

Local Coverage Determination (LCD): Biomarkers for Oncology (L35396)

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Novitas Solutions, Inc.	A and B MAC	04112 - MAC B	J - H	Colorado
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Novitas Solutions, Inc.	A and B MAC	12502 - MAC B	J - L	Pennsylvania
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LCD Information

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CMS National Coverage Policy

This LCD supplements but does not replace, modify or supersede existing Medicare applicable National Coverage Determinations (NCDs) or payment policy rules and regulations for biomarkers for oncology services. Federal statute and subsequent Medicare regulations regarding provision and payment for medical services are lengthy. They are not repeated in this LCD. Neither Medicare payment policy rules nor this LCD replace, modify or supersede applicable state statutes regarding medical practice or other health practice professions acts, definitions and/or scopes of practice. All providers who report services for Medicare payment must fully understand and follow all existing laws, regulations and rules for Medicare payment for biomarkers for oncology services and must properly submit only valid claims for them. Please review and understand them and apply the medical necessity provisions in the policy within the context of the manual rules. Relevant CMS manual instructions and policies may be found in the following Internet-Only Manuals (IOMs) published on the CMS Web site.

IOM Citations:

- CMS IOM Publication 100.02, *Medicare Benefit Policy Manual*, Chapter 15, Section 80.1, 80.1.1, 80.1.2, 80.1.3, Laboratory services must meet applicable requirements of CLIA
- CMS IOM Publication 100-08, *Medicare Program Integrity Manual*, Chapter 3
 - Section 3.4.1.3 Diagnosis Code Requirements
 - Section 3.6.2.3 Limitation of Liability Determinations

Social Security Act (Title XVIII) Standard References:

- Title XVIII of the Social Security Act, Section 1862(a)(1)(A) states that no Medicare payment shall be made for items or services which are not reasonable and necessary for the diagnosis or treatment of illness or injury.
- Title XVIII of the Social Security Act, Section 1862(a)(7). This section excludes routine physical examinations.
- Title XVIII of the Social Security Act, Section 1833(e) states that no payment shall be made to any provider for any claim that lacks the necessary information to process the claim.

Federal Register References:

- 42 CFR, Section 410.32(d)(3) Diagnostic x-ray tests, diagnostic laboratory tests, and other diagnostic tests: Conditions. Diagnostic laboratory tests

Coverage Guidance

Coverage Indications, Limitations, and/or Medical Necessity

Notice: It is not appropriate to bill Medicare for services that are not covered (as described by this entire LCD) as if they are covered. When billing for non-covered services, use the appropriate modifier.

Compliance with the provisions in this policy may be monitored and addressed through post payment data analysis and subsequent medical review audits.

History/Background and/or General Information

The emergence of personalized laboratory medicine has been characterized by a multitude of testing options which can more precisely pinpoint management needs of individual patients. As a result, the growing compendium of products described as biomarkers requires careful evaluation by both clinicians and laboratorians as to what testing configurations are reasonable and necessary under the Medicare Act. There are a plethora of burgeoning tools, including both gene-based (genomic) and protein-based (proteomic) assay formats, in tandem with more conventional (longstanding) flow cytometric, cytogenetic, etc. biomarkers. Classified somewhat differently, there are highly-diverse approaches ranging from single mutation biomarkers to multiple biomarker platforms, the latter of which often depend upon sophisticated biomathematical interpretative algorithms.

The term "biomarker" refers to a broad subcategory of medical signs (i.e., objective indications of medical state observed from outside the patient) which can be measured accurately and reproducibly. Medical signs stand in contrast to medical symptoms, which are limited to indications of health or illness perceived by the patient. In 1998, the National Institute of Health (NIH), defined a biomarker as: "a characteristic that is objectively measured and evaluated as an indicator of normal biologic processes pathogenic processes, or pharmacologic response to a therapeutic intervention."

This current LCD focuses upon selected testing in oncology, with some emphasis upon applying the revised 2016 CPT molecular coding format. The LCD primarily applies to molecular biomarker testing, but does involve some other types of related biomarker testing, such as proteomics.

There are separate Local Coverage Determinations (LCDs) that address other biomarkers, which include a multitude of assays which are not specifically discussed below. (Please refer to the Novitas website at www.novitas-solutions.com for a complete listing of LCDs.)

Local Medicare coverage of such biomarkers must be predicated upon four fundamental principles:

1. First, the biomarkers must have proven clinical validity/utility (CVU).
2. Second, to support the medical necessity of the service, there must be acceptance/uptake of specific testing into patient management. **It is essential that physicians be familiar enough with all specific biomarkers, which they order, such that all test results may become clinically actionable.**
3. Third, providers managing oncological conditions must demonstrate that the use of biomarkers will be used to assist in the management/treatment of the beneficiary.

4. Peer-reviewed full manuscript evidence is required to support combination panels for multiple biomarkers, particularly regarding their alleged composite clinical validity/utility. For example; such potential billing for multiple, diverse biomarkers (e.g., diagnostic/monitoring/prognostic/predictive) can only achieve medical necessity when it is clearly evident how each requested biomarker can be individually contributory.

It is useful to categorize oncology biomarkers into functional clusters which reflect both (1) The predominant intent of testing (with the caveat that individual assays may cross over into more than one category) and (2) The relative evidentiary expectations:

1. Oncology Biomarkers Used for Diagnosis/Classification/Monitoring/Surveillance: These types of assays are supportable by case-control sensitivity/specificity studies, with appropriate designs in place to minimize the extent of bias and confounding.
2. Oncology Biomarkers Used for Prognosis/Prediction: Oncology biomarkers used for prognosis/prediction (i.e., a predictive biomarker is associated with response [benefit] or lack of response to a particular therapy, relative to other available therapy, whereas a prognostic biomarker provides information on the likely outcome of the disease in an untreated individual).

There is a complex and diverse set of study methods which can drive the robust formulation of evidence for such esoteric testing, which are well-summarized by Deverka et al. at the Center for Medical Technology Policy, but there are currently NO standardized thresholds or benchmarks for evaluating the CVU/medical necessity of emerging biomarkers. However, the following sources (although not exhaustive and complete) may help support CVU when requesting reconsideration for coverage of biomarkers that are not included in this LCD:

1. FDA labeling documentation.
2. National Comprehensive Cancer Network (NCCN) Biomarkers Compendium recommendations, particularly where Category 1 evidence is noted.
3. Findings from well-established, independent technology assessments (e.g., Evaluation of Genomic Applications in Practice and Prevention [EGAPP], Agency for Healthcare Research and Quality [AHRQ], Blue Cross and Blue Shield Association Technology Evaluation Center [BCBSA TEC] and the Cochrane Collaboration).
4. Other independent, objective evaluations or systematic literature reviews, which can substantively contribute to the evidence base, including, but not restricted to, emerging National Institutes of Health (National Cancer Institute) guidelines for the accrual of genomics/proteomics clinical validity/utility evidence. Although there is not a prescriptive format for such systematic reviews, the documentation (submitted to Novitas) for reconsideration purposes should include the following three elements:
 - Some type of recurring/periodic Committee structure, which is comprised of at least qualified biomathematicians/methodologists, molecular pathology laboratory specialists and relevant clinicians (e.g., oncologists).
 - Evidence of active sharing of the critical evaluations in a manner that enables sufficiently broad input into this process, and a feasibly wide acceptance of this process by representative molecular pathology stakeholders. There is no preference between such a Committee being based at a single site, or even rotating among several sites.
 - Transparency of the biomarker evaluations via minutes (or a summary of minutes).

Covered Indications

MOLECULAR TESTS

Covered clinical types of application(s) are identified below as diagnostic (DX), prognostic (PROG) or predictive (PRED).

1. Colorectal Cancer

- KRAS (12/13) - PRED of resistance to an anti-EGFR agent
- KRAS codon 61 - PRED of resistance to an anti-EGFR agent
- KRAS codon 146 - PRED of resistance to an anti-EGFR agent
- NRAS - PRED of resistance to an anti-EGFR agent
- BRAF - PRED of resistance to an anti-EGFR agent + DX (sporadic vs. Lynch syndrome)
- PIK3CA - PRED of resistance to an anti-EGFR agent + PROG for local recurrence
- MSI by PCR - PRED of 5-FU resistance + DX
- MLH1 promoter hypermethylation - PRED of 5-FU resistance + DX
- mRNA (oncotype-Colon) – PRED for the recurrence risk for patients with Stage II colon cancer (CPT code 81525)
- Hereditary colon cancer disorders (CPT codes 81435 and 81436)
- Sept9 – (CPT code 81327)

ColonSeq®

This testing provides information to the patient and provider regarding potential treatment options and implications for RAS and BRAF mutations.

Please refer to A52986-Biomarkers for Oncology regarding coding and billing information.

2. Non-Small Cell Lung Cancer (NSCLC)

- EGFR- PRED of anti-EGFR response
- KRAS (12/13) - PRED of anti-EGFR resistance
- KRAS codon 61 - PRED of anti-EGFR resistance
- KRAS codon 146 - PRED of anti-EGFR resistance
- BRAF - PROG + PRED for anti-RAF inhibitor

ThermoFisher Oncomine DX Target Test for Non-Small Cell Lung Cancer (NSCLC) is a 23 gene panel including a 3 gene target test (companion test) approved by the FDA in June 2017 for NSCLC from tissue specimens. It can simultaneously identify the three gene variants that are a key to targeted therapy selection: BRAF and ROS1, and EGFR. The targeted therapies are dabrafenib (Tafinlar) in combination with trametinib (Mekinist), crizotinib (Xalkori), and gefitinib (Iressa), respectively. These three drugs are approved therapies for NSCLC patients with the above gene variants. Oncomine DX Target Test is the only FDA approved companion test that detects ROS1 fusions and that detects BRAF V600E, but it does not detect ALK fusions.

The literature does appear to show clinical validity for all tests and utility for the companion testing. Clinical trials ongoing for the remainder of the panel and as such will not be addressed here. Decision on coverage is based on the companion testing only.

LungSeq®

Testing for genetic alteration in these genes can determine targeted therapy options that have the potential to decrease tumor burden, decrease symptoms, increase survival, and dramatically improve the quality of life for patients with specific genetic alterations.

Please refer to A52986-Biomarkers for Oncology regarding coding and billing information.

3. Melanoma

- BRAF - PRED of response to Vemurafenib
- KIT - PRED of response to Imatinib (TKI)
- NRAS - PROG + PRED for anti-MEK inhibitor

4. Uveal Melanoma

- GNAQ – PROG
- GNA11 - PROG

5. Brain

- BRAF - PRED
- EGFR - PRED
- MGMT - PRED
- IDH1 - DX + PROG
- IDH2 - DX + PROG
- PIK3CA - PRED
- PTEN - PRED
- CIMP - PRED

6. Thyroid

- BRAF - DX + PRED
- KRAS - PRED for Selumetinib
- HRAS - PRED for Selumetinib
- NRAS - PRED for Selumetinib
- PIK3CA - PRED
- RET - DX
- PAX8/PPARG- DX

ThyraMIR Thyroid (CPT 81479) miRNA classifier (aPCR based microRNA gene expression classifier) (PRED) evaluates the expression levels of 10miRNA genes within an FNA biopsy: miR-29b-1-5p, miR-31-5p, miR-138-1-3p, miR-139-5p, miR-146b-5p, miR-155, miR-204-5p, miR-222-3p, miR-375, and miR-551b-3p.

CPT code 81545, oncology Thyroid, provides gene expression analysis of 142 genes utilizing fine needle aspirate, algorithm reported as a categorical result.(Afirma - PRED).

ThyraMIR is used as a companion test to ThyGenX when ThyGenX results are inconclusive.

- ThyraMIR, ThyGenX (CPT 81445) and Afirma services will be considered reasonable and necessary for patients with any of the following conditions:
 - An indeterminate pathology on fine needle aspiration
 - Patients with one or more thyroid nodules with a history or characteristics suggesting malignancy such as:
 - Nodule growth over time
 - Family history of thyroid cancer
 - Hoarseness, difficulty swallowing or breathing
 - History of exposure to ionizing radiation
 - Hard nodule compared with rest of gland consistency
 - Presence of cervical adenopathy
- RosettaGX Reveal thyroid MicroRNA test, an assay used for the classification of indeterminate thyroid nodules, will be considered reasonable and necessary when the conditions outlined above for ThyraMIR, ThyGenX and Afirma are met.
- ThyroSeq is a test utilized to better define the need for thyroid surgery and the type of such surgery. ThyroSeq will be considered reasonable and necessary when the conditions outlined above for ThyraMir, ThyGenX and Afirma are met.

