



## *Technically Speaking*

C.S. Guidess, Editor

Department of Pathology  
& Laboratory Medicine

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### **P2Y12 Changes Announced by Accumetrics, Inc**

Accumetrics, Inc. has implemented a change to the VerifyNow System and the VerifyNow P2Y12 Test for measuring platelet reactivity. As a result, the laboratory report for the P2Y12 Inhibitor test was modified on 8/17/12 to report the PRU (P2Y12 Reaction Units) for the P2Y12 Inhibitor test only. Base or % Inhibition results are no longer reported.

The manufacturer made this change because the PRU result has become widely established and accepted. Over the past several years, a tremendous and rapid accumulation of data has changed the practice of how to evaluate platelet reactivity measurements, focusing on absolute reactivity (i.e. PRU) as opposed to the magnitude of change in reactivity (i.e. % Inhibition). Post drug P2Y12 result values of <208 PRU are associated with expected anti-platelet effect. P2Y12 result values  $\geq 208$  PRU are indicative of a decreased response to P2Y12 inhibitors<sup>1</sup>. A pre-surgical P2Y12 result value of  $\leq 237$  has been found to be associated with an increased risk of re-operation for bleeding and blood product utilization<sup>2</sup>.

Since these changes may impact clinical practice and raise questions, additional support materials and contact information are provided. Questions or concerns may be directed to Leonel Edwards, MD at 203-739-7527. Additionally, access to the manufacturer's website at [www.Accumetrics.com](http://www.Accumetrics.com) is available.

#### **References:**

1. Price et al, Platelet Reactivity and CV Events in GRAVITAS. *Circulation*. 2011; 124: 1132 – 1137.
2. Brizzio et al, Use of an Objective Tool to Assess Platelet Inhibition Prior to Off-Pump Coronary Surgery to Reduce Blood Usage. *Journal of Invasive Cardiology*. 2012; 24: 49 – 52.

## Reference and Therapeutic Range Changes

### **aPTT Reference Range Change Effective August 28, 2012**

Effective Tuesday, August 28, 2012 at 00:00, the aPTT reference range for the Danbury Hospital Laboratory and the New Milford Hospital Laboratory will change to

**24.5 – 33.4 seconds.**

### **aPTT Heparin Therapeutic Range Change at New Milford Hospital**

Also, effective August 28, 2012, at 00:00, the aPTT heparin therapeutic range for the New Milford Hospital Laboratory will change to: **42.6 – 63.1 seconds.**

The new ranges will be updated in the lab information systems and will be reflected on patient reports. Questions regarding these changes may be directed to Dr. Leonel Edwards at 203-739-7527.

## **Morning is Optimum Time to Draw Blood for Testosterone Levels**

*Guillermo Pons, MD (Medical Director, Endocrinology Section; Dept. of Medicine)*

*Salvador Sena, Ph.D. (Medical Director, Clinical Chemistry, Dept. of Pathology and Laboratory Medicine)*

Many constituents in blood exhibit cyclical variations throughout the day. Several factors contribute to these so-called circadian variations, including posture, physical activity, food ingestion, stress, daylight or darkness, and sleep or wakefulness. Testosterone is a male reproductive hormone with significant circadian variation. A 20-40% increase in serum testosterone occurs during the night and levels decrease during the day. In young male individuals, early-morning testosterone levels are on average 50% higher than p.m. levels. This circadian rhythm is NOT blunted with aging. Because reference intervals for serum testosterone are established from a.m. samples, blood samples for testosterone testing should always be collected in the morning between 6:00 and 10:00 am.

An audit of outpatient testosterone tests performed in our laboratory has shown that a significant number of patients present during afternoon hours with orders for serum testosterone as well as samples received from physician office practices that are drawn during non-morning hours. For best results, please advise your patients to get their blood drawn before 10:00 am when ordering serum testosterone tests.

### **References**

1. Tietz Textbook of Clinical Chemistry and Molecular Diagnostics, Fourth Edition.
2. Mayo Medical Laboratories Test Catalog: <http://www.mayomedicallaboratories.com/test-catalog/Clinical+and+Interpretive/8533>.
3. ARUP Laboratories Test Directory: <http://www.aruplab.com/guides/ug/tests/0070130.jsp>.
4. Toward Excellence in Testosterone Testing: A Consensus Statement. J Clin Endocrinol Metab, October 2010, 95(10):4542–4548
5. Testosterone Therapy in Men with Androgen Deficiency Syndromes: An Endocrine Society Clinical Practice Guideline J Clin Endocrinol Metab, June 2010, 95(6):2536–2559.

Supply requisitions may be obtained by e-mail to [sandra.smith@wcthealthnetwork.org](mailto:sandra.smith@wcthealthnetwork.org) or by calling 203-739-7800.