SUMMARY

Spinal tumours constitute about 15% to 20% of the tumours of the central nervous system. The high morbidity and mortality associated with them necessitate their early diagnosis so that intervention can be planned at the earliest. Investigations like CT, MRI, Myelography, Scythygraphy consensus by multidisciplinary team, intraoperative impression determine the plan of management. Hence this study was conducted with the objective of assessing the coherence of preoperative assessment and intraoperative impression by comparing with the final confirmed diagnosis by histology.

Methodology
This was a longitudinal study conducted in Queen Elizabeth Hospital in Birmingham among patients diagnosed with intraspinal tumour who were suitable for surgical intervention between 2007 and 2017. Preoperative imaging was interpreted by consultant level radiologists, focusing on malignancy and tissue of origin. Im majority of cases120 of 136 Multidisciplinary Team Meeting (MDT) verified this provisional diagnosis. Later on Consultant level neurosurgeon documented his intraoperative assessment, based on lesion morphology. These provisional diagnosis obtained by radiology assessment, MDT input and surgeons observation was compared to histology assessment, as a gold standard. Study was approved by Queen Elizabeth University Hospital Birmingham FT NHS Clinical Audit and Registration System CARMS nr 15605.

Results
13 patients were included in the study. Age ranged between 18 and 85 years, mean 58.4, median 62 years old.

Agreement of final diagnosis with MDT Intervention
Accuracy 0.5 Kappa unweighted 0.668. Diagnosis was accurate in 60% Ependymomas, 100% Epidermoid, 100% Hemangioblastoma, 100% Lipoma, 87.32% Meingeoma, 80% Methastasis, 71.43% of Peripheral Nerve Sheath Tumours.

Agreement of final diagnosis with MRI appearances.
Accuracy 0.5 Kappa unweighted 0.796. MRI diagnosis was accurate in 64.29% of Ependymoma, 100% Epidermoid, 100% Hemangioblastomas, 100% Lipomas, 92.06% Meningeomas, 85.71% Metastasis, and 87.71% of Peripheral Nerve Sheath Tumours.

Agreement of final diagnosis with Intraoperative appearances.
Accuracy 0.5 Kappa unweighted 0.818. That correlates to 81.82% Ependymomas, 100% Epidermoids, 100% Gliomas, 100% Hemangioblastomas, 100% Lipomas, 92.77% Meningeomas, 89.47% Metastasis, 100% Paragangliomas, and 86.67% metastases.

Discussion
It was established, that MDT agreement with histology is 89.58%, MRI 89.58% and intraoperative impression has 91.47% agreement. Therefore we can see that in a diagnostic process modern of spinal tumors, modern imaging correlates significantly but not perfectly with factual diagnosis. MDT discussion although not perfectly correlates, if lead and conducted well, takes important role in diagnostic and therapeutic process. Intraoperative assessment of a experienced neurosurgeon has a very good agreement with a final diagnosis, and intraoperative strategy can and should correlate with it.