CLINICAL MEDICAL POLICY	
Policy Name:	Oncologic Genetic Testing Panels
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Responsible Department(s):	Medical Management
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Products:	Highmark Wholecare℠ Medicaid
Application:	All participating hospitals and providers
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Policy History

Date	Activity
11/01/2023	Provider Effective date
09/22/2023	PARP Approval
08/16/2023	QI/UM Committee review
08/16/2023	Annual Review: No changes to clinical criteria. Added the PA DHS TAG determination information for CPT code 81479, which is listed as an Option #3 (*Approved with [or denied due to] Limited/Minimal Evidence of Effectiveness - Will require Program Exception*) Updated 'Summary of Literature' and 'Reference Sources' sections. Updated the Description for the following CPT codes: 81445, 81450, and 81455, per AMA guidance.
11/01/2022	Provider Effective date
09/13/2022	PARP Approval
08/17/2022	QI/UM Committee review
08/17/2022	Annual Review: No changes to clinical criteria. Removed the word 'covered' from Procedures section, replaced with 'medically necessary'. Updated Summary of Literature and Reference Sources sections. Updated the Description for the following CPT codes: 0023U & 81342. The following deleted CPT codes were removed: 0057U & 0006M. Removed the following unspecified ICD-10 codes: D49.89, D49.9, C79.60, C57.20, C57.10, C50.929, C50.919, C50.819, C50.619, C50.529, C50.519, C50.419, C50.319, C50.219, C50.119, & C50.019.
01/17/2022	Provider effective date

11/30/2021	PARP Approval
08/18/2021	QI/UM Committee review
08/18/2021	Annual Review: No changes to clinical criteria or coding. Updated Summary of Literature and Reference Sources sections.
09/19/2018	QI/UM Committee review
09/14/2017	Initial policy developed

Disclaimer

Highmark Wholecare℠ medical policy is intended to serve only as a general reference resource regarding coverage for the services described. This policy does not constitute medical advice and is not intended to govern or otherwise influence medical decisions.

Policy Statement

Highmark Wholecare℠ may provide coverage under the medical-surgical benefits of the Company's Medicaid products for medically necessary oncologic Genetic Testing Panels.

This policy is designed to address medical necessity guidelines that are appropriate for the majority of individuals with a particular disease, illness or condition. Each person's unique clinical circumstances warrant individual consideration, based upon review of applicable medical records.

(Current applicable Pennsylvania HealthChoices Agreement Section V. Program Requirements, B. Prior Authorization of Services, 1. General Prior Authorization Requirements.)

Definitions

Prior Authorization Review Panel (PARP) – a panel of representatives from within the PA Department of Human Services who have been assigned organizational responsibility for the review, approval and denial of all PH-MCO Prior Authorization policies and procedures.

Genetic Testing Panel – a laboratory test that evaluates multiple genes simultaneously compared to sequential testing of individual genes. There are multiple uses of the testing results including but not limited to: to establish a clinical diagnosis, confirmation of a specific clinical diagnosis, the diagnosis of a hereditary disorder, to determine when a known cancer diagnosis is part of a hereditary cancer syndrome or to assist in the identification of a cancer type/subtype and in the selection of the most appropriate treatment of a cancer type/subtype.

Germline Mutation – an alteration in the DNA that is transmissible from parent to offspring.

Panel Testing Technology – a genetic testing method that examines multiple genes or mutations simultaneously. Testing methods can include next-generation sequencing and chromosomal microarray.

Next Generation Sequencing (NGS) – Non-Sanger-based high-throughput DNA sequencing technologies. Millions or billions of DNA strands can be sequenced in parallel, yielding substantially more throughput

and minimizing the need for the fragment-cloning methods that are often used in Sanger sequencing of genomes.

Variant of Unknown/Uncertain Significance (VUS) – an allele, or variant form of a gene that has been identified via genetic testing. The significance of the finding is not established and the connection to a human disease has not been identified.

Clinical Utility – how likely the testing is to significantly improve patient outcomes that reflect the balance between health-related benefits and/or harms that can ensue from using the information made available from the testing.

Genetic Counseling – a service that is provided by a Clinical Geneticist, Certified Genetic Counselor, or other approved medical provider who is independent and not employed by any clinical or genetic laboratory, who bears no conflict of interest with the entity performing the testing.

1st, 2nd, and 3rd Degree Relatives - Blood 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.
- 3rd-degree relatives are great-grandparents, great-aunts, great-uncles, great-grandchildren, and first cousins.

Procedures

This policy applies only if there is no separate Highmark Wholecare℠ medical policy that addresses the criteria for a specific oncologic genetic test. Genetic testing panels are defined as any assay that simultaneously tests for more than one gene associated with a condition. The testing may focus on sequence variants and/or deletions/duplications of those genes. Oncologic genetic testing panels include panels for hereditary conditions, genetic conditions, or cancer panels.

The ordering provider must validate the test's clinical utility by considering the following:

- Will the panel testing offer significant advantages compared to sequential analysis of individual genes, i.e., a genetic testing panel that address the disorder in question, rather than the disorder in question plus other disorders?
- How will the panel testing results be used in patient care decision making?
- Will the ancillary findings lead to further testing or management changes?
- Is there reliable evidence in the peer-reviewed scientific literature that health outcomes will be improved as a result of treatment decisions based on molecular genetic testing findings?

1. Oncologic genetic testing is considered medically necessary when ALL of the following guidelines are met:
    A. All genetic testing panels must be performed in a Clinical Laboratory Improvement Amendment (CLIA) licensed lab; AND
    B. Genetic testing panels are to be ordered by or recommended by a physician specialist such as a hematologist, oncologist, a physician with expertise in the treatment of the targeted disease or geneticist; AND

C. The ordering provider must not be employed or contracted by a commercial genetic testing laboratory; AND
D. A recommendation for the genetic testing is confirmed by either:
    - An American Board of Medical Genetics or American Board of Genetic counselor; OR
    - An independent Board Certified or Board eligible medical geneticist; AND
E. All components of the specific genetic testing panel must demonstrate positive clinical utility for the medical condition being evaluated and offers substantial advantages in efficiency compared to sequential analysis of individual genes; AND
F. Genetic testing panels should be considered when clinical evaluation suggests a particular diagnosis, the disorder cannot be identified through clinical evaluation and/or other testing, and not when the diagnosis is unclear or uncertain; AND
G. The provider has had a discussion with the patient regarding the scope of the genetic testing panel being ordered and the impact of variants of unknown significance.

2. ALL of the following documentation requirements apply:
    A. A brief explanation of how the results of genetic testing are necessary to guide treatment decisions relevant to the patient's personal medical history for positive patient outcome (i.e., whether to perform surgery, determine chemotherapy treatment, choose between medication options, etc.); AND
    B. Medical records relevant to the testing being performed are to include:
        1) A thorough history and physical examination by the referring physician; AND
        2) Any previously performed conventional testing and outcomes; AND
        3) A three generation pedigree analysis result; AND
        4) Any conservative treatments that have been provided, if applicable; AND
    C. The following information is required for a genetic or molecular diagnostic test:
        1) The specific name of the test/panel; AND
        2) Name of the performing CLIA-accredited laboratory; AND
        3) The exact gene(s) and/or mutations being tested
        4) Estimated cost/quote sheet for the genetic testing panel ordered; AND
    D. An informed consent must be signed by the patient prior to testing. The consent must include a statement that the patient agrees to post-test counseling and the consent must be made available upon request.

3. When oncologic genetic tests are considered not medically necessary
    - Broad-based genetic testing panels are considered not medically necessary when individual components are sufficient for treatment/management of the patient. Testing for multiple genes or multiple conditions, in cases where a tiered approach/method is clinically available, will be considered medically necessary only for the number of genes or tests that are reasonable to obtain necessary therapeutic decision making and NOT the entire panel.

    - More than one multi-gene panel is considered not medically necessary at the same time.

    - Genetic testing of children to predict adult onset of diseases is considered not medically necessary.

    - Genetic tests for inherited disease need only be conducted once per lifetime of the patient.

- If a genetic testing panel was previously performed for medically necessary indications and a larger panel is developed and requested, only the testing for previously untested genes will be considered medically necessary.

4. Post-payment Audit Statement

   The medical record must include documentation that reflects the medical necessity criteria and is subject to audit by Highmark Wholecare℠ at any time pursuant to the terms of your provider agreement.

5. Place of Service

   The proper place of service for oncologic genetic testing panels is outpatient.

