



**Molekularpathologie:** Dr. rer. medic. S. Zeugner (0351458-3052 oder -13004) und Dr. rer. nat. S. Herold (035145819816)  
**Ärztliche Ansprechpartner:** Prof. Dr. D.Aust (0351 458-3004) und Dr. S. Brückmann (0351-458-3004/-11427)

### Anforderung für molekularpathologische Diagnostik

<b>Patient / Name</b>	<b>Patient / Geb.-Datum</b>	<b>Material / Materialnummer</b>
<b>anfordernder Arzt</b>	<b>Tel. (Rücksprache)</b>	<b>anfordernde Abteilung</b>
<b>Entität (Pflichtfeld)</b>		<b>Diagnose (Pflichtfeld)</b>
<b>FOKUS Targets / Gene / Fusionen / Komplettes Gen-Panel (bitte immer angeben)</b>		
Anmerkungen		
Hinweise zur Abrechnung		Datum Probeneingang (Eintrag Institut für Pathologie)

### Diagnostik nach Entitäten

Die Mutationsanalyse mit Next Generation Sequencing (NGS) erfolgt nach den Leitlinienempfehlungen zur molekularen Tumordiagnostik.

\*NGS siehe Genliste **DNA/RNA-Panel** für detaillierte Informationen der untersuchten Genbereiche [siehe Rückseite](#)

<b>Lungenkarzinom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 2) <input type="checkbox"/> Mutationsanalyse an Liquid Biopsy (NGS DNA Panel 1) <input type="checkbox"/> RNA-NGS (Genfusionen/Translokationen/METex 14-Skipping-Varianten)(NGS RNA Panel 1) <input type="checkbox"/> ALK (FISH) <input type="checkbox"/> MET (FISH) <input type="checkbox"/> NTRK1-3 (FISH) <input type="checkbox"/> RET (FISH) <input type="checkbox"/> ROS1 (FISH)	<b>Kolorektales Karzinom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 3) <input type="checkbox"/> RNA-NGS (Genfusionen/Translokationen) (NGS RNA Panel 1) <b>HNPCC/LYNCH- Syndrom</b> <input type="checkbox"/> MSI (Mikrosatelliteninstabilität mit Fragmentlängenanalyse) <input type="checkbox"/> MLH1, MSH2, MSH6, PMS2 MMR-Protein-Expression (IHC) <input type="checkbox"/> MLH1 Methylierung <input type="checkbox"/> BRAF (Mutationsanalyse an FFPE (NGS DNA Panel 1))
<b>Magenkarzinom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 2) <input type="checkbox"/> HER2 (FISH)	<b>Malignes Melanom/Aderhautmelanom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 1) <input type="checkbox"/> Mutationsanalyse an Liquid Biopsy (NGS DNA Panel 1) <input type="checkbox"/> BRAF V600 Fast-Track
<b>Neurologische Tumoren</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 5) <input type="checkbox"/> 1p19q-Kodeletion (FISH) <input type="checkbox"/> CDKN2A (FISH) <input type="checkbox"/> MET (FISH) <input type="checkbox"/> MGMT Methylierung	<b>Sarkom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 1) <input type="checkbox"/> RNA - NGS (NGS RNA Panel 2) <input type="checkbox"/> FUS/c16 (FISH) Myxioide Sarkome <input type="checkbox"/> MDM2/c12 (FISH) Liposarkom <input type="checkbox"/> SS18/c18 (FISH) Synovialsarkom <input type="checkbox"/> EWSR1/c22 (FISH) Ewing-Sarkom
<b>Nierenzellkarzinom</b> <input type="checkbox"/> TFE3 (FISH)	<b>Schilddrüsenkarzinom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 1)
<b>Urologische Tumore /Prostata-, Mamma-, Ovarial- und Peritonealkarzinom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 1 und/oder DNA Panel 1a/1b) <input type="checkbox"/> RNA-NGS (NGS RNA Panel 1) <input type="checkbox"/> HER2 (FISH) <input type="checkbox"/> POLE <input type="checkbox"/> ESR1 <input type="checkbox"/> BRCA1/BRCA2	<b>Gallengangskarzinom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 1) <input type="checkbox"/> RNA - NGS (NGS RNA Panel 1)



