Serum Antibodies for the Diagnosis of Inflammatory Bowel Disease

Policy # 00238
Original Effective Date: 06/17/2009
Current Effective Date: 07/12/2021

Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc.(collectively referred to as the "Company"), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers determination of anti-neutrophil cytoplasmic antibody (ANCA) and anti-saccharomyces cerevisiae antibody (ASCA) in the workup and monitoring of patients with inflammatory bowel disease (IBD) to be **investigational.***

Background/Overview

Two serum antibodies, ANCA and ASCA have been associated with IBD. These antibodies may have potential use in the diagnosis of IBD, differentiating types of IBD, and predicting response to treatment.

Inflammatory bowel disease can be subdivided into ulcerative colitis (UC) and Crohn's disease (CD), both of which present with symptoms of diarrhea and abdominal pain. The definitive diagnosis can usually be established by a combination of radiographic, endoscopic and histologic criteria, although in 10%–15% the distinction between UC and CD cannot be made with certainty.

The serum antibodies have several potential uses. They can be used as diagnostic tests to improve the efficiency and accuracy of diagnosing IBD to decrease the extent of the diagnostic workup or to avoid invasive tests. As a diagnostic test, they might also be useful in differentiating between UC and CD in cases of indeterminate colitis. A second potential use is to classify subtypes of IBD by location of disease (i.e., proximal vs. distal bowel involvement) or by disease severity, thereby providing prognostic information. It has also been proposed that these markers may predict response to anti-tumor necrosis factor (TNF) therapy or identify susceptibility to IBD among family members of an affected individual.

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The Prometheus©‡ IBD Serology 7 (Prometheus Inc., San Diego, CA) is a quantitative analysis of biomarkers for IBD prediction and differentiation. Prometheus IBD Serology 7 is only offered at Prometheus. This system uses a 2-step process to diagnose IBD and to differentiate between UC and CD. The first step is a panel of four markers intended to maximize the sensitivity and negative predictive value of the test. Patients who test positive on the initial screen are further analyzed by a set of proprietary markers and enzyme reagents to distinguish between true positive results and artifacts of fixation. In this way, the Prometheus system is intended to increase the specificity of the test compared to other laboratories. The company also markets a testing strategy for predicting response to anti-TNF therapy and to monitor therapy.

FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)
Serum testing for ANCA and ASCA does not require FDA approval.

Centers for Medicare and Medicaid Services (CMS)
No Medicare national coverage determination available.

Rationale/Source

A number of studies have examined the association between the serologic markers ASCA and ANCA and IBD. Systematic reviews have found relatively low sensitivity and moderately high specificity. Moreover, the clinical utility of these assays has not been demonstrated. No studies demonstrated the use of these markers in lieu of a standard workup for IBD. A number of authors claim that these markers can be used to avoid invasive testing, but no studies demonstrated an actual decrease in the number of invasive tests through use of serum markers. These technologies are investigational for the diagnosis and monitoring of IBD given the insufficient evidence to evaluate the impact on net health outcome.

References

1. Blue Cross and Blue Shield Association, Medical Policy Reference Manual, "Serum Antibodies for the Diagnosis of Inflammatory Bowel Disease", 2.04.17, Archived June 2010.
2. 1999 TEC Assessments; Tab 12.

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3. Reese GE, Constantinides VA, Simillis C et al. Diagnostic precision of anti- Saccharomyces cerevisiae antibodies and perinuclear antineutrophil cytoplasmic antibodies in inflammatory bowel disease. Am J Gastroenterol 2006; 101(10):2410-22.
4. Joossens S, Reinisch W, Vermeire S et al. The value of serologic markers in indeterminate colitis: a prospective follow-up study. Gastroenterology 2002; 122(5):1242-7.
5. Mow WS, Vasiliauskas EA, Lin YC et al. Association of antibody responses to microbial antigens and complications of small bowel Crohn's disease. Gastroenterology 2004; 126(2):414-24.
6. Russell RK, Ip B, Aldhous MC. Anti- Saccharomyces cerevisiae antibody status is associated with oral involvement and disease severity in Crohn disease. J Pediatr Gastroenterol Nutr 2009; 48(2):161-7.
7. Sutton CL, Yang H, Li Z et al. Familial expression of anti- Saccharomyces cerevisiae mannan antibodies in affected and unaffected relatives of patients with Crohn's disease. Gut 2000; 46(1):58-63.
8. Annese V, Andreoli A, Andriulli A et al. Familial expression of anti- Saccharomyces cerevisiae Mannan antibodies in Crohn's disease and ulcerative colitis: a GISC study. Am J Gastroenterol 2001; 96(8):2407-12.
9. Zholudev A, Zurakowski D, Young W et al. Serologic testing with ANCA, ASCA and anti-OmpC in children and young adults with Crohn's disease and ulcerative colitis: diagnostic value and correlation with disease phenotype. Am J Gastroenterol 2004; 99(11):2235-41.
10. Schoepfer AM, Trummler M, Seeholzer P et al. Discriminating IBD from IBS: comparison of the test performance of fecal markers, blood leukocytes, CRP, and IBD antibodies. Inflamm Bowel Dis 2008; 14(1):32-9.
11. Papp M, Norman GL, Altorjay I et al. Utility of serological markers in inflammatory bowel diseases: gadget or magic? World J Gastroenterol 2007; 13(14):2028-36.

Policy History

Original Effective Date: 06/17/2009
Current Effective Date: 07/12/2021

06/17/2009 Medical Policy Committee approval.
06/03/2010 Medical Policy Committee approval.
06/16/2010 Medical Policy Implementation Committee approval. No change to coverage.
06/02/2011 Medical Policy Committee approval.

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06/15/2011	Medical Policy Implementation Committee approval. No change to coverage.
06/14/2012	Medical Policy Committee review
06/20/2012	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/06/2013	Medical Policy Committee review
06/25/2013	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/05/2014	Medical Policy Committee review
06/18/2014	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/04/2015	Medical Policy Committee review
06/17/2015	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
08/03/2015	Coding update: ICD10 Diagnosis code section added; ICD9 Procedure code section removed.
06/02/2016	Medical Policy Committee review
06/20/2016	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
01/01/2017	Coding update: Removing ICD-9 Diagnosis Codes
06/01/2017	Medical Policy Committee review
06/21/2017	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/07/2018	Medical Policy Committee review
06/20/2018	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
09/04/2018	Coding update
06/06/2019	Medical Policy Committee review
06/19/2019	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/04/2020	Medical Policy Committee review
06/10/2020	Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
06/03/2021	Medical Policy Committee review

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06/09/2021 Medical Policy Implementation Committee approval. Coverage eligibility unchanged.
Next Scheduled Review Date: 06/2022

Coding

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CPT is a registered trademark of the American Medical Association.

Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	0176U, 83516, 83518, 83519, 83520, 88346, 88350
HCPCS	No codes
ICD-10 Diagnosis	K50.00-K50.919, K51.00-K51.919, Z87.19

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*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
    1. Consultation with the Blue Cross and Blue Shield Association technology assessment program (TEC) or other nonaffiliated technology evaluation center(s);
    2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
    3. Reference to federal regulations.

‡ Indicated trademarks are the registered trademarks of their respective owners.

NOTICE: If the Patient's health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.

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