Overview

Useful For
An indicator of chronic alcohol abuse

This test is not appropriate for screening patients for congenital disorders of glycosylation.

Highlights
Patients with chronic alcoholism demonstrate increased levels of carbohydrate deficient transferrin over the amount of normally glycosylated tetrasiolotransferrin.

Method Name
Affinity Chromatography/Mass Spectrometry (MS)

NY State Available
Yes

Specimen

Specimen Type
Serum

Advisory Information
This test is for evaluation of alcohol abuse. If the ordering physician is looking for congenital disorders of glycosylation, order CDG / Carbohydrate Deficient Transferrin for Congenital Disorders of Glycosylation, Serum.

Necessary Information
1. Patient's age is required.
2. Reason for referral is required if patient is <21 years old.

Specimen Required
Collection Container/Tube:

Preferred: Red top

Acceptable: Serum gel

Submission Container/Tube: Plastic vial

Specimen Volume: 0.1 mL

Forms
If not ordering electronically, complete, print, and send a Therapeutics Test Request (T831) with the specimen.

Specimen Minimum Volume
0.05 mL

Reject Due To
Clinical and Interpretive

Clinical Information
Chronic alcoholism causes a transient change in the glycosylation pattern of transferrin where the relative amounts of disialo- and asialotransferrin (carbohydrate deficient transferrin: CDT) are increased over the amount of normally glycosylated tetsasialotransferrin. This recognition led to the use of CDT in serum as a marker for chronic alcohol abuse.

CDT typically normalizes within several weeks of abstinence of alcohol use. However, it is important to recognize that there are other causes of abnormal CDT levels, which include congenital disorders of glycosylation and other genetic and nongenetic causes of acute or chronic liver disease.

CDT testing alone is not recommended for general screening for alcoholism; however, when combined with other methods (ie, gamma-glutamyltransferase, mean corpuscular volume, patient self-reporting, ethylglucuronide analysis), clinicians can expect to identify the majority of patients who consume a large amount of alcohol.

Reference Values
< or =0.10
0.11-0.12 (indeterminate)

Interpretation
Patients with chronic alcoholism may develop abnormally glycosylated transferrin isoforms (ie, carbohydrate deficient transferring; CDT >0.12). CDT results from 0.11 to 0.12 are considered indeterminate.

Patients with liver disease due to genetic or nongenetic causes may also have abnormal results.

Cautions
This assay has not been fully validated for the investigation of alcoholism.

Carbohydrate deficient transferrin (CDT) testing alone is not recommended for general screening for alcoholism. Analysis of more than 1 biomarker is recommended to avoid misinterpretation of results.

The abnormal transferrin isoform pattern in patients with chronic alcoholism is similar to that observed in congenital disorders of glycosylation (CDGs). However, unlike most patients with CDG, the relative amount of
monoglycosylated transferrin is much lower. Other conditions such as hereditary fructose intolerance, galactosemia, and liver disease may result in increased levels of CDT. In addition, preanalytic variables such as bacterial contamination may cause falsely elevated CDT values. Several factors may cause variability in CDT analysis, including: ethnicity, gender, pregnancy, body mass index, smoking, blood pressure, iron metabolism, drug interactions, chronic medical illness.

Clinical Reference


Performance

Method Description


PDF Report

No

Day(s) and Time(s) Test Performed

Wednesday; 8 a.m.

Analytic Time

7 days (not reported Saturday or Sunday)

Maximum Laboratory Time

10 days

Specimen Retention Time

1 month

Performing Laboratory Location

Rochester
Fees and Codes

Fees
- Authorized users can sign in to Test Prices for detailed fee information.
- Clients without access to Test Prices can contact Customer Service 24 hours a day, seven days a week.
- Prospective clients should contact their Regional Manager. For assistance, contact Customer Service.

Test Classification
This test was developed and its performance characteristics determined by Mayo Clinic in a manner consistent with CLIA requirements. This test has not been cleared or approved by the U.S. Food and Drug Administration.

CPT Code Information
82373

LOINC® Information

<table>
<thead>
<tr>
<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDTA</td>
<td>Carb Def Transferrin, Adult, S</td>
<td>In Process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Result ID</th>
<th>Test Result Name</th>
<th>Result LOINC Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>31714</td>
<td>Mono-oligo/Di-oligo Ratio</td>
<td>35469-6</td>
</tr>
<tr>
<td>31715</td>
<td>Interpretation</td>
<td>59462-2</td>
</tr>
</tbody>
</table>