<b>Gastrointestinale Stromatumoren (GIST)</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 7)	<b>Aneurysmatische Knochenzyste, Noduläre Fasciitis</b> <input type="checkbox"/> USP6/c17 (FISH)
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<b>Pankreaskarzinom</b> <input type="checkbox"/> Mutationsanalyse an FFPE (NGS DNA Panel 1 und/oder Panel 6) <input type="checkbox"/> MSI (Mikrosatelliteninstabilität)	<b>Myeloische Leukämie (AML), MDS, Myelofibrose, Myeloproliferative Neoplasie</b> <input type="checkbox"/> Mutationsanalyse (NGS DNA Panel 4)
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<b>Erregerdiagnostik</b> <input type="checkbox"/> B. burgdorferi <input type="checkbox"/> Humanes Papilloma Virus (HPV) <input type="checkbox"/> M. Whipple <input type="checkbox"/> Fungi <input type="checkbox"/> TB (Mycobakterium tuberculosis) <input type="checkbox"/> Herpes Viren (CMV, HSV, HHV6, EBV, VZV) <input type="checkbox"/> MOTT (Mycobacteria other than TB)	<b>Lymphomdiagnostik</b> <input type="checkbox"/> B-Zell-Klonalitätsanalyse (IgH, IgK, IgL) <input type="checkbox"/> T-Zell-Klonalitätsanalyse (TCR $\beta$ , TCR $\gamma$ ) <input type="checkbox"/> BCL2::IgH (FISH) <input type="checkbox"/> BCL2 (FISH) <input type="checkbox"/> BCL6 (FISH) <input type="checkbox"/> MYC (FISH)
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<b>FISH-Analysen (Amplifikationen/Fusionen/Translokationen/Deletionen)</b> <input type="checkbox"/> ALK <input type="checkbox"/> BRAF <input type="checkbox"/> BCL2 <input type="checkbox"/> BCL6 <input type="checkbox"/> BCL2::IgH <input type="checkbox"/> CDKN2A <input type="checkbox"/> EGFR <input type="checkbox"/> EWSR1	<input type="checkbox"/> FUS <input type="checkbox"/> HER2 Mamma/Magen <input type="checkbox"/> HER2 sonstiges <input type="checkbox"/> MET <input type="checkbox"/> MYC <input type="checkbox"/> MDM2 <input type="checkbox"/> NTRK1 <input type="checkbox"/> NTRK2	<input type="checkbox"/> NTRK3 <input type="checkbox"/> RET <input type="checkbox"/> ROS1 <input type="checkbox"/> SS18/SYT <input type="checkbox"/> TFE3 <input type="checkbox"/> USP6 <input type="checkbox"/> 1p19q
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<b>Sonstiges</b> <input type="checkbox"/> DNA-Extraktion <input type="checkbox"/> cf-DNA-Extraktion <input type="checkbox"/> RNA-Extraktion	<input type="checkbox"/> MGMT-Methylierung <input type="checkbox"/> MLH1-Methylierung <input type="checkbox"/> MSI
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<b>Weitere DNA-NGS (Mutationen, InDels, CNVs), RNA-NGS (Fusionen/Rearrangements/Translokationen/METex14Skipping) (Targets bitte angeben)</b> <input type="checkbox"/>
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### \*NGS Genliste DNA/RNA-Panel

