



## **ALGORITHMIC ANALYSIS FOR CHRONIC LIVER DISEASE**

---

**Coverage for services, procedures, medical devices and drugs are dependent upon benefit eligibility as outlined in the member's specific benefit plan. This Medical Coverage Guideline must be read in its entirety to determine coverage eligibility, if any.**

**The section identified as "Description" defines or describes a service, procedure, medical device or drug and is in no way intended as a statement of medical necessity and/or coverage.**

**The section identified as "Criteria" defines criteria to determine whether a service, procedure, medical device or drug is considered medically necessary or experimental or investigational.**

**State or federal mandates, e.g., FEP program, may dictate that any drug, device or biological product approved by the U.S. Food and Drug Administration (FDA) may not be considered experimental or investigational and thus the drug, device or biological product may be assessed only on the basis of medical necessity.**

**Medical Coverage Guidelines are subject to change as new information becomes available.**

**For purposes of this Medical Coverage Guideline, the terms "experimental" and "investigational" are considered to be interchangeable.**

**BLUE CROSS®, BLUE SHIELD® and the Cross and Shield Symbols are registered service marks of the Blue Cross and Blue Shield Association, an association of independent Blue Cross and Blue Shield Plans. All other trademarks and service marks contained in this guideline are the property of their respective owners, which are not affiliated with BCBSAZ.**

---

### **Description:**

Multianalyte assays with algorithmic analyses (MAAAs) use the results from multiple assays of various types in an algorithmic analysis to determine and report a numeric score(s) or probability. MAAAs have been investigated as a substitute for biopsy in the screening, evaluation and monitoring of patients with chronic liver disease including fibrosis, steatosis or steatohepatitis in individuals with hepatitis C, alcoholic liver disease and non-alcoholic fatty liver disease. The results of individual component assays are not reported separately.



MEDICAL COVERAGE GUIDELINES  
SECTION: LABORATORY

ORIGINAL EFFECTIVE DATE: 08/13/14  
LAST REVIEW DATE:  
LAST CRITERIA REVISION DATE:  
ARCHIVE DATE:

---

## ALGORITHMIC ANALYSIS FOR CHRONIC LIVER DISEASE (cont.)

### Description: (cont.)

#### FibroSpect II®:

Combination of 3 serum biochemical markers that directly measure fibrogenesis of the liver analyzed using a patented algorithm exclusively by Prometheus® laboratories. Biochemical markers include:

1. Alpha-2 macroglobulin
2. Hyaluronic acid
3. TIMP-1

#### HepaScore®:

Combination of 4 serum biochemical markers, analyzed using a patented algorithm exclusively offered by Quest Diagnostics, to generate a measurement to determine the degree of hepatic fibrosis. Biochemical markers include:

1. Alpha-2 macroglobulin
2. Bilirubin, total
3. Gamma glutamyl transpeptidase (GGT)
4. Hyaluronic acid

#### ASH FibroSure® (ASH Test):

Combination of 10 serum biochemical markers of liver function together with age, gender, height, and weight in a proprietary algorithm exclusively offered by LabCorp. Proposed to provide surrogate markers for liver fibrosis, hepatic steatosis, and alcoholic steatohepatitis (ASH). Biochemical markers include:

1. Alpha-2 macroglobulin
2. Alanine aminotransferase (ALT)
3. Apolipoprotein A1
4. Aspartate aminotransferase (AST)
5. Bilirubin, total
6. Cholesterol, total
7. Gamma glutamyl transpeptidase (GGT)
8. Glucose, fasting
9. Haptoglobin
10. Triglycerides



**BlueCross  
BlueShield  
of Arizona**

An Independent Licensee of the  
Blue Cross and Blue Shield Association

**MEDICAL COVERAGE GUIDELINES  
SECTION: LABORATORY**

**ORIGINAL EFFECTIVE DATE:  
LAST REVIEW DATE:  
LAST CRITERIA REVISION DATE:  
ARCHIVE DATE:**

**08/13/14**

---

## **ALGORITHMIC ANALYSIS FOR CHRONIC LIVER DISEASE (cont.)**

### **Description: (cont.)**

#### **HCV FibroSure® (FibroTest):**

Combination of 6 serum biochemical indirect markers of liver function plus age and gender, analyzed with a patented algorithm exclusively offered by LabCorp, to generate a measurement of fibrosis and necro-inflammatory activity in the liver. Biochemical markers include:

1. Alanine aminotransferase (ALT)
2. Alpha-2 macroglobulin
3. Apolipoprotein A1
4. Bilirubin, total
5. Gamma glutamyl transpeptidase (GGT)
6. Haptoglobin

#### **NASH FibroSure® (NASH Test):**

Combination 10 serum biochemical markers of liver function together with age, gender, height, and weight, analyzed with a proprietary algorithm exclusively offered by LabCorp. Proposed to provide surrogate markers for liver fibrosis, hepatic steatosis, and Nonalcoholic steatohepatitis (NASH). Biochemical markers include:

1. Alpha-2 macroglobulin
2. Alanine aminotransferase (ALT)
3. Apolipoprotein A1
4. Aspartate aminotransferase (AST)
5. Bilirubin, total
6. Cholesterol, total
7. Gamma glutamyl transpeptidase (GGT)
8. Glucose, fasting
9. Haptoglobin
10. Triglycerides



MEDICAL COVERAGE GUIDELINES  
SECTION: LABORATORY

ORIGINAL EFFECTIVE DATE: 08/13/14  
LAST REVIEW DATE:  
LAST CRITERIA REVISION DATE:  
ARCHIVE DATE:

---

## ALGORITHMIC ANALYSIS FOR CHRONIC LIVER DISEASE (cont.)

### Criteria:

➤ Multianalyte assays with algorithmic analyses for the diagnosis and monitoring of individuals with chronic liver disease are considered **experimental or investigational** based upon:

1. Insufficient scientific evidence to permit conclusions concerning the effect on health outcome, and
2. Insufficient evidence to support improvement of the net health outcome, and
3. Insufficient evidence to support improvement of the net health outcome as much as, or more than, established alternatives.

These tests include, *but are not limited to*:

- ASH FibroSure
- FibroSpect
- HCV FibroSure
- HepaScore
- NASH FibroSure

---

### Resources:

1. 2.04.41 BCBS Association Medical Policy Reference Manual. Multianalyte Assays with Algorithmic Analysis for the Evaluation and Monitoring of Patients with Chronic Liver Disease. Re-issue date 07/10/2014, issue date 06/27/2005.
2. Quest Diagnostics®. Liver Fibrosis Panel, HepaScore. 12/2011. Accessed 07/21/2014, 07/22/2013, 08/29/2012