

Einsendeschein Molekularpathologie

Patientenname:	Regelleistung	<input type="checkbox"/>
Geburtsdatum:	Wahlleistung	<input type="checkbox"/>
Anschrift:	Kasse ambulant	<input type="checkbox"/>
Krankenkasse:	Kasse stationär	<input type="checkbox"/>

Klinische Diagnose:
Mutationsnachweise / PCR + Sanger Sequenzierung

KRAS hot spots Exon 2, 3, 4	<input type="checkbox"/>
NRAS hot spots Exone 2, 3, 4	<input type="checkbox"/>
HRAS hot spots Exon 2, 3	<input type="checkbox"/>
BRAF hot spot Exon 15 (V600)	<input type="checkbox"/>
BRAF hot spots Exon 11 (Lungenkarzinom)	<input type="checkbox"/>
EGFR hot spots Exone 18, 19, 21	<input type="checkbox"/>
EGFR hot spots Exon 20	<input type="checkbox"/>
KIT hot spots Exone 9, 11 (GIST)	<input type="checkbox"/>
KIT hot spots Exone 11, 17 (Mastocytose)	<input type="checkbox"/>
KIT hot spots Exone 11, 13, 17 (Melanom)	<input type="checkbox"/>
JAK2 hot spot Exon 14 (V617F)	<input type="checkbox"/>
JAK2 hot spots Exon 12	<input type="checkbox"/>
MPL hot spot Exon 10	<input type="checkbox"/>
CALR hot spots Exon 9	<input type="checkbox"/>
PDGFRA hot spots Exon 18	<input type="checkbox"/>
PDGFRA hot spots Exone 12, 14	<input type="checkbox"/>
GNAS1 hot spots Exone 8 + 9 (R201, Q227)	<input type="checkbox"/>
PIK3CA hot spots Exone 10, 21	<input type="checkbox"/>
NPM1 Exon 12	<input type="checkbox"/>
PRKD1	<input type="checkbox"/>
MYD88	<input type="checkbox"/>
GNAQ hot spots Exone 4, 5	<input type="checkbox"/>
GNA11 hot spots Exone 4, 5	<input type="checkbox"/>
HER2 hot spots Exon 20	<input type="checkbox"/>
TERT hot spots Promotor	<input type="checkbox"/>

nNGM

nNGM Diagnostik Lunge (Mutations- und Translokationsnachweise) (Bitte unbedingt mit Einsendeschein nNGM)	<input type="checkbox"/>
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Mutationsnachweise / Next generation sequencing

BRCA1, BRCA 2	<input type="checkbox"/>
TP53	<input type="checkbox"/>
APC, MUTYH	<input type="checkbox"/>
FAP	<input type="checkbox"/>
NF1, NF2	<input type="checkbox"/>
ATM, CHECK2	<input type="checkbox"/>
Oncomine Focus Cancer Panel (siehe Anhang)	<input type="checkbox"/>
Oncomine Lung cfDNA (EGFR T790M) (siehe Anhang)	<input type="checkbox"/>
Core panel (siehe Anhang)	<input type="checkbox"/>
MDS panel (siehe Anhang)	<input type="checkbox"/>
Archer sarkom Panel (siehe Anhang)	<input type="checkbox"/>
Lymphom panel	<input type="checkbox"/>
Pulmonale Hypertonie	<input type="checkbox"/>
(Bitte gewünschtes Gen und Exon/hot spot angeben)	

Klonalitätsanalysen / PCR + Kapillarelektrophorese oder NGS

IgH (Klonalität B Lymphozyten)	<input type="checkbox"/>
IgK+L (Klonalität B Lymphozyten)	<input type="checkbox"/>
TCRG (Klonalität T Lymphozyten)	<input type="checkbox"/>

Mikrosatelliteninstabilität / PCR + Kapillarelektrophorese

NCBI-MSI Panel	<input type="checkbox"/>
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Identitätsvergleiche / PCR + Kapillarelektrophorese

9 STR Loci (AmpFISTR Profiler Plus)	<input type="checkbox"/>
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Erregernachweise / PCR + Sanger Sequenzierung