7. Ovary/Fallopian Tube/Peritoneum

- AKT1 - PRED for PI3K/AKT/mTOR inhibitors
- BRAF - DX + PROG
- KRAS - DX + PROG
- MLH1 promoter hypermethylation - DX
- MSI by PCR - DX
- PIK3CA - PRED for PI3K/AKT/mTOR inhibitors
- PTEN - PRED for PI3K/AKT/mTOR inhibitors
- TP53 - DX + PROG

8. Uterus

- AKT1 - PRED for PI3K/AKT/mTOR inhibitors
- BRAF - PRED
- KRAS - PRED
- MLH1 promoter hypermethylation - DX
- MSI by PCR - DX
- PIK3CA - PRED for PI3K/AKT/mTOR inhibitors
- PTEN - PRED for PI3K/AKT/mTOR inhibitors + DX + PROG
- TP53 - DX + PROG

9. Urinary Tract

- FGFR3 - PROG
- MSI by PCR - DX
- MLH1 promoter hypermethylation - DX

10. Prostate

- The PROGENSA® PCA3 Assay (PRED) is an FDA-approved, automated molecular test (assay) that helps physicians determine the need for repeat prostate biopsies in men who have had a previous negative biopsy.
 - PTEN – PROG and THER
 - RB1 – DX and PROG
 - TP53 - PROG
11. Gastrointestinal Stromal Tumor
- KIT - PRED for Sumatinib + DX
 - PDGFRA - PRED for Sumatinib + DX
12. Cancer of Unknown Primary (CUP)
- Molecular testing (via CPT code 81479), using the Rosetta Cancer Origin Test™ (PROG), is considered reasonable and necessary in the pathologic diagnoses of CUP when a conventional surgical pathology/imaging work-up is unable to identify a primary neoplastic site. Other applications of this technology are considered not reasonable and necessary and are considered investigational in the use of diagnosis of specific tumor types such as NSCLC and renal cancers.
- TUO CTID (Cancer Type ID) (DX) represented by CPT code 81540 is considered reasonable and necessary in the pathologic diagnoses of CUP when a conventional surgical pathology/imaging work-up is unable to identify a primary neoplastic site. Other applications of this technology are considered not reasonable and necessary and are considered investigational in the use of diagnosis of specific tumor types such as NSCLC and renal cancers.
13. Leukemias and Lymphomas
- Acute lymphoid leukemia (ALL)
 - BCR/ABL1 - DX
 - ABL1 (kinase domain) - PROG
 - IGH - DX
 - TCRB - DX
 - TCRG - DX
 - TP53 - PROG
 - MLL/AF4 - DX
 - E2A/PBX1 - DX
 - ETV6/RUNX1 - DX
 - Acute myeloid leukemia (AML, and including acute promyelocytic leukemia): All PROG, except where noted below.
 - PML/RARA - DX
 - RUNX1/RUNX1T1 - DX
 - CBFβ/MYH11 - DX
 - FLT3 ITD
 - FLT3 D835
 - NPM1
 - KRAS
 - NRAS
 - KIT
 - CEBPA
 - IDH1
 - IDH2
 - DNMT3A
 - JAK2 (p.V617F)
 - JAK2 (exon 12)
 - MPL
 - DEK/CAN - DX
 - ASXL1
 - EZH2
 - TET2
 - PML/RARα (CPT code 81316)
 - Hairy cell leukemia
 - IGH somatic hypermutation - PROG
 - IGH - DX
 - Aplastic anemia
 - TCRB - DX
 - TCRG - DX
 - Burkitt's lymphoma

- IGH - DX
 - TP53 - PROG
- Myeloproliferative diseases (MPD - essential thrombocytosis [ET], myelofibrosis & polycythemia vera [PV])
 - BCR/ABL1 - DX
 - JAK2 (p.V617F) - DX
 - JAK2 (exon 12) - DX
 - MPL - DX
 - CALR - DX
 - CSF3R - DX
 - ASXL1 - PROG
 - TET2 - PROG
 - EZH2 - PROG
 - Calr (exon 9) (CPT code 81219)
- Chronic myeloid leukemia (CML) and chronic myelomonocytic leukemia (CMML)
 - KRAS - PROG
 - NRAS - PROG
 - BCR/ABL1 - DX
 - ABL1 (kinase domain) - PRED for Imatinib
 - FLT3 ITD - PROG
 - FLT3 D835 - PROG
 - KIT - PROG
 - JAK2 (p.V617F) - PROG
 - JAK2 (exon 12) - PROG
- Chronic lymphoid leukemia (CLL)
 - IGH - DX
 - IGH somatic hypermutation - PROG
 - TP53 - PROG
 - IGH direct probe method (CPT code 81262)
- Follicular lymphoma
 - IGH/BCL2 - DX (CPT code 81401 or 81402)
- Hypereosinophilia Syndrome (HES)
 - KIT (including p.D816V) - PROG + DX
 - FIP1L1/PDGFRα Fusion - DX
- Mantle cell lymphoma
 - CCND1/IGH - DX
- Mastocytosis
 - KIT (including p.D816V) - PROG + DX
 - FIP1L1/PDGFRα Fusion - DX
 - TCRG - DX
- T-cell prolymphocytic leukemia
 - TCRB - DX
 - TCRG - DX
- Myelodysplastic syndrome (MDS): All below biomarkers are PROG.
 - FLT3 ITD
 - FLT3 D835
 - NPM1
 - KRAS
 - NRAS
 - KIT
 - CEBPA
 - IDH1
 - IDH2
 - DNMT3A
 - JAK2 (p.V617F)
 - JAK2 (exon 12)
 - MPL
 - ASXL1
 - EZH2
 - TET2

- Cytogenomic microarray analysis, or alternatively, a single nucleotide polymorphism (SNP) array for the same testing, is covered for the identification of various mutations. These tests are used in the diagnosis/prognosis of various hematological malignancies.
14. Myeloma Gene Expression Profile (MyPRS) (PROG) isolates plasma cells from myeloma patients, extracts DNA, which is then subjected to MicroArray testing and application of validated software programs to identifying patterns of genetic abnormalities. Seventy highly predictive genes have been identified and correlated to myeloma early relapse. MyPRS gives a predictive risk signature as high-risk or low-risk at this time. A high risk score predicts a less than 20% three-year complete remission where as a low-risk predicts a five-year complete remission of greater than 60%. The predictive value for the stratification of therapeutic interventions allows these patients to be treated in a more personalized manner based on their own genetic profile.

This test is considered reasonable and necessary only after the initial diagnosis of multiple myeloma has been made and will be available to be used in the stratification of therapeutic interventions. It would be inappropriate to use this test as a diagnostic tool or as a monitoring device of ongoing therapy. Other testing is available for this function.

The coverage is set to include only two clinical settings:

- Once after initial diagnosis is made (i.e., please use ICD-10-CM code C90.00). In the event MyPRS was not tested at diagnosis of myeloma and there is ongoing initial therapy with persistent disease, MyPRS can be done still as an initial test.
- OR
- If relapse has occurred and a change in the therapeutic modalities is contemplated (i.e., please use ICD-10-CM code C90.02).

Please refer to the Utilization Guidelines section of this policy for frequency limitations.

15. Hereditary neuroendocrine tumor disorders (CPT code 81437) – Must include at least 6 genes with genomic sequence analysis NEX GEN including:
- MAX
 - SDHB
 - SDHC
 - SDHD
 - TMEM127
 - VHL

Please refer to the Utilization Guidelines section of this policy for frequency limitations.

16. Hereditary neuroendocrine tumor disorders; duplication/deletion analysis panel (CPT code 81438) – must include analysis for:
- SDHB
 - SDHC
 - SDHD
 - VHL
17. Neuroendocrine Tumors
- MGMT - PROG
 - PTEN – PROG and THER
 - RB1 – DX and PROG
 - TP53 – DX and PROG
 - TSC2 - PROG

18. Prosigna breast cancer gene signature assay (PROG) (CPT code 81520)

Background

Women with early breast cancer and up to 3 locally positive lymph nodes whose tumor is estrogen-receptor positive will usually receive anti-hormonal therapy such as tamoxifen or aromatase inhibitors. U.S. (NCCN) and international (St. Gallen) guidelines predicate the decision for adjuvant chemotherapy on the size and grade of the breast cancer and other factors including genomic assays that provide additional information on risk of recurrence (Hernandez-Ava et al., 2013). According to a 2014 review, "Prognostic factors provide an indication of whether a patient needs subsequent therapy." (Paoletti & Hayes, 2014). Similarly, another 2014 review article states, "Efforts should be focused on reducing chemotherapy in patients unlikely to benefit." (Rampurwala et al., 2014).

The PAM50 breast cancer gene signature test was developed in the late 1990s and initial studies showed a strong correlation with breast cancer recurrence and with complete pathologic response to neoadjuvant chemotherapy (Parker et al., 2009). While test results are reported on a scale of 1-100 as a Risk of Recurrence (ROR) score, the underlying algorithm is also able to classify cases into the luminal A and B, Her2neu, and triple-negative subtype classifications.

The Nanostring nCounter® nucleic acid analysis system replicates the PAM50 algorithm, as an FDA cleared kit, the Prosigna Breast Cancer Gene Signature Assay (FDA, 2013). The Prosigna package insert was most recently updated in January, 2015 (FDA, 2015) reflecting additional studies (Sestak et al., 2014). Notably, the Prosigna platform and the original PAM50 platform have a 0.997 correlation (Dowsett et al., 2013).

For the FDA, the Prosigna test was validated in a large population of post-menopausal, estrogen-receptor positive women based on 1,017 cases of the TransATAC study (Dowsett et al., 2013). The study showed a strong correlation with long-term breast cancer recurrence and added substantial additional prognostic information over a clinical treatment score based on standard clinical variables. This study was replicated in an independent population, also on the Prosigna test, using 1,620 samples from the ABCSG8 trial (Gnant, 2014). A separate analysis of these trials validated prediction of distant recurrence in years 5-10 after initial diagnosis (Sestak et al., 2014) and has been incorporated in the FDA labeling (FDA, 2015). The Prosigna test is issued as separate reports, consistent with FDA review and labeling, for node-negative and node-positive (1-3 node) populations. Analytic performance, precision, reproducibility, and analysis of the clinical validations are provided in the FDA labeling (FDA, 2013; FDA, 2015).

Clinical utility of this breast cancer gene signature has also been assessed. The study of Martin et al. (2015) showed a 20% decision impact on decisions for or against adjuvant chemotherapy in an all-comers population of 200 new cases of incident breast cancer, when Prosigna test information became available after all other clinical information had been considered. The net rates of selecting adjuvant chemotherapy for low, intermediate, and high risk cases was similar to that observed in a meta-analysis of Oncotype DX decision data (Carlson & Roth, 2013). Additional support for the use of these test results in treatment decisions comes from Parker et al. (2009), in which there was a strong association with neoadjuvant chemotherapy response. Low-scoring cases have a very low chance of complete pathological response to neoadjuvant chemotherapy, while high-scoring cases approach a 50% chance of complete pathological response. The same findings have been observed for other breast cancer gene signatures based on prognostic algorithms (Chang et al., 2008).

Consistent with the FDA indications for use, this testing will be considered reasonable and necessary only for patients that meet the following criteria:

- Post-menopausal female with **either**
 - ER+, lymph node-negative, stage I or II breast cancer; or
 - ER+, lymph node-positive (1-3 positive nodes), stage II breast cancer.