6. Genetic Counseling

   Pre- and post-test genetic counseling is required to be performed by an independent genetic provider (not employed by a genetic testing lab) prior to genetic testing for mutations. This service is necessary in order to inform patient being tested about the benefits and limitations of specific genetic tests. Genetic testing for mutations requires documentation of medical necessity from at least one of the following providers who has previously evaluated the patient, and intends to see the patient after genetic testing has been performed:

   - Board Eligible or Board Certified Genetic Counselor
   - Advanced Genetics Nurse
   - Genetic Clinical Nurse
   - Advanced Practice Nurse in Genetics
   - Board Eligible or Board Certified Clinical Geneticist
   - A physician of appropriate expertise or other obstetrical provider specializing in the care for the indication(s) for genetic testing

7. Related Policies

   - MP-010-MD-PA Testing for Genetic Disease
   - MP-011-MD-PA BRCA 1 & 2 Genetic Mutation Testing and Related Genetic Counseling
   - MP-013-MD-PA Whole Exome and Whole Genome Sequencing for Diagnosis of Genetic Disorders
   - MP-017-MD-PA BCR-ABL1 Testing in Chronic Myelogenous Leukemia and Acute Lymphoblastic Leukemia
   - MP-059-MD-PA Genetic Testing for Colorectal Cancer Susceptibility
   - MP-061-MD-PA Molecular Tumor Markers for Non-Small Cell Lung Cancer
   - MP-065-MD-PA Molecular Markers for Fine Needle Aspirates of Thyroid Nodules
   - MP-100-MD-PA Gene Expression and Biomarker Prostate Cancer Testing
   - MP-120-MD-PA Tumor Markers

Governing Bodies Approval

Three federal agencies play a role in the regulation of genetic tests: the Centers for Medicare and Medicaid Services (CMS), the U.S. Food & Drug Administration (FDA) and the Federal Trade Commission (FTC). CMS is responsible for regulating all clinical laboratories performing genetic testing, ensuring their compliance with the Clinical Laboratory Improvement Amendments of 1988. The FDA has the broadest authority in terms of regulating the safety and effectiveness of genetic tests as medical devices under the Federal Food, Drug, and Cosmetic Act. Compared to the FDA and CMS, the FTC's regulatory authority is rather narrow, and is limited to how tests are advertised. The Commission has the authority to regulate advertising that delivers health-related information to consumers to ensure that it is not false or misleading.

Genetic testing panels are typically laboratory derived tests that are not subject to the U.S. FDA approval. Due to the large numbers of mutations contained in expanded panels, it is not possible to determine clinical validity for the panels as a whole.

CLIA
The genetic testing panels are offered as laboratory-developed tests under Clinical Laboratory Improvement Amendments (CLIA) licensed laboratories. Clinical laboratories may develop and validate tests in-house and market them as a laboratory service; laboratories offering such tests as a clinical service must meet general regulatory standards of CLIA and must be licensed by CLIA for high complexity testing.

Note: This policy may not apply to multi-gene panel testing for indications that are addressed in another Highmark Wholecare test-specific medical policy. Please check to see if there is a more specific policy.

The Pennsylvania Department of Human Services Technology Assessment Group (TAG) workgroup meets quarterly to discuss issues revolving around new technologies and technologies or services that were previously considered to be a program exception. During this meeting, decisions are made as to whether or not certain technologies will be covered and how they will be covered. TAG's decisions are as follow:

- Option #1: Approved - Will be added to the Fee Schedule
- Option #2: Approved as Medically Effective - Will require Program Exception
- Option #3: Approved with (or denied due to) Limited/Minimal Evidence of Effectiveness - Will require Program Exception
- Option #4: Denied - Experimental/Investigational

As of August 2021, the TAG workgroup assigned CPT code an Option # 3.

Program Exception
CPT code 81479 requires a Program Exception. The ordering physician must provide a supporting statement indicating why the requested therapy or device is medically necessary, and the alternative options have been or are likely to be ineffective, adversely affect patient compliance, or cause an adverse reaction.

Summary of Literature

The role of genetic testing in the medical profession has continued to grow rapidly. With the completion of the Human Genome Project (HGP) and continued advances in the field of genomics, the use of genetic testing has become widespread. The World Health Organization (WHO) has published criteria to be met for any genetic test to be considered valuable: the disease is an important health problem, the risk in mutation carriers is high in the general population (not just in a high-risk group), mutations for the disease can be accurately identified, and effective interventions exist.

Genetic testing was first introduced as a clinical tool in the 1960s with chromosomal karyotyping. (Satya-Murti, et al. 2013) More advanced testing includes: Chromosomal microarray analysis or comparative genomic hybridization (array CDG) testing, fluorescence-in-situ-hybridization (FISH), letter-by-letter sequencing of specific genes (Sanger technology) and the new technology where huge panels of genes as large as the entire exome can be sequenced (NexGen technology).

Genetic testing includes the following:

- Single gene-targeted mutation/sequence analysis, deletion/duplication testing
- Deletion/duplication analysis
- Multi-gene panels
- Serial testing of single genes
- Whole Exome Sequencing (WES)-sequencing of exome but interpretation focus on genes related to phenotype
- Whole Genome Sequencing (WGS)-sequences all genetic material

Genetic testing panels have been proposed to aid in the diagnosis of individuals with suspected oncologic indications or mitochondrial disorders and may involve point mutations analysis. Genetic testing uses next-generation sequencing (NGS) technology, massive parallel sequencing, or chromosomal microarray analysis (CMA) testing to perform genetic panels. NGS and CMA are new genetic technologies. The intended use for genetic panels is variable. Existing genetic testing panels are available for the following areas: cancer, cardiovascular disease, neurologic disease, psychiatric conditions and for reproductive testing. In contrast to genomic testing, serial testing of single genes and multi-gene panel testing rely on the clinician developing a hypothesis about which specific gene or set of genes to test (Chinnery, 2014).

Several methods can be used for genetic testing:

- Molecular genetic tests (or gene tests) study single genes or short lengths of DNA to identify variations or mutations that lead to a genetic disorder.
- Cytogenetic tests analyze whole chromosomes or long lengths of DNA to see if there are large abnormalities, such as an extra copy of a chromosome, that cause a genetic condition.
- Biochemical genetic tests study the amount or activity level of proteins; abnormalities in either can indicate changes to the DNA that result in a genetic disorder (Genetic Alliance, 2010).

Advantages of genetic testing panels:

- Offers greater insight, including targeting the coding part of the gene that is relevant to a particular disease. Testing involves reading a DNA sequence from start to finish to see if there are any interruptions or disruptions that stop the gene from making normal proteins.
- Less chance of uncertainties, knowing that a particular mutation is absent can help ease anxiety.
- Opportunity to take action and guide medical care (Joy, 2017).

Disadvantages of genetic testing panels:

- There is no standardization in the makeup of genetic panels. The panel compositions are variable with different set of genes for the same condition. This genetic panel composition is determined by the specific lab that developed the test.
- The gene selection of genetic panels is subject to change based on scientific discovery.
- Because of the large number of mutations contained in expanded panels, it is not possible to determine clinical validity for the panels as a whole.
- The risk for uncertain and incidental findings with the large numbers of genes on the panels.
- Large percentage of VUS

Genetic testing plays a pivotal role in understanding the risk of a patient developing certain diseases while also screening and deciding on a medical treatment plan. There are various types of genetic tests performed for specific reasons:

- **Diagnostic testing** is done when symptoms of a disease are present and may be caused by mutated genes. Testing may be used to confirm or rule-out diseases such as cystic fibrosis or Huntington's disease.
- **Presymptomatic and predictive testing** can reveal if a patient is at risk for developing a genetic condition when there is a family history, for example colorectal cancer.
- **Carrier testing** may provide genetic information if a patient in a specific ethnic group has a family history of a genetic disorder (sickle cell, cystic fibrosis) and would like to be tested before having children. An expanded carrier test can detect genes associated with a wide variety of genetic diseases and mutations and identify if the patient or their partner are carriers for the same conditions.
- **Pharmacogenetic testing** may help determine what medication and dosage will be most favorable for patients' with a particular health condition or disease.
- **Prenatal testing** can detect some types of abnormalities in an unborn baby's genes. These tests screen for markers in blood or by invasive testing such as amniocentesis. Down syndrome and trisomy 18 syndrome are two genetic disorders that may be screened for as part of prenatal genetic testing. Cell-free DNA testing examines the baby's DNA using blood tests performed on the mother.
- **Newborn screening** is the most common type of genetic testing in the U.S., with all states requiring that newborns be tested for certain genetic and metabolic abnormalities. This test can reveal if there are disorders such as congenital hypothyroidism, sickle cell, or phenylketonuria (PKU)
- **Targeted gene sequencing** are focused panels that contain a select number of genes or gene regions that are known or are suspected as associates of the disease or phenotype. These panels can be designed with preselected content or custom designed. Next-generation sequencing also evaluates targeted genes of interest, however, multiple genes can be assessed (Mayo Clinic, 2022).

Multi-gene panel tests have the advantage of testing for many potential gene mutations simultaneously at a potentially lower cost than traditional testing. Because multiple numbers of genes in a panel are being investigated, there is also a higher likelihood of diagnosing a VUS. Clinical recommendations like enhanced cancer screening or risk-reducing surgery should be reserved for those patients who are found to have a deleterious mutation or who have a strong family cancer history, because most VUS are ultimately found not to be associated with health problems and medical decisions should not be based on the presence of a VUS. The decision to pursue gene-by-gene testing versus panel testing is a complex one that benefits from discussion with a genetics professional. In addition to germline testing, patients may

also benefit from having the tumor itself tested for mutations. Mutations that occur in the tumor are called somatic mutations and cannot be passed through the family (unlike germline mutations). Knowledge of either germline or somatic mutations may help direct treatment (SGO, 2016).