M. tuberculosis Komplex	<input type="checkbox"/>
HPV Hoch/Niedrigrisikotypen	<input type="checkbox"/>
HHV8	<input type="checkbox"/>
T. whipplei	<input type="checkbox"/>
Parvovirus B19	<input type="checkbox"/>
CMV	<input type="checkbox"/>
MCV	<input type="checkbox"/>
H. pylori 23SrRNA/16SrRNA/Gyrase A (Nachweis + häufige Resistenzmutationen)	<input type="checkbox"/>

Amplifikationen + Deletionen / FISH

HER2	<input type="checkbox"/>
TOP2A	<input type="checkbox"/>
NMYC	<input type="checkbox"/>
MDM2	<input type="checkbox"/>
EGFR	<input type="checkbox"/>
MET	<input type="checkbox"/>
FGFR2	<input type="checkbox"/>
CDK4	<input type="checkbox"/>
CMYC	<input type="checkbox"/>
TP53	<input type="checkbox"/>
ATM	<input type="checkbox"/>
CD274/PDL1	<input type="checkbox"/>

Translokationsnachweise / FISH

CCND1	<input type="checkbox"/>
BCL2	<input type="checkbox"/>
CMYC	<input type="checkbox"/>
BCL6	<input type="checkbox"/>
BCR	<input type="checkbox"/>
CBFB	<input type="checkbox"/>
RARA	<input type="checkbox"/>
ALK	<input type="checkbox"/>
ROS	<input type="checkbox"/>
RET	<input type="checkbox"/>
PPARG	<input type="checkbox"/>
EWSR1	<input type="checkbox"/>

CHOP (DDIT3)	<input type="checkbox"/>
FKHR (FOXO1)	<input type="checkbox"/>
SYT	<input type="checkbox"/>
FUS	<input type="checkbox"/>
MAML2	<input type="checkbox"/>
FGFR3	<input type="checkbox"/>
MYB	<input type="checkbox"/>
PDGFB	<input type="checkbox"/>
ETV6	<input type="checkbox"/>
USP6	<input type="checkbox"/>
TFE3	<input type="checkbox"/>
BRD4	<input type="checkbox"/>

Translokationsnachweise NGS

Für die aufgeführten Gene werden mit dem verwendeten Verfahren (Archer Fusion Plex) alle Translokationen detektiert

Sarkome
 ALK, CAMTA1, CCNB3, CIC, EPC1, EWSR1, FOXO1 (FKHR), FUS (TLS), GLI1, HMGA2, JAZF1, MEAF6, MKL2, NCOA2, NTRK3, PDGFB, PLAG1, ROS1, SS18(SYT),STAT6, TAF15, TCF12, TFE3, TFG, USP6, YWHAE

Heme v2
 ABL1, ABL2, ALK, BCL11B, BCL2, BCL3, BCL6, BCR, BIRC3, CBF3, CCND1, CCND2, CCND3, CD274, CDK6, CDKN2A, CEPBA, CEBPD, CEBPE, CEBPG, CDH1, CHIC2, CIITA, CREBBP, CRLF2, CSF1R, CTLA4, DEK, DUSP22, EBF1, EIF4A1, EPOR, ERG, ETV6, FGFR1, FOXP1, GLIS2, ID4, IKZF1, IKZF2, IKZF3, IRF4, IRF8, JAK2, KAT6A, KLF2, KMT2A, MALT1, MECOM, MKL1, MLF1, MLLT10, MLLT4, MUC1, MYC, MYH11, NF1, NFKB2, NOTCH1, NTRK3, NUP214, NUP98, P2RY8, PAG1, PAX5, PDCD1, PDCD1LG2, PDGFRA, PDGFRB, PICALM, PML, PRDM16, PTK2B, RARA, RBM15, ROS1, RUNX1, RUNX1T1, SEMA6A, SETD2, STIL, TAL1, TCF3, TFG, TP63, TYK2, ZCCHC7

