

Follicular Lymphoma

Newly Diagnosed and at Disease Progression (somatic)

When and what should be tested?

- Treatment eligible
- At time of initial diagnosis or upon disease progression
- Blood or LN sample
- Bone marrow biopsy

FDA/NCCN approved

- EZH2

Emerging

- NGS including STAT6 and TNFRSF14, CREBBP, MAP2K1

Informational Considerations

- Ki-67

Mantle Cell Lymphoma

Newly Diagnosed and at Disease Progression (somatic)

When and what should be tested?

- Treatment eligible
- At time of initial diagnosis or upon disease progression
- Blood or LN sample
- Bone marrow biopsy

FDA/NCCN approved

- n/a

Emerging

- BTK resistance mutation testing for patients on previous BTK inhibitors

Informational Considerations

- TP53
- SOX 11
- Ki-67
- LEF1
- IGHV

Chronic Lymphocytic Leukemia (CLL), Small Lymphocytic Lymphoma (SLL)

During Treatment/Observation and Relapse (somatic)

When and what should be tested?

- Treatment eligible
- During treatment/observation (MRD) and upon relapse when treatment is indicated
- Peripheral blood sample
- Bone marrow or lymph node biopsy in select cases

FDA/NCCN approved

- Consider MRD
- IGHV mutation status
- Del (17p)
- TP53
- Trisomy 12
- del (11q)
- del (13q)
- CpG-stimulated karyotype
- BTK
- BCL2
- PLCG2

Emerging

- NGS panel
- CARD11

Diffuse Large B-Cell Lymphoma (DLBCL)

Relapsed Disease (somatic)

When and what should be tested?

- Treatment eligible
- Upon relapse when clinically appropriate
- Bone marrow, blood or lymph node biopsy

FDA/NCCN approved

- n/a

Emerging

- NGS

Informational Considerations

- CD30
- Cyclin D1
- Kappa/lambda
- CD138
- ALK
- HHV8
- SOX11
- EBER-ISH

Lymphoplasmacytic Lymphoma (LPL), Marginal Zone Lymphoma, Hodgkin Lymphoma

Disease Progression (somatic)

When and what should be tested?

- Treatment eligible
- Upon disease progression
- Blood sample, tissue, or bone marrow biopsy

FDA/NCCN approved

- n/a

Emerging

- Lymphoblastic Lymphoma
- Marginal Zone Lymphoma
 - BTK resistance mutation testing for patients on previous BTK inhibitors
- LPL
 - CXCR4

Informational

- *MYD88* mutation status

Multiple Myeloma

During Treatment/Observation and Relapse (somatic)

When and what should be tested?

- Treatment eligible
- During treatment/observation (MRD)
- Upon relapse when clinically appropriate
- Peripheral blood sample
- Bone marrow biopsy

FDA/NCCN approved

- Consider flow cytometry-based MRD for treatment decisions

Emerging

- NGS

Informational Considerations

- Circulating plasma cells

B-Cell Acute Lymphoblastic Leukemia (ALL) - Adult

At Diagnosis and upon Relapse (somatic)

When and what should be tested?

- Treatment eligible
- During treatment/observation (MRD)
- At diagnosis, upon relapse
- Peripheral blood sample
- Bone marrow biopsy

FDA/NCCN approved

- BCR-ABL1
- MRD
- Comprehensive NGS
- Chromosomal microarray (CMA)/comparative genomic hybridization (cGH) in cases of aneuploidy or inadequate karyotype

- KMT2A

Informatics

- MLL

Acute Myelogenous Leukemia (AML)

At Diagnosis and upon Relapse (somatic)

When and what should be tested?

- Treatment eligible
- At time of initial diagnosis and upon relapse
- Peripheral blood sample
- Bone marrow biopsy

FDA/NCCN approved

- AML
- IDH1
- IDH2
- FLT3
- RUNX1
- NPM1
- CEBPA (in-frame bZIP mutation)
- ASXL1
- C-KIT
- TP53
- MRD
- NGS
- MLL (HRX/ALL-1/KMT2A)
- BCOR
- EZH2
- SF3B1
- SRSF2
- STAG2
- U2AF1
- ZRSR2

Emerging

- OSMR

Myelodysplastic Syndrome (MDS)

At Diagnosis and upon Relapse (somatic)

When and what should be tested?

- Treatment eligible
- At time of initial diagnosis and upon relapse
- Peripheral blood sample
- Bone marrow biopsy

FDA/NCCN approved

- n/a

Emerging

- NGS
- PDGFR β
- FCM
- TCR
- STAT3

Hairy Cell Leukemia

At Diagnosis and upon Relapse (somatic)

When and what should be tested?

- Treatment eligible
- All patients in the diagnostic/work-up phase of leukemia classification
- During treatment/observation (MRD)
- At time of initial diagnosis or upon relapse
- Bone marrow biopsy
- Peripheral blood sample

FDA/NCCN approved

- BRAF V600E*
- MRD
- IGHV4-34 rearrangement

Emerging

*If testing for BRAF V600E is negative, NGS or comparable testing for other BRAF and MAP2K1 mutations can be considered