COMPREHENSIVE HEMATOPATHOLOGY ANALYSIS
(Peripheral Blood or Bone Marrow)

DIAGNOSTIC:
- MORPHOLOGIC EVALUATION (include a narrative diagnosis of the highest specificity required)
- Complaints
- Clinical History
- Relevant Diagnostic Tests Per Opinion of Reviewing Pathologist

PROGNOSTIC (must be ordered with either Comprehensive Evaluation or Flow HNA):
- Bone Marrow Morphology
- Peripheral Blood Morphology
- Peripheral Blood Neutrophil Differential

TECH (CYTOMETRY) (see reverse for antibody list)
- Hematopoietic Neoplasms Assessment (HNA)
- P110/CD33R Assessment

MORPHOGENETICS
- Cancer Genomics
- Constitutional Genomics

REVEAL® SNP MICROARRAY

Multiple Myeloma Evaluation: SNP only
Multiple Myeloma Evaluation: SNP + FISH

FISH/ARRAYGENE® (probes listed by dispose state)

- ALL (Adult)
- ALL (Pediatric)
- CLL
- MLL
- BCR/ABL1, t(9;22)

- MDS
- Chronic Myeloid Leukemia

- Multiple Myeloma

- NPM1 Mutation
- CEBPA Mutation
- Other – Specify: ________________________________

SOLID TUMOR

- BRCAssure® - Breast
- BRCA1/BRCA2 Targeting
- BRCA2 Targeting
- BRCA1/BRCA2 Deletion/Duplication
- Ashkenazi Jewish BRCA Panel

Other – Specify: ________________________________

Other – Specify: ________________________________

When ordering tests for which Medicare or Medicaid reimbursements will be sought, physicians should order only those tests for services it deems investigational.

When ordering tests that are subject to CMS guidelines, refer to the policies published by your Medicare Administrative Contractor (MAC), CMS, or www.LabCorp.com/MedicareCMSNecessary.

Symbolic Legend
= Subject to Medicare medical necessity guidelines
= Medicare deems investigational. Medicare does not pay for services it deems investigational.

SPECIMEN LABEL INSTRUCTIONS
1. Complete the requisition with all requested information.
2. Label specimen with two unique identifiers.
3. Remove the required number of labels from the front of this sheet.
4. Place one (1) label on each specimen container (not on the lid).

Please dispose of unused labels.
COMPREHENSIVE HEMATOPOPATHY ANALYSIS
(Peripheral Blood or Bone Marrow)

DIAGNOSTIC:
MORPHOLOGIC EVALUATION (include a copy of CBC report)
- Hematopoietic Neoplasms Assessment (HNA)
  - Add diagnostic tests based on HNA findings per IO Reflex Criteria (see reverse)
- Phishing
  - Stem Cell Engraftment
- Cytogenetics
  - Non-Hematologic Syndromes
  - Leukocyte Adhesion Deficiency Assessment
- BM CDA/QBR Assessment
  - Send to NY

PROGNOSTIC (must be ordered with either Comprehensive Evaluation or Flow HNA):
- Add Relevant Prognostic Tests Per IO Reflex Criteria (see reverse)

MORPHOLOGIC EVALUATION (include a copy of CBC report)
- Bone Marrow Morphology
- Peripheral Blood Morphology

TECH (CYTOMETRY) (also request for antibody panel)
- Hematopoietic Neoplasms Assessment (HNA)
  - Add diagnostic tests based on HNA findings per IO Reflex Criteria (see reverse)
  - Phishing
  - Stem Cell Engraftment
  - Cytogenetics
- Non-Hematologic Syndromes
- Leukocyte Adhesion Deficiency Assessment
- BM CDA/QBR Assessment

REVEAL\(^\text{TM}\) SNP MICROARRAY
Note: If balanced translocations are a concern, cytogenetics and/or FISH analysis should be run. I/S X (SNP+ISH) is ordered, probes t(4;14), t(11;14), t(14;16) are performed.

SNP Microarray for ALL, AML, CML, MDS and other Hematologic Malignancies

Indication:
- Multiple Myeloma Evaluation: SNP only
- Multiple Myeloma Evaluation: SNP + FISH

FISH/ARRAYGENE\(^\text{TM}\) profiles listed by disease state

**SPECIAL INSTRUCTIONS**

1. Complete the requisition with all requested information.
2. Label specimen with two unique identifiers.
3. Remove the required number of labels from the front of this sheet.
4. Place one (1) label on each specimen container (not on the lid).

Please dispose of unused labels.
Flow Cytometry

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>Timing</th>
<th>Findings (Morphology, Flow cytometry, FISH and/or karyotyping)</th>
<th>Tests to Perform</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>Initial Diagnosis</td>
<td>ALL or borderline AML, pathology discretion with respect to adding immediately or waiting for karyotyping and then adding these tests only in the setting of a normal karyotype</td>
<td>FLT3+, CEBPA, and NPM1 mutation analyses</td>
</tr>
<tr>
<td>AML</td>
<td>Initial Diagnosis</td>
<td>AML or borderline AML, pathology discretion with respect to adding immediately or waiting for karyotyping and then adding these tests only in the setting of a normal karyotype</td>
<td>FLT3+, CEBPA, and NPM1 mutation analyses</td>
</tr>
<tr>
<td>CML</td>
<td>Initial Diagnosis</td>
<td>Features of RUNX1/RUNX1 (8;21) or CBFB inv(16), pathology discretion to wait on FISH or karyotype prior to ordering</td>
<td>c-KIT mutation analysis</td>
</tr>
<tr>
<td>CML</td>
<td>Follow up*</td>
<td>Features of refractoriness disease or disease progression/transformation</td>
<td>Flow probe for TP53 (17p-); deletion, TP53 mutation analysis, and SNP array</td>
</tr>
<tr>
<td>MDS</td>
<td>Initial Diagnosis</td>
<td>Morphologic diagnosis of MDS with normal cytogenetic karyotype</td>
<td>MDS SNP array</td>
</tr>
<tr>
<td>Plasma cell neoplasia</td>
<td>Initial Diagnosis</td>
<td>5% or more neoplastic plasma cells by morphology or 1% or more by flow cytometry</td>
<td>Myeloma FISH profile</td>
</tr>
<tr>
<td>Plasma cell neoplasia</td>
<td>Follow up*</td>
<td>Features of disease progression</td>
<td>Flow probes for TP53 (17p-), CKS1B (1q21), Monosomy 1</td>
</tr>
</tbody>
</table>

