Genetic Testing for Hereditary Cancer (for Louisiana Only)

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Instructions for Use

Content mandated by Louisiana Department of Health

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Application

This Medical Policy only applies to the state of Louisiana. The coverage rationale contained in this policy represents Louisiana Medicaid coverage policy and is set forth below in accordance with State requirements.

Coverage Rationale

Genetic Counseling

Genetic counseling before and after all genetic testing is required. Counseling must consist of at least all of the following and be documented in the medical record:

- Obtaining a structured family genetic history
- Genetic risk assessment; and
- Counseling of the enrollee and family about diagnosis, prognosis, and treatment

Breast and Ovarian Cancer

Louisiana Medicaid considers genetic testing for BRCA1 and BRCA2 mutations in cancer-affected individuals and cancer-unaffected individuals to be medically necessary if the beneficiary meets the criteria listed below.

Eligibility Criteria

Individuals meeting one or more of the below criteria are considered eligible:

- Individuals with any blood relative with a known BRCA1/BRCA2 mutation;
- Individuals meeting the criteria below but with previous limited testing (e.g., single gene and/or absent deletion duplication analysis) interested in pursuing multi-gene testing;
- Individuals with a personal history of cancer, defined as one or more of the following:
  - Breast cancer and one or more of the following:
    - Diagnosed age ≤ 45 years;
    - Diagnosed at age 45—50 years with:
      - Unknown or limited family history; or
      - A second breast cancer diagnosed at any age; or
      - ≥ 1 close blood relative* with breast, ovarian, pancreatic, or high-grade (Gleason score ≥ 7) or intraductal prostate cancer at any age.

        - Diagnosed at age ≤ 60 years with triple negative (ER–, PR–, HER2) breast cancer;
        - Diagnosed at any age with:
            - Ashkenazi Jewish ancestry; or
            - ≥ 1 close blood relative*with breast cancer at age ≤ 50 years or ovarian, pancreatic, or metastatic or intraductal prostate cancer at any age; or
            - ≥ 3 total diagnoses of breast cancer in patient and/or close blood relatives*
        - Diagnosed at any age with male breast cancer; or
        - Epithelial ovarian cancer (including fallopian tube cancer or peritoneal cancer) at any age.
    - Exocrine pancreatic cancer at any age;
    - Metastatic or intraductal prostate cancer at any age;
    - High-grade (Gleason score ≥ 7) prostate cancer at any age with:
        - Ashkenazi Jewish ancestry;
        - ≥ 1 close blood relative* with breast cancer at age ≤ 50 years or ovarian, pancreatic, or metastatic or intraductal prostate cancer at any age; or
        - ≥ 2 close blood relatives* with breast or prostate cancer (any grade) at any age.
    - A mutation identified on tumor genomic testing that has clinical implications if also identified in the germline; or
    - To aid in systemic therapy decision-making, such as for HER2-negative metastatic breast cancer.
- Individuals with a family history of cancer, including unaffected individuals, defined as one or more of the following:
    - An affected or unaffected individual with a 1st- or 2nd-degree blood relative meeting any of the criterion listed above (except individuals who meet criteria only for systemic therapy decision-making); or
    - An affected or unaffected individual who otherwise does not met criteria above but also has a probability > 5% of a BRCA1/2 pathogenic variant based on prior probability models (e.g., Tyer-Cuzick, BRCAPro, PennII).

*For the purpose of familial assessment, close blood relatives include first-, second-, and third-degree relatives on the same side of the family (maternal or paternal):

- 1st-degree relatives are parents, siblings, and children;
- 2nd-degree relatives are grandparents, aunts, uncles, nieces, nephews, grandchildren, and half siblings; or
- 3rd-degree relatives are great-grandparents, great-aunts, great-uncles, great grandchildren and first cousins

Familial Adenomatous Polyposis

Louisiana Medicaid considers genetic testing for adenomatous polyposis coli (APC) gene mutations to diagnose familial adenomatous polyposis (FAP) to be medically necessary if the beneficiary meets the following criteria.

Eligibility Criteria

- Personal history of > 20 cumulative adenomas; or
- Known deleterious APC mutation in first-degree family member.