Solid Tumor
 AKT3, ALK, ARHGAP26, AXL, BRAF, BRD3, BRD4, EGFR, ERG, ESR1, ETV1, ETV4, ETV5, ETV6, EWSR1, FGFR1, FGFR2, FGFR3, FGR, INSR, MAML2, MAST1, MAST2, MET, MSMB, MUSK, MYB, NOTCH1, NOTCH2, NRG1, NTRK1, NTRK2, NTRK3, NUMBL, NUTM1, PDGFRA, PDGFRB, PIK3CA, PKN1, PPARG, PRKCA, PRKCB, RAF1, RELA, RET, ROS1, RSPO2, RSPO3, TERT, TFE3, TFEB, THADA, TMPRSS2

Lung
 ALK, BRAF, EGFR, EWSR1, GLI1, FGFR1, FGFR2, FGFR3, KRAS, MET, NRG1, NTRK1, NTRK2, NTRK3, RET, ROS1

Stempel/Datum/Unterschrift

NGS Panel

nNGM Panel Lunge

Gen	Sequenzierte Exone
ALK	22, 23, 24, 25
BRAF	11, 15
CTNNB1	3
EGFR	18, 19, 20, 21
ERBB2	8, 19, 20
FGFR1	4, 5, 6, 7, 10, 12, 13, 14, 15
FGFR2	NM_000141.4: 6 - 8, 10, 11, 13 - 15; NM_022970.3: 8, 9, 12, 18
FGFR3	3, 6, 7, 9, 10, 12, 14, 16, 18
FGFR4	3, 6, 9, 12, 13, 15, 16
IDH1	4
IDH2	4
KRAS	2, 3, 4
MAP2K1	2, 3
MET	14, 16, 17, 18, 19
MET	Intron 13, ersten 100 bp von Intron 14
NRAS	2, 3, 4
PIK3CA	10, 21
PTEN	1, 2, 3, 4, 5, 6, 7, 8
ROS1	34, 35, 36, 37, 38, 39, 40, 41
TP53	4, 5, 6, 7, 8

Oncomine Focus DNA

Gen	Exon
AKT1	3
ALK	11, 21, 22, 23, 24, 25, 27, 29
AR	6, 8
BRAF	5, 6, 7, 8, 10, 11, 13, 15, 18
CDK4	2, 5, 6, 7, 8
CTNNB1	3
DDR2	6
EGFR	3, 7, 12, 15, 18, 19, 20, 21
ERBB2	8, 17, 18, 19, 20, 21, 22, 24, 25
ERBB3	2, 3, 6, 8, 9
ESR1	9
FGFR2	7, 8, 9, 12, 14
FGFR3	3, 7, 9, 14, 16
GNA11	4, 5
GNAQ	4, 5
HRAS	2, 3
IDH1	4
IDH2	4
JAK1	14, 15, 16
JAK2	14
JAK3	11, 12, 15
KIT	8, 9, 10, 11, 13, 17
KRAS	2, 3, 4
MAP2K1	2, 3, 6
MAP2K2	2
MET	2, 11, 14, 15, 16, 19
MTOR	30, 39, 40, 43, 47, 53
NRAS	2, 3, 4
PDGFRA	7, 12, 14, 18
PIK3CA	2, 5, 6, 8, 10, 14, 18, 21
RAF1	7, 12
RET	10, 11, 13, 15, 16
ROS1	36, 38
SMO	4, 6, 8, 9

