**Table Supplement:** Highest loading factors contained in the factor analysis for the alpha fetoprotein and ultrasound algorithms.

PRINCIPAL COMPONENT	VARIABLES WITH A FACTOR LOADING GREATER THAN 0.40
Alpha fetoprotein (AFP)	
1. Substance abuse	Chronic alcoholism, alcohol dependency, drug dependency, cocaine use, non-dependent use of drugs
2. Prior liver function tests	Alkaline phosphatase test within 30-days prior to AFP, alkaline phosphatase test within 2-years prior to AFP, bilirubin test within 30-days before AFP, bilirubin test within 2-years before AFP
3. CT scan after AFP	CT scan within 90-days after AFP
4. CT scan before AFP	CT scan within 90-days before AFP
5. LDH, diabetes, HCC diagnosis	Total serum lactic dehydrogenase (LDH) test within 30-days before AFP, diabetes, diagnosis code for HCC 60-days following AFP
6. Non-specific hepatitis	Acute hepatitis, chronic hepatitis
7. Liver disease severity	Prothrombin time tested within 30-days before AFP, esophageal varices without bleeding
8. Hepatitis	Non-alcoholic hepatitis, HBV without coma
9. Ultrasound	Ultrasound within 90-days before or after AFP
Ultrasound	
Substance abuse	Chronic alcoholism, alcohol dependency, drug dependency
Liver function tests within 30 days before ultrasound	Alkaline phosphatase test within 30-days before ultrasound, bilirubin test within 30-days before ultrasound, LDH within 30-days before ultrasound
3. CT scan – 30 days	CT scan within 30-days before ultrasound, CT scan within 30-days before or after ultrasound
Liver function tests within 2- years before ultrasound	Alkaline phosphate test within 2-years before ultrasound, total bilirubin test within 2-years before ultrasound, serum lactic dehydrogenase (LDH) test within 2-years before ultrasound
5. Hepatitis	HCV, unspecified hepatitis
6. CT scan – 90 days, diabetes	CT scan within 90-days before ultrasound, diabetes
7. IV drug use, HBV	Cocaine use, use of drugs, HBV
8. Liver biopsy, AFP	Liver biopsy within 1-year before or after ultrasound, prothrombin time, AFP within 90-days before or after ultrasound
9. HCC diagnosis, esophageal varices	HCC diagnosis within 60 days after ultrasound, esophageal varices without bleeding