



**Fig. S17.** The average gravitation score distribution of cancer driver genes, essential genes, and all genes across chromosomes for 6 cancer types: (A) COAD: colon adenocarcinoma, (B) HNSC: head and neck squamous cell carcinoma, (C) KIRC: kidney renal clear cell carcinoma, (D) LUAD: lung adenocarcinoma, (E) LUSC: lung squamous cell carcinoma, and (F) OV: ovarian serous cystadenocarcinoma. Left box plot shows the cancer driver gene average gravitation between X chromosome and the entire 22 autosomes. The p-values are calculated by the Wilcoxon sum-rank test and corrected by R package multiple test.

Fig. S17. continue...

