



## Test Update D-Dimer

### Overview and Clinical Utility

**As of Monday, April 14, 2008 PathGroup Labs is adding D-dimer to our in house coagulation test menu.**

D-dimer is a fibrin degradation product, a small protein fragment present in the blood after a blood clot is degraded by fibrinolysis. Increased levels of cross-linked fibrin degradation products are found in states of coagulation activation resulting in thrombin formation and subsequent secondary fibrinolysis. Increased levels of D-Dimer have been reported in the following situations: DIC, deep vein thrombosis (DVT), pulmonary embolism, surgery, cancer, and cirrhosis. D-Dimer is a useful test in the work-up of a patient with suspected DIC. The presence of increased D-Dimer levels differentiates DIC from primary fibrinolysis, where the level is not increased.

### Principle of Test

**Instrument used is STA- Compact by Diagnostica Stago**

When a beam of monochromatic light is allowed to transverse a suspension of microlatex particles to which specific antibodies have been attached by covalent bonding and if the wavelength of the light is much greater than the diameter of the latex particles, the light is only slightly absorbed. In the presence of the antigen being tested for, the antibody-coated latex particles agglutinate to form aggregates of a diameter greater than the wavelength of the light, more of the latter is absorbed. This increase in light absorption is a function of the antigen level present in the test sample.

- False positive readings can be due to various causes: liver disease, high rheumatoid factor, inflammation, malignancy, trauma, pregnancy, recent surgery as well as advanced age
- False negative readings can occur if the sample is taken either too early after thrombus formation or if testing is delayed for several days. Additionally, the presence of anti-coagulation can render the test negative because it prevents thrombus extension.

**Turn around Time:** Test is performed Tuesday- Friday in the Coagulation Department.

### Specimen Collection

3.2 % sodium citrate (Blue top tube).

Process the specimen immediately by following the handout for double spin coagulation specimens.

\*See attached brochure for details.

Unacceptable specimens: Samples that are short draws, clotted, lipemic or hemolyzed.

### Storage and transport requirements:

Frozen double spun plasma up to one month. \*See attached brochure for details.

Test Order Codes		CPT codes		
Old Test Code	New Test Code	Old/New	Old Reference Range	New Reference Range
DDIME	DIMER	85379	0.4-2.8 ug/mL	0.22-0.44 ug/mL

**Turn around Time:** Test is performed Tuesday- Friday in the Coagulation Department.

### References:

1. Schrecengost JE, LeGallo RD, Boyd JC, Moons KG, Gonias SL, Rose CE Jr, Bruns DE. Comparison of diagnostic accuracies in outpatients and hospitalized patients of D-dimer testing for the evaluation of suspected pulmonary embolism. *clinChem* 2003; 49:1483-90. PMID 12928229.
2. Stago STA-LIATEST Ddimer Assay Procedure from Diagnostica Stago Inc.

*For further questions, please contact Client Services at 615-562-9300 or 1-888-474-5227.*