- 19. Desmoid Fibromatosis
 - CTNNB1 – DX and PROG
- 20. Hepatic Adenoma
 - CTNNB1 – DX and PROG
- 21. Bladder

- CDKN2A – PROG
- FGFR1 – PROG
- FGFR3 – PROG
- MTOR – PROG
- PIK3CA – DX and PROG
- PTEN – PROG
- RB1 – PROG
- TP53 - PROG

NON-MOLECULAR ASSAYS

1. The VeriStrat® assay (CPT code 81538) is a mass spectrophotometric, serum-based predictive proteomics assay for NSCLC patients, where “first line” EGFR mutation testing is either wild-type or not able to be tested (e.g., if tissue might not be available). This test is a driver of therapy, most notably EGFR inhibitors such as erlotinib, and it has been validated by randomized controlled studies (Carbone et al. and Stinchcomb et al.) and physician uptake data (Akerley et al.) to support this particular coverage niche.
2. This LCD does not address ALK and ROS1 FISH assays, which are indicated as predictive biomarkers for Crizotinib therapy, since they are currently covered assays. However, it is expected that non-molecular testing for these two biomarkers should provide adequate predictive information.
3. FISH tests for bladder cancer are complex tests based on precision reagents, controls, and mathematical algorithms, all of which must be validated in clinical trials in order to support cutoff points for critical patient care decisions. Therefore, in each local physician’s office or laboratory, this category of testing is not easily replicated by miscellaneous research use or ASR reagents. Novitas will consider the coverage of FISH test kits based on peer-reviewed literature and approved manufacturer claims.
4. Although multiple bladder cancer FISH tests may be covered according to the above general criteria, UroVysion™ Bladder Cancer Kit (UroVysion™ Kit) will be considered medically reasonable and necessary only when performed according to the FDA label (Summary of Safety and Effectiveness Data, Food and Drug Administration, January 24, 2005) as follows:

The UroVysion Bladder Cancer Kit (UroVysion™ Kit) is designed to detect aneuploidy for chromosomes 3, 7, 17, and loss of the 9p21 locus via fluorescence in situ hybridization (FISH) in urine specimens from persons with hematuria suspected of having bladder cancer. Results from the UroVysion Kit are intended for use, in conjunction with and not in lieu of current standard diagnostic procedures, as an aid for initial diagnosis of bladder carcinoma in patients with hematuria and subsequent monitoring for tumor recurrence in patients previously diagnosed with bladder cancer.

5. The OVA1™ proteomic assay (PROG) will be considered reasonable and necessary when performed according to the FDA label using CPT code 81503:
 - OVA1™ identifies some women who will benefit from referral to a gynecological oncologist for their surgery, despite negative results from other clinical and radiographic tests for ovarian cancer. If other test results suggest cancer, referral to an oncologist is appropriate even with a negative OVA1™ result.
 - OVA1™ should be used by primary care physicians or gynecologists as an adjunctive test to complement, not replace, other diagnostic and clinical procedures.
 - OVA1™ uses a blood sample to test for levels of five proteins that change due to ovarian cancer. The test combines the five separate results into a single numerical score between 0 and 10 to indicate the likelihood that the pelvic mass is benign or malignant.

OVA1 has been cleared by the FDA for women who meet all of the following criteria:

- Are over 18 years of age
- Have an ovarian mass
- Have surgery planned

It is not intended for ovarian cancer screening or for a definitive diagnosis of ovarian cancer. Interpreting the test result requires knowledge of whether the woman is pre- or post-menopausal.

6. The Risk of Ovarian Malignancy Algorithm (ROMA™) is a qualitative serum test (PROG) that combines the results of HE4 EIA, ARCHITECT CA 125 II™ and menopausal status into a numerical score. ROMA™ is intended (per FDA clearance) to aid in assessing whether a premenopausal or postmenopausal woman who presents with an ovarian adnexal mass is at high or low likelihood of finding malignancy at surgery. ROMA™ will be considered reasonable and necessary for women who meet the following FDA labeling criteria:

- Over age 18;
- Ovarian adnexal mass present for which surgery is planned; and,
- Not yet referred to an oncologist.

ROMA™ must be interpreted in conjunction with an independent clinical and radiological assessment. The test is not intended as a screening or stand-alone diagnostic assay.

Limitations

Note: Please refer to the indications for any restrictions specific to the various assays.

1. Biomarkers not addressed in this LCD or any other Novitas LCD will be considered not reasonable and necessary unless specifically covered by national policy.
2. Most genomic testing should be a once in a lifetime test. Documentation in the medical record should clearly support the need for repeat testing to include the following: recurrence of disease, change in behavior of disease, etc.
3. Non-conventional methods of next generation sequencing (NGS), which can generate much more extensive genomic information than conventional techniques, are currently non-covered. NGS methods which provide more "intermediate" range information (e.g., in the 5-50 mutation range) may be performed in the laboratory, pending adequate quality control, such as CLIA certification, but the actual coding and billing will continue to follow the "one-at-a-time" biomarker approach based on this LCD.
4. Services represented by 0003U, 0005U, 0016U and 0017U are very new tests without clinical utility having been established. These tests are considered investigational and experimental and therefore are non-covered at this time. Services represented by 0002U are considered screening services which are non-covered by Medicare.

For frequency limitations, please refer to the Utilization Guidelines section below.

Notice: This LCD imposes frequency limitations as well as diagnosis limitations that support diagnosis to procedure code automated denials. However, services performed for any given diagnosis must meet all of the indications and limitations stated in this policy, the general requirements for medical necessity as stated in CMS payment policy manuals, any and all existing CMS national coverage determinations, and all Medicare payment rules.

As published in CMS IOM 100-08, Chapter 13, Section 13.5.1, in order to be covered under Medicare, a service shall be reasonable and necessary. When appropriate, contractors shall describe the circumstances under which the proposed LCD for the service is considered reasonable and necessary under Section 1862 (a)(1)(A). Contractors shall consider a service to be reasonable and necessary if the contractor determines that the service is:

- Safe and effective.
- Not experimental or investigational (exception: routine costs of qualifying clinical trial services with dates of service on or after September 19, 2000, that meet the requirements of the Clinical Trials NCD are considered reasonable and necessary).
- Appropriate, including the duration and frequency that is considered appropriate for the service, in terms of whether it is:
 - Furnished in accordance with accepted standards of medical practice for the diagnosis or treatment of the patient's condition or to improve the function of a malformed body member.
 - Furnished in a setting appropriate to the patient's medical needs and condition.
 - Ordered and furnished by qualified personnel.
 - One that meets, but does not exceed, the patient's medical needs.
 - At least as beneficial as an existing and available medically appropriate alternative

The redetermination process may be utilized for consideration of services performed outside of the reasonable and necessary requirements in this LCD.

Summary of Evidence

N/A

Analysis of Evidence (Rationale for Determination)

N/A

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Coding Information

Bill Type Codes:

Contractors may specify Bill Types to help providers identify those Bill Types typically used to report this service. Absence of a Bill Type does not guarantee that the policy does not apply to that Bill Type. Complete absence of all Bill Types indicates that coverage is not influenced by Bill Type and the policy should be assumed to apply equally to all claims.

- 012x Hospital Inpatient (Medicare Part B only)
- 013x Hospital Outpatient
- 014x Hospital - Laboratory Services Provided to Non-patients
- 022x Skilled Nursing - Inpatient (Medicare Part B only)
- 023x Skilled Nursing - Outpatient
- 071x Clinic - Rural Health
- 072x Clinic - Hospital Based or Independent Renal Dialysis Center
- 073x Clinic - Freestanding
- 075x Clinic - Comprehensive Outpatient Rehabilitation Facility (CORF)
- 077x Clinic - Federally Qualified Health Center (FQHC)
- 083x Ambulatory Surgery Center
- 085x Critical Access Hospital

Revenue Codes:

Contractors may specify Revenue Codes to help providers identify those Revenue Codes typically used to report this service. In most instances Revenue Codes are purely advisory. Unless specified in the policy, services reported under other Revenue Codes are equally subject to this coverage determination. Complete absence of all Revenue Codes indicates that coverage is not influenced by Revenue Code and the policy should be assumed to apply equally to all Revenue Codes.

Note: The contractor has identified the Bill Type and Revenue Codes applicable for use with the CPT/HCPCS codes included in this LCD. Providers are reminded that not all CPT/HCPCS codes listed can be billed with all Bill Type or Revenue Codes listed. CPT/HCPCS codes are required to be billed with specific Bill Type and Revenue Codes. Providers are encouraged to refer to the CMS Internet-Only Manual (IOM) Pub. 100-04, *Medicare Claims Processing Manual*, for further guidance.

030X Laboratory - General Classification

CPT/HCPCS Codes

Group 1 Paragraph:

Providers are reminded to refer to the long descriptors of the CPT codes in their CPT book.

Note: Please see the indications and limitations section of the LCD for details regarding CPT codes 81292, 81293, 81294, 81321, 81322, 81323, 81437, 81438, 81479, 81520, 81525, 81540, and 81545.

Please note that because the following CPT codes represent multiple biomarkers these codes will not have procedure to diagnosis code limitations at this time: 81246, 81350, 81400, 81401, 81402, 81403, 81404, 81405, 81406, 81407, 81408, 81435, 81436, and 81503.

Providers should refer to the covered indications section of the LCD to determine if biomarkers included in the above codes are considered reasonable and necessary.

Medicare is establishing limited coverage for the following CPT/HCPCS codes, as described in the preceding Coverage Guidance.

Group 1 Codes:

81120 Idh1 common variants
81121 Idh2 common variants
81170 Abl1 gene
81175 Asx11 full gene sequence
81176 Asx11 gene target seq alys
81206 Bcr/abl1 gene major bp
81207 Bcr/abl1 gene minor bp
81208 Bcr/abl1 gene other bp
81210 Braf gene
81218 Cebpa gene full sequence
81219 Calr gene com variants
81235 Egfr gene com variants
81245 Flt3 gene
81246 Flt3 gene analysis
81261 Igh gene rearrange amp meth
81262 Igh gene rearrang dir probe
81263 Igh vari regional mutation
81270 Jak2 gene
81272 Kit gene targeted seq analys
81273 Kit gene analys d816 variant
81275 Kras gene variants exon 2
81276 Kras gene addl variants
81287 Mgmt gene methylation anal
81292 Mlh1 gene full seq
81293 Mlh1 gene known variants
81294 Mlh1 gene dup/delete variant
81301 Microsatellite instability
81310 Npm1 gene
81311 Nras gene variants exon 2&3
81313 Pca3/klk3 antigen
81314 Pdgfra gene
81315 Pml/raralpha com breakpoints
81316 Pml/raralpha 1 breakpoint
81321 Pten gene full sequence
81322 Pten gene known fam variant
81323 Pten gene dup/delet variant
81327 Sept9 methylation analysis
81334 Runx1 gene targeted seq alys
81340 Trb@ gene rearrange amplify

81342 Trg gene rearrangement anal
81350 Ugt1a1 gene
81400 Mopath procedure level 1
81401 Mopath procedure level 2
81402 Mopath procedure level 3
81403 Mopath procedure level 4
81404 Mopath procedure level 5
81405 Mopath procedure level 6
81406 Mopath procedure level 7
81407 Mopath procedure level 8
81408 Mopath procedure level 9
81435 Hereditary colon ca dsordrs
81436 Hereditary colon ca dsordrs
81437 Heredtry nurondcrn tum dsrdr
81438 Heredtry nurondcrn tum dsrdr
81445 Targeted genomic seq analys
81479 Unlisted molecular pathology
81503 Onco (ovar) five proteins
81520 Onc breast mrna 58 genes
81525 Oncology colon mrna
81538 Oncology lung
81540 Oncology tum unknown origin
81545 Oncology thyroid
0022U Trgt gen seq dna&rna 23 gene
0026U Onc thyr dna&mrna 112 genes

Group 2 Paragraph:

The following CPT codes are **non-covered**.

Group 2 Codes:

81450 Targeted genomic seq analys
0002U Onc clrct 3 ur metab alg plp
0003U Onc ovar 5 prtn ser alg scor
0005U Onco prst8 3 gene ur alg
0009U Onc brst ca erbb2 amp/nonamp
0013U Onc sld org neo gene reargmt
0014U Hem hmtlmf neo gene reargmt
0016U Onc hmtlmf neo rna bcr/abl1
0017U Onc hmtlmf neo jak2 mut dna

ICD-10 Codes that Support Medical Necessity

Group 1 Paragraph:

It is the provider's responsibility to select codes carried out to the highest level of specificity and selected from the ICD-10-CM code book appropriate to the year in which the service is rendered for the claim(s) submitted.

