Laboratory Services

Important Test Announcement

SOMATIC DISEASE RNA SEQUENCING

Test Code: SDRNA **Live Date:** 7/6/2026

On July 6, 2026, the NCH Institute for Genomic Medicine (IGM) Clinical Laboratory will start offering **Somatic Disease RNA Sequencing (Test Code: SDRNA)**.

This RNA-based transcriptome sequencing test detects gene fusions in CNS and non-CNS solid tumors. Gene fusions resulting from chromosomal rearrangements are a hallmark of many types of neoplasia. Detection of gene fusions can aid in diagnosis and determination of treatment options, including potential treatment with an inhibitor specific to a fusion in an individual's neoplasm. This new test is not limited to specific gene fusion targets or specific exons within genes. Some regulatory fusions (e.g. those involving immunoglobulin loci such as *IGH*) may not be detected by this test.

In addition to gene fusions, this test can detect certain types of duplications that occur within genes (internal tandem duplications [ITDs]). ITDs involving the following genes are reported: *AKT1, BCOR, BRAF, EGFR, FGFR1, FLT3, KMT2A, PDGFRA, PDGFRB, TP53,* and *UBTF.* This test does not identify deletions.

This test replaces the Solid Tumor Fusion Analysis (**TUMFUSN**) panel that was previously available from our laboratory. Once this test is live, any orders for "**Solid Tumor Fusion Analysis**" will be converted to **Somatic Disease RNA Sequencing***.

- **CPT Code:** 81456
- **Typical Turnaround Time:** 21 days (3 weeks)
- **Special Collection:** At least 10% disease content must be present in the submitted Fresh, Snap-frozen, OCT, or Bone Marrow samples. At least 25% disease content must be present in the submitted FFPE tissue block or FFPE tissue scrolls (based on internal pathology review). Sample acquisition PRIOR to receiving treatment is strongly preferred. This test is NOT intended for residual disease detection.
- **Specimen Types & Volume:**

Specimen Type	Specimen Container (with size)	Specimen Volume	Container Status (Preferred/Alternate)
Unstained tissue slides	Unstained slides and consecutive cut H&E	10 slides, 10 microns thick	Preferred
Paraffin-embedded tissue	Paraffin block	1 block	Preferred
Tissue (Snap-frozen)	Tissue cassette	50 mg	Alternate
Tissue (Snap-frozen)	Cryogenic tube	50 mg	Alternate
OCT-embedded tissue	Tissue cassette	50 mg	Alternate
OCT-embedded tissue	Cryogenic tube	50 mg	Alternate
Tissue (Fresh)	Tissue culture transport media	50 mg	Alternate
Tissue (Fresh)	Sterile container with saline	50 mg	Alternate
Bone Marrow	4 mL Purple tube (EDTA)	4 mL	Alternate
Tissue scrolls (FFPE)	Sterile container	10-15 scrolls	Alternate
RNA *Must be extracted in CLIA-approved lab	Microcentrifuge tube	Contact IGM lab	Alternate

- **<u>Specimen Transport/Stability</u>:**
    - **Unstained Slides:**
        - Keep at room temperature
        - Protect from heat
        - Must be accompanied by H&E slide from adjacent section
        - Samples decalcified with a strong acid are not accepted. EDTA-based decalcification methods (such as Formical) are acceptable.

- **Paraffin-embedded tissue:**
  - Protect from heat
  - Keep at room temperature
- **Tissue (snap-frozen):**
  - Freeze immediately after collection
  - Transport to laboratory as soon as possible
  - Protect from heat
  - Keep frozen
- **OCT-embedded tissue:**
  - Keep frozen
  - Transport to laboratory as soon as possible
  - Protect from heat
  - Freeze immediately after collection
- **Tissue (Fresh):**
  - Refrigerate after collection. If delay in transport is greater than 24 hours, freeze.
  - Transport to lab on ice immediately after collection
  - Protect from heat
  - Do not add fixative
  - Do not formalin fix the sample
  - Keep refrigerated
- **Bone marrow:**
  - If delay in transport is greater than 24 hours, refrigerate
  - Transport to the lab immediately after collection
  - Room temperature 24 hours(s)
- **Tissue scrolls (FFPE):**
  - Protect from heat
  - Keep at room temperature

        - Must be accompanied by H&E slide from the same tissue block used to make FFPE scrolls
        - Samples decalcified with a strong acid are not accepted. EDTA-based decalcification methods (such as Formical) are acceptable.
    - **RNA:**
        - Please contact laboratory before sending
        - Keep frozen

If you have any additional questions about testing, please refer to the Laboratory Test Directory or call Client Services at 614-722-5477.

*For New York State Clients: This test is not NY State-approved. Solid Tumor Fusion Analysis will still be available for NY clients.