



Figure 1: A) Schema of the workflows used in the study demonstrating the ROI selection, and exemplar surgical specimen, the FFPE tissue block constructed alongside its H&E slide, and the corresponding immune slides. B) Representative IHC examples of immune cell density for each immune cell type, taken at 20x magnification, all from WDLPS blocks. The top row shows areas of high immune cell density for each cell type, and the bottom row shows low immune cell density for each cell type. C) An example of CD3+ staining for two blocks taken from the same tumour which demonstrate one block with high density of CD3+ on the top, and one block with low density of CD3+ on the bottom. D) Tukey box and whiskers plot demonstrating total tumour infiltrating lymphocyte count for immune cells from the 40 blocks and across the subtypes. Variable distribution of immune cells across the four subtypes WDLPS, DDLPS, LMS and SCS is observed. E) Correlation of average immune cell infiltrate per HPF with MRI EF. Scatter plots shows each black point representing an individual block, and solid blue line shows line of best fit. Positive correlation of MRI enhancing fraction with CD3+, CD4+ and CD8+ demonstrated.