UNC HEALTH CARE

MEMORANDUM #20

TO: UNC Medical Center Attending Physicians, Housestaff, Clinical Nurse Coordinators, Department Heads and Supervisors

FROM: Margaret L. Gulley MD, Director of Molecular Pathology Programs
Herbert C. Whinna MD, Medical Director, McLendon Clinical Laboratories

SUBJECT: Changes to the Myeloid Mutation Panel

DATE: January 24, 2017

Effective February 1, 2017, the Molecular Genetics Laboratory is adding additional genes for analysis to the Myeloid Mutation Panel.

What change was made and why? Recent literature reveals the prognostic value of additional gene mutations beyond those previously evaluated in our panel for acute myeloid leukemia (AML). These genes are *BCOR, SRSF2, STAG2, U2AF1, ZRSR2*. The expanded gene list is also applicable to myelodysplastic syndrome (MDS). The myeloproliferative neoplasm (MPN) gene panel will not change.

When performed for either acute myeloid leukemia (AML) or myelodysplastic syndrome (MDS), the panel now includes pertinent segments of the following 21 genes: *ASXL1, BCOR, CEBPA, DNMT3A, ETV6/TEL, EZH2, FLT3, IDH1, IDH2, KIT, NPM1, NRAS, RUNX1, SF3B1, SRSF2, STAG2, TET2, TP53, U2AF1, WT1*, and *ZRSR2*. Mutation in these genes impacts prognosis and/or clinical trial enrollment.

"Myeloid mutation panel - AML" and "Myeloid mutation panel - MDS" will remain as separate orderable tests in Epic. Cases ordered as "**Myeloid mutation panel - AML**" will automatically include reflex *FLT3* internal tandem duplication (*FLT3*-ITD) testing, and an RNA storage specimen to facilitate quantitative *NPM1* type A mutation RNA measurement in cases that test positive for an *NPM1* mutation.

Clinical Indications for Myeloid Mutation Panel testing:

1) **For AML:** Refine classification and prognosis of newly diagnosed AML.
2) **For MDS:** Demonstrate clonality to assist in diagnosis, and refine prognosis.
3) **For MPN:** In an adult with persistently elevated blood counts, demonstrate clonality to assist in diagnosis, and refine prognosis.

Specimen requirements remain the same: Bone marrow aspirate (1 mL, EDTA) or peripheral blood (3mL, EDTA) having at least 10% neoplastic cells and refrigerated for up to 24 hours.

For further information, consult the McLendon Clinical Laboratories website: http://www.uncmedicalcenter.org/mclendon-clinical-laboratories/directory/molecular-pathology-and-genetics/ or call the Molecular Genetics Lab at (984) 974-1825 or Dr. Patel at (984) 974-1454. E-mail: nirali_patel@med.unc.edu