

Concert Genetic Testing: Immunology and Rheumatology

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[Coding implications](#)

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OVERVIEW

This policy addresses the use of tests for autoimmune conditions and inherited immunodeficiency disorders.

For additional information see the [Rationale](#) section.

POLICY REFERENCE TABLE

Coding Implications

This clinical policy references Current Procedural Terminology (CPT®). CPT is a registered trademark of the American Medical Association. All CPT codes and descriptions are copyrighted 2024, American Medical Association. All rights reserved. CPT codes and CPT descriptions are from the current manuals and those included herein are not intended to be all-inclusive and are included for informational purposes only. Codes referenced in this clinical policy are for informational purposes only and may not support medical necessity. Inclusion or exclusion of any codes does not guarantee coverage. Providers should reference the most up-to-date sources of professional coding guidance prior to the submission of claims for reimbursement of covered services.

The tests, CPT codes, and ICD codes referenced in this policy are not comprehensive, and their inclusion does not represent a guarantee of coverage or non-coverage. Please see the [Concert Platform](#) for additional registered tests.

The tests and associated laboratories and CPT codes contained within this document serve only as examples to help users navigate claims and corresponding criteria; as such, they are not comprehensive and are not a guarantee of coverage or non-coverage. Please see the [Concert Genetics Platform](#) for a comprehensive list of registered tests.

NOTE: Coverage is subject to each requested code's inclusion on the corresponding LDH fee schedule. Non-covered codes are denoted (*) and are reviewed for Medical Necessity for members under 21 years of age on a per case basis. The non-covered codes will only be denoted in the table below and not throughout the policy. Please only reference the policy reference table for covered and non-covered codes.

<u>CRITERIA SECTIONS</u>	EXAMPLE TEST (LABS)	COMMON BILLING CODES	<u>REF</u>
<u>Celiac Disease</u>			
<u>HLA-DQ Genotyping Analysis</u>	Celiac <i>HLA DQ</i> Association (Labcorp)	81375*, 81376*, 81377*, 81382, 81383*, K90.0, R10.0-R10.13, R10.3-R10.829, R10.84-R10.9	1, 2, 3
<u>HLA Typing for Axial Spondyloarthritis</u>			
<u>HLA Typing for Axial Spondyloarthritis</u>	<i>HLA-B27</i> DNA Typing (Quest Diagnostics)	81374*, M04.8, M04.9, M05, M06, M45	9, 10, 11
<u>Periodic Fever Syndrome</u>			
<u>Periodic Fever Syndromes Multigene Panel</u>	Periodic Fever Syndromes Panel (Invitae)	81404*, 81479, M04.1, R50.9, A68.9	12
	Periodic Fever Syndromes Panel (PreventionGenetics, part of Exact Sciences)		
	Periodic Fever Syndromes Panel (7 genes) (GeneDx)		
<u>Rheumatoid Arthritis</u>			
<u>Evidence-Based Rheumatoid Arthritis Algorithmic Tests</u>	PrismRA - 0456U* (Scipher Medicine)	0456U*, M05, M06, M08	13
<u>Emerging Evidence Rheumatoid Arthritis</u>	Vectra (LabCorp)	81490*, M05.00-M06.9	4
	Vectra with CV Risk (LabCorp)		

<u>CRITERIA SECTIONS</u>	EXAMPLE TEST (LABS)	COMMON BILLING CODES	<u>REF</u>
<u>Algorithmic Tests</u>			
<u>Other Covered Immune, Autoimmune, and Rheumatoid Disorders</u>			
<u>Other Covered Immune, Autoimmune, and Rheumatoid Disorders</u>	See list below	81400*, 81401*, 81402*, 81403*, 81404*, 81405*, 81406*, 81407*, 81408*	5, 6, 7, 8

RELATED POLICIES

This policy document provides criteria for immunology and rheumatology testing. Please refer to:

- **Specialty Testing: Multisystem Genetic Conditions** for criteria related to diagnostic tests for genetic disorders that affect multiple organ systems (e.g. whole exome and genome sequencing, chromosomal microarray, and multigene panels for broad phenotypes).
- **General Approach to Laboratory Testing** for criteria related to immunology and rheumatology, including known familial variant testing, that is not specifically discussed in this or another non-general policy.

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CRITERIA

It is the policy of Louisiana Healthcare Connections that the specific genetic testing noted below is **medically necessary** when meeting the related criteria:

CELIAC DISEASE

HLA-DQ Genotyping Analysis

- I. *HLA-DQA1* and *HLA-DQB1* genotyping analysis to rule out celiac disease (CD) is considered **medically necessary** when:
 - A. The member/enrollee is being evaluated for celiac disease, **AND**
 - B. The member/enrollee meets at least one of the following:

1. Had an inconclusive serology (antibody) result, **OR**
 2. Had an inconclusive histology (biopsy) result, **OR**
 3. Started a gluten-free diet before evaluation for celiac disease, **AND**
- C. *HLA-DQA1* and *HLA-DQB1* genotyping analysis has not been previously performed.
- II. Current evidence does not support *HLA-DQA1* and *HLA-DQB1* genotyping analysis to rule out celiac disease for all other indications.