Medicare is establishing the following limited coverage for the colorectal cancer molecular biomarkers (also including the small intestine) listed below and for MAAA CPT code 81525, mRNA gene expression profiling by real time RT-PCR of 12 genes utilizing ffpe tissue, algorithm and report:

KRAS (12/13) **81275**
KRAS codon 61 **81276**
KRAS codon 146 **81276**
NRAS **81311**
BRAF **81210**
MSI by PCR **81301**
MLH1 promoter hypermethylation **81292, 81293, 81294**
mRNA **81525**
Sept9 **81327**

Group 1 Codes:

ICD-10 Codes	Description
C17.0	Malignant neoplasm of duodenum
C17.1	Malignant neoplasm of jejunum
C17.2	Malignant neoplasm of ileum
C17.3	Meckel's diverticulum, malignant
C17.8	Malignant neoplasm of overlapping sites of small intestine
C17.9	Malignant neoplasm of small intestine, unspecified
C18.0	Malignant neoplasm of cecum
C18.1	Malignant neoplasm of appendix
C18.2	Malignant neoplasm of ascending colon
C18.3	Malignant neoplasm of hepatic flexure
C18.4	Malignant neoplasm of transverse colon
C18.5	Malignant neoplasm of splenic flexure
C18.6	Malignant neoplasm of descending colon
C18.7	Malignant neoplasm of sigmoid colon
C18.8	Malignant neoplasm of overlapping sites of colon
C18.9	Malignant neoplasm of colon, unspecified
C19	Malignant neoplasm of rectosigmoid junction
C20	Malignant neoplasm of rectum
C21.0	Malignant neoplasm of anus, unspecified
C21.1	Malignant neoplasm of anal canal
C21.2	Malignant neoplasm of cloacogenic zone
C21.8	Malignant neoplasm of overlapping sites of rectum, anus and anal canal

Group 2 Paragraph:

Medicare is establishing the following limited coverage for non-small cell lung carcinoma (NSCLC) molecular biomarkers:

EGFR **81235**

KRAS (12/13) **81275**

KRAS codon 61 **81276**

KRAS codon 146 **81276**

BRAF **81210**

Oncology Lung (Veristrat) **81538**

Oncomine DX **0022U**

LungSeq® **81445**

Group 2 Codes:

ICD-10 Codes	Description
C33	Malignant neoplasm of trachea
C34.00	Malignant neoplasm of unspecified main bronchus
C34.01	Malignant neoplasm of right main bronchus
C34.02	Malignant neoplasm of left main bronchus
C34.10	Malignant neoplasm of upper lobe, unspecified bronchus or lung
C34.11	Malignant neoplasm of upper lobe, right bronchus or lung
C34.12	Malignant neoplasm of upper lobe, left bronchus or lung
C34.2	Malignant neoplasm of middle lobe, bronchus or lung
C34.30	Malignant neoplasm of lower lobe, unspecified bronchus or lung
C34.31	Malignant neoplasm of lower lobe, right bronchus or lung
C34.32	Malignant neoplasm of lower lobe, left bronchus or lung
C34.80	Malignant neoplasm of overlapping sites of unspecified bronchus and lung
C34.81	Malignant neoplasm of overlapping sites of right bronchus and lung
C34.82	Malignant neoplasm of overlapping sites of left bronchus and lung

ICD-10 Codes	Description
C34.90	Malignant neoplasm of unspecified part of unspecified bronchus or lung
C34.91	Malignant neoplasm of unspecified part of right bronchus or lung
C34.92	Malignant neoplasm of unspecified part of left bronchus or lung
C38.4	Malignant neoplasm of pleura
C45.0	Mesothelioma of pleura

Group 3 Paragraph:

Medicare is establishing the following limited coverage for melanoma molecular biomarkers:

BRAF **81210**
 KIT **81272**
 NRAS **81311**

Group 3 Codes:

ICD-10 Codes	Description
C43.0	Malignant melanoma of lip
C43.10	Malignant melanoma of unspecified eyelid, including canthus
C43.111	Malignant melanoma of right upper eyelid, including canthus
C43.112	Malignant melanoma of right lower eyelid, including canthus
C43.121	Malignant melanoma of left upper eyelid, including canthus
C43.122	Malignant melanoma of left lower eyelid, including canthus
C43.20	Malignant melanoma of unspecified ear and external auricular canal
C43.21	Malignant melanoma of right ear and external auricular canal
C43.22	Malignant melanoma of left ear and external auricular canal
C43.30	Malignant melanoma of unspecified part of face
C43.31	Malignant melanoma of nose
C43.39	Malignant melanoma of other parts of face
C43.4	Malignant melanoma of scalp and neck
C43.51	Malignant melanoma of anal skin
C43.52	Malignant melanoma of skin of breast
C43.59	Malignant melanoma of other part of trunk
C43.60	Malignant melanoma of unspecified upper limb, including shoulder
C43.61	Malignant melanoma of right upper limb, including shoulder
C43.62	Malignant melanoma of left upper limb, including shoulder
C43.70	Malignant melanoma of unspecified lower limb, including hip
C43.71	Malignant melanoma of right lower limb, including hip
C43.72	Malignant melanoma of left lower limb, including hip
C43.8	Malignant melanoma of overlapping sites of skin
C43.9	Malignant melanoma of skin, unspecified
D03.0	Melanoma in situ of lip
D03.10	Melanoma in situ of unspecified eyelid, including canthus
D03.111	Melanoma in situ of right upper eyelid, including canthus
D03.112	Melanoma in situ of right lower eyelid, including canthus
D03.121	Melanoma in situ of left upper eyelid, including canthus
D03.122	Melanoma in situ of left lower eyelid, including canthus
D03.20	Melanoma in situ of unspecified ear and external auricular canal
D03.21	Melanoma in situ of right ear and external auricular canal
D03.22	Melanoma in situ of left ear and external auricular canal
D03.30	Melanoma in situ of unspecified part of face
D03.39	Melanoma in situ of other parts of face
D03.4	Melanoma in situ of scalp and neck
D03.51	Melanoma in situ of anal skin
D03.52	Melanoma in situ of breast (skin) (soft tissue)
D03.59	Melanoma in situ of other part of trunk
D03.60	Melanoma in situ of unspecified upper limb, including shoulder
D03.61	Melanoma in situ of right upper limb, including shoulder

ICD-10 Codes	Description
D03.62	Melanoma in situ of left upper limb, including shoulder
D03.70	Melanoma in situ of unspecified lower limb, including hip
D03.71	Melanoma in situ of right lower limb, including hip
D03.72	Melanoma in situ of left lower limb, including hip
D03.8	Melanoma in situ of other sites
D03.9	Melanoma in situ, unspecified

Group 4 Paragraph:

Medicare is establishing the following limited coverage for Uveal Melanoma

GNA11 - **81479**

Group 4 Codes:

ICD-10 Codes	Description
C69.01	Malignant neoplasm of right conjunctiva
C69.02	Malignant neoplasm of left conjunctiva
C69.11	Malignant neoplasm of right cornea
C69.12	Malignant neoplasm of left cornea
C69.21	Malignant neoplasm of right retina
C69.22	Malignant neoplasm of left retina
C69.31	Malignant neoplasm of right choroid
C69.32	Malignant neoplasm of left choroid
C69.41	Malignant neoplasm of right ciliary body
C69.42	Malignant neoplasm of left ciliary body
C69.51	Malignant neoplasm of right lacrimal gland and duct
C69.52	Malignant neoplasm of left lacrimal gland and duct
C69.61	Malignant neoplasm of right orbit
C69.62	Malignant neoplasm of left orbit
C69.81	Malignant neoplasm of overlapping sites of right eye and adnexa
C69.82	Malignant neoplasm of overlapping sites of left eye and adnexa

Group 5 Paragraph:

Medicare is establishing the following limited coverage for brain molecular biomarkers:

BRAF **81210**
 EGFR **81235**
 MGMT **81287**
 PTEN **81321, 81322, 81323, 81479**
 CIMP **81479**
 IDH1 **81120**
 IDH2 **81121**

Group 5 Codes:

ICD-10 Codes	Description
C71.0	Malignant neoplasm of cerebrum, except lobes and ventricles
C71.1	Malignant neoplasm of frontal lobe
C71.2	Malignant neoplasm of temporal lobe
C71.3	Malignant neoplasm of parietal lobe
C71.4	Malignant neoplasm of occipital lobe
C71.5	Malignant neoplasm of cerebral ventricle
C71.6	Malignant neoplasm of cerebellum
C71.7	Malignant neoplasm of brain stem
C71.8	Malignant neoplasm of overlapping sites of brain
C71.9	Malignant neoplasm of brain, unspecified

Group 6 Paragraph:**Medicare is establishing the following limited coverage for thyroid molecular biomarkers:**

BRAF - **81210**
 KRAS - **81275, 81276**
 NRAS - **81311**
 ThyraMIR - **81479**
 Afirma - **81545**
 ThyGenX - **81445**
 RosettaGX Reveal Thyroid miRNA - **81479**
 ThyroSeq - **0026U**

Group 6 Codes:

ICD-10 Codes	Description
C73*	Malignant neoplasm of thyroid gland
D34	Benign neoplasm of thyroid gland
D44.0	Neoplasm of uncertain behavior of thyroid gland
D44.2*	Neoplasm of uncertain behavior of parathyroid gland
D44.9	Neoplasm of uncertain behavior of unspecified endocrine gland
E01.0	Iodine-deficiency related diffuse (endemic) goiter
E01.1	Iodine-deficiency related multinodular (endemic) goiter
E01.2	Iodine-deficiency related (endemic) goiter, unspecified
E04.0	Nontoxic diffuse goiter
E04.1	Nontoxic single thyroid nodule
E04.2	Nontoxic multinodular goiter
E04.8	Other specified nontoxic goiter
E04.9	Nontoxic goiter, unspecified

Group 6 Medical Necessity ICD-10 Codes Asterisk Explanation:

***Note:** C73 and D44.2 should not be reported for ThyraMIR, Afirma, ThyGenX, Rosetta GX Reveal or ThyroSeq.

Group 7 Paragraph:**Medicare is establishing the following limited coverage for uterus/ovary/fallopian tube/peritoneum molecular biomarkers:**

AKT1 **81479**
 BRAF **81210**
 KRAS **81275, 81276**
 MLH1 promoter hypermethylation **81292, 81293, 81294**
 MSI by PCR **81301**
 PTEN **81321, 81322, 81323, 81479**

Group 7 Codes:

ICD-10 Codes	Description
C45.1	Mesothelioma of peritoneum
C48.1	Malignant neoplasm of specified parts of peritoneum
C48.2	Malignant neoplasm of peritoneum, unspecified
C48.8	Malignant neoplasm of overlapping sites of retroperitoneum and peritoneum
C54.0	Malignant neoplasm of isthmus uteri
C54.1	Malignant neoplasm of endometrium
C54.2	Malignant neoplasm of myometrium
C54.3	Malignant neoplasm of fundus uteri
C54.8	Malignant neoplasm of overlapping sites of corpus uteri
C54.9	Malignant neoplasm of corpus uteri, unspecified
C55	Malignant neoplasm of uterus, part unspecified
C56.1	Malignant neoplasm of right ovary

ICD-10 Codes	Description
C56.2	Malignant neoplasm of left ovary
C56.9	Malignant neoplasm of unspecified ovary
C57.00	Malignant neoplasm of unspecified fallopian tube
C57.01	Malignant neoplasm of right fallopian tube
C57.02	Malignant neoplasm of left fallopian tube
C57.10	Malignant neoplasm of unspecified broad ligament
C57.11	Malignant neoplasm of right broad ligament
C57.12	Malignant neoplasm of left broad ligament
C57.20	Malignant neoplasm of unspecified round ligament
C57.21	Malignant neoplasm of right round ligament
C57.22	Malignant neoplasm of left round ligament
C57.3	Malignant neoplasm of parametrium
C57.4	Malignant neoplasm of uterine adnexa, unspecified

Group 8 Paragraph:

Medicare is establishing the following limited coverage for urinary tract molecular biomarkers:

MSI by PCR **81301**

MLH1 promoter hypermethylation **81292, 81293, 81294**

Group 8 Codes:

ICD-10 Codes	Description
C65.1	Malignant neoplasm of right renal pelvis
C65.2	Malignant neoplasm of left renal pelvis
C65.9	Malignant neoplasm of unspecified renal pelvis
C66.1	Malignant neoplasm of right ureter
C66.2	Malignant neoplasm of left ureter
C66.9	Malignant neoplasm of unspecified ureter
C68.0	Malignant neoplasm of urethra
C68.1	Malignant neoplasm of paraurethral glands
C68.8	Malignant neoplasm of overlapping sites of urinary organs
C68.9	Malignant neoplasm of urinary organ, unspecified

