

The Comprehensive Solution with Tempus

We offer a broad range of molecular testing services to help physicians make informed treatment decisions.

MINIMAL RESIDUAL DISEASE AND DISEASE MONITORING

ASSAY	OVERVIEW	SPECIMEN TYPE(S)
xM Tumor-naïve for minimal residual disease (MRD)	<p>An assay that was developed leveraging a multimodal database and advanced machine learning, the test returns a positive or negative MRD result along with a quantitative value.</p> <p><i>Available for patients with colorectal cancer.</i></p>	BLOOD (4) 8.5mL Streck tubes filled with peripheral blood (from the clinic)

TESTS FOR INFORMING TREATMENT SELECTION

xT DNA Solid Tumor + Normal Match or Solid Tumor Only	<p>648 gene panel by DNA seq with incidental germline findings</p> <p>Tumor + normal match</p> <p>Immunotherapy Metrics Microsatellite Instability (MSI) Status Tumor Mutational Burden (TMB) HLA Class I genotyping</p>	TISSUE (from pathology department) + BLOOD (2) 8.5mL Streck tubes filled with peripheral blood* (from the clinic)
xR (RNA) Solid Tumor	<p>Whole transcriptome RNA seq with validated fusion detection.</p> <p>Altered splicing for MET Exon 14, and EGFRvIII. <i>May be ordered as a standalone or in combination with xT (DNA) seq.</i></p>	TISSUE (from pathology department)
xF/xF+ Blood (liquid biopsy, cfDNA)	<p>105/523 gene panel by DNA seq.</p> <p>Immunotherapy Markers MSI-High Status; Blood-based Tumor Mutational Burden (bTMB) HLA Class I genotyping</p>	BLOOD (2) 8.5mL Streck tubes filled with peripheral blood (from the clinic)
xE Solid Tumor + Normal Match	<p>Whole exome 19,000+ gene panel by DNA seq with potential germline findings</p> <p>Immunotherapy Markers Tumor Mutational Burden (TMB)</p>	TISSUE (from pathology department) + BLOOD (2) 8.5mL Streck tubes filled with peripheral blood* (from the clinic)

ALGORITHMIC TESTS— Available as add-on test to xT Solid Tumor/Normal Match DNA seq and xR RNA seq. No additional tissue required.

HRD Homologous Recombination Deficiency	DNA seq: Genome-wide loss of heterozygosity threshold for ovarian and breast cancers [§]	RNA seq: HRD score (all other cancers) [¶]
TO Tumor Origin [¶]	RNA expression data: Probability prediction of the patient's most likely cancer type(s) from 68 possible diagnoses.	
DPYD [§]	Identifies patients at elevated risk for toxicity to 5-FU and/or capecitabine. Detects alterations at 5 major loci on the DPYD gene.	
UGT1A1 [§]	Identifies patients at elevated risk for toxicity to irinotecan, sacituzumab govitecan, and/or belinostat. Detects 5 variants from 3 loci on the UGT1A1 gene.	
IPS Immune Profile Score	Prognostic biomarker for immune checkpoint inhibitor candidates	

IMMUNOHISTOCHEMISTRY (IHC) OPTIONS— Available with any xT, xR, or xE test. Tempus will request tissue from pathology.

PD-L1 Clones	22C3; SP142; 28-8; SP263
MMR	MLH1; MSH2; MSH6; PMS2
HER2 [†]	Protein expression (powered by NeoGenomics)
FOLR1	Folate Receptor alpha (FR α) expression (powered by NeoGenomics)
CLDN18	Claudin-18 expression (powered by NeoGenomics)
c-MET	c-Met expression (powered by NeoGenomics)

NEURO-ONCOLOGY OPTIONS— Available with any xT or xR test. Tempus will request tissue from pathology.

1p/19q	co-deletion (powered by NeoGenomics)
MGMT	promoter methylation (powered by NeoGenomics)

* A saliva specimen from the patient is also accepted as the normal match

§ xT solid tumor + normal match DNA seq required

¶ xR RNA seq required

† When HER2 is ordered, it will be reflexed to ERBB2 FISH for all solid tumor types in cases of equivocal results (IHC score of 2+). While FISH reflex will occur for equivocal IHC results in any solid tumor, it is currently only guideline-supported for select tumor types.^{1,2,3}

1 Northcott J, Bartha G, Harris J, et al. Analytical validation of NeXT Personal®, an ultra-sensitive personalized circulating tumor DNA assay. *Oncotarget*. 2024;15:200-218

2 Wolff AC, Somerfield MR, Dowsett M, et al. Human epidermal growth factor receptor 2 testing in breast cancer: ASCO-College of American Pathologists guideline update. *J Clin Oncol*. 2023;41(22):3867-3872.

3 Bartley AN, Washington MK, Ventura CB, et al. Her2 testing and clinical decision making in gastroesophageal adenocarcinoma: guideline from the College of American Pathologists, American Society for Clinical Pathology, and American Society of Clinical Oncology. *Arch Pathol Lab Med*. 2016;140(12):1345-1363.