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HLA TYPING FOR AXIAL SPONDYLOARTHRITIS

HLA Typing for Axial Spondyloarthritis

- I. HLA-B27 typing for evaluation of axial spondyloarthritis is considered **medically necessary** when:
 - A. The member/enrollee has clinical or radiographic features of axial spondyloarthritis.
- II. Current evidence does not support HLA-B27 typing for evaluation of axial spondyloarthritis for all other indications.

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PERIODIC FEVER SYNDROME

Periodic Fever Syndromes Multigene Panel

- I. Genetic testing for periodic fever syndromes, also called hereditary recurrent fever syndromes, (e.g., Familial Mediterranean Fever, tumor necrosis factor receptor-associated periodic fever [TRAPS]) via a multigene panel is considered **medically necessary** when:
 - A. The member/enrollee has three or more episodes of [unexplained fever](#) in a six-month period, occurring at least seven days apart, **AND**
 - B. Common causes of fever have been ruled out, including viral or bacterial infection.
- II. Current evidence does not support genetic testing for periodic fever syndromes, also called hereditary recurrent fever syndromes, (e.g., Familial Mediterranean Fever, tumor necrosis factor receptor-associated periodic fever [TRAPS]) via a multigene panel for all other indications.

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RHEUMATOID ARTHRITIS

Evidence-Based Rheumatoid Arthritis Algorithmic Tests

- I. Rheumatoid arthritis algorithmic tests (PrismRA) with sufficient evidence of clinical validity and utility to determine appropriateness of TNFi treatment are considered **medically necessary** when:
 - A. The member/enrollee is age 18 or older, **AND**
 - B. The member/enrollee has a diagnosis of moderately to severely active rheumatoid arthritis (RA), **AND**
 - C. The member/enrollee previously received first-line therapy for treatment of rheumatoid arthritis conventional synthetic disease-modifying anti-rheumatic drug (csDMARD), **AND**
 - D. The member/enrollee is unresponsive/refractory or intolerant to the therapy despite a therapeutic dose, **AND**
 - E. One of the following:
 1. The member/enrollee has not yet initiated a biologic or targeted synthetic therapy (b/tDMARD) for RA (i.e., TNFi), **OR**
 2. The member/enrollee has initiated a biologic or targeted synthetic therapy (b/tDMARD) for RA (i.e., TNFi), **AND**
 - a) The member/enrollee is unresponsive/refractory or intolerant to a therapeutic dose, **AND**
 - F. The member/enrollee has not had previous testing using molecular biomarkers for predictive therapy selection for rheumatoid arthritis.
- II. Current evidence does not support rheumatoid arthritis algorithmic tests (PrismRA) with sufficient evidence of clinical validity and utility to determine appropriateness of TNFi treatment for all other indications where clinical validity and utility have not been demonstrated.

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Emerging Evidence Rheumatoid Arthritis Algorithmic Tests

- I. Current evidence does not support rheumatoid arthritis algorithmic tests (Vectra).

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OTHER COVERED IMMUNE, AUTOIMMUNE, AND RHEUMATOID DISORDERS

Other Covered Immune, Autoimmune, and Rheumatoid Disorders

The following is a list of conditions that have a known genetic association. Due to their relative rareness, it may be appropriate to cover these genetic tests to establish or confirm a diagnosis.

- I. Genetic testing to establish or confirm one of the following immune, autoimmune, or rheumatoid disorders to guide management is considered **medically necessary** when the member/enrollee demonstrates clinical features consistent with the disorder (the list is not meant to be comprehensive, see II below):
 - A. [Agammaglobulinemia: X-Linked and Autosomal Recessive](#) (*BTK*)
 - B. [Autoimmune Lymphoproliferative Syndrome \(ALPS\)](#) (*FAS*)
 - C. [Chronic Granulomatous Disease \(CGD\)](#) (*CYBA*, *CYBC1*, *NCF1*, *NCF2*, and *NCF4*, *CYBB*)
 - D. Complement Deficiencies
 - E. Congenital Neutropenia Syndromes (e.g., *ELANE*-Related Neutropenia) (*ELANE*, *HAX1*)
 - F. [Familial Hemophagocytic Lymphohistiocytosis](#) (HLH) (*PRF1*, *STX11*, *STXBP2*, or *UNC13D*)
 - G. [Hyper IgE Syndrome \(HIES\)](#) (*STAT3*)
 - H. [Hyper IgM Syndromes](#) (*CD40LG*)
 - I. Leukocyte Adhesion Deficiency (LAD) (*CD18*, *Kindlin-3*, *ITGB2*)
 - J. NEMO Deficiency Syndrome (*NEMO*, aka *IKK gamma* or *IKKG*)
 - K. [Severe Combined Immune Deficiency \(SCID\) and Combined Immune Deficiency](#) (*IL2RG*)
 - L. WHIM Syndrome (Warts, Hypogammaglobulinemia, Infections, and Myelokathexis) (*CXCR4*)
 - M. [Wiskott-Aldrich Syndrome](#) (*WAS*).
- II. Genetic testing to establish or confirm the diagnosis of all other immune, autoimmune, or rheumatoid disorders not specifically discussed within this or another medical policy will be evaluated by the criteria outlined in the *General Approach to Genetic and Molecular Testing* (see policy for criteria).