Group 9 Paragraph:

Medicare is establishing the following limited coverage for prostate cancer molecular biomarkers:

PROGENSA® PCA3 Assay - **81313**

PTEN - **81321, 81322, 81323**

RB1 - **81479**

Group 9 Codes:

ICD-10 Codes	Description
C61	Malignant neoplasm of prostate
D29.1	Benign neoplasm of prostate
D40.0	Neoplasm of uncertain behavior of prostate
N40.0	Benign prostatic hyperplasia without lower urinary tract symptoms
N40.1	Benign prostatic hyperplasia with lower urinary tract symptoms
N40.2	Nodular prostate without lower urinary tract symptoms
N40.3	Nodular prostate with lower urinary tract symptoms
N42.31	Prostatic intraepithelial neoplasia
N42.32	Atypical small acinar proliferation of prostate
N42.39	Other dysplasia of prostate
N42.83	Cyst of prostate
R31.1	Benign essential microscopic hematuria

ICD-10 Codes	Description
R31.29	Other microscopic hematuria

Group 10 Paragraph:

Medicare is establishing the following limited coverage for gastrointestinal stromal tumor molecular biomarkers:

KIT **81272**
 PDGFRA **81314**

Group 10 Codes:

ICD-10 Codes	Description
C49.A0	Gastrointestinal stromal tumor, unspecified site
C49.A1	Gastrointestinal stromal tumor of esophagus
C49.A2	Gastrointestinal stromal tumor of stomach
C49.A3	Gastrointestinal stromal tumor of small intestine
C49.A4	Gastrointestinal stromal tumor of large intestine
C49.A5	Gastrointestinal stromal tumor of rectum
C49.A9	Gastrointestinal stromal tumor of other sites
D48.1	Neoplasm of uncertain behavior of connective and other soft tissue
D48.2	Neoplasm of uncertain behavior of peripheral nerves and autonomic nervous system

Group 11 Paragraph:

Medicare is establishing the following limited coverage for acute lymphoid leukemia (ALL) molecular biomarkers:

BCR/ABL1 **81206, 81207, 81208**
 ABL1 (kinase domain) **81170**
 IGH **81261**
 TCRB **81340**
 TCRG **81342**
 MLL/AF4 **81479**
 RUNX1 **81334**

Group 11 Codes:

ICD-10 Codes	Description
C91.00	Acute lymphoblastic leukemia not having achieved remission
C91.01	Acute lymphoblastic leukemia, in remission
C91.02	Acute lymphoblastic leukemia, in relapse

Group 12 Paragraph:

Medicare is establishing the following limited coverage for acute myeloid leukemia (AML, and including acute promyelocytic leukemia) molecular biomarkers:

PML/RARA **81315**
 PML/RARalpha **81316**
 FLT3 ITD **81245**
 NPM1 **81310**
 KRAS **81275, 81276**
 NRAS **81311**
 KIT **81273**
 CEBPA **81218**
 JAK2 (p.V617F) **81270**
 DEK/CAN **81479**
 ASXL1 **81175, 81176**
 EZH2 **81479**

TET2 **81479**
IDH1 **81120**
IDH2 **81121**
RUNX1 **81334**

Group 12 Codes:

ICD-10 Codes	Description
C92.00	Acute myeloblastic leukemia, not having achieved remission
C92.01	Acute myeloblastic leukemia, in remission
C92.02	Acute myeloblastic leukemia, in relapse
C92.40	Acute promyelocytic leukemia, not having achieved remission
C92.41	Acute promyelocytic leukemia, in remission
C92.42	Acute promyelocytic leukemia, in relapse
C92.50	Acute myelomonocytic leukemia, not having achieved remission
C92.51	Acute myelomonocytic leukemia, in remission
C92.52	Acute myelomonocytic leukemia, in relapse
C92.60	Acute myeloid leukemia with 11q23-abnormality not having achieved remission
C92.61	Acute myeloid leukemia with 11q23-abnormality in remission
C92.62	Acute myeloid leukemia with 11q23-abnormality in relapse
C92.A0	Acute myeloid leukemia with multilineage dysplasia, not having achieved remission
C92.A1	Acute myeloid leukemia with multilineage dysplasia, in remission
C92.A2	Acute myeloid leukemia with multilineage dysplasia, in relapse

Group 13 Paragraph:

Medicare is establishing the following limited coverage for hairy cell leukemia molecular biomarkers:

IGH somatic hypermutation **81263**
IGH **81261**

Group 13 Codes:

ICD-10 Codes	Description
C91.40	Hairy cell leukemia not having achieved remission
C91.41	Hairy cell leukemia, in remission
C91.42	Hairy cell leukemia, in relapse

Group 14 Paragraph:

Medicare is establishing the following limited coverage for aplastic anemia molecular biomarkers:

TCRB **81340**
TCRG **81342**

Group 14 Codes:

ICD-10 Codes	Description
D60.0	Chronic acquired pure red cell aplasia
D60.1	Transient acquired pure red cell aplasia
D60.8	Other acquired pure red cell aplasias
D60.9	Acquired pure red cell aplasia, unspecified
D61.01	Constitutional (pure) red blood cell aplasia
D61.09	Other constitutional aplastic anemia
D61.1	Drug-induced aplastic anemia
D61.2	Aplastic anemia due to other external agents
D61.3	Idiopathic aplastic anemia
D61.89	Other specified aplastic anemias and other bone marrow failure syndromes

ICD-10 Codes	Description
D61.9	Aplastic anemia, unspecified

Group 15 Paragraph:

Medicare is establishing the following limited coverage for Burkitt's lymphoma molecular biomarkers:

IGH **81261**

Group 15 Codes:

ICD-10 Codes	Description
C83.70	Burkitt lymphoma, unspecified site
C83.71	Burkitt lymphoma, lymph nodes of head, face, and neck
C83.72	Burkitt lymphoma, intrathoracic lymph nodes
C83.73	Burkitt lymphoma, intra-abdominal lymph nodes
C83.74	Burkitt lymphoma, lymph nodes of axilla and upper limb
C83.75	Burkitt lymphoma, lymph nodes of inguinal region and lower limb
C83.76	Burkitt lymphoma, intrapelvic lymph nodes
C83.77	Burkitt lymphoma, spleen
C83.78	Burkitt lymphoma, lymph nodes of multiple sites
C83.79	Burkitt lymphoma, extranodal and solid organ sites

Group 16 Paragraph:

Medicare is establishing the following limited coverage for myeloproliferative diseases (MPD - essential thrombocytosis [ET], myelofibrosis & polycythemia vera [PV]) molecular biomarkers:

BCR/ABL1 **81206, 81207, 81208**
 JAK2 (p.V617F) **81270**
 CALR **81479**
 CALR (exon 9) **81219**
 CSF3R **81479**
 ASXL1 **81175, 81176**
 TET2 **81479**
 EZH2 **81479**

Group 16 Codes:

ICD-10 Codes	Description
D45	Polycythemia vera
D47.1	Chronic myeloproliferative disease
D47.3	Essential (hemorrhagic) thrombocythemia
D75.81	Myelofibrosis

Group 17 Paragraph:

Medicare is establishing the following limited coverage for chronic myeloid leukemia (CML) and chronic myelomonocytic leukemia (CMML) molecular biomarkers:

KRAS **81275, 81276**
 NRAS **81311**
 BCR/ABL1 **81206, 81207, 81208**
 ABL1 (kinase domain) **81170**
 FLT3 ITD **81245**
 KIT **81273**
 JAK2 (p.V617F) **81270**

Group 17 Codes:

ICD-10 Codes	Description
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ICD-10 Codes	Description
C92.10	Chronic myeloid leukemia, BCR/ABL-positive, not having achieved remission
C92.11	Chronic myeloid leukemia, BCR/ABL-positive, in remission
C92.12	Chronic myeloid leukemia, BCR/ABL-positive, in relapse
C93.10	Chronic myelomonocytic leukemia not having achieved remission
C93.11	Chronic myelomonocytic leukemia, in remission
C93.12	Chronic myelomonocytic leukemia, in relapse

**Group 18 Paragraph:
Medicare is establishing the following limited coverage for chronic lymphoid leukemia (CLL) molecular biomarkers:**

IGH **81261**
 IGH direct probe method **81262**
 IGH somatic hypermutation **81263**

Group 18 Codes:

ICD-10 Codes	Description
C91.10	Chronic lymphocytic leukemia of B-cell type not having achieved remission
C91.11	Chronic lymphocytic leukemia of B-cell type in remission
C91.12	Chronic lymphocytic leukemia of B-cell type in relapse

**Group 19 Paragraph:
Medicare is establishing the following limited coverage for Hypereosinophilia Syndrome (HES) molecular biomarkers:**

KIT (including p.D816V) **81273**

Group 19 Codes:

ICD-10 Codes	Description
D72.1	Eosinophilia

**Group 20 Paragraph:
Medicare is establishing the following limited coverage for mastocytosis molecular biomarkers:**

KIT (including p.D816V) **81273**
 TCRG **81342**

Group 20 Codes:

ICD-10 Codes	Description
C96.20	Malignant mast cell neoplasm, unspecified
C96.22	Mast cell sarcoma
C96.29	Other malignant mast cell neoplasm

**Group 21 Paragraph:
Medicare is establishing the following limited coverage for T-cell prolymphocytic leukemia molecular biomarkers:**

TCRB **81340**
 TCRG **81342**

Group 21 Codes:

ICD-10 Codes	Description
C91.60	Polymphocytic leukemia of T-cell type not having achieved remission
C91.61	Polymphocytic leukemia of T-cell type, in remission
C91.62	Polymphocytic leukemia of T-cell type, in relapse
C95.90	Leukemia, unspecified not having achieved remission
C95.91	Leukemia, unspecified, in remission
C95.92	Leukemia, unspecified, in relapse

Group 22 Paragraph:

Medicare is establishing the following limited coverage for myelodysplastic syndrome (MDS) molecular biomarkers:

FLT3 ITD **81245**
 NPM1 **81310**
 KRAS **81275, 81276**
 NRAS **81311**
 KIT **81273**
 CEBPA **81218**
 JAK2 (p.V617F) **81270**
 ASXL1 **81175, 81176**
 EZH2 **81479**
 TET2 **81479**
 IDH1 **81120**
 IDH2 **81121**

Group 22 Codes:

ICD-10 Codes	Description
D46.0	Refractory anemia without ring sideroblasts, so stated
D46.1	Refractory anemia with ring sideroblasts
D46.20	Refractory anemia with excess of blasts, unspecified
D46.21	Refractory anemia with excess of blasts 1
D46.22	Refractory anemia with excess of blasts 2
D46.A	Refractory cytopenia with multilineage dysplasia
D46.B	Refractory cytopenia with multilineage dysplasia and ring sideroblasts
D46.C	Myelodysplastic syndrome with isolated del(5q) chromosomal abnormality
D46.4	Refractory anemia, unspecified
D46.Z	Other myelodysplastic syndromes
D46.9	Myelodysplastic syndrome, unspecified

Group 23 Paragraph:

Medicare is establishing the following limited coverage for Myeloma gene expression profile (MyPRS) (CPT code 81479):

Group 23 Codes:

ICD-10 Codes	Description
C90.00*	Multiple myeloma not having achieved remission
C90.02*	Multiple myeloma in relapse

Group 23 Medical Necessity ICD-10 Codes Asterisk Explanation:

***Note: C90.00** should be reported after initial diagnosis has been made and **C90.02** should be reported if there has been a relapse with a change in treatment planned.

