

NeoThetis GENES AND GENETIC ALTERATIONS TESTED

GENES TESTED

The following table indicates the genes tested per panel.

NeoThetis PAN-CANCER PLUS 222 genes

ABL1, ABL2, AKT1, AKT2, ALK, ANKRD26, APC, AR, ARAF, ASXL1, ATM, ATRX, B2M, BAP1, BARD1, BCL2, BCL6, BCOR, BCORL1, BCR, BMPR1A, BRAF, BRCA1, BRCA2, BRIP1, CALR, CBFB, CBL, CBLB, CBLC, CCND1, CCND2, CCND3, CCNE1, CD274, CD74, CDC25C, CDH1, CDK12, CDK4, CDK6, CDKN2A, CEBPA, CHEK2, CIC, CSF1R, CSF3R, CTLA4, CTNNB1, CUX1, CXCR4, DCK, DDR2, DDX41, DEK, DHX15, DICER1, DNMT3A, DUSP22, EGFR, EIF1AX, EPCAM, ERBB2, ERBB3, ERBB4, ERCC4, ERG, ESR1, ETNK1, ETV1, ETV4, ETV6, EWSR1, EZH2, FANCA, FBXW7, FGF13, FGF19, FGF2, FGF3, FGFR1, FGFR2, FGFR3, FGFR4, FLT1, FLT3, FLT4, FOXA1, FOXL2, FOXO1, FRS2, FUBP1, GATA1, GATA2, GATA3, GNA11, GNAQ, GNAS, H3F3A, HDAC2, HOXB13, HRAS, IDH1, IDH2, IKZF1, IL3, INHA, INSRR, IRF4, JAK1, JAK2, JAK3, KDM6A, KDR, KEAP1, KIT, KMT2A, KMT2C, KMT2D, KRAS, LUC7L2, MALT1, MAP2K1, MAP2K2, MAP3K1, MDM2, MECOM, MET, MITF, MLH1, MLLT3, MPL, MRE11, MSH2, MSH6, MTOR, MUTYH, MYC, MYCN, MYD88, MYH11, MYOD1, NBN, NCOA3, NF1, NF2, NFE2L2, NOTCH1, NPM1, NRAS, NRG1, NTRK1, NTRK2, NTRK3, NUP214, NUTM1, PALB2, PARP1, PBX1, PDCD1, PDCD1LG2, PDGFRA, PDGFRB, PGR, PHF6, PIK3CA, PIK3CB, PIK3R1, PML, PMS2, POLD1, POLE, PPM1D, PPP2R1A, PTCH1, PTEN, PTPN11, RAD21, RAD51C, RAD51D, RAF1, RARA, RB1, RBBP6, RET, RNF43, ROS1, RPS14, RUNX1, RUNX1T1, SETBP1, SF3B1, SH2B3, SLC29A1, SMAD4, SMARCA4, SMARCB1, SMC1A, SMC3, SMO, SOX10, SPOP, SRSF2, STAG2, STAT3, STAT5B, STK11, SUZ12, TCF3, TCL1A, TERT, TET2, TMPRSS2, TP53, TSC1, TSC2, U2AF1, VEGFA, VHL, WT1, XPO1, ZRSR2

GENETIC ALTERATIONS TESTED

The following table shows the types of genetic alterations and coding exon coverage for each gene.

