

BEAUMONT HEALTH GUIDELINES FOR CYTOGENETIC/MOLECULAR FOLLOW-UP TESTING OF HEMATOPOIETIC MALIGNANCY

Effective Date: October 23, 2019

With the expanding discovery of new genetic markers, it became imperative to have a test protocol in place to ensure compliance with NCCN guidelines and WHO guidelines. Thus, a multidisciplinary committee was formed by Beaumont Laboratory to standardize cytogenetic and molecular testing for hematopoietic malignancy across the hospital system. This Laboratory Bulletin summarizes the current testing protocol and ancillary tests that will automatically be ordered by the pathologists in all follow up specimens of hematopoietic malignancy.

| | |
|--|---|
| Acute Lymphoblastic Leukemia | <ul style="list-style-type: none">• Karyotype• FISH for previously identified abnormality• RT-PCR for BCR-ABL1 if positive at diagnosis |
| Acute Myeloid Leukemia, including evolving AML | <ul style="list-style-type: none">• Karyotype• Repeat mutations (NPM1, FLT3, IDH1/IDH2), on follow up marrows other than day 14. Note: sensitivity may not be sufficient for evaluation of minimal residual disease• PCR for RUNX1-RUNX1T1, PML-RARA etc performed by clinician on peripheral blood |
| Myelodysplastic Syndrome | <ul style="list-style-type: none">• Karyotype• Previously identified FISH abnormality at clinician request |
| Myeloproliferative Neoplasms | <ul style="list-style-type: none">• Karyotype |
| Myelodysplastic/Myeloproliferative Neoplasms including Chronic Myelomonocytic Leukemia | <ul style="list-style-type: none">• Karyotype |
| Plasma Cell Myeloma | <ul style="list-style-type: none">• Karyotype• FISH for previously identified abnormality |
| Chronic Lymphocytic Leukemia/ Small Lymphocytic Lymphoma | <ul style="list-style-type: none">• Karyotype• Complete CLL FISH panel |
| T-cell leukemia, including T-cell Prolymphocytic Leukemia | <ul style="list-style-type: none">• Karyotype• FISH for previously identified abnormality |
| Lymphomas | <ul style="list-style-type: none">• Cytogenetic and molecular testing for previously identified abnormality in DLBCL and mantle cell lymphoma• Other testing at physician request |

Date submitted: October 23, 2019

Submitted by: Ann Marie Blenc, M.D., System Medical Director, Hematopathology