



**Supplementary Fig. 4.** The relationship between the homologous recombination (HR) deficiency scores and levels of the corresponding mutation signatures. For three types of scores representing the HR deficiency (number of telomeric allelic imbalance [NtAI], large scale transition [LST], homologous recombination deficiency–loss of heterozygosity [HRD-LOH] in the top, middle and bottom panels, respectively), the HR deficiency scores (x-axis) are shown against the level of mutation signatures derived of the corresponding scores (y-axis). Overall positive and negative relationships are observed for mutation signatures corresponding to the positive and negative differentials (Pos and Neg, respectively; left and right). The correlation levels are shown in the main Fig. 3D.