

P2Y12 and Aspirin Testing Announcement

To: Medical Staff

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Re: *New Laboratory Tests for Determining Patient Response to Plavix[®] or Aspirin*

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On 12/14/2009, the Strong Memorial Hospital Clinical Laboratory began offering two new tests, the VerifyNow P2Y12 Assay and the VerifyNow Aspirin Assay. Whole blood is used for the evaluation of platelet function in patients on aspirin or P2Y12 inhibitors such as Plavix. These tests could benefit patients on daily Plavix or aspirin therapy to confirm protection and those undergoing cardiac surgery, percutaneous coronary interventions (PCI).

Therapeutic Response – Variability in patient response to anti-platelet drugs is common. It is recommended that patients on Plavix or aspirin be tested to determine if the drug has produced the expected anti-platelet effect. Aspirin studies show that up to a quarter of patients are not responding to its anti-platelet effects, and those patients are 2-3 times more likely to have a major heart attack or stroke. Additionally, studies show that up to 30% of patients taking Plavix have low levels of platelet inhibition.

Surgical Screen – Patients administered anti-platelet therapies are at risk of increased bleeding during operations. It is recommended that patients on Plavix or aspirin undergoing surgery or invasive procedures be tested to limit preoperative exposure. Test results may aid in decisions to initiate or delay surgery, and to make preparations for additional blood product use if surgery cannot be postponed.

Results Reporting

VerifyNow P2Y12 test results are reported in Percent Inhibition. Results could be affected by the following:

- Low hematocrit values or low platelet count.
- GP IIb/IIIa inhibitors – ReoPro[®], Aggrastat[®], and Integrilin[®]. Patients who have been administered Aggrastat or Integrilin within two days or ReoPro within two weeks should not be tested.



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VerifyNow Aspirin test results are reported in Aspirin Response Units (ARU). Results greater than 550 ARU indicate the patient is not responding to aspirin therapy. Results could be affected by the following:

- NSAID - Ibuprofen, Naproxen, Diclofenac, Indocin, Feldene, NSAIDs have been documented to inhibit platelet function, resulting in decreased ARU values if taken within 24 hours. However, if an NSAID is ingested at the same time as aspirin, this may result in a higher ARU than with aspirin alone.
- GP IIb/IIIa inhibitors – ReoPro, Aggrastat, and Integrilin. Patients who have been administered Aggrastat or Integrilin within two days, or ReoPro within two weeks, should not be tested.

These tests can be ordered via laboratory mnemonics PPIA (P2Y12 platelet inhibition assay) or APIA (aspirin platelet inhibition assay). **Testing should be performed within 3 hours of blood draw** and is usually completed within 45 minutes. **A special collection tube is required:**

1. SMH - call lab at 275-0561 to obtain special blue top tube.
2. HH – call lab at 341-6469 to obtain special blue top tube.
3. Outpatients – appropriate collection is available at all of our PSC sites.

Both of these tests will be offered Monday through Friday from 7 am to 9 pm. Should you have any questions about the assay please contact me at the methods listed above.



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