ABL1	ABL2	AKT1	AKT2	ALK	ANKRD26
Full coding exonic coverage (NM_005157.6)	Full coding exonic coverage (NM_007314.4)	Full coding exonic coverage (NM_001382430.1)	Full coding exonic coverage (NM_001626.6)	Full coding exonic coveage (NM_004304.5)	Full coding exonic coverage (NM_014915.3)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
	A				A
APC Full coding exonic coverage (NM_000038.6)	AR Full coding exonic coverage (NM_000044.6)	ARAF Full coding exonic coverage (NM_001654.5)	ASXL1 Exons 1-2, 4-13 (NM_015338.6)	ATM Full coding exonic coverage (NM_000051.4)	ATRX Full coding exonic coverage (NM_000489.6)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered		Selected non-coding regions covered	
	A •	A	A	A	A
B2M Full coding exonic coverage (NM_004048.4)	BAP1 Full coding exonic coverage (NM_004656.4)	BARD1 Full coding exonic coverage (NM_000465.4)	BCL2 Full coding exonic coverage (NM_000633.3)	BCL6 Full coding exonic coverage (NM_001706.5)	BCOR Full coding exonic coverage (NM_001123385.2)
A	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	
A	A	A	A	A	A
BCORL1 Exons 2-8, 10-14 (NM_001379451.1)	BCR Exons 1-16, 21-23 (NM_004327.4)	BMPR1A Exons 4-5, 7-8, 11 (NM_004329.3)	Exons 1-13, 15, 16, 18 (NM_004333.6) Exons 1-14, 16, 17, 19	BRCA1 Full coding exonic coverage (NM_007294.4)	BRCA2 Full coding exonic coverage (NM_000059.4)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	(NM_001374258.1) Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
BRIP1	CALR	CBFB	CBL	CBLB	CBLC
Full coding exonic coverage (NM_032043.3)	Full coding exonic coverage (NM_004343.4)	Exons 2-6 (NM_022845.3)	Exons 1-2, 4-16 (NM_005188.4)	Full coding exonic coverage (NM_170662.5)	Full coding exonic coverage (NM_012116.4)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered		
			A		A

Selected non-coding regions which are covered by the test are indicated above.

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Rearrangements













CCND1 Full coding exonic coverage (NM_053056.3)	CCND2 Full coding exonic coverage (NM_001759.4)	CCND3 Full coding exonic coverage (NM_001760.5)	CCNE1 Full coding exonic coverage (NM_001238.4)	CD274 Full coding exonic coverage (NM_014143.4)	CD74 Full coding exonic coverage (NM_001025159.3)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
CDC25C Full coding exonic coverage (NM_001790.5)	CDH1 Full coding exonic coverage (NM_004360.5)	CDK12 Full coding exonic coverage (NM_016507.4)	CDK4 Full coding exonic coverage (NM_000075.4)	CDK6 Full coding exonic coverage (NM_001145306.2)	CDKN2A Full coding exonic coverage (NM_000077.5) (NM_058195.4)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
CEBPA Full coding exonic coverage (NM_004364.5)	CHEK2 Exon 2-13 (NM_007194.4)	CIC Full coding exonic coverage (NM_001386298.1)	CSF1R Full coding exonic coverage (NM_001288705)	CSF3R Full coding exonic coverage (NM_000760.4)	CTLA4 Full coding exonic coverage (NM_005214.5)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered		Selected non-coding regions covered	Selected non-coding regions covered
