Test Definition: SFM
Soluble Fibrin Monomer

Overview

Useful For
Assisting in the diagnosis of arterial or venous prethrombotic states in various pathological and clinical situations: disseminated intravascular coagulation (DIC), and postoperative monitoring of surgeries with a high risk of thromboses

Method Name
Only orderable as part of a profile. For more information see:

THRMP / Thrombophilia Profile
BDIAL / Bleeding Diathesis Profile, Limited
PROCT / Prolonged Clot Time Profile

Latex Immunoassay (LIA)

NY State Available
Yes

Specimen

Specimen Type
Plasma Na Cit

Specimen Required
Only orderable as part of a profile. For more information see:

THRMP / Thrombophilia Profile
BDIAL / Bleeding Diathesis Profile, Limited
PROCT / Prolonged Clot Time Profile

Reject Due To

<table>
<thead>
<tr>
<th>Gross hemolysis</th>
<th>Reject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross lipemia</td>
<td>Reject</td>
</tr>
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</table>

Specimen Stability Information

<table>
<thead>
<tr>
<th>Specimen Type</th>
<th>Temperature</th>
<th>Time</th>
</tr>
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<tbody>
<tr>
<td>Plasma Na Cit</td>
<td>Frozen</td>
<td>14 days</td>
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Clinical and Interpretive
Clinical Information
Fibrin monomers are intermediate products formed during the proteolysis of fibrinogen by thrombin. During intravascular coagulation, low levels of thrombin are available in the blood, but the quantity of fibrin monomers formed are not sufficient to aggregate and form a clot; instead, they associate themselves with fibrinogen or fibrinogen-degradation products to form soluble complexes (ie, soluble fibrin monomer complex: SFMC). Intravascular coagulation and fibrinolysis (ICF), or disseminated intravascular coagulation (DIC) is a clinical diagnosis; no single test is completely sensitive or specific for ICF.

Reference Values
Only orderable as part of a profile. For more information see:

THRMP / Thrombophilia Profile
BDIAL / Bleeding Diathesis Profile, Limited
PROCT / Prolonged Clot Time Profile

<8 mcg/mL

Interpretation
A normal soluble fibrin monomer complex (SFMC) does not exclude the presence of thrombosis or early disseminated intravascular coagulation (DIC) /intravascular coagulation and fibrinolysis (ICF). An elevated SFMC may be seen in patients with venous or arterial thromboembolism or DIC/ICF. It may also be mildly elevated in clotted specimens.

Cautions
Lipemia can interfere with this assay, causing an underestimation of the soluble fibrin monomer complex (SFMC) level. Therefore, results from lipemic specimens should be interpreted with caution.

Supportive Data
In a study of approximately 135 plasma samples, intravascular coagulation and fibrinolysis (ICF) was diagnosed by clinical and laboratory information (excluding the latex immunoassay: LIA; soluble fibrin monomer complex: SFMC), including response to therapy. Based on this designation of presence or absence of ICF, the sensitivity and specificity of the automated LIA SFMC for ICF by plasma SFMC level is shown in the Table.

Table. Sensitivity and Specificity of Automated Latex Immunoassay (LIA) Plasma Soluble Fibrin Monomer Complex (SFMC) for Intravascular Coagulation and Fibrinolysis (ICF/DIC) by SFMC Plasma Concentration

<table>
<thead>
<tr>
<th>LIA SFMC (mcg/mL)</th>
<th>Sensitivity (%)</th>
<th>Specificity (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; or =7</td>
<td>93</td>
<td>66</td>
</tr>
<tr>
<td>&gt;7-10</td>
<td>87</td>
<td>77</td>
</tr>
<tr>
<td>&gt;10-20</td>
<td>77</td>
<td>85</td>
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<tr>
<td>&gt;20-40</td>
<td>70</td>
<td>86</td>
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<tr>
<td>&gt;40-50</td>
<td>63</td>
<td>87</td>
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<tr>
<td>&gt;50-75</td>
<td>53</td>
<td>91</td>
</tr>
<tr>
<td>&gt;75-100</td>
<td>47</td>
<td>95</td>
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</table>
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| >500 | 25 | 97 |

Based on the estimated pretest probability of ICF, the sensitivity and specificity of the plasma SFMC level can be used to calculate the post-test positive and negative predictive value for a diagnosis of ICF.

Clinical Reference
1. Dempfle CE: The use of soluble fibrin in evaluating the acute and chronic hypercoagulable state Thrombosis and Haemostasis 1999;82:673

Performance

Method Description
This assay is based on the change in turbidity of a microparticle suspension that is measured by photometry. A suspension of latex microparticles, coated by covalent bonding with monoclonal antibodies specific for fibrin monomers, is mixed with the plasma to be assayed. An antigen-antibody reaction takes place, leading to an agglutination of the latex microparticles, which induces an increase in turbidity of the reaction medium. This increase in turbidity is reflected by an increase in absorbance, the latter being measured photometrically. The increase in absorbance is a function of the soluble fibrin monomer complex (SFMC) level present in the test sample. (Package insert: STA-Liatest FM Package Insert. Diagnostica Stago, Inc, December 2009)

PDF Report
No

Day(s) and Time(s) Test Performed
Monday through Friday

Analytic Time
1 hour

Maximum Laboratory Time
4 days

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.
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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
85366

LOINC® Information

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<th>Test ID</th>
<th>Test Order Name</th>
<th>Order LOINC Value</th>
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<tbody>
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<td>SFM</td>
<td>Soluble Fibrin Monomer</td>
<td>40702-3</td>
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<table>
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