NOTE: Clinical features for a specific disorder may be outlined in resources such as [GeneReviews](#), [OMIM](#), [National Library of Medicine](#), [Genetics Home Reference](#), or other scholarly source.

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RATIONALE

HLA-DQ Genotyping Analysis

American College of Gastroenterology (ACG)

The guidelines from the American College of Gastroenterology (2023) addressing the diagnosis and management of celiac disease (CD) stated that genetic testing for CD-compatible HLA haplotype is not required for diagnosis in all cases but may be helpful in selected situations such as in the context of serology-histology discrepancy. If negative, celiac disease is ruled out. HLA testing is also central to the approach to CD testing for individuals who have already started a GFD (gluten free diet) before evaluation; in the presence of a CD-compatible haplotype, a gluten challenge can be offered (p. 63-64).

American Gastroenterological Association

A clinical practice update on diagnosis and monitoring of celiac disease (2019) states that HLA testing has value in its negative predictive value to rule out CD in patients who are seronegative but have histologic changes or did not have serology at the time of diagnosis. HLA testing may be reserved for second line evaluation of patients with an equivocal diagnosis (inconclusive serology, histology or prior gluten free diet).

U.S. Preventive Services Task Force

The US Preventive Service Task Force (2017) released guidelines on screening adults and children for CD. These guidelines reviewed the use of tTG IgA testing followed by an intestinal biopsy to screen asymptomatic patients. Genotype testing was not discussed. The overall conclusion of this review was that the current balance of evidence was insufficient to assess benefits and harms resulting from screening for CD (p. 1252).

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HLA Typing for Axial Spondyloarthritis

Rudwaleit et al, 2009

“Refinement of the candidate criteria resulted in new ASAS [Assessment of SpondyloArthritis International Society] classification criteria that are defined as: the presence of sacroiliitis by radiography or by magnetic resonance imaging (MRI) plus at least one SpA feature ("imaging arm") or the presence of HLA-B27 plus at least two SpA features ("clinical arm")” (p. 777).

Akgul and Ozgocmen, 2011

“HLA B-27 positivity is extremely relevant to the early diagnosis of SpA [spondyloarthropathies]. Five to 10% of the population are HLA B-27 positive and in patients

with AS [ankylosing spondylitis] and SpA the positivity of HLA B-27 changes to 70% to 95% and nearly 70%, respectively” (p. 109).

Yu and van Tubergen, UpToDate, 2024

HLA-B27 testing can be helpful when radiographs or MRI show findings that are consistent with axSpA; a positive result can increase the probability of having axSpa to 80-90%. Negative testing would significantly reduce the likelihood of diagnosis. HLA-B27 testing can also be used in patients presenting with chronic back pain with a significant probability of axSpA after clinical evaluation. The results of this testing alone are not diagnostic nor do they exclude the diagnosis but should be interpreted with other clinical findings.

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Periodic Fever Syndromes Multigene Panel

Soon and Laxer (2017)

A 2017 clinical review by Soon and Laxer addressing recurrent fever in childhood stated the following: “Recurrent or periodic fever syndromes are defined by 3 or more episodes of unexplained fever in a 6-month period, occurring at least 7 days apart” (p. 756). The authors recommend that: “Once infections, immunodeficiency, malignancy, inflammatory bowel disease, and adverse drug reactions have been ruled out, autoinflammatory diseases—including periodic fever syndromes—should be considered” (p. 758).