A	A	A	A	A	A
CTNNB1 Exons 3-15 (NM_001904.4)	Full coding exonic coverage (NM_181552.4) (NM_001913.5)	CXCR4 Full coding exonic coverage (NM_003467.3)	DCK Full coding exonic coverage (NM_000788.3)	DDR2 Full coding exonic coverage (NM_006182.4)	DDX41 Full coding exonic coverage (NM_016222.4)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered		Selected non-coding regions covered	Selected non-coding regions covered
			A		A
DEL	DUNAE	DICEDA	DAINATOA	DUCDOO	FOED
DEK Full coding exonic coverage (NM_003472.4)	DHX15 Full coding exonic coverage (NM_001358.3)	DICER1 Exons 2-26 (NM_177438.3)	DNMT3A Full coding exonic coverage (NM_022552.5)	DUSP22 Full coding exonic coverage (NM_001286555.3)	EGFR Exons 1-15, 17-24, 27,28 (NM_005228.5)
Selected non-coding regions covered	Selected non-coding regions covered			Selected non-coding regions covered	
A			A	A	A O
	_	_	A	_	
EIF1AX Exons 2, 4-5 (NM_001412.4)	EPCAM Full coding exonic coverage (NM_002354.3)	ERBB2 Exons 1-15, 19-24 (NM_004448.4)	ERBB3 Full coding exonic coverage (NM_001982.4)	ERBB4 Full coding exonic coverage (NM_005235.3)	ERCC4 Full coding exonic coverage (NM_005236.3)
	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	
					A
ERG Full coding exonic coverage (NM_182918.4)	ESR1 Full coding exonic coverage (NM_000125.4)	ETNK1 Full coding exonic coverage (NM_018638.5)	ETV1 Full coding exonic coverage (NM_004956.5)	ETV4 Full coding exonic coverage (NM_001079675.5)	ETV6 Full coding exonic coverage (NM_001987.5)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
EM/CD4	E7110	FANICA	EDVA47		
EWSR1 Exons 1-3, 6-10, 12-17 (NM_005243.4)	EZH2 Exons 2-4, 6-20 (NM_004456.5)	Exons 1-2, 4- 14, 16-43 (NM_000135.4)	FBXW7 Full coding exonic coverage (NM_001349798.2)	FGF13 Exons 1, 3-5 (NM_004114.5)	FGF19 Full coding exonic coverage (NM_005117.3)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	
_	A	_	_	_	A •
FGF2 Full coding exonic coverage (NM_001361665.2)	FGF3 Full coding exonic coverage (NM_005247.4)	FGFR1 Exons 2, 5-9, 12-18 (NM_023110.3)	FGFR2 Exons 2-9, 11, 13-17 (NM_000141.5)	FGFR3 Full coding exonic coverage (NM_000142.5)	FGFR4 Full coding exonic coverage (NM_213647.3)
	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
		No.			
FLT1 Full coding exonic coverage (NM_002019.4)	FLT3 Exons 1-15, 17-24 (NM_004119.3)	FLT4 Exons 2-19, 21-30 (NM_182925.5)	FOXA1 Full coding exonic coverage (NM_004496.5)	FOXL2 Full coding exonic coverage (NM_023067.4)	FOXO1 Full coding exonic coverage (NM_002015.4)
Full coding exonic coverage	Exons 1-15, 17-24	Exons 2-19, 21-30	Full coding exonic coverage	Full coding exonic coverage	Full coding exonic coverage
Full coding exonic coverage (NM_002019.4)	Exons 1-15, 17-24 (NM_004119.3)	Exons 2-19, 21-30	Full coding exonic coverage (NM_004496.5)	Full coding exonic coverage (NM_023067.4)	Full coding exonic coverage (NM_002015.4)

