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Test Update 711

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CPT Code 88377-TC

Order Code: MNR4A

Effective April 1, 2020, MLabs will offer NR4A3 (9q22-9q31) Rearrangement by (FISH) [MNR4A] testing.

Test Usage: NR4A3 encodes an orphan nuclear receptor. Rearrangements of NR4A3 occur in more than 80% of extraskeletal myxoid chondrosarcoma (EMC) as well as in salivary acinic cell carcinoma (AciCC), driving tumorigenesis. With EMC, NR4A3 rearrangements fuse the 3' end of NR4A3, including its DNA binding domain, to a variety of 5' oncogenic transcription activator fusion partners. With AciCC, NR4A3 rearrangement translocates highly active chromatin regions to the upstream region of NR4A3. The detection of NR4A3 rearrangements can be useful in diagnosing EMC and AciCC – including uncommon histologic variants – and in distinguishing these neoplasms from other myxoid neoplasms and salivary gland tumors, respectively.

Test Limitations: This test will detect rearrangements involving NR4A3 but will not identify the translocation partner. The test may fail to detect NR4A3 rearrangements involving a submicroscopic insertion or with a breakpoint outside of the region interrogated by the probes used in this assay.

Methodology: Fluorescence In Situ Hybridization (FISH)

Analytic Time: 3 – 10 days

Specimen Requirements: A formalin-fixed, paraffin-embedded tissue block (containing sufficient neoplastic cells) is preferred. Unstained slides (3 slides cut at 4-microns) with associated H&E-stained slide are also acceptable. Decalcified tissue or tissues with other fixatives will be accepted and the assay attempted; however, these specimens may result in failed testing due to degraded nucleic acid. Both blocks and slides should be stored at room temperature.

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