



# Marshfield Labs™

A division of Marshfield Clinic

# L a b o r a t o r y *News*

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## **Changes to Thyroglobulin Test**

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Starting September 1, 2009, the lab order code for thyroglobulin (Tg) will change from TG to THYGL. With this nomenclature change will also come a reporting change. The Tg result will always be paired with a quantitative, rather than qualitative, anti-thyroglobulin antibody (TgAb) result. If the TgAb result is within defined normal limits, the Tg will be reported. However, if the TgAb result is elevated, the Tg result will only appear in the comment section with an interpretive comment.

Any time the TgAb is positive, the potential for Tg interference exists. Therefore, a Tg result will not be offered alone. Anti-thyroglobulin antibodies are present in ~20% of patients with differentiated thyroid carcinoma (DTC) and in ~10% of the healthy population. Over time, the Ab levels can fluctuate and even change from one type to another. Their influence on the Tg assay is not predictable. There are no Tg methods that are impervious to this potential TgAb interference and it can not be readily deduced whether TgAb interference will increase or decrease the Tg result. Therefore, if TgAb are present, the Tg results should not be used. However, if the antibody decreases to levels that are considered acceptably low, then a Tg result would become valid again.

When TgAb are present and the Tg levels cannot be used, the TgAb result may still have value. These antibodies can be used as a marker, since measurement of TgAb has utility as an indicator of treatment efficacy or recurrence of DTC in those patients who are antibody-positive. This stand-alone test is already on the menu (lab order code: TA-TG) and will continue to be available.

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## THYROGLOBULIN TEST:

**Test Description:**

Thyroglobulin with anti-TG Ab

**Test Code:** THYGL

**CPT Codes:** 84432, 86800

**Fee:** \$82.90

**Reference ranges:**

Thyroglobulin

Normal thyroid:

≤43.0 ng/mL

Athyroid patient:

<3.0 ng/mL

Anti-thyroglobulin antibody:

≤4.0 IU/mL

## FREE THYROXINE INDEX:

**Test Description:** Thyroid Index  
(T7 for OB)

**Test Code:** T7

**CPT Codes:** 84436, 84479

**Fee:** \$16.50

**Reference range:** 1.9 – 4.2

## FETAL LUNG MATURITY (FLM) BY LBC:

**Reference range:**

Mature: >50 x 10<sup>3</sup>/μL

Transitional: 15 – 50 x 10<sup>3</sup>/μL

Immature: <15 x 10<sup>3</sup>/μL

## New Thyroid Panel for OB Patients (Free Thyroxine Index, FTI)

This new thyroid panel for OB reports a total T4, T3-uptake, and calculated free thyroxine index (FTI, also known as T7). The FTI is the product of the total T4 and T3-uptake results. When abnormalities in plasma protein binding are present (that regularly occur in OB patients), the FTI may be a more reliable indicator of thyroid status. Although the units for total T4 could be carried over to the FTI result, it is common to report a unitless value to differentiate it from thyroid tests with potentially similar values (e.g., T4). The FTI is generally elevated in hyperthyroid patients and depressed in hypothyroidism.

## TDx Fetal Lung Maturity (FLM) Test to be Discontinued

By the end of 2009, the FLM test performed on our current instrument (TDx) will no longer be supported by the manufacturer. The remaining tests on this platform are being transitioned to other instruments. However, the FLM test by this technology is not offered by other vendors. Over the past few years, the use of the lamellar body count (LBC) has gained good acceptance for the assessment of FLM and currently accounts for about three times greater test volume than the TDx at Marshfield Labs. The LBC testing will continue to be orderable (order code: LBC).

FLM by LBC reference range:

Mature: >50 x 10<sup>3</sup>/μL

Transitional: 15 – 50 x 10<sup>3</sup>/μL

Immature: <15 x 10<sup>3</sup>/μL 