Oncomine Focus RNA

Gen	Fusionspartner
ABL	EML1
AKT3	MAGI3
ALK	EML4, KIF5B, TFG, HIP1, SEC31L1, A2M, ACTG2, PTPN3, ATIC, C2orf44, CARS, CLIP4, CLTL, DCTN1, GTF2IRD1, KLC1, MEMO1, NCOA1, RANBP2, PRKAR1A, SMEK2, TPM1, TPM3, VCL, TPM4, TPR, TRAF3
AXL	MBIP
BRAF	KIAA1549, ATGRAP, AKAP9, CDC27, FAM131B, FCHSD1, PAPSS1, SLC45A3, SND1, TAX1BP1, TRIM24
EGFR	Exon1-Exon6
ENCTRL	TBP, MYC, HMBS, ITGB7, LRP1
ERBB2	WIPF2
ERG	TMPRSS2
ETV1	TMPRSS2
ETV4	TMPRSS2
ETV5	TMPRSS2
FGFR1	BAG4, ERLIN2, TACC1
FGFR2	SLC45A3, AFF3, BICC1, CASP7, CIT, KIAA1967, MGEA5, OFD1, TACC3
FGFR3	TACC3, AES, BAIAP2L1, ELAVL3
MET	PTPRZ1, BAIAP2L1, C8orf34, CAPZA2, TFG, TPR, OXR1, Exon13-Exon15
NTRK1	TPR, MPRIP, BCAN, CD74, CEL, IRF2BP2, LMNA, NFASC, DYNC2H1, RNF213, SQSTM1, SSBP2, TPM3
NTRK2	AFAP1, AGBL4, NACC2, QKI, SQSTM1, VCL, TRIM24
NTRK3	ETV6, BTBD1, COX5A
PDGFRA	SCAF11
PPARG	PAX8
RAF1	B4GALT1, ESRP1
RET	CCDC6, KIF5B, ERC1, AKAP13, TPL1XR1, SPECC1L, ACBD5, AFAP1, FKBP15, GOLGA5, HOOK3, KIAA1468, NCOA4, PCM1, RUFY2, PRKAR1A, TRIM24, TRIM27, TRIM33
ROS1	SLC34A2, CD74, SDC4, EZR, GOPC, TPM3, CCDC6, CEP85L, CLIP1, CLTC, ERC1, HLA_A, KDELR21, KIAA1598, LRIG3, MSN, MYO5A, PPFIBP1, PWWP2A, TFG, ZCCHC8

Oncomine Lung cfDNA (EGFR T790M)

Gen	Exone
ALK	21, 22, 23, 24, 25
BRAF	11, 15
EGFR	18, 19, 20, 21
ERBB2	20
KRAS	2, 3
MAP2K1	2, 3, 6
MET	14, 16, 19
NRAS	2, 3
PIK3CA	10, 21
ROS1	36
TP53	4, 5, 6, 7, 8, 10

Core Panel

Gen	Exone
ALK	22, 23, 24, 25
BRAF	11, 15
CALR	9
CXCR4	1
EGFR	18, 19, 20, 21
ERBB2	8, 17, 18, 19, 20, 21, 22
GNA11	4, 5
GNAQ	4, 5
GNAS1	8, 9
H3F3A	2
H3F3B	2
HRAS	2, 3
JAK2	12, 14
KIT	9, 11, 13, 17
KRAS	2, 3, 4
MET	13, 14 mit Intronsequenzen, 16, 17, 18, 19
MPL	10
MYD88	5
NRAS	2, 3, 4
PDGFRA	12, 14, 18
PIK3CA	10, 21
PRKD1	15
TERT Promotor	chr5:1.295.190-1.295.260
TP53	2, 3, 4, 5, 6, 7, 8, 9, 10, 11

MDS Panel

Gen	Exone
ASXL1	2-12
BRAF	15
CBL	7, 8, 9, 10
DNMT3A	2, 4-23
EZH2	2-20
IDH1	4
IDH2	4
KRAS	2, 3, 4
NRAS	2, 3, 4
PTPN11	3, 12, 13
RUNX1	2-9
SF3B1	14, 15, 16
SRSF2	1
SOS1	9, 10
STAG2	3-35
TET2	3-11
TP53	2-11
U2AF1	2, 7
ZRSR2	1-11

Archer Sarcoma Panel

ALK	JAZF1	TAF15
CAMTA1	MEAF6	TCF12
CCNB3	MKL2	TFE3
CIC	NCOA2	TFG
EPC1	NTRK3	USP6
EWSR1	PDGFB	YWHAE
FOXO1	PLAG1	
FUS	ROS1	
GLI1	SS18	
HMGA2	STAT6	