UNC HEALTH CARE

MEMORANDUM #23

TO: UNCHCS Attending Physicians, Housestaff, Clinical Nurse Coordinators, Department Heads and Supervisors

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

SUBJECT: *TERT* Promoter Mutation Test in Glioma

DATE: June 27, 2017

Effective July 5, 2017, the Molecular Genetics Laboratory will offer a *TERT* promoter mutation test.

Clinical Indications for *TERT* Promoter Mutation Testing:
TERT promoter mutation helps to refine prognosis in glioma and serves as a tumor marker in multiple cancer types.

Histologically low grade glioma harboring *TERT* promoter mutation, wild-type *IDH1/2*, and lacking 1p/19q deletion has a poor prognosis comparable to that of glioblastoma (grade 4).

Specimen Requirements:
This assay sequences genomic DNA extracted from paraffin-embedded tissue. Ten unstained slides from a block diagnostic for tumor should be submitted, along with an H&E stained slide marked by the pathologist to indicate the most tumor-rich region (at least 50% tumor cells required). After macrodissection and DNA extraction, the *TERT* promoter region is analyzed by Sanger sequencing. Results at positions -124C>T (also called C228T) and -146C>T (also called C250T) are interpreted by a pathologist.

Reference:
Eckel-Passow JE, *et al.* "Glioma groups based on 1p/19q, *IDH*, and *TERT* promoter mutations in tumors." *New Engl J Med.* 2015; 372(26): 2499-2508. PMID: 26061753.

Questions? Call the UNC Molecular Genetics Lab at **(984) 974-1825** or
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