Oncologists may choose panel testing around hereditary cancer from the following approaches:

- **Syndrome-specific gene panel:** This approach would include BRCA1 and BRCA2 for hereditary breast and ovarian cancer or testing of mismatch repair genes for Lynch syndrome (MLH1, MSH2, MSH6, PMS2 and EPCAM).
- **High-penetrance gene panel:** These types of panels include genes with high penetrance and known to be involved in a specific cancer. One example is high risk breast cancer panel testing for mutations in *BRCA1, BRCA2, TP53, PTEN, CDH1* and *STK11.*
- **Cancer-specific gene panel:** This panel would include testing of between 17-23 genes. Tested genes include both highly and moderately penetrant genes related to a specific cancer type such as breast cancer or ovarian cancer.
- **Comprehensive cancer risk panel:** Several companies offer these panels, which include testing of between 25 and 61 highly and moderately penetrant genes known to be associated with risk for many different cancers.

Although multigene tests are gaining in popularity for patients who may be predisposed to hereditary breast and/or ovarian cancer, concerns remain because most of the genes tested are considered low- or moderate-risk genes for which management guidelines either do not exist or have only been recently introduced. Current research indicates that multigene panel testing can provide information in a small subset of patients, however additional studies are necessary to address if clinical interventions are of any benefit to positive less well studied mutations. In addition, there is paucity in the information in addressing the large numbers of variants of uncertain significance generated by multigene panels.

Multi-gene panels are commonly used when:

- When the family mutation is unknown in a symptomatic patient; OR
- When there are multiple candidate genes and no single gene is significantly more likely than the others; OR
- When personal and family history are suggestive of more than one hereditary syndrome; OR
- When the suspected diagnosis cannot be unequivocally diagnosed otherwise.

Targeted Gene Sequencing

Targeted gene sequencing are focused panels that contain a select number of genes or gene regions that are known or are suspected as associates of the disease or phenotype. These panels can be designed with preselected content or custom designed. Next-generation sequencing also evaluated targeted genes of interest however, multiple genes can be assessed

Shashi and colleagues (2014) noted that it remains unclear which patients should be analyzed with a specific genetic test and in which stage during the evaluation. In a study to assess the diagnostic yield of the traditional comprehensive clinical evaluation and targeted genetic testing, the authors retrospectively analyzed a cohort of 500 unselected consecutive patients. These patients had received traditional genetic diagnostic evaluations at a tertiary facility. The diagnosis rate, number of visits to diagnosis, genetic tests and the cost of testing was calculate. The authors concluded that nearly half of the patients tested with traditional approaches were diagnosed in the initial visit. It is logical that the remaining patients that were undiagnosed, may benefit from next generation sequencing. The use of next-generation sequencing

utilized after the first clinical visit could result in a higher rate of genetic diagnosis and at a considerable cost savings.

The American Academy of Neurology (AAN) has issued recommendations for genetic test that is 'guided by the clinical phenotype, inheritance patter (if available), and electrodiagnostic features. As example the AAN does not support complete panels of all known Charcot-Marie Tooth genes, but rather recommends a stepwise evaluation method to improve genetic screening efficiency.

Multiple research documents report that a thorough clinical evaluation is a major step in choosing the best genetic test for the patient condition.

Neither National Comprehensive Cancer Network (NCCN) nor the American College of Medical Genetics and Genomics (ACMG) have general guidelines on oncologic genetic testing, but rather give guidance on testing for specific types of cancer. The CDC does maintain several databases for information on genetic testing and precision medicine.

- Evaluating Genomic Tests
- Public Health Genomics and Precision Health Knowledge Base (v7.5)

Coding Requirements

Procedure Codes

CPT Code	Description
0023U	Oncology (acute myelogenous leukemia), DNA, genotyping of internal tandem duplication, p.D835, p.I836, using mononuclear cells, reported as detection or non-detection of FLT3 mutation and indication for or against the use of midostaurin
0048U	Oncology (solid organ neoplasia), DNA, targeted sequencing of protein-coding exons of 468 cancer-associated genes, including interrogation for somatic mutations and microsatellite instability, matched with normal specimens, utilizing formalin-fixed paraffin-embedded tumor tissue, report of clinically significant mutation(s)
0050U	Targeted genomic sequence analysis panel, acute myelogenous leukemia, DNA analysis, 194 genes, interrogation for sequence variants, copy number variants or rearrangements
0007M	Oncology (gastrointestinal neuroendocrine tumors), real-time PCR expression analysis of 51 genes, utilizing whole peripheral blood, algorithm reported as a nomogram of tumor disease index
81272	KIT (v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog) (eg, gastrointestinal stromal tumor [GIST], acute myeloid leukemia, melanoma), gene analysis, targeted sequence analysis (eg, exons 8, 11, 13, 17, 18)
81273	KIT (v-kit Hardy-Zuckerman 4 feline sarcoma viral oncogene homolog) (eg, mastocytosis), gene analysis, D816 variant(s)
81340	TRB@ (T cell antigen receptor, beta) (e.g., leukemia and lymphoma), gene rearrangement analysis to detect abnormal clonal population(s); using amplification methodology (e.g., polymerase chain reaction)
81342	TRG@ (T cell antigen receptor, gamma) (eg, leukemia and lymphoma), gene rearrangement analysis, evaluation to detect abnormal clonal population(s)
81401	Molecular pathology procedure, Level 2
81402	Molecular pathology procedure, Level 3
81403	Molecular pathology procedure, Level 4
81404	Molecular pathology procedure, Level 5
81405	Molecular pathology procedure, Level 6

81406	Molecular pathology procedure, Level 7
81407	Molecular pathology procedure, Level 8
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 14 genes, including ATM, BRCA1, BRCA2, BRIP1, CDH1, MLH1, MSH2, MSH6, NBN, PALB2, PTEN, RAD51C, STK11, and TP53
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
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
81445	Targeted genomic sequence analysis panel, solid organ neoplasm, 5-50 genes (eg, ALK, BRAF, CDKN2A, EGFR, ERBB2, KIT, KRAS, MET, NRAS, PDGFRA, PDGFRB, PGR, PIK3CA, PTEN, RET), interrogation for sequence variants and copy number variants or rearrangements, if performed; DNA analysis or combined DNA and RNA analysis
81450	Targeted genomic sequence analysis panel, hematolymphoid neoplasm or disorder, 5-50 genes (eg, BRAF, CEBPA, DNMT3A, EZH2, FLT3, IDH1, IDH2, JAK2, KIT, KRAS, MLL, NOTCH1, NPM1, NRAS), interrogation for sequence variants, and copy number variants or rearrangements, or isoform expression or mRNA expression levels, if performed; DNA analysis or combined DNA and RNA analysis
81455	Targeted genomic sequence analysis panel, solid organ or hematolymphoid neoplasm or disorder, 51 or greater genes (eg, ALK, BRAF, CDKN2A, CEBPA, DNMT3A, EGFR, ERBB2, EZH2, FLT3, IDH1, IDH2, JAK2, KIT, KRAS, MET, MLL, NOTCH1, NPM1, NRAS, PDGFRA, PDGFRB, PGR, PIK3CA, PTEN, RET), interrogation for sequence variants and copy number variants or rearrangements, or isoform expression or mRNA expression levels, if performed; DNA analysis or combined DNA and RNA analysis
81479*	Unlisted molecular pathology procedure
81504	Oncology (tissue of origin), microarray gene expression profiling of > 2000 genes, utilizing formalin-fixed paraffin-embedded tissue, algorithm reported as tissue similarity scores
81520	Oncology (breast), mRNA gene expression profiling by hybrid capture of 58 genes (50 content and 8 housekeeping), utilizing formalin-fixed paraffin-embedded tissue, algorithm reported as a recurrence risk score
81521	Oncology (breast), mRNA, microarray gene expression profiling of 70 content genes and 465 housekeeping genes, utilizing fresh frozen or formalin-fixed paraffin-embedded tissue, algorithm reported as index related to risk of distant metastasis
81540	Oncology (tumor of unknown origin), mRNA, gene expression profiling by real-time RT-PCR of 92 genes (87 content and 5 housekeeping) to classify tumor into main cancer type and subtype, utilizing formalin-fixed paraffin-embedded tissue, algorithm reported as a probability of a predicted main cancer type and subtype
88299	Unlisted cytogenetic study
S3854	Gene expression profiling panel for use in the management of breast cancer treatment

*TAG Determination; see 'Governing Bodies Approval' section above.

Note: If a procedure code other than those listed above is requested, the request must be sent to a Medical Director for individual consideration. The code may also be possibly listed on another separate Highmark Wholecare medical policy.

