

NeoThetis GENES AND GENETIC ALTERATIONS TESTED PER PANEL

GENES TESTED

The following table indicates the genes tested per panel.

NeoThetis PAN-CANCER 80 genes	AKT1, ALK, APC, AR, ARAF, ATM, ATRX, BARD1, BRAF, BRCA1, BRCA2, BRIP1, CDH1, CDKN2A, CHEK2, CIC, CTNNB1, DDR2, DICER1, EGFR, ERBB2, ERBB3, ERBB4, ESR1, FBXW7, FGFR1, FGFR2, FGFR3, FLT3, FOXA1, FOXL2, FUBP1, GATA3, GNA11, GNAQ, GNAS, H3F3A, IDH1, IDH2, JAK2, KEAP1, KIT, KRAS, MAP2K1, MAP3K1, MET, MLH1, MRE11, MSH2, MSH6, MTOR, MYC, MYCN, NBN, NF1, NPM1, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PDGFRA, PIK3CA, PIK3CB, PMS2, POLE, PTEN, RAD51C, RAD51D, RAF1, RB1, RET, ROS1, RUNX1, SMAD4, SPOP, STK11, TERT, TMPRSS2, TP53
NeoThetis BREAST / GYNECOLOGICAL 48 genes	AKT1, ATM, BARD1, BRAF, BRCA1, BRCA2, BRIP1, CHEK2, CTNNB1, DICER1, EGFR, ERBB2, ERBB3, ESR1, FBXW7, FGFR1, FGFR2, FGFR3, FOXA1, FOXL2, GATA3, KIT, KRAS, MAP3K1, MET, MLH1, MRE11, MSH2, MSH6, MTOR, NBN, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PIK3CA, PIK3CB, PMS2, POLE, PTEN, RAD51C, RAD51D, RAF1, RET, RUNX1, SMAD4, TP53
NeoThetis COLORECTAL 34 genes	AKT1, APC, ATM, BRAF, BRCA1, BRCA2, CTNNB1, EGFR, ERBB2, FBXW7, FGFR1, FGFR2, FGFR3, GNAS, KRAS, MET, MLH1, MSH2, MSH6, MTOR, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PDGFRA, PIK3CA, PIK3CB, PMS2, POLE, PTEN, RAF1, SMAD4, TP53
NeoThetis GASTRIC 23 genes	APC, CDH1, EGFR, ERBB2, FGFR1, FGFR2, FGFR3, KIT, KRAS, MET, MLH1, MSH2, MSH6, NF1, NTRK1, NTRK2, NTRK3, PDGFRA, PIK3CA, PMS2, SMAD4, STK11, TP53
NeoThetis MELANOMA 28 genes	AKT1, ALK, BRAF, CTNNB1, ERBB2, FGFR1, FGFR2, FGFR3, GNA11, GNAQ, KIT, KRAS, MAP2K1, MET, MYC, NF1, NRAS, NTRK1, NTRK2, NTRK3, PDGFRA, PIK3CA, POLE, PTEN, RET, ROS1, STK11, TP53
NeoThetis NSCLC 36 genes	AKT1, ALK, APC, ARAF, ATM, BRAF, BRCA2, CTNNB1, DDR2, EGFR, ERBB2, ERBB3, ERBB4, FBXW7, FGFR1, FGFR2, FGFR3, JAK2, KEAP1, KRAS, MAP2K1, MET, NRAS, NTRK1, NTRK2, NTRK3, PDGFRA, PIK3CA, POLE, PTEN, RAF1, RET, ROS1, SMAD4, STK11, TP53
NeoThetis PANCREATIC 26 genes	ALK, ATM, BRAF, BRCA1, BRCA2, CDKN2A, CHEK2, ERBB2, FBXW7, FGFR1, FGFR2, FGFR3, KRAS, MLH1, MSH2, MSH6, MYC, NTRK1, NTRK2, NTRK3, PALB2, PMS2, ROS1, SMAD4, STK11, TP53
NeoThetis PROSTATE 35 genes	AKT1, APC, AR, ATM, BARD1, BRAF, BRCA1, BRCA2, CHEK2, CTNNB1, ERBB2, FGFR1, FGFR2, FGFR3, FOXA1, MLH1, MSH2, MSH6, MYC, MYCN, NRAS, NTRK1, NTRK2, NTRK3, PALB2, PIK3CA, PIK3CB, PMS2, POLE, PTEN, RAD51C, RAD51D, SPOP, TMPRSS2, TP53

