Lung Cancer Focused Molecular Profiling Panels

I. Lung cancer focused molecular profiling panels are considered **medically necessary** when:

   A. The member has a diagnosis of:

      1. Advanced (stage IIIb or higher) or metastatic lung adenocarcinoma, **OR**

      2. Advanced (stage IIIb or higher) or metastatic large cell lung carcinoma, **OR**

      3. Advanced (stage IIIb or higher) or metastatic squamous cell lung carcinoma, **OR**

      4. Advanced (stage IIIb or higher) or metastatic non-small cell lung cancer (NSCLC) not otherwise specified (NOS), **AND**

   B. The member is seeking further cancer treatment (e.g., therapeutic chemotherapy).

II. Repeat lung cancer-focused molecular profiling panels are considered **medically necessary** when the member has progression on targeted therapy for non-small cell lung cancer.

III. Lung cancer-focused molecular profiling panels are considered **investigational** for all other indications.

NOTE: If a panel is performed, appropriate panel codes should be used.

RATIONALE AND REFERENCES

Lung Cancer Focused Molecular Profiling Panels

National Comprehensive Cancer Network (NCCN): Non-Small Cell Lung Cancer (7.2025)

This guideline recommends molecular testing for patients with advanced or metastatic disease and when feasible, testing should be performed via a broad, panel-based approach, most typically performed by NGS. This can be a single assay or a combination of assays and tiered approaches are also acceptable (p. NSCL-19).

Additionally, patients with stages IB-IIIA or IIIB [T3,N2] are recommended to have testing for PD-L1, EGFR and ALK if perioperative systemic therapy is being considered (p. NSCL-E, 1 of 6). In some clinical scenarios it is necessary to do rapid testing which can be followed up with broad testing (p. NSCL-H, 1 of 8, NSCL-H 2 of 8).

NCCN discusses re-testing tumor tissue in patients with progression who are receiving targeted therapy. This applies to all molecular targets associated with lung cancer and is warranted given it could aid in treatment decision-making (NSCL-H 7 of 8).

National Comprehensive Cancer Network (NCCN). NCCN Clinical Practice Guidelines in Oncology: Non-Small Cell Lung Cancer 7.2025 https://www.nccn.org/professionals/physician_gls/pdf/nscl.pdf

DEFINITIONS

1. **Advanced** cancer (advanced stages or advanced tumor or advanced/metastatic): Cancer that is unlikely to be cured or controlled with treatment. The cancer may have spread from where it first started to nearby tissue, lymph nodes, or distant parts of the body. Treatment may be given to help shrink the tumor, slow the growth of cancer cells, or relieve symptoms.
2. **Circulating tumor DNA (ctDNA)** is fragmented, tumor-derived DNA circulating in the bloodstream that is not being carried in a cell. ctDNA derives either directly from the tumor or from circulating tumor cells.
3. **Circulating Tumor Cells (CTCs)** are intact cells that have shed into the bloodstream or lymphatic system from a primary tumor or a metastasis site, and are carried around the body by blood circulation.
4. **Tumor mutational burden**: A measurement of mutations carried by tumor cells and is a predictive biomarker that is being studied to evaluate its association with response to immunotherapy.

5. **Widely metastatic**: A cancer for which local control cannot be delivered to all areas of disease (per NCCN guidelines).