

Supplementary material

Supplementary Table I. Growth protocol and referral molecular alteration of cell lines selected for the study.

Cell line	Molecular Alteration	Complete Growth Medium	Origin
SNU16	FGFR2-UNBALANCE	RPMI1640+ 10% fetal bovine serum+ 1% L-glutamine + 1% penicillin/streptomycin	Human
RT112	FGFR3-TACC3	RPMI1640+ 10% fetal bovine serum+ 1% L-glutamine + 1% penicillin/streptomycin	Human
BaF3	FGFR2-BICC1	RPMI1640+ 10% fetal bovine serum+ 1% L-glutamine + 1% penicillin/streptomycin	Human

Supplementary Table II. Additional molecular alteration detected by each institution on DNA in training set.

Center ID	Mutation	MAF% or CNV value
1	PIK3CA p.E545K	8.6%
	PTEN p.Q149*	13.0%
	TERT c.-124C>T	40.0%
	TP53 p.Y205F	41.0%
	TP53 p.S183*	23.0%
2	PIK3CA p.E545K	10.0%
	PIK3CA p.D549H	10.0%
	TP53 p.P278A	10.0%
	TP53 p.S183*	19.0%
	TP53 c.560-2A>G	9.0%
3	PIK3CA p.E545K	8.9%
	PIK3CA p.D549H	8.9%
	MYC CNV	127.3
5	FGFR4 p.D127H	0.1%
	PIK3CA p.E545K	0.1%
	PIK3CA p.D549H	0.1%
	MYC CNV	nd
6	PIK3CA p.E545K	7.6%
	PIK3CA p.D549H	7.4%
	PTEN p.Q149*	8.4%
	TP53 p.Y205F	36.1%
	TP53 p.S183*	19.5%
	TP53 p.P278A	6.0%
	CDKN2A CNV	-4.8
7	PIK3CA p.E545K	0.2%
	PIK3CA p.D549H	0.2%
	TP53 p.Y205F	0.5%
	TP53 p.P278A	0.1%
7b	PIK3CA p.E545K	7.1%
	PIK3CA p.D549H	8.3%
	PTEN p.Q149*	13.8%
	TP53 p.Y205F	49.3%
	TP53 p.S183*	18.4%
	TP53 p.P278A	11.8%
	CDKN2A CNV	-4.9
8	FGFR4 p.D127H	18.5%
	PIK3CA p.E545K	10.7%
	PIK3CA p.D549H	10.6%
	PTEN p.Q149*	7.2%
	TERT c.-124C>T	24.0%
	TP53 p.Y205F	32.2%
	TP53 p.S183*	25.9%
	TP53 p.P278A	5.9%
	CDKN2A CNV	-4.8

Abbreviations: CDKN2A (Cyclin Dependent Kinase Inhibitor 2A); CNV (Copy Number Variation); FGFR4 (Fibroblast Growth Factor Receptor 4); MAF (Mutant Allele Frequency); MYC (MYC Proto-Oncogene); PIK3CA (Phosphatidylinositol-4,5-bisphosphate 3-kinase catalytic subunit alpha); PTEN (Phosphatase and Tensin Homolog); TERT (Telomerase Reverse Transcriptase); TP53 (Tumor Suppressor Protein p53).