

## Lab Alert: Genetics News

Regional Pathology Services provides genetic testing and expertise in molecular genetics, cytogenetics, FISH, microarray, Human Leukocyte Antigen (HLA), Next-Generation Sequencing (NGS), and forensics and paternity testing.

### NEW TESTING

#### [FLTTKD](#)

#### FLT3 TKD Mutation

- This test detects mutations in the *FLT3* tyrosine kinase domain (TKD) in blood or bone marrow from AML patients. *FLT3* TKD mutations are targetable with *FLT3* inhibitors such as gilteritinib and midostaurin.

#### [STPP](#)

#### Solid Tumor Precision Panel

- Replaces the Colorectal Cancer Panel, Gastrointestinal Stromal Tumor (GIST) Panel, Lung Cancer Panel, and Melanoma Panel

#### [TMBO](#)

#### Tumor Mutational Burden

- The Tumor Mutation Load (TML) Assay is a targeted next-generation sequencing assay that is designed for providing an accurate assessment of TMB (mutations/Mb). Studies have shown that tumors that have a high tumor mutation burden/load (TML or TMB) potentially have a better response to immunotherapy.

### FEATURED TESTING

#### **ACUTE MYELOID LEUKEMIA (AML) FISH PANEL**

The Human Genetic Laboratory's AML FISH panel now includes *NUP98* [11p15] as recommended by the World Health Organization (WHO). The addition of this probe increases the detection of cryptic rearrangements and helps characterize prognostic outcomes.

#### [FAML](#)

#### FISH-Acute Myeloid Leukemia (AML) Panel

- 8 centromere, 20q12, *CBFB* [16q22], *D7S486* [7q31] / 7 centromere, *EGR1* [5q31], *KMT2A (MLL)* [11q23], *MECOM (EVI1)* [3q26.2], *NUP98* [11p15], *PML :: RARA* [t(15;17)], *RARA* [17q21], *RUNX1T1::RUNX1 (ETO / AML1)* [t(8;21)]

#### **CHRONIC MYELOID LEUKEMIA (CML) FISH PANEL**

The Human Genetic Laboratory's CML FISH panel when ordered without chromosomes, often requested for follow-up studies, has a new reflex algorithm.

- *BCR::ABL1* negative: no reflex will occur
- *BCR::ABL1* positive: reflex to *MECOM*, *TP53*, 8 centromere, 19p13 /19q13

#### **FORENSICS AND PATERNITY TESTING**

The Human DNA Identification Laboratory utilizes industry standard methods compliant with CODIS (U.S. Combined DNA Index System) to determine person of origin in various biological samples. Application of our methodology can be used to resolve identity in the following circumstances:

- Paternity / parentage
- Physical evidence for law enforcement agencies and private attorneys
- Patient tissue / body fluid misidentification

For more information on forensic and paternity testing visit our website:

<https://www.reglab.org/services/paternity-and-forensic-testing/>

**NEW TEST BUILD INFORMATION:**

<b>Test Code</b>	<b>Test Name</b>	<b>ResultCode</b>	<b>ResultName</b>	<b>CPT</b>
<a href="#">FLTKD</a>	FLT3 TKD Mutation	FLTKD	FLT3 TKD Mutation	81479
<a href="#">STPP</a>	Solid Tumor Precision Panel	STPPR	Solid Tumor Precision Panel	81445
<a href="#">TMBO</a>	Tumor Mutational Burden	TMB	Tumor Mutational Burden	81479

**DISCONTINUED TESTING**

The following testing has been discontinued and when available a replacement test code has been indicated.

<b>Deactivated Test Code</b>	<b>Deactivated Test Name</b>	<b>Replacement Test Code</b>
50GCP / 50GCPO	50 Gene Cancer Panel	<a href="#">STPP</a>
CCMP	Colorectal Cancer Panel	<a href="#">STPP</a>
EGFR	EGFR Mutation	No replacement
GIST	Gastrointestinal Stromal Tumor (GIST) Panel	<a href="#">STPP</a>
KRASM	KRAS Mutation Detection	No replacement
LCMP	Lung Cancer Mutation Panel	<a href="#">STPP</a>
MMP	Melanoma Mutation Panel	<a href="#">STPP</a>
PIK3CA	PIK3CA Mutation Detection	No replacement
TP53P	TP53 Mutation on fixed tissue	<a href="#">TP53</a> *fresh tissue only*

**UPDATED REQUEST FORMS**

- Hematopathology Molecular Oncology/Consultation Request form
- Solid Tumor FISH/Molecular Oncology Test Request Form
- Oncology Test Request Form

*Request forms are found on our website and are also available through the supply portal. If you need access to the supply portal your account manager can assist.*