Diagnosis Codes

This list is not all-inclusive

ICD-10 Code	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
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 tumor 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
C10.1	Malignant neoplasm of anterior surface of epiglottis
C10.2	Malignant neoplasm of lateral wall of oropharynx
C10.3	Malignant neoplasm of posterior wall of oropharynx
C10.4	Malignant neoplasm of branchial cleft
C10.8	Malignant neoplasm of overlapping sites of oropharynx
C10.9	Malignant neoplasm of oropharynx, unspecified
C11.0	Malignant neoplasm of superior wall of nasopharynx
C11.1	Malignant neoplasm of posterior wall of nasopharynx
C11.2	Malignant neoplasm of lateral wall of nasopharynx
C11.3	Malignant neoplasm of anterior wall of nasopharynx
C11.8	Malignant neoplasm of overlapping sites of nasopharynx
C11.9	Malignant neoplasm of nasopharynx, unspecified
C12	Malignant neoplasm of pyriform sinus
C13.0	Malignant neoplasm of postcricoid region
C13.1	Malignant neoplasm of aryepiglottis fold, hypopharyngeal aspect
C13.2	Malignant neoplasm of posterior wall of hypopharynx
C13.8	Malignant neoplasm of overlapping sites of hypopharynx
C13.9	Malignant neoplasm of hypopharynx, unspecified

C14.0	Malignant neoplasm of pharynx, unspecified
C14.2	Malignant neoplasm of Waldeyer's ring
C14.8	Malignant neoplasm of overlapping sites of lip, oral cavity and pharynx
C15.3	Malignant neoplasm of upper third of esophagus
C15.4	Malignant neoplasm of middle third esophagus
C15.5	Malignant neoplasm of lower third of esophagus
C15.8	Malignant neoplasm of overlapping sites of esophagus
C15.9	Malignant neoplasm of esophagus, unspecified
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
C22.0	Liver cell carcinoma
C22.2	Hepatoblastoma
C22.3	Liver cell carcinoma
C22.4	Other sarcomas of liver
C22.7	Other specified carcinoma 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
C23	Malignant neoplasm of gallbladder
C24.0	Malignant neoplasm of extrahepatic bile duct
C24.1	Malignant neoplasm of ampulla of Vater
C24.8	Malignant neoplasm of overlapping sites of biliary tract
C24.9	Malignant neoplasm of biliary tract, unspecified
C25.0	Malignant neoplasm of head of pancreas
C25.1	Malignant neoplasm of body of pancreas
C25.2	Malignant neoplasm of tail of pancreas
C25.3	Malignant neoplasm of pancreatic duct
C25.4	Malignant neoplasm of endocrine pancreas
C25.7	Malignant neoplasm of other parts of pancreas
C25.8	Malignant neoplasm of overlapping sites of pancreas
C25.9	Malignant neoplasm of pancreas, unspecified
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 main 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
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
C43.0	Malignant melanoma of lip
C43.10	Malignant neoplasm 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 neoplasm of unspecified ear and external auricular canal
C43.21	Malignant neoplasm of right ear and external auricular canal
C43.22	Malignant neoplasm of left ear and external auricular canal
C43.30	Malignant neoplasm of unspecified part of face
C43.31	Malignant neoplasm of nose
C43.39	Malignant neoplasm of other parts of the face
C43.4	Malignant neoplasm of scalp and neck
C43.51	Malignant neoplasm of anal skin
C43.52	Malignant neoplasm of skin of breast
C43.59	Malignant neoplasm 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
C4A.111	Merkel cell carcinoma of right upper eyelid, including canthus
C4A.112	Merkel cell carcinoma of right lower eyelid, including canthus
C4A.121	Merkel cell carcinoma of left upper eyelid, including canthus
C4A.122	Merkel cell carcinoma of left lower eyelid, including canthus
C44.111	Basal cell carcinoma of skin of unspecified eyelid, including canthus
C44.1121	Basal cell carcinoma of skin of right upper eyelid, including canthus
C44.1122	Basal cell carcinoma of skin of right lower eyelid, including canthus
C44.1191	Basal cell carcinoma of skin of left upper eyelid, including canthus
C44.1192	Basal cell carcinoma of skin of left lower eyelid, including canthus
C44.121	Squamous cell carcinoma of skin of unspecified eyelid, including canthus

C44.1221	Squamous cell carcinoma of skin of right upper eyelid, including canthus
C44.1222	Squamous cell carcinoma of skin of right lower eyelid, including canthus
C44.1291	Squamous cell carcinoma of skin of left upper eyelid, including canthus
C44.1292	Squamous cell carcinoma of skin of left lower eyelid, including canthus
C44.131	Sebaceous cell carcinoma of skin of unspecified eyelid, including canthus
C44.1321	Sebaceous cell carcinoma of skin of right upper eyelid, including canthus
C44.1322	Sebaceous cell carcinoma of skin of right lower eyelid, including canthus
C44.1391	Sebaceous cell carcinoma of skin of left upper eyelid, including canthus
C44.1392	Sebaceous cell carcinoma of skin of left lower eyelid, including canthus
C44.191	Other specified malignant neoplasm of skin of unspecified eyelid, including canthus
C44.1921	Other specified malignant neoplasm of skin of right upper eyelid, including canthus
C44.1922	Other specified malignant neoplasm of skin of right lower eyelid, including canthus
C44.1991	Other specified malignant neoplasm of skin of left upper eyelid, including canthus
C44.1992	Other specified malignant neoplasm of skin of left lower eyelid, including canthus
C45.0	Mesothelioma of pleura
C45.1	Mesothelioma of peritoneum
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
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
C49.0	Malignant neoplasm of connective and soft tissue of head, face, and neck
C49.9	Malignant neoplasm of connective and soft tissue, unspecified
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
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
C50.121	Malignant neoplasm of central portion of right male breast
C50.122	Malignant neoplasm of central portion of left male 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
C50.521	Malignant neoplasm of lower-outer quadrant of right male breast
C50.522	Malignant neoplasm of lower-outer quadrant of left male 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
C50.921	Malignant neoplasm of unspecified site of right male breast
C50.922	Malignant neoplasm of unspecified site of left male breast
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
C56.2	Malignant neoplasm of left ovary
C57.01	Malignant neoplasm of right fallopian tube
C57.02	Malignant neoplasm of left fallopian tube
C57.11	Malignant neoplasm of right broad ligament
C57.12	Malignant neoplasm of left broad 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
C57.7	Malignant neoplasm of other specified female genital organs
C57.8	Malignant neoplasm of overlapping sites of female genital organs
C57.9	Malignant neoplasm of female genital organ, unspecified
C60.1	Malignant neoplasm of glans penis
C61	Malignant neoplasm of prostate
C64.1	Malignant neoplasm of right kidney, except renal pelvis
C64.2	Malignant neoplasm of left kidney, expect renal pelvis
C64.9	Malignant neoplasm of unspecified kidney, except renal pelvis
C65.1	Malignant neoplasm of unspecified kidney, except 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
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
C67.6	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
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
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
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
C73	Malignant neoplasm of thyroid gland
C74.10	Malignant neoplasm of medulla of unspecified adrenal gland
C74.11	Malignant neoplasm of medulla of right adrenal gland
C74.12	Malignant neoplasm of medulla of left adrenal gland
C75.0	Malignant neoplasm of parathyroid gland
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
C78.00	Secondary malignant neoplasm of unspecified lung
C78.01	Secondary malignant neoplasm of right lung
C78.02	Secondary malignant neoplasm left lung
C78.1	Secondary malignant neoplasm of mediastinum
C78.2	Secondary malignant neoplasm of pleura
C78.30	Secondary malignant neoplasm of unspecified respiratory organ
C78.39	Secondary malignant neoplasm of other respiratory organs
C78.4	Secondary malignant neoplasm of small intestine
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
C78.80	Secondary malignant neoplasm of unspecified digestive organ

