



**Fig S10.** Comparison of FAIRE signal enrichment in older FFPE tissue blocks versus younger FFPE tissue blocks. (A) Overlap of significant peaks from EWS894 xenograft tissue called in older blocks (purple, 7 years old) with younger blocks (yellow, 2 months old). (B) Heatmap of FAIRE signal enrichment across all older blocks ( $n = 2, 3$  replicates each) and all younger blocks ( $n = 3$ ), 5 kb around center of peaks called significant in either the older blocks, the younger blocks, or both. (C) Number of significantly different peaks in peak groups (defined in (A)), calculated by DESeq2 ( $abs(\log_2\text{FoldChange}) > 0.6$  and  $\text{padj} < 0.05$ ) comparing FAIRE signal in 3 younger blocks to 3 older block replicates (mean of 2 older blocks). (D) Range of fraction of peaks overlapping between two peak sets of older block replicates. Fraction of younger block peaks overlapping older block peaks marked by dotted line. (E-G) Distribution of signal to noise (mean FAIRE signal 50 bp around summit – mean FAIRE signal at 50 bp flanking peak end) for all shared peaks (E), older block only peaks (F) and younger block only peaks (G), as defined in (A). FAIRE signal distribution in older block replicates (blue), and younger block (green). (H) Spearman's correlation coefficients comparing signal to noise difference between blocks for EWS894 older blocks (replicates combined), EWS894 younger blocks, MCF-7 younger blocks, and 786-0 younger blocks.