



S11 Fig. Kaplan-Meier plot for survival outcomes based on specific gene mutation for ARID1A in EHC and IHC (A, B), STK11 in IHC (C), KRAS in IHC (D), SMAD4 in IHC (E), and ATM in IHC (F) using the independent validation cohorts (13 cohorts, n=1,711). p-value was estimated using the log-rank test. CCA, cholangiocarcinoma; DFS, disease-free survival; OS, overall survival.