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To: Chiefs of Service, Attending Physicians, Housestaff, Nurses and Other Concerned Personnel

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Re: New Thyroid Peroxidase (TPO) Antibody Test

Starting January 23, 2011, the SFGH Clinical Laboratory will offer a Thyroid Peroxidase (TPO, thyroperoxidase) antibody test to be used for evaluation of autoimmune thyroid disease. **This test replaces the Thyroid Microsomal Antibody (ATMA) test, which will be discontinued.** If a Thyroid Microsomal Antibody test is ordered on the laboratory requisition, a TPO assay will be automatically performed.

1. **Specimen requirement** for the TPO test: 2 mL serum (Gold-top gel tube).

2. **Availability:** The TPO test will be performed daily (Mon – Fri) as the samples are received.

3. **Results:** Results will be reported as a numerical value in U/ml (Reference range: Negative, < 60 U/ml).

4. **Test Information:** The antibody reactivity previously ascribed to the thyroid microsomes is now recognized to be primarily directed against thyroperoxidase. The new TPO antibody immunoassay is more sensitive and specific than the thyroid microsomal antibody test that is being discontinued. TPO antibody testing is the most sensitive test for detecting autoimmune thyroid disease. TPO antibody is typically the first abnormality to appear in the course of developing hypothyroidism secondary to Hashimoto’s thyroiditis. TPO antibodies are also found in ~85% of patients with Graves’ disease.

5. **Limitations:** The results of this test should be used in conjunction with clinical findings and other laboratory data, especially TSH and thyroid hormone levels, to make the diagnosis of autoimmune thyroid disease. A subset of normal individuals (up to 5%) may have low level antibodies that may not have clinical significance. Moderately increased levels of TPO antibodies may be found in patients with non-thyroid disease such as type 1 diabetes, pernicious anemia, rheumatoid arthritis, lupus erythematosus and other autoimmune disorders.

For questions or concerns, please contact Dr. Kara Lynch (206-5477) or the Clinical Chemistry Lab Medicine Resident (daytime pager: 443-2311).