Lynch Syndrome

Louisiana Medicaid considers genetic testing for Lynch syndrome to be medically necessary when a beneficiary meets the following criteria:

- Amsterdam II criteria; or
- Revised Bethesda Guidelines; or
- Estimated risk ≥ 5 percent based on predictive models (MMRpro, PREMM5, or MMRpredict).

Amsterdam II Criteria

All of the following criteria must be met.

There must be at least three relatives with a Lynch syndrome associated cancer (cancer of the colorectal, endometrium, small bowel, ureter or renal pelvis) and all of the following criteria should be present:

- One must be a first-degree relative to the other two;
- Two or more successive generations must be affected;
- One or more must be diagnosed before 50 years of age;
- Familial adenomatous polyposis should be excluded in the colorectal cancer; and
- Tumors must be verified by pathological examination.

Revised Bethesda Guidelines

One or more criterion must be met:

- Colorectal or uterine cancer diagnosed in a patient who is less than 50 years of age;
- Presence of synchronous (coexist at the same time), metachronous (previous or recurring) colorectal cancer, or other Lynch syndrome associated tumors**;
- Colorectal cancer with the MSI-H *** histology **** diagnosed in a patient who is less than 60 years of age;
- Colorectal cancer diagnosed in one or more first-degree relatives with a Lynch syndrome related tumor, with one of the cancers being diagnosed under 50 years of age; and/or
- Colorectal cancer diagnosed in two or more first- or second-degree relatives with Lynch syndrome related tumors, regardless of age.

**Hereditary nonpolyposis colorectal cancer (HNPCC)-related tumors include colorectal, endometrial, stomach, ovarian, pancreas, ureter and renal pelvis, biliary tract, and brain (usually glioblastoma as seen in Turcot syndrome) tumors, sebaceous gland adenomas and keratoacanthomas in Muir-Torre syndrome, and carcinoma of the small bowel.

***MSI-H - microsatellite instability–high in tumors refers to changes in two or more of the five National Cancer Institute-recommended panels of microsatellite markers.

****Presence of tumor infiltrating lymphocytes, Crohn's-like lymphocytic reaction, mucinous/signet-ring differentiation, or medullary growth pattern.

Note: Genetic testing for a particular disease should generally be performed once per lifetime; however, there are rare instances in which testing may be performed more than once in a lifetime (e.g., previous testing methodology is inaccurate or a new discovery has added significant relevant mutations for a disease).

Applicable Codes

The following list(s) of procedure and/or diagnosis codes is provided for reference purposes only and may not be all inclusive. Listing of a code in this policy does not imply that the service described by the code is a covered or non-covered health service. Benefit coverage for health services is determined by federal, state, or contractual requirements and applicable laws that may require coverage for a specific service. The inclusion of a code does not imply any right to reimbursement or guarantee claim payment. Other Policies and Guidelines may apply.

CPT Code	Description
BRCA1 and BRCA2	
*0138U	BRCA1 (BRCA1, DNA repair associated), BRCA2 (BRCA2, DNA repair associated) (e.g., hereditary breast and ovarian cancer) mRNA sequence analysis (List separately in addition to code for primary procedure)
81162	BRCA1 (BRCA1, DNA repair associated), BRCA2 (BRCA2, DNA repair associated) (e.g., hereditary breast and ovarian cancer) gene analysis; full sequence analysis and full duplication/deletion analysis (i.e., detection of large gene rearrangements)
81163	BRCA1 (BRCA1, DNA repair associated), BRCA2 (BRCA2, DNA repair associated) (e.g., hereditary breast and ovarian cancer) gene analysis; full sequence analysis
81164	BRCA1 (BRCA1, DNA repair associated), BRCA2 (BRCA2, DNA repair associated) (e.g., hereditary breast and ovarian cancer) gene analysis; full duplication/deletion analysis (i.e., detection of large gene rearrangements)
81165	BRCA1 (BRCA1, DNA repair associated) (e.g., hereditary breast and ovarian cancer) gene analysis; full sequence analysis
81166	BRCA1 (BRCA1, DNA repair associated) (e.g., hereditary breast and ovarian cancer) gene analysis; full duplication/deletion analysis (i.e., detection of large gene rearrangements)
81167	BRCA2 (BRCA2, DNA repair associated) (e.g., hereditary breast and ovarian cancer) gene analysis; full duplication/deletion analysis (i.e., detection of large gene rearrangements)