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FRS2 Exons 5-9	FUBP1 Exons 1-19	GATA1 Full coding exonic coverage	GATA2 Full coding exonic coverage	GATA3 Full coding exonic coverage	GNA11 Exons 2-7
(NM_001278356.2)	(NM_003902.5)	(NM_002049.4)	(NM_032638.5)	(NM_001002295.2)	(NM_002067.5)
•	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
		A	_	A	A
GNAQ	GNAS	H3F3A	HDAC2	HOXB13	HRAS
Full coding exonic coverage (NM_002072.5)	Full coding exonic coverage (NM_000516.7)	Full coding exonic coverage (NM_002107.7)	Full coding exonic coverage (NM_001527.4)	Full coding exonic coverage (NM_006361.6)	Full coding exonic coverage (NM_005343.4) (NM_176795.5)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
IDH1	IDH2	IKZF1	IL3	INHA	INSRR
Full coding exonic coverage (NM_005896.4)	Exon 2-11 (NM_002168.4)	Full coding exonic coverage (NM_006060.6)	Full coding exonic coverage (NM_000588.4)	Full coding exonic coverage (NM_002191.4)	Exons 1-6, 8-22 (NM_014215.3)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
	A			A	
IRF4 Full coding exonic coverage (NM_002460.4)	JAK1 Full coding exonic coverage (NM_002227.4)	Full coding exonic coverage (NM_004972.4)	JAK3 Full coding exonic coverage (NM_000215.4)	KDM6A Exons 1-13, 15-24, 26-30 (NM_001291415.2)	Full coding exonic coverage (NM_002253.4)
	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
		A •			
I/EAD4	1/17	LANTON	I/A ITOC	I/A 4TOD	LVDAC
KEAP1 Full coding exonic coverage (NM_203500.2)	Full coding exonic coverage (NM_000222.3)	KMT2A Full coding exonic coverage (NM_001197104.2)	Exons 1-6, 8-14, 16-17, 22-23, 25-59 (NM_170606.3)	Full coding exonic coverage (NM_003482.4)	KRAS Full coding exonic coverage (NM_004985.5)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
A	A •	A	A	A	A •
		_	_	_	_
LUC7L2 Full coding exonic coverage (NM_016019.5)	MALT1 Full coding exonic coverage (NM_006785.4)	MAP2K1 Full coding exonic coverage (NM_002755.4)	MAP2K2 Exons 1-8, 10, 11 (NM_030662.4)	MAP3K1 Full coding exonic coverage (NM_005921.2)	MDM2 Full coding exonic coverage (NM_002392.6)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
MECOM Full coding exonic coverage (NM_004991.4)	MET Exons 2-6, 8-21 (NM_000245.4)	MITF Full coding exonic coverage (NM_001354604.2) (NM_000248.4)	MLH1 Full coding exonic coverage (NM_000249.4)	MLLT3 Exons 1-5, 7-11 (NM_004529.4)	MPL Full coding exonic coverage (NM_005373.3)
					Selected non-coding regions covered
					A
MRE11 Full coding exonic coverage (NM_005591.4)	MSH2 Full coding exonic coverage (NM_000251.3)	MSH6 Full coding exonic coverage (NM_000179.3)	MTOR Full coding exonic coverage (NM_004958.4)	MUTYH Full coding exonic coverage (NM_001048174.2)	MYC Full coding exonic coverage (NM_002467.6)
Selected non-coding regions covered	Selected non-coding regions covered		Selected non-coding regions covered		Selected non-coding regions covered
A	A	A	A	A	A •
10/01	L AVED CO	100144	10/00/	NIDNI	NOOAO
MYCN Full coding exonic coverage (NM_005378.6)	MYD88 Full coding exonic coverage (NM_002468.5)	MYH11 Full coding exonic coverage (NM_002474.3) (NM_001040113.2)	MYOD1 Full coding exonic coverage (NM_002478.5)	NBN Full coding exonic coverage (NM_002485.5)	NCOA3 Full coding exonic coverage (NM_181659.3)
			Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
			A		
NF1 Exons 1-37, 40, 44-47, 49, 53 (NM_001042492.3)	NF2 Full coding exonic coverage (NM_000268.4)	NFE2L2 Exons 2-5 (NM_006164.5)	NOTCH1 Exons 2-34 (NM_017617.5)	NPM1 Exons 1-2, 5-7, 11 (NM_002520.7)	NRAS Full coding exonic coverage (NM_002524.5)
Selected non-coding regions covered	Selected non-coding regions covered			Selected non-coding regions covered	
•	<u> </u>	A	A	<u> </u>	A •
	_	—	—	—	A •