**Recommendation for follow-up evaluation requires that prior material was evaluated in an IO facility.**

Diagnostic Test Reflex Criteria Based on Flow Cytometry or Surgical Pathology Consultation Findings

<table>
<thead>
<tr>
<th>Disease Category</th>
<th>Timing</th>
<th>Findings</th>
<th>Tests to Perform</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALL</td>
<td>Initial Diagnosis</td>
<td>Diagnostic or suspicious for AML with RUNX1/RUNX1 (8;21), CBFB inv (16), or PML/RARA (15;17), acute myelomonocytic, or acute monocytic/monoblastic leukemia</td>
<td>FISH probes for RUNX1/RUNX1 (8;21), CBFB inv (16), or PML/RARA (15;17) or MLL respectively, as indicated</td>
</tr>
<tr>
<td>B-cell lymphoma</td>
<td>Initial Diagnosis</td>
<td>Findings suspicious or diagnostic for B-cell lymphoma, but with equivocal findings with regard to subclassification</td>
<td>NHL FISH probes and molecular assays as indicated</td>
</tr>
<tr>
<td>Large B-cell lymphoma or Burkitt lymphoma</td>
<td>Initial Diagnosis</td>
<td>Monotypic B-cells diagnostic or suspicious for large B-cell lymphoma or Burkitt lymphoma</td>
<td>FISH probes for MYC, BCL2, and BCL2 translocations and cytogenetic karyotyping, as indicated</td>
</tr>
<tr>
<td>Eosinophil</td>
<td>Initial Diagnosis</td>
<td>Peripheral blood with 1.0K/µL or more eosinophils</td>
<td>FISH probes for PDGFRα, PDGFRβ, and FGFR1</td>
</tr>
<tr>
<td>Hairy Cell Leukemia (HCL)</td>
<td>Initial Diagnosis</td>
<td>CD103+ monoblastic B-cells (5% or more) inconclusive for HCL</td>
<td>BRAF mutation</td>
</tr>
<tr>
<td>Lymphoplasmacytic Lymphoma (LPL)</td>
<td>Initial Diagnosis</td>
<td>Monoblastic B-cells (10% or more) with features indicating LPL in differential diagnosis</td>
<td>MYD88 mutation</td>
</tr>
<tr>
<td>Mediastinum cell lymphoma (MCL)</td>
<td>Initial Diagnosis</td>
<td>Monotypic B-cells (5% or more) diagnostic or suspicious of MCL</td>
<td>FISH probe for CCND1/IGH (11;14)</td>
</tr>
<tr>
<td>MPN (mast cell disease)</td>
<td>Initial Diagnosis</td>
<td>Atypical mast cells by flow cytometry</td>
<td>c-KIT mutation analysis for mast cell disease</td>
</tr>
<tr>
<td>MPN (PV, ET, PMF, CML)</td>
<td>Initial Diagnosis</td>
<td>Flow cytometric findings suspicious for MPN</td>
<td>FISH probe for BCR/ABL1 with reflex to JAK2 V617F (Quad) and/or CALR mutations if negative</td>
</tr>
<tr>
<td>T-cell lymphoma/leukemia</td>
<td>Initial Diagnosis</td>
<td>Atypical T-cells diagnostic or suspicious for T-cell lymphoma/leukemia</td>
<td>TCR gene rearrangement</td>
</tr>
</tbody>
</table>

**Investigational Use Only**

Morphologic Evaluation Common Components (Please include patient CBC report)

- Peripheral Blood Interpretation (85060)
- Bone Marrow Aspirate Smear & Interpretation (85097)
- Core (85305)
- Decalcification (88311)
- Core (85305)
- Additional Studies/Special Stains (88313): Iron and reticulin
- IHC Global marker number (88342) varies but typically 0-4

Flow Cytometry*

- Peripheral blood/bone marrow panel (HNA) 24 ** antibodies
  - CD2, CD3, CD4, CD5, CD7, CD8, CD10, CD11b, CD11c, CD12, CD14, CD16, CD19, CD20, CD23, CD25, CD33, CD34, CD38, CD45, CD56, CD64, HLA-DR, kappa light chain, lambda light chain
  - Tissue/fluids panel (HNA) 21 ** antibodies
    - CD2, CD3, CD4, CD5, CD7, CD8, CD10, CD11b, CD19, CD20, CD23, CD30, CD38, CD43, CD45, CD56, CD57, FMC-7, HLA-DR, kappa light chain, lambda light chain
- PNH Evaluation
  - CD14, CD15, CD24, CD45, CD64, FLAER. CD64 and CD25 may be added at discretion of reviewing pathologist

*Additional antibodies may be added if determined to be medically necessary to render a diagnosis in the opinion of the reviewing pathologist.

**Markers performed determined by testing facility.