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Evidence-Based Rheumatoid Arthritis Algorithmic Tests

Centers for Medicare and Medicaid Services

The CMS local coverage determination (LCD) entitled MolDX: Molecular Biomarker Testing to Guide Targeted Therapy Selection in Rheumatoid Arthritis (L39424) states the following regarding guidance for targeted therapy selection in rheumatoid arthritis:

“criteria:

1. The patient is an adult with a confirmed diagnosis of moderately to severely active RA.
2. The patient has a history of failure, contraindication, or intolerance to at least one first-line therapy for the treatment of RA (i.e., conventional synthetic disease-modifying anti-rheumatic drugs (csDMARDs)) despite adequate dosing.
3. The patient has not initiated a biologic or targeted synthetic therapy (b/tDMARD) for RA (i.e., Tumor Necrosis Factor-?? inhibitor [TNFi], Janus Kinase [JAK] inhibitor, etc.) OR has initiated b/tDMARD therapy and is being considered for an alternate class of targeted therapies as a result of failure, contraindication, or intolerance to the initial targeted therapy despite adequate dosing.”

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Emerging Evidence Rheumatoid Arthritis Algorithmic Tests

American College of Rheumatology (ACR)

The ACR updated guidelines in 2019 regarding their recommendation for Rheumatoid Arthritis (RA) disease activity measures. They identified 11 measures of disease activity that fulfilled the studies minimum standard for regular use in most clinical settings (listed in Table 4 on page 1552), and this list included the Multibiomarker Disease Activity Score (MBDA score, Vectra DA).

Although the original Vectra DA test is included in this list, the current commercially available version of the test that is now called Vectra includes the leptin-adjusted MBDA score (now called the "adjusted MBDA score") that was not addressed in the 2019 ACR guideline. This is because evidence on Vectra with the adjusted MBDA score was published subsequent to the ACR review end date.

A Rheumatoid Arthritis (RA) Measures toolkit was created by the ACR in 2021 (<https://ratoolkit.kotobee.com/#/reader>). There is no mention of Vectra testing to aid in the treatment of RA, nor are there recommendations for this type of biomarker testing for RA.

Concert Note

There is insufficient evidence to support the use of this test. No recommendations for or against this testing within standard professional society guidelines covering this area of testing were identified.

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DEFINITIONS

1. **Unexplained fever** is a fever of unknown origin (FUO). A temperature higher than 38.3 C (100.9 F) that lasts for more than three weeks with no obvious source despite appropriate investigation. The four categories of potential etiology of FUO are classic, nosocomial, immune deficient, and human immunodeficiency virus-related. The four subgroups of the differential diagnosis of FUO are infections, malignancies, autoimmune conditions, and miscellaneous.

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Reviews, Revisions, and Approvals	Revision Date	Approval Date	Effective Date
Converted corporate to local policy.	09/23	11/27/23	
Semi-annual review. Overview, coding, reference-table, background and references updated. Throughout policy: replaced “coverage criteria” with “criteria. For Policy Reference Table; under Other Covered Immune, Autoimmune, and Rheumatoid Disorders: added “81401, 81402, 81403, 81404, 81405, 81406, 81407,”. For Other Related Policies: added “and Molecular”. For Other Covered Immune, Autoimmune, and Rheumatoid Disorders: added “and Molecular”. For Background and Rationale; under Known Familial Variant Analysis for Immune, Autoimmune, and Rheumatoid Disorders: replaced “inheritance patterns” with “genetic testing”; under Rheumatoid Arthritis Biomarker Activity Panels: removed “its 2019 guidelines...” and added “2019”	12/23	2/27/24	
Semi-annual review. In Known Familial Variant Analysis for Immune, Autoimmune, and Rheumatoid Disorders criteria, moved criteria to policy “Genetic Testing: General Approach to Genetic and Molecular Testing” to consolidate criteria for known familial variant tests. In HLA Typing for Axial Spondyloarthritis criteria, updated criteria to clarify name of the condition. Minor rewording for clarity throughout. Coding, reference-table, background and references updated.	06/24	5/13/2025	6/13/2025
Annual review. Policy title changed from Concert Genetic Testing: Immune, Autoimmune, and Rheumatoid Disorders to Concert Genetic Testing: Immunology and Rheumatology. "Rheumatoid Arthritis Biomarker Activity Panels" criteria title changed to "Emerging Evidence Rheumatoid Arthritis Algorithmic Tests." Minor rewording without clinical significance. HLA-DQ Genotyping Analysis criteria moved from Concert Genetic Testing: Gastroenterologic Disorders to this policy. “Investigational” policy statements changed to note that “current evidence does not support...”	03/26	5/27/26	6/26/26

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Important Reminder

This clinical policy has been developed by appropriately experienced and licensed health care professionals based on a review and consideration of currently available generally accepted standards of medical practice; peer-reviewed medical literature; government agency/program approval status; evidence-based guidelines and positions of leading national health professional organizations; views of physicians practicing in relevant clinical areas affected by this clinical policy; and other available clinical information. LHCC makes no representations and accepts no liability with respect to the content of any external information used or relied upon in developing this clinical policy. This clinical policy is consistent with standards of medical practice current at the time that this clinical policy was approved.

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