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NRG1	NTRK1	NTRK2	NTRK3	NUP214	NUTM1
Full coding exonic coverage	Full coding exonic coverage	Exons 10-11, 13-14	Exons 14-15	Full coding exonic coverage	Full coding exonic coverage
(NM_013964.5)	(NM_002529.4)	(NM_006180.6)	(NM_001012338.3)	(NM_005085.4)	(NM_001284292.2)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
				A	
PALB2	PARP1	PBX1	PDCD1	PDCD1LG2	PDGFRA
Full coding exonic coverage (NM_024675.4)	Exon 1-10, 12-23 (NM_001618.4)	Full coding exonic coverage (NM_002585.4)	Full coding exonic coverage (NM_005018.3)	Full coding exonic coverage (NM_025239.4)	Full coding exonic coverage (NM_006206.6)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
A			A	A	
PDGFRB Full coding exonic coverage (NM_002609.4)	PGR Full coding exonic coverage (NM_000926.4)	PHF6 Full coding exonic coverage (NM_001015877.2)	PIK3CA Exons 2-10, 14-21 (NM_006218.4)	PIK3CB Full coding exonic coverage (NM_006219.3)	PIK3R1 Exons 2-9, 11-16 (NM_181523.3)
Selected non-coding regions covered	Selected non-coding regions covered	A	A •	Selected non-coding regions covered	Selected non-coding regions covered
DMI	DN 450	DOLD4	DOLE	DDMAD	DDDOD4 A
Full coding exonic coverage (NM_033238.3)	PMS2 Exons 2-4, 6-11, 13 (NM_000535.7)	POLD1 Full coding exonic coverage (NM_002691.4)	Full coding exonic coverage (NM_006231.4)	PPM1D Full coding exonic coverage (NM_003620.4)	PPP2R1A Full coding exonic coverage (NM_014225.6)
Selected non-coding regions covered		Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
		A		A	A
PTCH1	PTEN	PTPN11	RAD21	RAD51C	RAD51D
Full coding exonic coverage (NM_000264.5) (NM_001083603.3)	Exons 1-8 (NM_000314.8)	Exons 1-6, 8-9, 11-15 (NM_002834.5)	Full coding exonic coverage (NM_006265.3)	Full coding exonic coverage (NM_058216.3)	Full coding exonic coverage (NM_002878.4)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	A	A	Selected non-coding regions covered
RAF1	RARA	DD1	RBBP6	DET	RNF43
Full coding exonic coverage (NM_002880.4)	Full coding exonic coverage (NM_000964.4)	RB1 Exons 1-13, 16-27 (NM_000321.3)	Full coding exonic coverage (NM_006910.5)	Full coding exonic coverage (NM_020975.6)	Full coding exonic coverage (NM_017763.6)
Selected non-coding regions covered		Selected non-coding regions covered		Selected non-coding regions covered	Selected non-coding regions covered
		A	A		A
ROS1	RPS14	RUNX1	RUNX1T1	SETBP1	SF3B1
Exons 32-37 (NM_001378902.1)	Exons 3-5 (NM_005617.4)	Exons 4-9 (NM_001754.5)	Exons 2-12 (NM_001198679.3)	Full coding exonic coverage (NM_015559.3)	Exons 1-10, 12-21, 23-25 (NM_012433.4)
	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered		Selected non-coding regions covered
			A	A	A
CLIODO	CLCOOA4	CMADA	CNAADCAA	CNAADCDA	CNACAA
SH2B3 Full coding exonic coverage (NM_005475.3)	SLC29A1 Full coding exonic coverage (NM_001372327.1)	SMAD4 Full coding exonic coverage (NM_005359.6)	SMARCA4 Exons 2-10, 12-35 (NM_003072.5) Exons 2-10, 12-36	SMARCB1 Full coding exonic coverage (NM_003073.5)	SMC1A Full coding exonic coverage (NM_006306.4)
Selected non-coding regions covered		Selected non-coding regions covered	(NM_001387283.1) Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
A	A	A	A	A	A
SMC3	SMO	SOX10	SPOP	SRSF2	STAG2
Exons 1-25, 29 (NM_005445.4)	Full coding exonic coverage (NM_005631.5)	Full coding exonic coverage (NM_006941.4)	Full coding exonic coverage (NM_001007228.2)	Full coding exonic coverage (NM_001195427.2)	Full coding exonic coverage (NM_001042750.2)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
STAT3 Full coding exonic coverage (NM_139276.3)	STAT5B Exons 2-6, 9-12, 14-15, 17-19 (NM_012448.4)	STK11 Full coding exonic coverage (NM_000455.5)	SUZ12 Exons 1-2, 4, 7-8, 10-16 (NM_015355.4)	TCF3 Full coding exonic coverage (NM_003200.5) (NM_001136139.4)	TCL1A Full coding exonic coverage (NM_021966.3)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	
A		A	A	A	A

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TERT Full coding exonic coverage (NM_198253.3)	TET2 Full coding exonic coverage (NM_001127208.3)	TMPRSS2 Exons 2-5 (NM_005656.4)	TP53 Full coding exonic coverage (NM_000546.6)	TSC1 Full coding exonic coverage (NM_000368.5)	TSC2 Full coding exonic coverage (NM_000548.5)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered
U2AF1 Full coding exonic coverage (NM_006758.3)	VEGFA Full coding exonic coverage (NM_003376.6)	VHL Full coding exonic coverage (NM_000551.4)	WT1 Full coding exonic coverage (NM_024426.6)	XPO1 Full coding exonic coverage (NM_003400.4)	ZRSR2 Exons 1, 3-7, 9-11 (NM_005089.4)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered	A	A

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