CPT Code	Description
BRCA1 and BRCA2	
81216	BRCA2 (BRCA2, DNA repair associated) (e.g., hereditary breast and ovarian cancer) gene analysis; full sequence analysis
Multi-Gene Panel	
*0101U	Hereditary colon cancer disorders (e.g., Lynch syndrome, PTEN hamartoma syndrome, Cowden syndrome, familial adenomatosis polyposis), genomic sequence analysis panel utilizing a combination of NGS, Sanger, MLPA, and array CGH, with MRNA analytics to resolve variants of unknown significance when indicated (15 genes [sequencing and deletion/duplication], EPCAM and GREM1 [deletion/duplication only])
*0102U	Hereditary breast cancer-related disorders (e.g., hereditary breast cancer, hereditary ovarian cancer, hereditary endometrial cancer), genomic sequence analysis panel utilizing a combination of NGS, Sanger, MLPA, and array CGH, with MRNA analytics to resolve variants of unknown significance when indicated (17 genes [sequencing and deletion/duplication])
*0103U	Hereditary ovarian cancer (e.g., hereditary ovarian cancer, hereditary endometrial cancer), genomic sequence analysis panel utilizing a combination of NGS, Sanger, MLPA, and array CGH, with MRNA analytics to resolve variants of unknown significance when indicated (24 genes [sequencing and deletion/duplication], EPCAM [deletion/duplication only])
*0129U	Hereditary breast cancer-related disorders (e.g., hereditary breast cancer, hereditary ovarian cancer, hereditary endometrial cancer), genomic sequence analysis and deletion/duplication analysis panel (ATM, BRCA1, BRCA2, CDH1, CHEK2, PALB2, PTEN, and TP53)
*0130U	Hereditary colon cancer disorders (e.g., Lynch syndrome, PTEN hamartoma syndrome, Cowden syndrome, familial adenomatosis polyposis), targeted mRNA sequence analysis panel (APC, CDH1, CHEK2, MLH1, MSH2, MSH6, MUTYH, PMS2, PTEN, and TP53) (List separately in addition to code for primary procedure)
*0131U	Hereditary breast cancer-related disorders (e.g., hereditary breast cancer, hereditary ovarian cancer, hereditary endometrial cancer), targeted mRNA sequence analysis panel (13 genes) (List separately in addition to code for primary procedure)
*0132U	Hereditary ovarian cancer-related disorders (e.g., hereditary breast cancer, hereditary ovarian cancer, hereditary endometrial cancer), targeted mRNA sequence analysis panel (17 genes) (List separately in addition to code for primary procedure)
*0133U	Hereditary prostate cancer-related disorders, targeted mRNA sequence analysis panel (11 genes) (List separately in addition to code for primary procedure)
*0134U	Hereditary pan cancer (e.g., hereditary breast and ovarian cancer, hereditary endometrial cancer, hereditary colorectal cancer), targeted mRNA sequence analysis panel (18 genes) (List separately in addition to code for primary procedure)
*0135U	Hereditary gynecological cancer (e.g., hereditary breast and ovarian cancer, hereditary endometrial cancer, hereditary colorectal cancer), targeted mRNA sequence analysis panel (12 genes) (List separately in addition to code for primary procedure)
*0162U	Hereditary colon cancer (Lynch syndrome), targeted mRNA sequence analysis panel (MLH1, MSH2, MSH6, PMS2) (List separately in addition to code for primary procedure)
*0238U	Oncology (Lynch syndrome), genomic DNA sequence analysis of MLH1, MSH2, MSH6, PMS2, and EPCAM, including small sequence changes in exonic and intronic regions, deletions, duplications, mobile element insertions, and variants in non-uniquely mappable regions
*81432	Hereditary breast cancer-related disorders (e.g., hereditary breast cancer, hereditary ovarian cancer, hereditary endometrial cancer); genomic sequence analysis panel, must include sequencing of at least 10 genes, always including BRCA1, BRCA2, CDH1, MLH1, MSH2, MSH6, PALB2, PTEN, STK11, and TP53