Group 24 Paragraph:

Medicare is establishing the following limited coverage for CPT code 81520:

Group 24 Codes:

ICD-10 Codes	Description
C50.011	Malignant neoplasm of nipple and areola, right female breast
C50.012	Malignant neoplasm of nipple and areola, left female breast
C50.111	Malignant neoplasm of central portion of right female breast
C50.112	Malignant neoplasm of central portion of left female breast
C50.211	Malignant neoplasm of upper-inner quadrant of right female breast
C50.212	Malignant neoplasm of upper-inner quadrant of left female breast
C50.311	Malignant neoplasm of lower-inner quadrant of right female breast
C50.312	Malignant neoplasm of lower-inner quadrant of left female breast
C50.411	Malignant neoplasm of upper-outer quadrant of right female breast
C50.412	Malignant neoplasm of upper-outer quadrant of left female breast
C50.511	Malignant neoplasm of lower-outer quadrant of right female breast
C50.512	Malignant neoplasm of lower-outer quadrant of left female breast
C50.611	Malignant neoplasm of axillary tail of right female breast
C50.612	Malignant neoplasm of axillary tail of left female breast
C50.811	Malignant neoplasm of overlapping sites of right female breast
C50.812	Malignant neoplasm of overlapping sites of left female breast
C50.911	Malignant neoplasm of unspecified site of right female breast
C50.912	Malignant neoplasm of unspecified site of left female breast

Group 25 Paragraph:

Medicare is establishing the following limited coverage for Neuroendocrine Tumors:

MAX – **81437**
MGMT – **81287**
PTEN – **81321, 81322, 81323**
RB1 - **81479**
SDHB – **81437, 81438**
SDHC – **81437, 81438**
SDHD – **81437, 81438**
TMEM127 – **81437**
TSC2 - **81479**
VHL – **81437, 81438**

Group 25 Codes:

ICD-10 Codes	Description
C7A.010	Malignant carcinoid tumor of the duodenum
C7A.011	Malignant carcinoid tumor of the jejunum
C7A.012	Malignant carcinoid tumor of the ileum
C7A.019	Malignant carcinoid tumor of the small intestine, unspecified portion
C7A.020	Malignant carcinoid tumor of the appendix
C7A.021	Malignant carcinoid tumor of the cecum
C7A.022	Malignant carcinoid tumor of the ascending colon
C7A.023	Malignant carcinoid tumor of the transverse colon
C7A.024	Malignant carcinoid tumor of the descending colon
C7A.025	Malignant carcinoid tumor of the sigmoid colon
C7A.026	Malignant carcinoid tumor of the rectum
C7A.029	Malignant carcinoid tumor of the large intestine, unspecified portion
C7A.090	Malignant carcinoid tumor of the bronchus and lung
C7A.091	Malignant carcinoid tumor of the thymus

ICD-10 Codes	Description
C7A.092	Malignant carcinoid tumor of the stomach
C7A.093	Malignant carcinoid tumor of the kidney
C7A.094	Malignant carcinoid tumor of the foregut, unspecified
C7A.095	Malignant carcinoid tumor of the midgut, unspecified
C7A.096	Malignant carcinoid tumor of the hindgut, unspecified
C7A.098	Malignant carcinoid tumors of other sites
C7A.1	Malignant poorly differentiated neuroendocrine tumors
C7A.8	Other malignant neuroendocrine tumors
C7B.01	Secondary carcinoid tumors of distant lymph nodes
C7B.02	Secondary carcinoid tumors of liver
C7B.03	Secondary carcinoid tumors of bone
C7B.04	Secondary carcinoid tumors of peritoneum
C7B.09	Secondary carcinoid tumors of other sites
C7B.1	Secondary Merkel cell carcinoma
C7B.8	Other secondary neuroendocrine tumors
D3A.010	Benign carcinoid tumor of the duodenum
D3A.011	Benign carcinoid tumor of the jejunum
D3A.012	Benign carcinoid tumor of the ileum
D3A.019	Benign carcinoid tumor of the small intestine, unspecified portion
D3A.020	Benign carcinoid tumor of the appendix
D3A.021	Benign carcinoid tumor of the cecum
D3A.022	Benign carcinoid tumor of the ascending colon
D3A.023	Benign carcinoid tumor of the transverse colon
D3A.024	Benign carcinoid tumor of the descending colon
D3A.025	Benign carcinoid tumor of the sigmoid colon
D3A.026	Benign carcinoid tumor of the rectum
D3A.029	Benign carcinoid tumor of the large intestine, unspecified portion
D3A.090	Benign carcinoid tumor of the bronchus and lung
D3A.091	Benign carcinoid tumor of the thymus
D3A.092	Benign carcinoid tumor of the stomach
D3A.093	Benign carcinoid tumor of the kidney
D3A.094	Benign carcinoid tumor of the foregut, unspecified
D3A.095	Benign carcinoid tumor of the midgut, unspecified
D3A.096	Benign carcinoid tumor of the hindgut, unspecified
D3A.098	Benign carcinoid tumors of other sites
D3A.8	Other benign neuroendocrine tumors

Group 26 Paragraph:

Medicare is establishing the following limited coverage for CPT code 81540 – TUO CTID (Cancer Type ID):

Group 26 Codes:

ICD-10 Codes	Description
C18.1	Malignant neoplasm of appendix
C18.9	Malignant neoplasm of colon, unspecified
C22.0	Liver cell carcinoma
C22.2	Hepatoblastoma
C22.3	Angiosarcoma of liver
C22.4	Other sarcomas of liver
C22.7	Other specified carcinomas of liver
C22.8	Malignant neoplasm of liver, primary, unspecified as to type
C22.9	Malignant neoplasm of liver, not specified as primary or secondary
C25.2	Malignant neoplasm of tail of pancreas
C25.7	Malignant neoplasm of other parts of pancreas
C25.8	Malignant neoplasm of overlapping sites of pancreas

ICD-10 Codes	Description
C25.9	Malignant neoplasm of pancreas, unspecified
C33	Malignant neoplasm of trachea
C34.01	Malignant neoplasm of right main bronchus
C34.02	Malignant neoplasm of left main bronchus
C34.11	Malignant neoplasm of upper lobe, right bronchus or lung
C34.12	Malignant neoplasm of upper lobe, left bronchus or lung
C34.2	Malignant neoplasm of middle lobe, bronchus or lung
C34.32	Malignant neoplasm of lower lobe, left bronchus or lung
C34.81	Malignant neoplasm of overlapping sites of right bronchus and lung
C34.82	Malignant neoplasm of overlapping sites of left bronchus and lung
C34.91	Malignant neoplasm of unspecified part of right bronchus or lung
C34.92	Malignant neoplasm of unspecified part of left bronchus or lung
C43.51	Malignant melanoma of anal skin
C43.52	Malignant melanoma of skin of breast
C43.59	Malignant melanoma of other part of trunk
C45.9	Mesothelioma, unspecified
C47.0	Malignant neoplasm of peripheral nerves of head, face and neck
C47.9	Malignant neoplasm of peripheral nerves and autonomic nervous system, unspecified
C48.0	Malignant neoplasm of retroperitoneum
C49.0	Malignant neoplasm of connective and soft tissue of head, face and neck
C49.9	Malignant neoplasm of connective and soft tissue, unspecified
C50.411	Malignant neoplasm of upper-outer quadrant of right female breast
C50.412	Malignant neoplasm of upper-outer quadrant of left female breast
C50.511	Malignant neoplasm of lower-outer quadrant of right female breast
C50.512	Malignant neoplasm of lower-outer quadrant of left female breast
C50.811	Malignant neoplasm of overlapping sites of right female breast
C50.812	Malignant neoplasm of overlapping sites of left female breast
C50.911	Malignant neoplasm of unspecified site of right female breast
C50.912	Malignant neoplasm of unspecified site of left female breast
C56.1	Malignant neoplasm of right ovary
C56.2	Malignant neoplasm of left ovary
C61	Malignant neoplasm of prostate
C64.1	Malignant neoplasm of right kidney, except renal pelvis
C64.2	Malignant neoplasm of left kidney, except renal pelvis
C67.5	Malignant neoplasm of bladder neck
C67.9	Malignant neoplasm of bladder, unspecified
C76.0	Malignant neoplasm of head, face and neck
C77.0	Secondary and unspecified malignant neoplasm of lymph nodes of head, face and neck
C77.1	Secondary and unspecified malignant neoplasm of intrathoracic lymph nodes
C77.2	Secondary and unspecified malignant neoplasm of intra-abdominal lymph nodes
C77.3	Secondary and unspecified malignant neoplasm of axilla and upper limb lymph nodes
C77.4	Secondary and unspecified malignant neoplasm of inguinal and lower limb lymph nodes
C77.5	Secondary and unspecified malignant neoplasm of intrapelvic lymph nodes
C77.8	Secondary and unspecified malignant neoplasm of lymph nodes of multiple regions
C77.9	Secondary and unspecified malignant neoplasm of lymph node, unspecified
C78.01	Secondary malignant neoplasm of right lung
C78.02	Secondary malignant neoplasm of left lung
C78.5	Secondary malignant neoplasm of large intestine and rectum
C78.6	Secondary malignant neoplasm of retroperitoneum and peritoneum
C78.7	Secondary malignant neoplasm of liver and intrahepatic bile duct
C79.01	Secondary malignant neoplasm of right kidney and renal pelvis
C79.02	Secondary malignant neoplasm of left kidney and renal pelvis
C79.2	Secondary malignant neoplasm of skin
C79.31	Secondary malignant neoplasm of brain
C79.49	Secondary malignant neoplasm of other parts of nervous system
C79.51	Secondary malignant neoplasm of bone
C79.52	Secondary malignant neoplasm of bone marrow
C79.61	Secondary malignant neoplasm of right ovary

ICD-10 Codes	Description
C79.62	Secondary malignant neoplasm of left ovary
C79.89	Secondary malignant neoplasm of other specified sites
C80.0	Disseminated malignant neoplasm, unspecified
C80.1	Malignant (primary) neoplasm, unspecified
C82.57	Diffuse follicle center lymphoma, spleen
C84.A7	Cutaneous T-cell lymphoma, unspecified, spleen
C84.Z7	Other mature T/NK-cell lymphomas, spleen
C84.97	Mature T/NK-cell lymphomas, unspecified, spleen
C85.17	Unspecified B-cell lymphoma, spleen
C85.27	Mediastinal (thymic) large B-cell lymphoma, spleen
C85.87	Other specified types of non-Hodgkin lymphoma, spleen
C85.97	Non-Hodgkin lymphoma, unspecified, spleen
C86.1	Hepatosplenic T-cell lymphoma
D01.5	Carcinoma in situ of liver, gallbladder and bile ducts
D01.7	Carcinoma in situ of other specified digestive organs
D01.9	Carcinoma in situ of digestive organ, unspecified
D02.21	Carcinoma in situ of right bronchus and lung
D02.22	Carcinoma in situ of left bronchus and lung
D03.51	Melanoma in situ of anal skin
D03.52	Melanoma in situ of breast (skin) (soft tissue)
D03.59	Melanoma in situ of other part of trunk
D49.0	Neoplasm of unspecified behavior of digestive system
D49.1	Neoplasm of unspecified behavior of respiratory system
D49.2	Neoplasm of unspecified behavior of bone, soft tissue, and skin
D49.3	Neoplasm of unspecified behavior of breast
D49.4	Neoplasm of unspecified behavior of bladder
D49.511	Neoplasm of unspecified behavior of right kidney
D49.512	Neoplasm of unspecified behavior of left kidney
D49.59	Neoplasm of unspecified behavior of other genitourinary organ
D49.6	Neoplasm of unspecified behavior of brain
D49.7	Neoplasm of unspecified behavior of endocrine glands and other parts of nervous system
D49.89	Neoplasm of unspecified behavior of other specified sites
D49.9	Neoplasm of unspecified behavior of unspecified site
J91.0	Malignant pleural effusion

Group 27 Paragraph:

Medicare is establishing the following limited coverage for Bladder:

FGFR1 – **81479**

MTOR – **81479**

PTEN – **81321, 81322, 81323**

RB1 – **81479**

Group 27 Codes:

ICD-10 Codes	Description
C67.0	Malignant neoplasm of trigone of bladder
C67.1	Malignant neoplasm of dome of bladder
C67.2	Malignant neoplasm of lateral wall of bladder
C67.3	Malignant neoplasm of anterior wall of bladder
C67.4	Malignant neoplasm of posterior wall of bladder
C67.5	Malignant neoplasm of bladder neck
C67.6	Malignant neoplasm of ureteric orifice
C67.7	Malignant neoplasm of urachus
C67.8	Malignant neoplasm of overlapping sites of bladder
C67.9	Malignant neoplasm of bladder, unspecified

Group 1 Paragraph:

All those not listed under the "ICD-10 Codes that Support Medical Necessity" section.

Group 1 Codes: N/A

ICD-10 Additional Information [Back to Top](#)

General Information

Associated Information

Please refer to Local Coverage Article: Biomarkers for Oncology (A52986) for billing information.