C78.89	Secondary malignant neoplasm of other digestive organs
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
C79.61	Secondary malignant neoplasm of right ovary
C79.62	Secondary malignant neoplasm of left ovary
C79.81	Secondary malignant neoplasm of breast
C79.89	Secondary malignant neoplasm of other specified sites
C80.0	Disseminated malignant neoplasm, unspecified
C80.1	Malignant (primary) neoplasm, unspecified
C81.00	Nodular lymphocyte predominate Hodgkin lymphoma, unspecified site
C81.01	Nodular lymphocyte predominate Hodgkin lymphoma, lymph nodes of head, face and neck
C81.02	Nodular lymphocyte predominate Hodgkin lymphoma, intrathoracic lymph nodes
C81.03	Nodular lymphocyte predominate Hodgkin lymphoma, intra-abdominal lymph nodes
C81.04	Nodular lymphocyte predominate Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.05	Nodular lymphocyte predominate Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.06	Nodular lymphocyte predominate Hodgkin lymphoma, intrapelvic lymph nodes
C81.07	Nodular lymphocyte predominate Hodgkin lymphoma, spleen
C81.08	Nodular lymphocyte predominate Hodgkin lymphoma, lymph nodes of multiple sites
C81.09	Nodular lymphocyte predominate Hodgkin lymphoma, extranodal and solid organ sites
C81.10	Nodular sclerosis classical Hodgkin lymphoma, unspecified site
C81.11	Nodular sclerosis classical Hodgkin lymphoma, lymph nodes of head, face and neck
C81.12	Nodular sclerosis classical Hodgkin lymphoma, intrathoracic lymph nodes
C81.13	Nodular sclerosis classical Hodgkin lymphoma, intra-abdominal lymph nodes
C81.14	Nodular sclerosis classical Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.15	Nodular sclerosis classical Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.16	Nodular sclerosis classical Hodgkin lymphoma, intrapelvic lymph nodes
C81.17	Nodular sclerosis classical Hodgkin lymphoma, spleen
C81.18	Nodular sclerosis classical Hodgkin lymphoma, lymph nodes of multiple sites
C81.19	Nodular sclerosis classical Hodgkin lymphoma, extranodal and solid organ sites
C81.20	Mixed cellularity classical Hodgkin lymphoma, unspecified site
C81.21	Mixed cellularity classical Hodgkin lymphoma, lymph nodes of head, face and neck
C81.22	Mixed cellularity classical Hodgkin lymphoma, intrathoracic lymph nodes
C81.23	Mixed cellularity classical Hodgkin lymphoma, intra-abdominal lymph nodes
C81.24	Mixed cellularity classical Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.25	Mixed cellularity classical Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.26	Mixed cellularity classical Hodgkin lymphoma, intrapelvic lymph nodes
C81.27	Mixed cellularity classical Hodgkin lymphoma, spleen
C81.28	Mixed cellularity classical Hodgkin lymphoma, lymph nodes of multiple sites
C81.29	Mixed cellularity classical Hodgkin lymphoma, extranodal and solid organs
C81.30	Lymphocyte depleted classical Hodgkin lymphoma, unspecified site
C81.31	Lymphocyte depleted classical Hodgkin lymphoma, lymph nodes of head, face and neck
C81.32	Lymphocyte depleted classical Hodgkin lymphoma, intrathoracic lymph nodes
C81.33	Lymphocyte depleted classical Hodgkin lymphoma, intra-abdominal lymph nodes
C81.34	Lymphocyte depleted classical Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.35	Lymphocyte depleted classical Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.36	Lymphocyte depleted classical Hodgkin lymphoma, intrapelvic lymph nodes
C81.37	Lymphocyte depleted classical Hodgkin lymphoma, spleen

C81.38	Lymphocyte depleted classical Hodgkin lymphoma, lymph nodes of multiple sites
C81.39	Lymphocyte depleted classical Hodgkin lymphoma, extranodal and solid organ sites
C81.40	Lymphocyte-rich classical Hodgkin lymphoma, unspecified site
C81.41	Lymphocyte-rich classical Hodgkin lymphoma, lymph nodes of head, face and neck
C81.42	Lymphocyte-rich classical Hodgkin lymphoma, intrathoracic lymph nodes
C81.43	Lymphocyte-rich classical Hodgkin lymphoma, intra-abdominal lymph nodes
C81.44	Lymphocyte-rich classical Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.45	Lymphocyte-rich classical Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.46	Lymphocyte-rich classical Hodgkin lymphoma, intrapelvic lymph nodes
C81.47	Lymphocyte-rich classical Hodgkin lymphoma, spleen
C81.48	Lymphocyte-rich classical Hodgkin lymphoma, lymph nodes of multiple sites
C81.49	Lymphocyte-rich classical Hodgkin lymphoma, extranodal and solid organ sites
C81.70	Other classical Hodgkin lymphoma, unspecified site
C81.71	Other classical Hodgkin lymphoma, lymph nodes of head, face and neck
C81.72	Other classical Hodgkin lymphoma, intrathoracic lymph nodes
C81.73	Other classical Hodgkin lymphoma, intra-abdominal lymph nodes
C81.74	Other classical Hodgkin lymphoma, lymph nodes of axilla and upper limb
C81.75	Other classical Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C81.76	Other classical Hodgkin lymphoma, intrapelvic lymph nodes
C81.77	Other classical Hodgkin lymphoma, spleen
C81.78	Other classical Hodgkin lymphoma, lymph nodes of multiple sites
C81.79	Other classical Hodgkin lymphoma, extranodal and solid organ sites
C81.90	Hodgkin lymphoma, unspecified, unspecified site
C81.91	Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck
C81.92	Hodgkin lymphoma, unspecified, intrathoracic lymph nodes
C81.93	Hodgkin lymphoma, unspecified, intra-abdominal lymph nodes
C81.94	Hodgkin lymphoma, unspecified, lymph nodes of axilla and upper limb
C81.95	Hodgkin lymphoma, unspecified, lymph nodes of inguinal region and lower limb
C81.96	Hodgkin lymphoma, unspecified, intrapelvic lymph nodes
C81.97	Hodgkin lymphoma, unspecified, spleen
C81.98	Hodgkin lymphoma, unspecified, lymph nodes of multiple sites
C81.99	Hodgkin lymphoma, unspecified, extranodal and solid organ sites
C82.00	Follicular lymphoma grade I, unspecified site
C82.01	Follicular lymphoma grade I, lymph nodes of head, face, and neck
C82.02	Follicular lymphoma grade I, intrathoracic lymph nodes
C82.03	Follicular lymphoma grade I, intra-abdominal lymph nodes
C82.04	Follicular lymphoma grade I, lymph nodes of axilla and upper limb
C82.05	Follicular lymphoma grade I, lymph nodes of inguinal region and lower limb
C82.06	Follicular lymphoma grade I, intrapelvic lymph nodes
C82.07	Follicular lymphoma grade I, spleen
C82.08	Follicular lymphoma grade I, lymph nodes of multiple sites
C82.09	Follicular lymphoma grade I, extranodal and solid organ sites
C82.10	Follicular lymphoma grade II, unspecified site
C82.11	Follicular lymphoma grade II, lymph nodes of head, face, and neck
C82.12	Follicular lymphoma grade II, intrathoracic lymph nodes
C82.13	Follicular lymphoma grade II, intra-abdominal lymph nodes
C82.14	Follicular lymphoma grade II, lymph nodes of axilla and upper limb
C82.15	Follicular lymphoma grade II, lymph nodes of inguinal region and lower limb
C82.16	Follicular lymphoma grade II, intrapelvic lymph nodes
C82.17	Follicular lymphoma grade II, spleen
C82.18	Follicular lymphoma grade II, lymph nodes of multiple sites

C82.19	Follicular lymphoma grade II, extranodal and solid organ sites
C82.20	Follicular lymphoma grade III, unspecified, unspecified site
C82.21	Follicular lymphoma grade III, unspecified, lymph nodes of head, face, and neck
C82.22	Follicular lymphoma grade III, unspecified, intrathoracic lymph nodes
C82.23	Follicular lymphoma grade III, unspecified, intra-abdominal lymph nodes
C82.24	Follicular lymphoma grade III, unspecified, lymph nodes of axilla and upper limb
C82.25	Follicular lymphoma grade III, unspecified, lymph nodes of inguinal region and lower limb
C82.26	Follicular lymphoma grade III, unspecified, intrapelvic lymph nodes
C82.27	Follicular lymphoma grade III, unspecified, spleen
C82.28	Follicular lymphoma grade III, unspecified, lymph nodes of multiple sites
C82.29	Follicular lymphoma grade III, unspecified, extranodal and solid organ sites
C82.30	Follicular lymphoma grade IIIa, unspecified site
C82.00	Follicular lymphoma grade I, unspecified site
C82.01	Follicular lymphoma grade I, lymph nodes of head, face, and neck
C82.02	Follicular lymphoma grade I, intrathoracic lymph nodes
C82.03	Follicular lymphoma grade I, intra-abdominal lymph nodes
C82.04	Follicular lymphoma grade I, lymph nodes of axilla and upper limb
C82.05	Follicular lymphoma grade I, lymph nodes of inguinal region and lower limb
C82.06	Follicular lymphoma grade I, intrapelvic lymph nodes
C82.07	Follicular lymphoma grade I, spleen
C82.08	Follicular lymphoma grade I, lymph nodes of multiple sites
C82.09	Follicular lymphoma grade I, extranodal and solid organ sites
C82.10	Follicular lymphoma grade II, unspecified site
C82.31	Follicular lymphoma grade IIIa, lymph nodes of head, face, and neck
C82.32	Follicular lymphoma grade IIIa, intrathoracic lymph nodes
C82.33	Follicular lymphoma grade IIIa, intra-abdominal lymph nodes
C82.34	Follicular lymphoma grade IIIa, lymph nodes of axilla and upper limb
C82.35	Follicular lymphoma grade IIIa, lymph nodes of inguinal region and lower limb
C82.36	Follicular lymphoma grade IIIa, intrapelvic lymph nodes
C82.37	Follicular lymphoma grade IIIa, spleen
C82.38	Follicular lymphoma grade IIIa, lymph nodes of multiple sites
C82.39	Follicular lymphoma grade IIIa, extranodal and solid organ sites
C82.40	Follicular lymphoma grade IIIb, unspecified site
C82.41	Follicular lymphoma grade IIIb, lymph nodes of head, face, and neck
C82.42	Follicular lymphoma grade IIIb, intrathoracic lymph nodes
C82.43	Follicular lymphoma grade IIIb, intra-abdominal lymph nodes
C82.44	Follicular lymphoma grade IIIb, lymph nodes of axilla and upper limb
C82.45	Follicular lymphoma grade IIIb, lymph nodes of inguinal region and lower limb
C82.46	Follicular lymphoma grade IIIb, intrapelvic lymph nodes
C82.47	Follicular lymphoma grade IIIb, spleen
C82.48	Follicular lymphoma grade IIIb, lymph nodes of multiple sites
C82.49	Follicular lymphoma grade IIIb, extranodal and solid organ sites
C82.50	Diffuse follicle center lymphoma, unspecified site
C82.51	Diffuse follicle center lymphoma, lymph nodes of head, face, and neck
C82.52	Diffuse follicle center lymphoma, intrathoracic lymph nodes
C82.53	Diffuse follicle center lymphoma, intra-abdominal lymph nodes
C82.54	Diffuse follicle center lymphoma, lymph nodes of axilla and upper limb
C82.55	Diffuse follicle center lymphoma, lymph nodes of inguinal region and lower limb
C82.56	Diffuse follicle center lymphoma, intrapelvic lymph nodes
C82.57	Diffuse follicle center lymphoma, spleen
C82.58	Diffuse follicle center lymphoma, lymph nodes of multiple sites

