



**Supplementary Fig. 3:** Association of the statistical ranking of hotspots with patients' survival. Survival probabilities and curves were obtained using Kaplan-Meier estimates. Dark pink denotes patients harboring hotspots with stronger statistical significance (upper-ranked 50%); light pink denotes patients harboring hotspots with weaker statistical significance (lower-ranked 50%). Number at risk tables are shown under corresponding Kaplan-Meier plots, indicating the number of subjects at risk immediately before the time point. Hazard ratio (HR), and P value, and C-statistics were calculated using a Cox regression model using the upper-ranked hotspot as a predictor. HR with [0, inf) 95% confidence intervals are denoted as "-". BRCA: breast invasive carcinoma, ESCA: esophageal carcinoma, HNSC: head and neck squamous cell carcinoma, LIHC: liver hepatocellular carcinoma, LUSC: lung squamous cell carcinoma, READ: rectum adenocarcinoma. Number of hotspots included in each Kaplan-Meier analysis (N\_upper50 and N\_lower50, respectively): BRCA=42, 42; ESCA=29, 17; HNSC=29, 33; LIHC=11, 8; LUSC=44, 24; READ=38, 26; STAD=42, 37.