Purpose: Ki67 labeling index (LI) is used as a predictive marker for response to chemotherapy and associated with prognosis in breast cancer. In this study, we evaluated interobserver concordance of visual assessment of Ki67 LI in breast cancer.

Methods: Ki67-immunostained slides of 160 cases of primary invasive breast cancer were visual assessed by five breast pathologists with two different methods to choose the scoring fields: (1) hot-spot score, (2) average score. Proportions of positive tumor cells at 10% intervals were scored. The intra-class correlation coefficient (ICC) was estimated with a 95% confidence interval (CI) to assess the interobserver reproducibility.

Results: (1) A perfect concordance of Ki67 LI was both demonstrated according to two score methods ($p > 0.0001$). Average score method (ICC, 0.904) demonstrated a better correlation than hot-spot score method (ICC, 0.894). (2) By respective means according to two score methods, all cases were classified into three groups ($\leq 10\%$, $11-30\%$ and $> 30\%$ Ki-67 LI). The concordance was relatively low in $11-30\%$ Ki67 LI group compared with other two Ki67 LI groups according to both methods. (3) All cases were classified into three groups by paired-difference (d) between means of hot-spot score and average score ($d < 5$, $5 \leq d < 10$, $d \geq 10$). The consistency was observed to decrease with increasing paired-difference according to both methods.

Conclusions: Visual assessment of Ki67 LI is a candidate for a standard method in breast cancer clinical practice. Average score and hot-spot score of visual assessment both demonstrated a perfect concordance, and an overall average assessment across the whole section including hot spots may be a better visual assessment method used in routine practice. Interobserver concordance of intermediate Ki67 LI in which most cutoffs are located for making clinical decisions was relatively low.

116. MALIGNANT SOLITARY FIBROUS TUMOUR OF THE PLEURA WITH HETEROLOGOUS DIFFERENTIATION – A CASE REPORT

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Background: Solitary fibrous tumours (SFT) of the pleura are rare neoplasms. Malignant solitary fibrous tumours showing heterologous differentiation are exceedingly rare. This case adds to the reported body of literature on this unusual form of malignant transformation in an uncommon entity.

Clinical features: We report a case of a 63-year-old man who presented with dyspnoea and chest pain. The CT scan showed a large pleural-based mass with two satellite nodules in the adjacent right lower lobe. Surgical resection of the mass was performed.

Pathological features: The 11cm well-circumscribed mass was attached to a thin wedge of lung. The cut surface was solid and cream-coloured with focal areas of myxoid, necrotic and haemorrhagic change. Two separate similar nodules were seen in the adjacent lung parenchyma. Histologically, the tumour showed a spectrum of classic low-grade SFT to frankly malignant sarcomatous areas but was also showing two lines of divergent chondrosarcomatous and osteosarcomatous

differentiation. Diffuse CD34 positivity was present throughout the tumour.

Discussion: Only 5 cases of malignant SFT with heterologous differentiation have been reported to date. Of these, two cases were reported as showing bi-directional divergent differentiation. These cases of malignant SFT with heterologous differentiation have shown clear de-differentiation, as defined by an abrupt transition between low-grade and high-grade areas with loss of CD34 positivity. Our case is unique in that there was no clear evidence of de-differentiation and CD34 positivity was preserved in the high-grade areas.

117. A CASE OF SYSTEMIC MASTOCYTOSIS DIAGNOSED ON COLONIC BIOPSY

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Background: Systemic mastocytosis a rare disorder characterised by the clonal proliferation of mast cells in one or more extracutaneous organs. More than 60% of patients complain of gastrointestinal symptoms such as pain and diarrhoea, commonly due to mediators such as histamine. Uncommonly, it is due to infiltration of the gastrointestinal tract by mast cells.

Case report: We report a case of a 53 year old female who initially had a gastroscopy and colonoscopy for abnormal liver function tests, intermittent abdominal pain, vomiting and diarrhoea in 2010. Biopsies of the gastric antrum, duodenum and terminal ileum were normal. The random colonic biopsy showed mild variation in crypt architecture with occasional branching crypts and a hypercellular lamina propria with an increased number of eosinophils. Immunohistochemical staining with CD117 (c-KIT) confirmed a diffuse infiltration of mast cells within the lamina propria, consistent with a diagnosis of systemic mastocytosis. She was subsequently treated with ranitidine and doxepin. In 2015, she had a repeat colonoscopy for investigation of IBS-type symptoms. A random colonic biopsy showed similar features to the initial biopsy, with occasional branching crypts and a hypercellular lamina propria containing collections of mast cells and an increased number of eosinophils, consistent with a diagnosis of systemic mastocytosis.

Discussion: The literature on the gastrointestinal features of systemic mastocytosis describe mast cell infiltration of the lamina propria, but few studies document the cellular features and architectural disturbances associated with it in detail. Currently, the features on H&E staining are classified as non-specific, and require the use of special stains, like CD117, to confirm the presence of mast cells. This case study aims to describe the histopathological features associated with it in detail.

118. PRIMARY GERMINOMA IN A FEMALE: A RARE MEDIASTINAL TUMOUR

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