C82.59	Diffuse follicle center lymphoma, extranodal and solid organ sites
C82.60	Cutaneous follicle center lymphoma, unspecified site
C82.61	Cutaneous follicle center lymphoma, lymph nodes of head, face, and neck
C82.62	Cutaneous follicle center lymphoma, intrathoracic lymph nodes
C82.63	Cutaneous follicle center lymphoma, intra-abdominal lymph nodes
C82.64	Cutaneous follicle center lymphoma, lymph nodes of axilla and upper limb
C82.65	Cutaneous follicle center lymphoma, lymph nodes of inguinal region and lower limb
C82.66	Cutaneous follicle center lymphoma, intrapelvic lymph nodes
C82.67	Cutaneous follicle center lymphoma, spleen
C82.68	Cutaneous follicle center lymphoma, lymph nodes of multiple sites
C82.69	Cutaneous follicle center lymphoma, extranodal and solid organ sites
C82.80	Other types of follicular lymphoma, unspecified site
C82.81	Other types of follicular lymphoma, lymph nodes of head, face, and neck
C82.82	Other types of follicular lymphoma, intrathoracic lymph nodes
C82.83	Other types of follicular lymphoma, intra-abdominal lymph nodes
C82.84	Other types of follicular lymphoma, lymph nodes of axilla and upper limb
C82.85	Other types of follicular lymphoma, lymph nodes of inguinal region and lower limb
C82.86	Other types of follicular lymphoma, intrapelvic lymph nodes
C82.87	Other types of follicular lymphoma, spleen
C82.88	Other types of follicular lymphoma, lymph nodes of multiple sites
C82.89	Other types of follicular lymphoma, extranodal and solid organ sites
C82.90	Follicular lymphoma, unspecified, unspecified site
C82.91	Follicular lymphoma, unspecified, lymph nodes of head, face, and neck
C82.92	Follicular lymphoma, unspecified, intrathoracic lymph nodes
C82.93	Follicular lymphoma, unspecified, intra-abdominal lymph nodes
C82.94	Follicular lymphoma, unspecified, lymph nodes of axilla and upper limb
C82.95	Follicular lymphoma, unspecified, lymph nodes of inguinal region and lower limb
C82.96	Follicular lymphoma, unspecified, intrapelvic lymph nodes
C82.97	Follicular lymphoma, unspecified, spleen
C83.00	Small cell B-cell lymphoma, unspecified site
C83.01	Small cell B-cell lymphoma, lymph nodes of head, face, and neck
C83.02	Small cell B-cell lymphoma, intrathoracic lymph nodes
C83.03	Small cell B-cell lymphoma, intra-abdominal lymph nodes
C83.04	Small cell B-cell lymphoma, lymph nodes of axilla and upper limb
C83.05	Small cell B-cell lymphoma, lymph nodes of inguinal region and lower limb
C83.06	Small cell B-cell lymphoma, intrapelvic lymph nodes
C83.07	Small cell B-cell lymphoma, spleen
C83.08	Small cell B-cell lymphoma, lymph nodes of multiple sites
C83.09	Small cell B-cell lymphoma, extranodal and solid organ sites
C83.10	Mantle cell lymphoma, unspecified site
C83.11	Mantle cell lymphoma, lymph nodes of head, face, and neck
C83.12	Mantle cell lymphoma, intrathoracic lymph nodes
C83.13	Mantle cell lymphoma, intra-abdominal lymph nodes
C83.14	Mantle cell lymphoma, lymph nodes of axilla and upper limb
C83.15	Mantle cell lymphoma, lymph nodes of inguinal region and lower limb
C83.16	Mantle cell lymphoma, intrapelvic lymph nodes
C83.17	Mantle cell lymphoma, spleen
C83.18	Mantle cell lymphoma, lymph nodes of multiple sites
C83.19	Mantle cell lymphoma, extranodal and solid organ sites
C83.30	Diffuse large B-cell lymphoma, unspecified site
C83.31	Diffuse large B-cell lymphoma, lymph nodes of head, face, and neck

C83.32	Diffuse large B-cell lymphoma, intrathoracic lymph nodes
C83.33	Diffuse large B-cell lymphoma, intra-abdominal lymph nodes
C83.34	Diffuse large B-cell lymphoma, lymph nodes of axilla and upper limb
C83.35	Diffuse large B-cell lymphoma, lymph nodes of inguinal region and lower limb
C83.36	Diffuse large B-cell lymphoma, intrapelvic lymph nodes
C83.37	Diffuse large B-cell lymphoma, spleen
C83.38	Diffuse large B-cell lymphoma, lymph nodes of multiple sites
C83.39	Diffuse large B-cell lymphoma, extranodal and solid organ sites
C83.50	Lymphoblastic (diffuse) lymphoma, unspecified site
C83.51	Lymphoblastic (diffuse) lymphoma, lymph nodes of head, face, and neck
C83.52	Lymphoblastic (diffuse) lymphoma, intrathoracic lymph nodes
C83.53	Lymphoblastic (diffuse) lymphoma, intra-abdominal lymph nodes
C83.54	Lymphoblastic (diffuse) lymphoma, lymph nodes of axilla and upper limb
C83.55	Lymphoblastic (diffuse) lymphoma, lymph nodes of inguinal region and lower limb
C83.56	Lymphoblastic (diffuse) lymphoma, intrapelvic lymph nodes
C83.57	Lymphoblastic (diffuse) lymphoma, spleen
C83.58	Lymphoblastic (diffuse) lymphoma, lymph nodes of multiple sites
C83.59	Lymphoblastic (diffuse) lymphoma, extranodal and solid organ sites
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
C83.80	Other non-follicular lymphoma, unspecified site
C83.81	Other non-follicular lymphoma, lymph nodes of head, face, and neck
C83.82	Other non-follicular lymphoma, intrathoracic lymph nodes
C83.83	Other non-follicular lymphoma, intra-abdominal lymph nodes
C83.84	Other non-follicular lymphoma, lymph nodes of axilla and upper limb
C83.85	Other non-follicular lymphoma, lymph nodes of inguinal region and lower limb
C83.	Other non-follicular lymphoma, intrapelvic lymph nodes
C83.87	Other non-follicular lymphoma, spleen
C83.88	Other non-follicular lymphoma, lymph nodes of multiple sites
C83.	Other non-follicular lymphoma, extranodal and solid organ sites
C83.90	Non-follicular (diffuse) lymphoma, unspecified, unspecified site
C83.91	Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of head, face, and neck
C83.92	Non-follicular (diffuse) lymphoma, unspecified, intrathoracic lymph nodes
C83.93	Non-follicular (diffuse) lymphoma, unspecified, intra-abdominal lymph nodes
C83.94	Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of axilla and upper limb
C83.95	Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of inguinal region and lower limb
C83.96	Non-follicular (diffuse) lymphoma, unspecified, intrapelvic lymph nodes
C83.97	Non-follicular (diffuse) lymphoma, unspecified, spleen
C83.98	Non-follicular (diffuse) lymphoma, unspecified, lymph nodes of multiple sites
C83.99	Non-follicular (diffuse) lymphoma, unspecified, extranodal and solid organ sites
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

