



To: UPHS Physicians and Staff  
 From: The Division of Precision and Computational Diagnostics (PCD)  
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Date: November 6, 2025  
 Re: **NEW MYELOID SEQUENCING ASSAY:** Hematological Expedited Sequencing (HEXS) Panel

The Division of Precision and Computational Diagnostics is pleased to announce the release of the **Hematological Expedited Sequencing (HEXS) panel**. Testing for appropriate samples will begin in November (see Testing Information below). The National Comprehensive Cancer Network (NCCN) and The European LeukemiaNet (ELN) guidelines recommend rapid turnaround time (3-5 days) for genomic profiling of actionable therapeutic targets in myeloid malignancies.

This test, which has been rigorously validated by the PCD, can reliably detect single nucleotide variants (SNVs), insertions/deletions (indels), and certain *FLT3*-ITDs (see Limitations section below) in regions of interest across 58 genes (refer to table below). The specific genomic regions targeted by HEXS are available upon request.

<i>ABL1</i>	<i>BRAF</i>	<b><i>CEBPA</i></b>	<b><i>ETV6</i></b>	<i>HRAS</i>	<b><i>KDM6A</i></b>	<i>NPM1</i>	<i>PTEN</i>	<i>SMC1A</i>	<b><i>TP53</i></b>
<i>ANKRD26</i>	<i>CALR</i>	<i>CSF3R</i>	<b><i>EZH2</i></b>	<i>IDH1</i>	<i>KIT</i>	<i>NRAS</i>	<i>PTPN11</i>	<i>SMC3</i>	<i>U2AF1</i>
<i>ASXL1</i>	<i>CBL</i>	<i>CUX1</i>	<i>FLT3</i>	<i>IDH2</i>	<i>KMT2A</i>	<i>PDGFRA</i>	<b><i>RAD21</i></b>	<i>SRSF2</i>	<i>WT1</i>
<i>ATRX</i>	<i>CBLB</i>	<i>DDX41</i>	<i>GATA1</i>	<b><i>IKZF1</i></b>	<i>KRAS</i>	<b><i>PHF6</i></b>	<b><i>RUNX1</i></b>	<i>STAG1</i>	<b><i>ZRSR2</i></b>
<b><i>BCOR</i></b>	<i>CBLC</i>	<b><i>DNMT3A</i></b>	<b><i>GATA2</i></b>	<i>JAK2</i>	<i>MPL</i>	<b><i>PIGA</i></b>	<i>SETBP1</i>	<b><i>STAG2</i></b>	
<b><i>BCORL1</i></b>	<b><i>CDKN2A</i></b>	<i>ETNK1</i>	<i>GNAS</i>	<i>JAK3</i>	<i>NF1</i>	<i>PPM1D</i>	<i>SF3B1</i>	<b><i>TET2</i></b>	

**Bold:** Full Coding Sequence (CDS) covered

HEXS is intended to supplement the existing PennSeq™ Heme panel by facilitating time-sensitive treatment decisions for patients with a new diagnosis of acute myeloid leukemia or myelodysplastic syndrome.

- **Methodology:** HEXS is based on Pillar's oncoReveal® Myeloid kit using stem loop inhibition mediated amplification and next generation sequencing on the Illumina MiSeq i100 Plus instrument.
- **Reporting:** Positive, for cases with clinically reportable variants, or Within Normal Limits, for cases without clinically reportable variants. Clinically reportable variants will be classified by clinical significance according to existing reporting practices.
- **Limitations:** HEXS detects SNVs, insertions or deletions <10 bp, complex insertions or deletions, and *FLT3*-ITDs <21 bp down to 2% variant allele frequency (VAF), insertions or deletions ≥10 bp down to 1% VAF, and *FLT3*-ITDs between 21 bp and 84 bp down to 0.3% VAF. This assay does not detect structural variants (such as rearrangements), copy number changes or tumor mutational burden.

### Testing Information

	Test Name
<b>PennChart Ordering:</b>	Blood: Hematological Expedited Sequencing (HEXS) [PxCode HEXS] Bone Marrow: SPHEM; special studies drop down
<b>Turnaround Time:</b>	Within 5 days
<b>Acceptable Specimen:</b>	<ul style="list-style-type: none"> <li>• Bone marrow or peripheral blood collected in EDTA (lavender) tube (1 tube)</li> <li>• Bone marrow core in saline</li> </ul>

**For more information** call the Molecular Pathology Laboratory (215) 615-3094 on weekdays during regular business hours. For information on ordering and specimen requirements, kindly consult the [Lab Test Services Guide](#).