CPT Code	Description
Multi-Gene Panel	
*81433	Hereditary breast cancer-related disorders (e.g., hereditary breast cancer, hereditary ovarian cancer, hereditary endometrial cancer); duplication/deletion analysis panel, must include analyses for BRCA1, BRCA2, MLH1, MSH2, and STK11
*81435	Hereditary colon cancer disorders (e.g., Lynch syndrome, PTEN hamartoma syndrome, Cowden syndrome, familial adenomatosis polyposis); genomic sequence analysis panel, must include sequencing of at least 10 genes, including APC, BMPR1A, CDH1, MLH1, MSH2, MSH6, MUTYH, PTEN, SMAD4, and STK11
*81436	Hereditary colon cancer disorders (e.g., Lynch syndrome, PTEN hamartoma syndrome, Cowden syndrome, familial adenomatosis polyposis); duplication/deletion analysis panel, must include analysis of at least 5 genes, including MLH1, MSH2, EPCAM, SMAD4, and STK11
*81437	Hereditary neuroendocrine tumor disorders (e.g., medullary thyroid carcinoma, parathyroid carcinoma, malignant pheochromocytoma or paraganglioma); genomic sequence analysis panel, must include sequencing of at least 6 genes, including MAX, SDHB, SDHC, SDHD, TMEM127, and VHL
*81438	Hereditary neuroendocrine tumor disorders (e.g., medullary thyroid carcinoma, parathyroid carcinoma, malignant pheochromocytoma or paraganglioma); duplication/deletion analysis panel, must include analyses for SDHB, SDHC, SDHD, and VHL
81441	Inherited bone marrow failure syndromes (IBMFS) (eg, Fanconi anemia, dyskeratosis congenita, Diamond-Blackfan anemia, Shwachman-Diamond syndrome, GATA2 deficiency syndrome, congenital amegakaryocytic thrombocytopenia) sequence analysis panel, must include sequencing of at least 30 genes, including BRCA2, BRIP1, DKC1, FANCA, FANCB, FANCC, FANCD2, FANCE, FANCF, FANCG, FANCI, FANCL, GATA1, GATA2, MPL, NHP2, NOP10, PALB2, RAD51C, RPL11, RPL35A, RPL5, RPS10, RPS19, RPS24, RPS26, RPS7, SBDS, TERT, and TINF2
81479	Unlisted molecular pathology procedure

Codes labeled with an asterisk (*) are not on the State of Louisiana Medicaid Fee Schedule and therefore may not be covered by the state of Louisiana Medicaid Program.

U.S. Food and Drug Administration (FDA)

This section is to be used for informational purposes only. FDA approval alone is not a basis for coverage.

Laboratories that perform genetic tests are regulated under the Clinical Laboratory Improvement Amendments (CLIA) Act of 1988. More information is available at: https://www.fda.gov/medicaldevices/deviceregulationandguidance/ivdregulatoryassistance/ucm124105.htm. (Accessed September 27, 2022)

References

Louisiana Department of Health: Professional Services Provider Manual, Section 5.1 – Breast and Ovarian Cancer of the Medicaid Services Manual: https://www.lamedicaid.com/provweb1/providermanuals/manuals/PS/PS.pdf. Accessed September 27, 2022.

Policy History/Revision Information

Date	Summary of Changes
04/01/2023	Applicable Codes • Added CPT code 0238U

Date	Summary of Changes
	• Added language to indicate CPT codes 0101U, 0102U, 0103U, 0129U, 0130U, 0131U, 0132U, 0133U, 0134U, 0135U, 0138U, 0162U, 0238U, 81432, 81433, 81435, 81436, 81437, and 81438 are not on the State of Louisiana Fee Schedule and therefore may not be covered by the State of Louisiana Medicaid Program **Supporting Information** • Archived previous policy version CS049LA.O

Instructions for Use

This Medical Policy provides assistance in interpreting UnitedHealthcare standard benefit plans. When deciding coverage, the federal, state or contractual requirements for benefit plan coverage must be referenced as the terms of the federal, state or contractual requirements for benefit plan coverage may differ from the standard benefit plan. In the event of a conflict, the federal, state or contractual requirements for benefit plan coverage govern. Before using this policy, please check the federal, state or contractual requirements for benefit plan coverage. UnitedHealthcare reserves the right to modify its Policies and Guidelines as necessary. This Medical Policy is provided for informational purposes. It does not constitute medical advice.

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