C85.10	Unspecified B-cell lymphoma, unspecified site
C85.11	Unspecified B-cell lymphoma, lymph nodes of head, face, and neck
C85.12	Unspecified B-cell lymphoma, intrathoracic lymph nodes
C85.13	Unspecified B-cell lymphoma, intra-abdominal lymph nodes
C85.14	Unspecified B-cell lymphoma, lymph nodes of axilla and upper limb
C85.15	Unspecified B-cell lymphoma, lymph nodes of inguinal region and lower limb
C85.16	Unspecified B-cell lymphoma, intrapelvic lymph nodes
C85.17	Unspecified B-cell lymphoma, spleen
C85.18	Unspecified B-cell lymphoma, lymph nodes of multiple sites
C85.19	Unspecified B-cell lymphoma, extranodal and solid organ sites
C85.20	Mediastinal (thymic) large B-cell lymphoma, unspecified site
C85.21	Mediastinal (thymic) large B-cell lymphoma, lymph nodes of head, face, and neck
C85.22	Mediastinal (thymic) large B-cell lymphoma, intrathoracic lymph nodes
C85.23	Mediastinal (thymic) large B-cell lymphoma, intra-abdominal lymph nodes
C85.24	Mediastinal (thymic) large B-cell lymphoma, lymph nodes of axilla and upper limb
C85.25	Mediastinal (thymic) large B-cell lymphoma, lymph nodes of inguinal region and lower limb
C85.26	Mediastinal (thymic) large B-cell lymphoma, intrapelvic lymph nodes
C85.27	Mediastinal (thymic) large B-cell lymphoma, spleen
C85.28	Mediastinal (thymic) large B-cell lymphoma, lymph nodes of multiple sites
C85.29	Mediastinal (thymic) large B-cell lymphoma, extranodal and solid organ sites
C85.80	Other specified types of non-Hodgkin lymphoma, unspecified site
C85.81	Other specified types of non-Hodgkin lymphoma, lymph nodes of head, face, and neck
C85.82	Other specified types of non-Hodgkin lymphoma, intrathoracic lymph nodes
C85.83	Other specified types of non-Hodgkin lymphoma, intra-abdominal lymph nodes
C85.84	Other specified types of non-Hodgkin lymphoma, lymph nodes of axilla and upper limb
C85.85	Other specified types of non-Hodgkin lymphoma, lymph nodes of inguinal region and lower limb
C85.86	Other specified types of non-Hodgkin lymphoma, intrapelvic lymph nodes
C85.87	Other specified types of non-Hodgkin lymphoma, spleen
C85.88	Other specified types of non-Hodgkin lymphoma, lymph nodes of multiple sites
C85.89	Other specified types of non-Hodgkin lymphoma, extranodal and solid organ sites
C85.90	Non-Hodgkin lymphoma, unspecified, unspecified site
C85.91	Non-Hodgkin lymphoma, unspecified, lymph nodes of head, face, and neck
C85.92	Non-Hodgkin lymphoma, unspecified, intrathoracic lymph nodes
C85.93	Non-Hodgkin lymphoma, unspecified, intra-abdominal lymph nodes
C85.94	Non-Hodgkin lymphoma, unspecified, lymph nodes of axilla and upper limb
C85.95	Non-Hodgkin lymphoma, unspecified, lymph nodes of inguinal region and lower limb
C85.96	Non-Hodgkin lymphoma, unspecified, intrapelvic lymph nodes
C85.97	Non-Hodgkin lymphoma, unspecified, spleen
C85.98	Non-Hodgkin lymphoma, unspecified, lymph nodes of multiple sites
C85.99	Non-Hodgkin lymphoma, unspecified, extranodal and solid organ sites
C86.1	Hepatosplenic T-cell lymphoma
C88.0	Waldenstrom macroglobulinemia
C88.8	Other malignant immunoproliferative diseases
C90.00	Multiple myeloma, not having achieved remission
C90.02	Multiple myeloma, in relapse
C91.00	Acute lymphoblastic leukemia not having achieved remission
C91.01	Acute lymphoblastic leukemia, in remission
C91.02	Acute lymphoblastic leukemia, in relapse
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

C91.40	Hairy cell leukemia not having achieved remission
C91.41	Hairy cell leukemia, in remission
C91.42	Hairy cell leukemia, in relapse
C91.60	Prolymphocytic leukemia of T-cell type, not having achieved remission
C91.61	Prolymphocytic leukemia of T-cell type, in remission
C91.62	Prolymphocytic leukemia of T-cell type, in relapse
C92.00	Acute myeloblastic leukemia, not having achieved remission
C92.01	Acute myeloblastic leukemia, in remission
C92.02	Acute myeloblastic leukemia, in relapse
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
C92.30	Myeloid sarcoma, not having achieved remission
C92.32	Myeloid sarcoma, 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
C92.Z0	Other myeloid leukemia not having achieved remission
C92.Z2	Other myeloid leukemia, 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
C94.00	Acute erythroid leukemia, not having achieved remission
C94.02	Acute erythroid leukemia, in relapse
C94.40	Acute panmyelosis with myelofibrosis not having achieved remission
C94.41	Acute panmyelosis with myelofibrosis, in remission
C94.42	Acute panmyelosis with myelofibrosis, in relapse
C94.6	Myelodysplastic disease, not classified
C95.00	Acute leukemia of unspecified cell type not having achieved remission
C95.01	Acute leukemia of unspecified cell type, in remission
C95.02	Acute leukemia of unspecified cell type, in relapse
C95.10	Chronic leukemia of unspecified cell type not having achieved remission
C95.11	Chronic leukemia of unspecified cell type, in remission
C95.12	Chronic leukemia of unspecified cell type, in relapse
C95.90	Leukemia, unspecified not having achieved remission
C95.91	Leukemia, unspecified, in remission
C95.92	Leukemia, unspecified, in relapse
C96.20	Malignant mast cell neoplasm, unspecified
C96.21	Aggressive systemic mastocytosis
C96.22	Mast cell sarcoma
C96.29	Other malignant mast cell neoplasm
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
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 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
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
D04.111	Carcinoma in situ of skin of right upper eyelid, including canthus
D04.112	Carcinoma in situ of skin of right lower eyelid, including canthus
D04.121	Carcinoma in situ of skin of left upper eyelid, including canthus
D04.122	Carcinoma in situ of skin of left lower eyelid, including canthus
D05.00	Lobular carcinoma in situ of unspecified breast
D05.01	Lobular carcinoma in situ of right breast
D05.02	Lobular carcinoma in situ of left breast
D05.10	Intraductal carcinoma in situ of unspecified breast
D05.11	Intraductal carcinoma in situ of right breast
D05.12	Intraductal carcinoma in situ of left breast
D05.80	Other specified type of carcinoma in situ of unspecified breast
D05.81	Other specified type of carcinoma in situ of right breast
D05.82	Other specified type of carcinoma in situ of left breast
D05.90	Unspecified type of carcinoma in situ of unspecified breast
D05.91	Unspecified type of carcinoma in situ of right breast
D05.92	Unspecified type of carcinoma in situ of left breast
D07.30	Carcinoma in situ of unspecified female genital organs
D07.39	Carcinoma in situ of other female genital organs
D22.111	Melanocytic nevi of right upper eyelid, including canthus
D22.112	Melanocytic nevi of right lower eyelid, including canthus
D22.121	Melanocytic nevi of left upper eyelid, including canthus
D22.122	Melanocytic nevi of left lower eyelid, including canthus
D23.111	Other benign neoplasm of skin of right upper eyelid, including canthus
D23.112	Other benign neoplasm of skin of right lower eyelid, including canthus
D23.121	Other benign neoplasm of skin of left upper eyelid, including canthus
D23.122	Other benign neoplasm of skin of left lower eyelid, including canthus

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 sights
D3A.8	Other benign neuroendocrine tumors
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
D44.9	Neoplasm of uncertain behavior of unspecified endocrine gland
D45	Polycythemia vera
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
D47.01	Cutaneous mastocytosis
D47.02	Systemic mastocytosis
D47.09	Other mast cell neoplasms of uncertain behavior
D47.1	Chronic myeloproliferative disease
D47.3	Essential (hemorrhagic) thrombocythemia
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
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
D60.0	Chronic acquired pure red cell aplasia
D60.1	Transient acquired pure red cell aplasia
D60.8	Other acquire 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
D61.9	Aplastic anemia, unspecified
D75.81	Myelofibrosis
J91.0	Malignant pleural effusion
Z15.01	Genetic susceptibility to malignant neoplasm of breast
Z15.02	Genetic susceptibility to malignant neoplasm of ovary
Z17.0	Estrogen receptor positive status [ER+]
Z80.0	Family history of malignant neoplasm of digestive organs
Z80.1	Family history of malignant neoplasm of other respiratory and intrathoracic organs
Z80.2	Family history of malignant neoplasm of trachea, bronchus and lung
Z80.3	Family history of malignant neoplasm of breast
Z80.41	Family history of malignant neoplasm of ovary
Z80.42	Family history of malignant neoplasm of prostate
Z80.43	Family history of malignant neoplasm of testis
Z80.49	Family history of malignant neoplasm of other genital organs
Z80.51	Family history of malignant neoplasm of kidney
Z80.52	Family history of malignant neoplasm of bladder
Z80.59	Family history of malignant neoplasm of other urinary tract organ
Z80.6	Family history of leukemia
Z80.7	Family history of lymphoid, hematopoietic and related tissues
Z80.8	Family history of malignant neoplasm of other organs or systems
Z80.9	Family history of malignant neoplasm, unspecified
Z85.038	Personal history of other malignant neoplasm of large intestine
Z85.048	Personal history of other malignant neoplasm of rectum, rectosigmoid junction, and anus
Z85.07	Personal history of malignant neoplasm of pancreas
Z85.3	Personal history of malignant neoplasm of breast
Z85.43	Personal history of malignant neoplasm of ovary
Z85.44	Personal history of malignant neoplasm of other female genital organs
Z85.45	Personal history of malignant neoplasm of unspecified male genital organ
Z85.46	Personal history of malignant neoplasm of prostate
Z85.49	Personal history of malignant neoplasm of other male genital organs
Z85.820	Personal history of malignant melanoma of skin

Informational

Examples of Genetic Testing Panels
This list is not all-inclusive. This table is strictly informational and does not indicate medical necessity.