Documentation Requirements

1. All documentation must be maintained in the patient's medical record and made available to the contractor upon request.
2. Every page of the record must be legible and include appropriate patient identification information (e.g., complete name, dates of service[s]). The documentation must include the legible signature of the physician or non-physician practitioner responsible for and providing the care to the patient.
3. The submitted medical record must support the use of the selected ICD-10-CM code(s). The submitted CPT/HCPCS code must describe the service performed.
4. The medical record documentation must support the medical necessity of the services as stated in this policy. Specifically, the medical record should reflect whether any biomarker ordered is diagnostic, prognostic or predictive, as well as be able to clearly correlate any test results with given interventions **(e.g., particular selection of chemotherapy)**.

Utilization Guidelines

In accordance with CMS Ruling 95-1 (V), utilization of these services should be consistent with locally acceptable standards of practice.

The following tests will all be covered once per lifetime per beneficiary:

- CPT code 81437 – Hereditary neuroendocrine tumor disorders
- CPT code 81438 – Hereditary neuroendocrine tumor disorders; duplication/deletion analysis
- ThyraMIR ,Afirma,ThyGenX, RosettaGX Reveal and ThyroSeq tests
 - Should the unlikely situation of a second, unrelated thyroid nodule with indeterminate pathology occur, coverage may be considered upon appeal with supporting documentation
- CPT code 81540 TUO CTID (Cancer TYPE ID)
- CPT code 0022U when reported for the Oncomine DX Test

While some biomarkers have utility for testing once per lifetime, there are some tumor specific scenarios where repeat testing would be needed for assessment of response to therapy or to identify basis of disease progression. In cases with metastatic or recurrent tumors, repeat testing may be useful in determining further clinical management. Also, biomarkers such as BCR-ABL1 fusion, PML-RARA fusion are useful in monitoring response to therapy and predict a response up to four times per annum.

Sources of Information

Contractor is not responsible for the continued availability of websites listed.

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<http://www.cms.gov/medicare-coverage-database/details/medcac-meeting-details.aspx?MEDCACId=67&bc=AAAIAAAAAAAAAAAA%3d%3d&> (Minutes from this May 1, 2013 MEDCAC to be posted between July 1-September 1, 2013)

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There were extensive in-person consultations with both CAC representatives and nationally-recognized experts in order to assist with the above medical necessity language and procedure-to-diagnosis code pairings.

Other Contractor Policies

Noridian Local Coverage Determination (LCD), DL36380 - MoIDX: Breast Cancer Assay: Prosigna

Contractor Medical Directors

Bibliography

N/A

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Revision History Information

Revision History Date	Revision History Number	Revision History Explanation	Reason(s) for Change
		<p>LCD revised and published on 10/04/2018 to update the policy in response to inquiry and reconsideration requests; all literature reviewed and added to policy. Non-coverage reaffirmed for CPT codes 0012M and 0013M for CxBladder. Non-coverage reaffirmed for CPT code 0002U for PolypDx™ Assay and Algorithm. Effective for dates of service on and after 05/15/2018 the following changes have been made to the policy:</p> <p>Covered Indications for Molecular Tests updated to include a new group (#4) for Uveal Melanoma with biomarkers GNAQ and GNA11. GNAQ is reported with CPT code 81403 and currently does not have ICD-10 diagnosis code pairing. The following ICD-10 diagnosis codes have been added for GNA11 reported with CPT code 81479 to ICD-10 Code Group 4: C69.01, C69.02, C69.11, C69.12, C69.21, C69.22, C69.31, C69.32, C69.41, C69.42, C69.51, C69.52, C69.61, C69.62, C69.81, C69.82.</p> <p>ThyroSeq has been added to the thyroid test group (new group #6). CPT Code 0026U has been added to CPT Group 1 Codes. ThyroSeq for CPT code 0026U has been added to ICD-10 Code Group 6 (new) and added to the asterisk note indicating ICD-10 diagnosis codes C73 and D44.2 should not be reported for this test. Utilization Guidelines have been updated to include the ThyroSeq test once per lifetime per beneficiary.</p>	
10/04/2018	R24	<p>Covered Indications for Molecular Tests updated to include biomarker FGFR3 as covered under Urinary Tract (new #9). FGFR3 is reported with CPT code 81404 and currently does not have ICD-10 code pairing.</p> <p>Covered Indications for Molecular Tests updated to include biomarkers PTEN, RB1 and TP53 to Prostate (new group #10). TP53 is reported with CPT code 81405 and currently does not have ICD-10 code pairing. ICD-10 Code Group 9 (new) has been updated to include PTEN for CPT codes 81321, 81322, 81323 and RB1 for CPT code 81479.</p> <p>Covered Indications for Molecular Tests updated to include biomarkers MGMT, PTEN, RB1, TP53 and TSC2 for Neuroendocrine tumors (new group #17). TP53 is reported with CPT code 81405 and currently does not have ICD-10 diagnosis code pairing. ICD-10 Code Group for neuroendocrine tumors (new #25) has been updated to include MGMT reported with CPT code 81287, PTEN reported with CPT codes 81321, 81322, or 81323; and RB1 or TSC2 reported with CPT code 81479.</p> <p>Covered Indications for Molecular Tests updated to include biomarker CTNNB1 to Desmoid Fibromatosis (new group #19). CTNNB1 is reported with CPT code 81403 and currently does not have ICD-10 diagnosis code pairing.</p> <p>Covered Indications for Molecular Tests updated to include biomarker CTNNB1 to Hepatic Adenoma (new group #20). CTNNB1 is reported with CPT code 81403 and currently does not have ICD-10 diagnosis code pairing.</p>	<ul style="list-style-type: none"> • Revisions Due To ICD-10-CM Code Changes • Reconsideration Request

Revision History Date	Revision History Number	Revision History Explanation	Reason(s) for Change
		<p>Covered Indications for Molecular Tests updated to include biomarkers CDKN2A, FGFR3, PIK3CA and TP53 for Bladder (new group #21). CDKN2A, FGFR3, PIK3CA and TP53 reported with CPT code 81404 or 81405 and currently does not have ICD-10 diagnosis code pairing. CPT codes 81321, 81322 and 81323 for biomarker PTEN and CPT code 81479 for biomarkers FGFR1, MTOR and RB1 added to new ICD-10 Diagnosis Code Group 27 for Bladder. The following ICD-10 diagnosis codes have been added to new ICD-10 Code Group 27: C67.0, C67.1, C67.2, C67.3, C67.4, C67.5, C67.6, C67.7, C67.8 and C67.9.</p> <p>Effective for dates of service on and after 05/18/2018, CPT code 0022U added to CPT Group 1 Codes. Utilization Guidelines and ICD-10 Code Group 2 updated to reflect Oncomine DX CPT code changed from 81445 to 0022U.</p> <p>Covered Indications for Molecular Tests (#1) updated to include ColonSeq® for Colorectal Cancer and (#2) LungSeq® for Non-Small Cell Lung Cancer. ICD-10 Code Group 1 updated to add ColonSeq® for CPT code 81445. ICD-10 Code Group 2 updated to add LungSeq® for CPT code 81445.</p> <p>In response to the annual ICD-10 code update, effective for dates of service 10/1/2018 and after the following ICD-10 codes have been deleted from ICD-10 code group 3: C43.11, C43.12, D03.11 and D03.12 and the following ICD-10 codes have been added to ICD-10 code group 3: C43.111, C43.112, C43.121, C43.122, D03.111, D03.112, D03.121, D03.122.</p> <p>At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; therefore, not all the fields included on the LCD are applicable as noted in this policy.</p> <p>LCD revised and published on 07/26/2018. The following revisions have been made in the covered indications section of the policy:</p> <p>ThyGenX represented by CPT code 81445 has been added under Molecular Tests for Thyroid, ICD-10 Code Group Paragraph 5 and Utilization Guidelines effective for dates of service on and after 04/09/2018.</p> <p>RosettaGX Reveal Thyroid miRNA has been added as a covered service under Molecular Tests for Thyroid, ICD-10 Code Group Paragraph 5 and Utilization Guidelines effective for dates of service on and after 04/09/2018. Literature submitted has been reviewed and added to the policy.</p> <p>FLT3 D836 has been revised to FLT3 D835 under Molecular Tests for AML, CML/CMML and MDS covered indication sections. FLT3 D835 has also been removed from the following ICD-10 Code Group Paragraphs; Group 11, Group 16 and the newly numbered Group 21 (formerly group 22 before renumbering with this revision) since CPT 81246 does not have any diagnosis restrictions effective for dates of service 01/01/2015 and after.</p> <p>Biomarker ATM listed under Molecular Tests for CLL covered indications has been removed from the LCD. This biomarker has also been removed from ICD-10 Code Group Paragraph 17 as there are no coverage restrictions for ATM at this time.</p>	<ul style="list-style-type: none"> • Typographical Error • Other (Recon, Inquiry)
07/26/2018	R23		

Revision History Date	Revision History Number	Revision History Explanation	Reason(s) for Change
		<p>The CPT codes listed with IGH/BCL2 under Molecular Tests in the Follicular lymphoma section have been changed to 81401 and 81402. ICD-10 diagnosis code Group 18 has been deleted as 81401 and 81402 do not have any diagnosis limitations effective for dates of service on and after 01/01/2016. In response to removing Group 18 the ICD-10 code groups have been renumbered.</p>	
		<p>A clarifying statement has been added under the CPT Code Group 1 Paragraph to explain that these CPT codes do not have diagnosis limitations and providers should refer to the covered indications of the LCD for reasonable and necessary guidelines for biomarkers included in these CPT codes.</p>	
		<p>PIK3CA has been removed from the following ICD-10 Code Group Paragraphs list of biomarkers; Group 1, Group 4, Group 5 and Group 6 effective for dates of service on and after 01/01/2015.</p>	
		<p>Diagnosis codes C21.0, C21.2 and C21.8 have been added to ICD-10 Code Group 1 as covered diagnoses effective for dates of service on or after 12/01/2016.</p>	
		<p>Diagnosis code C55 has been added to ICD-10 Code Group 6 as a covered diagnosis effective for dates of service on or after 12/01/2016.</p>	
		<p>A typographical error was made during the ICD-9 to ICD-10 translation resulting in ICD-10 code C92.02 being placed in ICD-10 Code Group 10 instead of the correct ICD-10 code, C91.02. C92.02 is being deleted from ICD-10 Code Group 10 and C91.02 is being added effective for dates of service 12/01/2016 and after.</p>	
		<p>Diagnosis codes C93.10, C93.11 and C93.12 have been added to ICD-10 Code Group 16 as covered diagnoses effective for dates of service 12/01/2016 and after.</p>	
		<p>Diagnosis codes C91.60, C91.61 and C91.62 have been added to newly numbered ICD-10 Code Group 20 (formerly group 21 before renumbering with this revision) as covered diagnoses for T-cell leukemia effective for dates of service on or after 12/01/2016. LCD revised and published on 03/08/2018 effective for dates of service on and after 12/22/2017 to add limited coverage for Oncomine DX test reported with CPT code 81445 for Non-Small Cell Lung Cancer (NSCLC). Language has been added to #2 under Molecular Tests in the Covered Indications area and CPT code 81445 has been added to ICD-10 Group 2 Paragraph for NSCLC. Utilization guidelines have been added for the Oncomine DX test when reported with CPT code 81445. References received with a reconsideration request for the Oncomine DX test have been reviewed and added to the policy. Link to L36715-BRCA1 and BRCA2 Genetic Testing and L35062-Biomarkers Overview added to the Related Local Coverage Documents section. For provider education/guidance, per Annual Review, removed Bill Types 18x and 21x as those Bill Types are not for inpatient services claims; update to CFR listing per template.</p>	<ul style="list-style-type: none"> • Reconsideration Request • Other (Annual Review)
03/08/2018	R22		
		<p>At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; therefore, not all the fields included on the LCD are applicable as noted in this policy.</p>	
01/01/2018	R21		

