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Jetect DNA Cha	ing Action inges with a	onable M an Expected	utation (or Predi	(S/Alter cted) Imp	rations: pact on the Res	ponse to Treatmen	too	
Gene mutation & amplification					Gene fusio	n		EGFR
ABL1	CRKL	IDH2	NF1	RAC2	ALK	Mutation	1 🕒 ★	DDAF
ACTN4	CREBBP	IGF1R	NFE2L2/Nrf2	RAD51C	AKT2	L		BKAF
AKT1	CTNNB	IGF2	NOTCH1	RAF1	BRAF			
AKT2	CUL3	IL7R	NOTCH2	RB1	ERBB4		ŏŏ	
AKT3	DDR2	JAK1	NOTCH3	RET	FGFR2			
ALK	EGFR	JAK2	NRAS	RHOA	FGFR3			FN/I/_AIK
APC	ENO1	JAK3	NRG1	ROS1	NRG1			
ARAF	EP300	KDM6A/UTX	NTRK1	SETBP1	NTRK1			VIEED DET
ARID1A	ERBB2/HER2	KEAP1	NTRK2	SETD2	NTRK2	Fusion		KIF3D-KEI
ARID2	ERBB3	KIT	NTRK3	SMAD4	PDGFRA			
ATM	ERBB4	KRAS	NT5C2	SMARCA4	RET			CD74-RUS1
AXIN1	ESR1/ER	MAP2K1/MEK1	PALB2	SMARCB1	ROS1			
AXL	EZH2	MAP2K2/MEK2	PBRM1	SMO			$\bigcirc \bigcirc$	
SAP1	FBXW7	MAP2K4	PDGFRA	SIAI3			$\bigcirc$	
SARDI	FGFRI	IVIAP3K1	PDGFRB	SIKII/LKBI				
	FOFKZ	MDM2	PIKSCA	1255				
	FGFR3	MDMA	PIKSKI	1301			XX	
DRCA1	FUFR4	MDIVI4	PINSKZ	VHL				
CND1	CNA11		POLDI			Amplification		
CND1	GNATI	MTOP	POLE			Ampinication		HEKZ/EKBL
	GNAG	MSU2	DTCU1					
	HRAS	MYC	PTEN					ΙΛΙΥĊΝ
	1000	ANT C	DAG					























				🥸 National Cancer Ce	enter Japan			
		ene						
	D	mutation) elopment						
	Oncog	gene examples	Tumor s example	uppressor gene s				
Accelerator	EGFR HER2 BRAF ALK ROS1	Mostly, somatic Activating mutations (Hot spot mutations) Fusion Amplification (copy gain)	BRCA1/2 APC TP53 RB NF1	Somatic & germline Deleterious mutations (=Inactivating mutations) (=Loss-of-function mutations) Truncating mutations Deletion (copy loss)	Brake			
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