Name of Test
ARUP Laboratories
Agammaglobulinemia Panel
Amyotrophic Lateral Sclerosis Pane
Aortopathy Panel
Ashkenazi Jewish Diseases Panel
Autism Panel
Biotinidase Deficiency (BTD) 5 Mutation
Brugada Syndrome Panel
Cardiomyopathy and Arrhythmia Panel
Cystic Fibrosis (CFTR) 32 Mutations Panel
Mitochondrial Disorders Panel
Noonan Spectrum Disorders Panel
Periodic Fever Syndromes Panel
Retinitis Pigmentosa/Leber Congenital Amaurosis Panel
Solid Tumor Mutation Panel Next Generation Sequencing
Vascular Malformation Syndromes
Emory Genetics Laboratories
ACOG/ACMG Carrier Screen Targeted Mutation Panel
Anophthalmia/ Microphthalmia/ Anterior Segment Dysgenesis/ Anomaly: Sequencing Panel
Arrhythmias Deletion/Duplication Panel
Arrhythmias Sequencing Panel
Autism Spectrum Disorders
Cardiomyopathy Panel
Ciliopathies Panel
Congenital Glycosylation Disorders
Early Onset IBD Sequencing and Del/Dup Panels
Epilepsy
Eye Disorders
Expanded Neuromuscular Disorders
Hereditary Hemolytic Anemia Sequencing 28 Genes
Noonan Syndrome and Related Disorders
Osteogenesis Inperfecta and Osteopenia Sequencing Panel
Short Stature Panel
Sudden Cardiac Arrest Panel
X-linked Intellectual Disability
Ambry Genetics
BreastNext™
CancerNext™
ColoNext™
FHNext
HCMNext

Marfan, Aneurysm and Related Disorders Panel
OvaNext™
Pan Cardio Panel
PancNext
RenalNext
TAADNext
X-linked Intellectual Disability
Athena
Alzheimer's Disease
Amyotrophic Lateral Sclerosis Advanced Evaluation Gene Panel
Ataxia, Comprehensive Evaluation
Autosomal Recessive Ataxia Evaluation
Common Mitochondrial Disorder Evaluation
Complete Ataxia Evaluation Panel
Complete Hereditary Spastic Paraplegia Evaluation Panel
Early Infantile Epileptic Encephalopathy
Hemiplegic Migraine Profile
Hereditary Renal Tubular Disorder Panel
Intellectual Disability
Mitochondrial Disease Associated with Mitochondrial Depletion Syndrome
Myotonic Syndrome Advanced Evaluation Panel
Periodic Paralysis Advanced Sequencing Evaluation Panel
Progressive External Ophthalmoplegia Evaluation Panel
Idiopathic Hypogonadotropic Hypogonadism/Kallmann Syndrome
Baylor College of Medicine
Cobalamin Metabolism Comprehensive Panel
CoQ10 Comprehensive Panel
GeneAware
Glycogen Storage Disorders Panel
Low Bone Mass Panel
Mitochondrial Disorders Panel
Myopathy/Rhabdomyolysis Panel
Progressive External Ophthalmoplegia Panel
Pyruvate Dehydrogenase Deficiency and Mitochondrial Respiratory Chain Complex V Deficiency Panel
Retinitis Pigmentosa Panel
Usher Syndrome Panel
GeneDx
Autism/ID Xpanded Panel
Breast/Ovarian Cancer Panel
Cardiomyopathy Panel
Colorectal Cancer Panel
Combined Cardiac Panel
Combined Mito Genome Plus Mito Nuclear Gene Panel
Comprehensive Hereditary Cancer Panel
Comprehensive Arrhythmia Panel
Comprehensive Cancer Panel

Comprehensive Epilepsy Panel
Comprehensive Mitochondrial Nuclear Gene Panel
Congenital Ichthyosis XomeDxSlice Panel
Congenital Myopathy and Congenital Muscular Dystrophy Panel
Dilated Cardiomyopathy (DCM) Left Ventricular Non-Compaction (LVNC)
Endometrial Cancer Panel
EpiXpanded Panel
Heterotaxy Panel
High-Moderate Risk Panel
Hyper-IgE Syndromes Panel
Hypertrophic Cardiomyopathy (HCM) Panel
Marfan Syndrome/TAAD Sequencing Panel
Noonan RASopathies Panel
Noonan Syndrome Panel
Pancreatic Cancer Panel
Prenatal Noonan Spectrum Disorders
Prenatal Skeletal Dysplasia Panel
Progressive External Ophthalmoplegia (PEO)/Optic Atrophy Nuclear Gene Panel
Rett/Angelman Syndrome Panel
Syndromic Macrocephaly Overgrowth Panel
XomeDxPlus (whole exome sequencing [WES] + mtDNA Sequencing and Deletion Testing
Medical Neurogenetics
Leigh Disease Panel
Spastic Paraplegia Next Generation Sequencing
Partners Healthcare
Isolated Non-syndromic Congenital Heart Defects Panel
Noonan Spectrum Panel *Pan Cardiomyopathy Panel*
Usher Syndrome Panel
Mayo Medical Laboratories
Arrhythmogenic Right Ventricular Cardiomyopathy Panel
Bacterial Typing by whole Genome Sequencing
Brugada Syndrome
Comprehensive Cardiomyopathy Multi-Gene Panel
Congenital Disorders Chromosome Analysis (CDCA)
Dilated Cardiomyopathy Panel
Hereditary Colon Cancer Syndromes
Hypertrophic Cardiomyopathy Panel
Long QT Syndrome
Marfan Syndrome Panel
Noonan Syndrome Panel
Signature Genomics
Signature Prenatal Microarray
Counsyl Genomics
Counsyl Panel
GoodStart Genetics
GoodStart Select

Reimbursement

Participating facilities will be reimbursed per their Highmark Wholecare℠ contract.

Reference Sources

American Society of Clinical Oncology (ASCO). Panel Tests. Undated. Accessed on August 2, 2023.

Society of Gynecologic Oncology (SGO). 2016 Genetics Toolkit. 2016. Accessed on July 27, 2022.

LaDuca H, Stuenkel AJ, Dolinsky JS, et al. Utilization of multigene panels in hereditary cancer predisposition testing: analysis of more than 2,000 patients. Genetics in Medicine (2014)16, 830-837. Accessed on October 4, 2017.

Robson ME, Bradbury AR, Arun B, et al. American Society of Clinical Oncology Policy Statement Update: genetic and genomic testing for cancer susceptibility. Journal of Clinical Oncol. 33, no.21. November 2015. Accessed on October 4, 2017.

Xue Y, Ankala A, Wilcox WR, Hegde MR. Solving the molecular diagnostic testing conundrum for Mendelian disorders in the era of next-generation sequencing: single-gene, gene panel, or exome/genome sequencing. Genet in Med. 2015. Accessed on October 10, 2017.

Shashi V, McConkie-Rosell A, Rosell B, Schoch K, et al. The utility of the traditional medical genetics diagnostic evaluation in the context of next-generation sequencing for undiagnosed genetic disorders. Genet in Med. February 2014. Accessed on October 10, 2017.

World Health Organization (WHO). Quality & safety in genetic testing: an emerging concern. Accessed on August 2, 2023.

Satya-Murti S, Cohen BH, Michelson D. Chromosomal microarray analysis for intellectual disabilities. Template Coverage Policy. Americ Acad Neurology. 2013. Accessed on October 11, 2017.

England JD, Gronseth GS, Franklin G, et al. AAN Practice Parameter: Evaluation of distal symmetric polyneuropathy: Role of laboratory and genetic testing (an evidence-based review). Neurology. 2009. Accessed on October 17, 2017.