Revision History Date	Revision History Number	Revision History Explanation	Reason(s) for Change
		<p>LCD revised and published on 01/25/2018 effective for dates of service on and after 01/01/2018 to reflect the annual CPT/HCPCS code updates. For the following CPT/HCPCS codes either the short description and/or the long description was changed: 81400, 81401, 81403, 81404, 81405, 81406. Depending on which description is used in this LCD there may not be any change in how the code displays in the document. The following CPT/HCPCS codes have been added to CPT/HCPCS Code Group 1: 81120, 81121, 81175, 81176, 81334, 81520. The following CPT/HCPCS code has been deleted from CPT code group 1: 0008M. To clarify coverage for the new CPT/HCPCS code additions, ICD-10 Group Code Paragraphs have been updated as follows: Group 4: IDH1 (81120) and IDH2 (81121); Group 10: RUNX1 (81334); Group 11: ASXL1 (81175, 81176), IDH1 (81120), IDH2 (81121) and RUNX1 (81334); Group 15: ASXL1 (81175, 81176); Group 22: ASXL1 (81175, 81176), IDH1 (81120) and IDH2 (81121); and Group 24: 81520 has been added and 0008M has been deleted.</p> <p>At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; therefore, not all the fields included on the LCD are applicable as noted in this policy.</p>	<ul style="list-style-type: none"> Revisions Due To CPT/HCPCS Code Changes
11/09/2017	R20	<p>LCD revised and published on 11/09/2017 effective for dates of service on and after 08/01/2017 to add the following new CPT/HCPCS codes for Proprietary Laboratory Analyses (PLA) to Group 2 CPT/HCPCS Codes as non-covered: 0009U, 0013U, 0014U, 0016U, and 0017U. LCD revised with effective dates of service on and after 10/02/2017 to reflect the 4Q17 CPT/HCPCS code updates. For the following CPT/HCPCS code(s) either the short description and/or the long description was changed: 81405 and 0002U. Depending on which description is used in this LCD, there may not be any change in how the code displays in the document.</p> <p>At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; therefore, not all the fields included on the LCD are applicable as noted in this policy.</p>	<ul style="list-style-type: none"> Revisions Due To CPT/HCPCS Code Changes
10/01/2017	R19	<p>LCD revised and published on 10/05/2017 effective for dates of service on and after 10/01/2017 to reflect the ICD-10 Annual Code Updates. The following ICD-10 code has been deleted from Group 20 codes: C96.2. The following ICD-10 codes have been added to Group 20 codes: C96.20, C96.22, C96.29.</p> <p>At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; therefore, not all the fields included on the LCD are applicable as noted in this policy.</p>	<ul style="list-style-type: none"> Revisions Due To ICD-10-CM Code Changes
08/10/2017	R18	<p>LCD revised and published on 08/10/2017 effective for dates of service on and after 05/01/2017 to add the following CPT code as non-covered to Group 2 Codes: 0005U.</p> <p>At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.</p>	<ul style="list-style-type: none"> Revisions Due To CPT/HCPCS Code Changes
02/01/2017	R17		<ul style="list-style-type: none"> Reconsideration Request

Revision History Date	Revision History Number	Revision History Explanation	Reason(s) for Change
		LCD revised and published on 07/13/2017 to add references received with a reconsideration request for CxBladder coverage. After review of the submitted literature it has been determined that non-coverage of CxBladder will remain. No substantial changes are being made to the LCD at this time.	
		At this time 21st Century Cures Act will apply to new and revised LCDs that restrict coverage which requires comment and notice. This revision is not a restriction to the coverage determination; and, therefore not all the fields included on the LCD are applicable as noted in this policy.	
02/01/2017	R16	LCD revised and published on 05/11/2017 effective for dates of service on and after 02/01/2017 to add the following CPT codes as non-covered to Group 2 Codes: 0002U and 0003U. An explanation of non-coverage for these codes has been added to the Limitation section of the policy.	<ul style="list-style-type: none"> • Revisions Due To CPT/HCPCS Code Changes
01/01/2017	R15	LCD revised and published on 01/12/2017 effective for dates of service on and after 01/01/2017 to reflect the annual CPT/HCPCS code updates. For the following CPT/HCPCS codes either the short description and/or the long description was changed. Depending on which description is used in this LCD, there may not be any change in how the code displays in the document: 81402 and 81407. The following CPT/HCPCS code 81327 has been added to group 1 CPT codes and Group 1 Paragraph for ICD-10 codes of the LCD.	<ul style="list-style-type: none"> • Revisions Due To CPT/HCPCS Code Changes
12/01/2016	R14	LCD posted for notice on 10/13/2016. LCD becomes effective for dates of service and after 12/01/2016. 05/19/2016 DL35396 Draft LCD posted for comment.	<ul style="list-style-type: none"> • Automated Edits to Enforce Reasonable & Necessary Requirements
10/01/2016	R13	LCD revised and published on 09/29/2016 effective for dates of service on and after 10/01/2016 to reflect the ICD-10 Annual Code Updates. The following ICD-10 codes have been added to the list of Group 8 diagnosis codes: N42.31, N42.32 and N42.39. The following ICD-10 codes have been added to Group 9 diagnosis codes: C49.A0, C49.A1, C49.A2, C49.A3, C49.A4, C49.A5 and C49.A9. The following Group 8 ICD-10 codes have undergone a descriptor change: N40.0 and N40.1.	<ul style="list-style-type: none"> • Revisions Due To ICD-10-CM Code Changes
01/22/2016	R12	LCD revised and published on 05/12/2016 to correct source for Starczynowski.	<ul style="list-style-type: none"> • Typographical Error
01/22/2016	R11	LCD revised and published on 04/14/2016, effective for dates of service 01/22/2016, to add limited coverage for Prosigna upon additional reconsideration request. A new Group for CPT/HCPCS code 0008M was created for the following ICD-10 codes for 0008M: C50.011, C50.012, C50.019, C50.111, C50.112, C50.119, C50.211, C50.212, C50.219, C50.311, C50.312, C50.319, C50.411, C50.412, C50.419, C50.511, C50.512, C50.519, C50.611, C50.612, C50.619, C50.811, C50.812, C50.819, C50.911, C50.912, C50.919. Submitted sources have been added to the LCD. Please note: The content of this LCD version remains the same as the prior version (R10) except that additional codes have been added to the Revision History for this version to accurately reflect all the code additions.	<ul style="list-style-type: none"> • Reconsideration Request
01/22/2016	R10	LCD revised and published on 04/14/2016, effective for dates of service on and after 01/22/2016, to add limited coverage for Prosigna upon additional reconsideration request. A new Group for CPT/HCPCS code 0008M was created for the following ICD-10 codes for 0008M: C50.011, C50.012, C50.111, C50.112, C50.211, C50.212, C50.311, C50.312, C50.411, C50.412, C50.511, C50.512, C50.611, C50.612, C50.811, C50.812, C50.911, C50.912. Submitted sources have been added to the LCD.	<ul style="list-style-type: none"> • Reconsideration Request

Revision History Date	Revision History Number	Revision History Explanation	Reason(s) for Change
01/01/2016	R9	LCD revised and published on 02/11/2016, effective for dates of service 12/14/2015 and after, to add coverage for ThyraMIR services reported with CPT code 81479. The following ICD-10 codes have been added to Group 5 for ThyraMIR: E01.0, E01.2, E04.0, E04.8, E04.9.	<ul style="list-style-type: none"> Reconsideration Request
01/01/2016	R8	LCD revised and published on 01/28/2016 to reflect the annual CPT/HCPCS code updates. For the following CPT/HCPCS codes, either the short description or the long description was changed. Depending on which description is used in this LCD, there may not be any change in how the code displays in the document: 81210, 81275, 81402, 81435, 81436, 81445, 81450. The following code has been added to CPT group 2 as NON-COVERED; 81595 as the service represented by this code is currently non-covered per the LCD under the non-conventional methods of NGS limitation. CPT code 81170 has been added to groups 10 and 16 to replace 81403 for reporting ABL1. CPT code 81218 has been added to groups 11 and 23 to replace 81403 for CEBPA. CPT code 81272 has been added to groups 3 and 9 to replace 81404 for KIT. CPT 81273 has been added to groups 11, 16, 19, 21, and 23 to replace 81402 for KIT. CPT 81276 has been added to groups 1, 2, 5, 6, 11, 16, and 23. CPT code 81311 has been added to groups 1, 3, 5, 11, 16, and 23 to replace 81404 associated with NRAS. CPT code 81314 has been added to group 9 to replace 81404 associated with PDGFRA. CPT code 81538 has been added for VeriStrat® testing to group 2 diagnosis.	<ul style="list-style-type: none"> Revisions Due To CPT/HCPCS Code Changes
10/01/2015	R7	LCD revised and published on 11/13/2015 to add ICD-10 diagnosis codes with higher specificity to Group 5 effective for dates of service on and after 10/01/2015. Diagnosis codes added to Group 5: D44.2, D44.9, E01.1. Sources from reconsideration requests have been reviewed and added to the LCD sources. No substantial changes have been made based on the reconsiderations.	<ul style="list-style-type: none"> Reconsideration Request Other (Clarification)
10/01/2015	R6	LCD revised and published on 10/08/2015 to reflect that OVA1 should be reported with CPT 81503 rather than 84999 effective for dates of service on and after 10/01/2015.	<ul style="list-style-type: none"> Revisions Due To CPT/HCPCS Code Changes
10/01/2015	R5	LCD revised and published on 08/13/2015 to add multiple sources submitted with several reconsideration requests regarding Prosigna, molecular kidney cancer testing and bladder cancer testing. All literature was reviewed. No changes to the policy were made based on these reconsideration requests.	<ul style="list-style-type: none"> Reconsideration Request
10/01/2015	R4	LCD revised and published on 01/23/2015 to reflect the annual CPT/HCPCS code updates For the following CPT/HCPCS code(s) either the short description and/or the long description was changed. Depending on which description is used in this LCD, there may not be any change in how the code displays in the document: 81245; 81402; 81403; 81404; 81405. The following codes have been added to CPT group 2 as NON-COVERED; 81445, 81450 and 81455. The following codes have been added to the LCD but will not have any diagnosis to procedure code editing at this time; 81246; 81435; and 81436. CPT code 81313 has been added to group 8 to replace 81479 for reporting PROGENSA® PCA3 Assay. Original and subsequent decisions to non-cover Prosigna are reaffirmed upon additional reconsideration request. Submitted sources have been added to the LCD.	<ul style="list-style-type: none"> Revisions Due To CPT/HCPCS Code Changes Reconsideration Request
10/01/2015	R3	LCD revised and published on 10/09/2014, effective for dates of service on or after 10/01/2015. Non-coverage for Prosigna reaffirmed upon reconsideration request. LCD revised to add ICD-10-CM codes under group 5 for indeterminate malignancy, as well as presumed or documented malignancy of the thyroid gland per a reconsideration request. LCD also revised to add limited coverage for MyPRS multiple myeloma testing.	<ul style="list-style-type: none"> Reconsideration Request
10/01/2015	R2		<ul style="list-style-type: none"> Typographical Error

Revision History Date	Revision History Number	Revision History Explanation	Reason(s) for Change
10/01/2015	R1	<p>10/01/2014 LCD revised and published on 08/14/2014 to provide clarifications to the statement regarding next generation sequencing methods in the limitations section and to the cancer of unknown primary testing area. Reference to Local Coverage Article A52986 was inserted into LCD.</p> <p>10/01/2014 LCD revised and published on 08/14/2014 to provide clarifications to the statement regarding next generation sequencing methods in the limitations section and to the cancer of unknown primary testing area. Reference to Local Coverag Article A52986 was inserted into LCD.</p>	<ul style="list-style-type: none"> Other (Clarification)

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Associated Documents

Attachments N/A

Related Local Coverage Documents Article(s) [A52986 - Biomarkers for Oncology](#) LCD(s) [L35062 - Biomarkers Overview](#) [L36715 - BRCA1 and BRCA2 Genetic Testing](#) [DL35396](#) - (MCD Archive Site)

Related National Coverage Documents NCD(s) [210.3 - Colorectal Cancer Screening Tests](#)

Public Version(s) Updated on 09/28/2018 with effective dates 10/04/2018 - N/A [Updated on 07/20/2018 with effective dates 07/26/2018 - 10/03/2018](#) [Updated on 03/02/2018 with effective dates 03/08/2018 - 07/25/2018](#) [Updated on 01/19/2018 with effective dates 01/01/2018 - 03/07/2018](#) [Updated on 11/03/2017 with effective dates 11/09/2017 - 12/31/2017](#) [Updated on 09/29/2017 with effective dates 10/01/2017 - 11/08/2017](#) Some older versions have been archived. Please visit the [MCD Archive Site](#) to retrieve them. [Back to Top](#)

Keywords

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