATELY DIFFERENTIATED CARCINOMA, IN KEEPING WITH BREAST PRIMARY (6462/20). THIS SPECIMEN: RIGHT MASTECTOMY FOR EXCISION OF ANGIOSARCOMA, INCLUDING PECTORALIS FASCIA.

MACROSCOPY

Right breast stitch single = 12 o'clock, double = 9 o'clock: an orientated right sided mastectomy specimen weighing 1837g and measuring 253mm (3 to 9 o'clock), x200mm (12 to 6 o'clock), x74mm (anterior to posterior). The anterior surface is covered in skin measuring 253mm (3 to 9 o'clock), x207mm (12 to 6 o'clock). There are multiple reddened purple nodules surrounding the nipple areolar complex. Some of these inferior nodules appear to have breached the skin surface and show surface crusting. There are two woody lesions present towards the 3 o'clock margin, each measuring 7mm in diameter and lying 14mm apart. The main area of discoloration measures 147mm (3 to 9 o'clock), x123mm (12 to 6 o'clock). On slicing there is a previous excision scar located in the upper outer quadrant. The breast tissue appears predominantly normal with one small focal hemorrhagic area located centrally. The main tumor extends to a depth of 24mm and lies 60mm from closest deep resection margin. Tumor lies 89mm from closest to 12 o'clock resection margin, 42mm from closest to 6 o'clock resection margin, 24mm from closest to 3 o'clock resection margin and 93mm from closest to 9 o'clock resection margin. On further slicing there is a further deep nodule identified 9 o'clock to nipple areolar complex. Blocks 1-12) Clock face sections around periphery of skin (each corresponding to cassette number). 13) Nipple with tumor. 14) Tumor nodule breaching skin surface with crusting. 15&16) Representative sections of further surface nodules protruding through skin. 17) Representative section of small ?pigmented nodule towards superior aspect. 18) Representative section of woody lesion towards 3 o'clock aspect. 19) Representative section of purple nodule in central breast. 20) Representative section of deep resection margin underlying tumor. 21) Representative section of excision scar. 22&23) Further representative sections of tumor at surface. 24) Representative section of further deep nodule 9 o'clock to nipple areolar complex. Tissue and tumor remain.

HISTOLOGY

Sections show skin and subcutis, with the dermis and subcutis containing ill-defined cellular tumor, with features as previously reported in the biopsy (5944/20), and composed of variably formed, often angulated anastomosing vessels lined by mildly to moderately atypical ovoid to spindle cells with vesicular nuclei with frequently prominent nucleoli. In areas, the tumor is composed of more solid distributions of compressed, variably formed vessels, with prominent surrounding hemorrhage. Mitotic figures are prominent, with an index frequently exceeding 20/10hpf (focally 8-9 per one hpf) with relatively plump forms. No definite tumor necrosis is seen. Tumor is seen in the region of the nipple, with infiltration around smooth muscle bundles. The atypical vascular process is also very focally present just below the epithelial rete pegs (eg slide 12); most of this appears to represent angiosarcoma, and there may be overlap with prior atypical vascular lesion. Adjacent superficial dermal vessels in areas are noted to be dilated and angulated and somewhat irregular, in keeping with pre-existing atypical vascular lesions. There is ulceration of the overlying skin with crusting, edema and acute inflammation. The overlying epidermis shows focal seborrheic keratoses, as well as focal mild thinning and hyperkeratosis, but no other significant pathology is noted within it. There is also a small epidermoid cyst/ epithelial inclusion cyst without atypia (eg slide 11) which appears excised. No definite features of atypia are noted in the small amount of surrounding breast parenchyma.

The features are consistent with high-grade angiosarcoma. The purple nodule in the central breast shows deep fibroadipose tissue containing high-grade angiosarcoma including some small, slightly more epithelioid areas (slide 19). The further surface nodules protruding through the skin show angiosarcoma (one with predominantly solid-pattern high-grade features, and surrounding better-differentiated vasoformative angiosarcoma; these nodules might represent separate tumor foci, or possibly extensive continuous disease. The macroscopically separate deep lesion from the area 9 o'clock to the nipple areolar complex shows high-grade angiosarcoma. The section from the excision scar shows deeper fibroadipose tissue without skin, with focal fibrosis with some calcifications and small foci of angiosarcoma. The representative section from the small, possibly macroscopically pigmented nodule (slide 17) shows no significant pathology. The firm lesion described towards the 3 o'clock aspect shows a seborrheic keratosis, which appears excised.

Marginal status for angiosarcoma is as follows:

1 o'clock: at least 14mm
2 o'clock: at least 18mm
3 o'clock: at least 17mm
4 o'clock: at least 15mm
5 o'clock: at least 12mm
6 o'clock: at least 18mm
7 o'clock: 16mm
8 o'clock: at least 15mm
9 o'clock: at least 11mm
10 o'clock: at least 12mm
11 o'clock: at least 14mm
12 o'clock: at least 15mm
Deep margin: approximately 17.5mm.

Dr Magnus Hallin/Dr Khin Thway