

Table S2. The description of patients biosamples in experimental dataset.

Sample ID	Putative RTK fusion type	Gender	Age	Cancer type	TNM	Grade
AL-44	<i>FGFR1-AZIN1</i>	male	2	Acute lymphoblastic leukemia	NA	NA
AL-7	<i>RET-GART</i>	female	2	Acute myeloid leukemia	NA	NA
AL-98	<i>BCR - ABL1</i>	male	5	Acute lymphoblastic leukemia	NA	NA
BC-105	<i>ATP2B1-ERBB2</i>	female	52	Breast cancer	T2N3M0	G3
	<i>FBXL20-ERBB2</i>					
BC-59	<i>FGFR1-REPS2</i>	female	61	Breast cancer	T1N1M0	G3
EpS-1	<i>HMBOX1-FGFR1</i>	male	60	Epithelioid sarcoma	T4bN0M0	G3
FS-1	<i>CCDC6 - RET</i>	female	58	Breast fibrosarcoma	NA	G3
GC-30	<i>ABL1-ALDH1A2</i>	female	61	Pseudomyxoma peritonei	pT4bpN3pM1	G3
LuC-11	<i>KIF27-NTRK2</i>	male	52	Lung cancer (squamous cell carcinoma)	T2N2M0	NA
LuC-19	<i>NTRK2-USP47</i>	male	65	Lung cancer (squamous cell carcinoma)	T2N0M0	G2
LuC-46	<i>SLC34A2-ROSI</i>	female	48	Lung cancer (adenocarcinoma)	NA	NA
LuC-71	<i>NTRK2-AL157886.1</i>	male	60	Lung cancer (mixed type: adenocarcinoma + squamous cell carcinoma)	T2N2M0	G2
LuC-81	<i>NTRK2-ETNK1</i>	male	54	Lung cancer (squamous cell carcinoma)	T2N0M1	NA
OC-11	<i>FGFR2 - LGSN</i>	female	38	Ovarian cancer	T3cNkhM1	G3
	<i>RPS24-FGFR2</i>					
OC-15	<i>ABL1-FNIP2</i>	female	48	Ovarian cancer	NA	NA
PC-24	<i>DOCK1-FGFR2</i>	female	60	Pancreatic cancer	cT4N1M1	G3
SkC-1	<i>ABL1-CD59</i>	male	34	Sarcoma Kaposi	NA	NA
XC-1	<i>FGFR2-NFYC</i>	female	58	Non-gestational choriocarcinoma	TxN1M1	NA