#### \* NGS Panel Genlisten:

**DNA Panel 1: "mini-nNGM" (DNA-NGS):** ALK, BRAF, EGFR, KRAS, MET, NRAS, PIK3CA

**DNA Panel 1a: "mini-nNGM+POLE" (DNA-NGS):** ALK, BRAF, EGFR, KRAS, MET, NRAS, PIK3CA, POLE

**DNA Panel 1b: "mini-nNGM+ESR1" (DNA-NGS):** ALK, BRAF, EGFR, KRAS, MET, NRAS, PIK3CA, ESR1

**DNA Panel 2: "nNGM Panel" (DNA-NGS):** ALK, BRAF, CTNNB1, EGFR, ERBB2, FGFR1-4, HRAS, IDH1, IDH2, KEAP1, KRAS, MAP2K1, MET, NRAS, NTRK1-3, PIK3CA, PTEN, RET, ROS1, STK11, TP53, TRDMT1

**DNA Panel 3: "Kolon-Panel" (DNA-NGS):** APC, BRAF, CTNNB1, FBXW7, KRAS, NRAS, PIK3CA, SMAD4, TP53

**DNA Panel 4: "Myeloid-Onko-Panel" (DNA-NGS):** ANKRD26, ASXL1, BCOR, BCORL1, BRAF, CALR, CBL, CEBPA, CSF3R, CXCR4, DDX41, DNMT3A, ETV6, EZH2, FLT3, GATA2, GNB1, IDH1, IDH2, JAK2, KIT, KRAS, MPL, MYD88, NF1, NOTCH1, NPM1, NRAS, PHF6, PIGA, PPM1D, PRPF8, PTPN11, RAD21, RUNX1, SF3B1, STAG2, SRSF2, TERC, TERT, TET2, TP53, U2AF1, WT1, ZRSR1

**DNA Panel 5: "Neuro-Onko-Panel" (DNA-NGS):** AKT1, ATRX, BRAF, CDKN2A, CIC, DAXX, EGFR, GNA11, GNAQ, H3F3A, H3F3B, IDH1, IDH2, KDM6A, KLF4, KLLN, NF1, NF2, PIK3CA, PIK3R1, POLR2A, PTEN, SMARCB1, SMO, STAG2, SUFU, TERT Promotor, TP53, TRAF7

**DNA Panel 6: "BRCA" (DNA-NGS):** BRCA1 und BRCA2

**DNA Panel 7: "AIT" (Actionable Insights Tumor) (DNA-NGS):** AKT1, ALK, BRAF, CTNNB1, EGFR, ERBB2, ERBB3, ESR1, FOXL2, GNA11, GNAQ, IDH1, IDH2, KIT, KRAS, MET, NRAS, PDGFRA, PIK3CA, RAF1, RET, TP53

**RNA Panel 1: "Fusionen nach nNGM" (RNA-NGS):** ALK, BAG4, BAIAP2L1, BRAF, CCDC6, CD74, COPA, CIAO1, CUX1, EGFR, EML4, ERC1, ETV6, EZR, FGFR1, FGFR2, FGFR3, FGFR4, GOPC, HIP1, KIF5B, KLC1, LRIG3, MET, MET, (Exon-14-Skipping) MPRIP, MRPS14, NRG1, NTRK1, NTRK2, NTRK3, NUTM1, RAD51, RET, ROS1, SDC4, SLC34A2, STRN, TACC3, TFG, TPR, TRIM33, UBE3C

**RNA Panel 2: "Sarkom NGS Panel" (RNA-NGS):** ALK, BCOR, BRAF, CAMTA1, CCNB3, CIC, EPC1, EWSR1, FOSB, FOXO1, FUS, GLI1, HMGA2, JAZF1, MEAF6, MKL2, NTRK1, NTRK2, NTRK3, PDGFB, PLAG1, ROS1, SS18, STAT6, TAF15, TCF12, TFE3, TFG, USP6, YWHAE

nNGM: Nationales Netzwerk Genomische Medizin Lungenkrebs; [www.nngm.de](http://www.nngm.de)