GENETIC ALTERATIONS TESTED

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

AKT1 Exon 4 (NM_001382430.1)	ALK Exons 18-20, 22-23 (NM_004304.5)	APC Full exonic coverage (NM_000038.6)	AR Exons 1-2, 4-8 (NM_000044.6)	ARAF Exon 7 (NM_001654.5)	ATM Full exonic coverage (NM_000051.4)
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
▲	▲ ■	▲	▲ ●	▲	▲
ATRX Exons 5, 7, 9, 11, 13-14, 17, 20-22, 29-31, 35 (NM_000489.6)	BARD1 Full exonic coverage (NM_000465.4)	BRAF Exons 9-12, 15 (NM_004333.6)	BRCA1 Full exonic coverage (NM_007294.4)	BRCA2 Full exonic coverage (NM_000059.4)	BRIP1 Full exonic coverage (NM_032043.3)
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
▲	▲	▲ ■	▲	▲	▲
CDH1 Full exonic coverage (NM_004360.5)	CDKN2A Full exonic coverage (NM_000077.5) (NM_058195.4)	CHEK2 Exons 1-10 (NM_007194.4)	CIC Exons 19, 21 (NM_0015125.4)	CTNNB1 Exon 3 (NM_001904.4)	DDR2 Exon 17 (NM_006182.4)
Selected non-coding regions covered	Selected non-coding regions covered	Selected non-coding regions covered			
▲	●	▲	▲	▲	▲
DICER1 Exons 2-26 (NM_177438.3)	EGFR Exons 2-5, 8-10, 12, 14-15, 17-24, 27-28 (NM_005228.5)	ERBB2 Exons 3-4, 7-8, 10, 19-24 (NM_004448.4)	ERBB3 Exons 3, 6-11, 20-21 (NM_001982.4)	ERBB4 Exons 7, 15, 19, 23 (NM_005235.3)	ESR1 Exons 2-5, 7-8 (NM_000125.4)
		Selected non-coding regions covered			Selected non-coding regions covered
▲	▲ ●	▲ ●	▲	▲	▲ ●

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

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▲ Single Nucleotide Variant / Indels ● Copy Number Alterations ■ Rearrangements

FBXW7 Exons 6-7, 9-14 (NM_001349798.2) 	FGFR1 Exon 5-9, 12-13, 16, 18 (NM_023110.3) Selected non-coding regions covered 	FGFR2 Exons 2-9, 11, 13-18 (NM_000141.5) Selected non-coding regions covered 	FGFR3 Exons 4, 7-8, 11-12, 16-18 (NM_000142.5) Selected non-coding regions covered  	FLT3 Exon 20 (NM_004119.3) 	FOXA1 Exon 2 (NM_004496.5) 
FOXL2 Exon 1 (NM_023067.4) 	FUBP1 Exon 14 (NM_003902.5) 	GATA3 Exons 5-6 (NM_001002295.2) 	GNA11 Exons 4-5 (NM_002067.5) 	GNAQ Exons 5, 7 (NM_002072.5) 	GNAS Exon 8 (NM_005416.7) 
H3F3A Exon 2 (NM_002107.7) 	IDH1 Exon 4 (NM_005896.4) 	IDH2 Exon 4 (NM_002168.4) 	JAK2 Exon 14 (NM_004972.4) 	KEAP1 Exons 2-4 (NM_203500.2) 	KIT Exons 2-21 (NM_000222.3)  
KRAS Exons 2-4 (NM_004985.5)  	MAP2K1 Exons 2-3, 6-7 (NM_002755.4) 	MAP3K1 Exons 5-6, 16-18 (NM_005921.2) 	MET Exons 2-21 (NM_000245.4)  	MLH1 Full exonic coverage (NM_000249.4) Selected non-coding regions covered 	MRE11 Exons 1-18, 20 (NM_005591.4) Selected non-coding regions covered 
MSH2 Full exonic coverage (NM_000251.3) Selected non-coding regions covered 	MSH6 Full exonic coverage (NM_000179.3) 	MTOR Exons 43, 47, 53, 56 (NM_004958.4) 	MYC Exons 1, 3 (NM_002467.6) 	MYCN Exon 3 (NM_005378.6) 	NBN Full exonic coverage (NM_002485.5) 
NF1 Exons 6, 12, 17-18, 21-22, 25, 27-28, 34, 37, 40, 44-47, 49, 53 (NM_001042492.3) 	NPM1 Exon 11 (NM_002520.7) 	NRAS Exons 2-4 (NM_002524.5) 	NTRK1 Exons 7-15 (NM_002529.4) Selected non-coding regions covered  	NTRK2 Exons 10-11, 13-14 (NM_006180.6) Selected non-coding regions covered 	NTRK3 Exons 14-15 (NM_001012338.3) Selected non-coding regions covered 
PALB2 Full exonic coverage (NM_024675.4) Selected non-coding regions covered 	PDGFRA Exon 18 (NM_006206.6) 	PIK3CA Exons 2-6, 8, 10, 15-17, 19-21 (NM_006218.4)  	PIK3CB Exons 13, 15, 24 (NM_006219.3) 	PMS2 Exons 6-8, 10 (NM_000535.7) 	POLE Exons 2-49 (NM_006231.4) Selected non-coding regions covered 
PTEN Full exonic coverage (NM_000314.8) Selected non-coding regions covered 	RAD51C Full exonic coverage (NM_058216.3) Selected non-coding regions covered 	RAD51D Full exonic coverage (NM_002878.4) Selected non-coding regions covered 	RAF1 Exon 7 (NM_002880.4) 	RB1 Exons 1-13, 16-27 (NM_000321.3) Selected non-coding regions covered 	RET Full exonic coverage (NM_020975.6) Selected non-coding regions covered  
ROS1 Exons 32-37 (NM_001378902.1) Selected non-coding regions covered 	RUNX1 Exon 5 (NM_001754.5) 	SMAD4 Full exonic coverage (NM_005359.6) Selected non-coding regions covered 	SPOP Exons 4-5 (NM_001007228.2) 	STK11 Full exonic coverage (NM_000455.5) Selected non-coding regions covered 	TERT Exon 1 (NM_198253.3) Selected non-coding regions covered 
TMPRSS2 Exons 2-4 (NM_005656.4) Selected non-coding regions covered 	TP53 Full exonic coverage (NM_000546.6) Selected non-coding regions covered 				

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

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 Single Nucleotide Variant / Indels

 Copy Number Alterations

 Rearrangements