Hepatic Function Panel

CPT Code: 80076
Order Code: C903
Includes: Total Protein, Albumin, Globulin (calculated), Albumin/Globulin Ratio (calculated), Total Bilirubin, Direct Bilirubin, Indirect Bilirubin (calculated), Alkaline Phosphatase, AST, ALT
ABN Requirement: No
Synonyms: HFP; LFT; Basic Liver Profile; Liver Function Profile
Specimen: Serum
Volume: 1.0 mL
Minimum Volume: 0.5 mL
Container: Gel-barrier tube (SST, Tiger Top)

Collection:

1. Collect and label sample according to standard protocols.
2. Gently invert tube 5 times immediately after draw. Do not shake.
3. Allow blood to clot 30 minutes.
4. Centrifuge for 10 minutes.

Transport: Store serum at 2°C to 8°C after collection and ship the same day per packaging instructions included with the provided shipping box.

Stability:

Refrigerated (2-8°C): 7 days
Ambient (15-25°C): 24 hours
Frozen (-20°C): Not Acceptable

Causes for Rejection: Specimens other than serum; improper labeling; samples not stored properly; samples older than stability limits; hemolysis

Methodology: See individual tests

Turn Around Time: 1 to 3 days

Clinical Significance: This panel may be helpful in assessing liver injury, diagnosing liver diseases, and monitoring treatment of liver diseases and adverse

effects of hepatotoxic drugs [1]. This panel includes total protein, albumin, globulin (calculated), albumin/globulin ratio, total bilirubin, direct bilirubin, indirect bilirubin (calculated), alkaline phosphatase (ALP), aspartate aminotransferase (AST), and alanine aminotransferase (ALT).

ALT, AST, ALP, and bilirubin are common liver chemistry analytes that can be used to evaluate liver injury. ALT is a more liver-specific marker than AST. The latter also is present in the peripheral circulation during episodes of skeletal, cardiac, and smooth muscle injury. Elevated ALT and AST levels disproportionate to ALP levels indicate hepatocellular injury; elevated ALP and bilirubin levels disproportionate to ALT and AST levels indicate cholestatic injury. In the absence of identifiable risk factors, ALT or AST levels above the upper limit of the normal range are associated with increased liver-related mortality [1]. Evaluation of direct and indirect bilirubin levels is helpful for assessing the possibility of hepatocellular disease [1]. Elevated direct bilirubin levels imply hepatocellular dysfunction or cholestasis.

Albumin is a marker of liver synthetic function; low levels may indicate liver disease of more than 3 weeks' duration [1]. Total protein levels reflect the sum of albumin and globulins and may aid in the diagnosis of disorders involving the liver, kidney, or bone marrow.

This panel may be useful in evaluating individuals who are taking hepatotoxic drugs as well as those with viral hepatitis, symptoms or signs of chronic liver disease, conditions associated with a high risk of developing liver disease, lifestyle risk factors for nonalcoholic fatty liver disease, or a family history of liver disease [2].

Because many liver diseases cause characteristic abnormalities in selected liver chemistry analytes, results of individual analytes in this panel may aid in differential diagnosis. An abnormal test result may need to be confirmed by repeat testing and/or performing a clarifying test. For example, measurement of gamma-glutamyl transferase activity (not included in this panel) can help determine whether an elevated ALP result reflects hepatic disease [1].

Note that liver enzymes are markers of liver injury, not direct measurements of hepatic function. Bilirubin, albumin, and prothrombin time are markers of liver synthetic function [1,2].

The results of this test should be interpreted in the context of pertinent clinical and family history and physical examination findings.

References

1. Kwo PY, et al. Am J Gastroenterol. 2017;112(1):18-35.
2. Newsome PN, et al. Gut. 2018;67(1):6-19.

Additional Information: Refer to individual tests for preanalytical issues that may affect test results.

The CPT codes provided are based on AMA guidelines and are for informational purposes only. CPT coding is the sole responsibility of the billing party. Please direct any questions regarding coding to the payer being billed.