

**To:** UCM Medical Staff, House staff, Nursing Staff, Patient Care Centers, and Outpatient Clinics

**From:** Melissa S Pessin, MD, PhD  
Professor and Vice Chair, Clinical Pathology  
Medical Director of Hyde Park Clinical Laboratories and Alternative Site Testing

**Date:** 8/5/2025

**Subject: Total Testosterone Testing Method Change at UCM Clinical Chemistry Lab - Hyde Park**

**Effective Date:** 8/11/2025

**Laboratory Section:** Chemistry

**Summary:**

Effective August 11, 2025, the Hyde Park Clinical Chemistry Laboratory will begin performing total testosterone testing in-house by immunoassay (IA) on our automation lines, which operate 24/7. This will replace the current mass spectrometry-based method of batched testing three times per week.

The two methodologies differ only in the lower limit of their reporting ranges: 12 ng/dL for the new IA method versus 7 ng/dL for the mass spectrometry method. The upper limit of the IA reporting range is 1,500 ng/dL.

Based on in-house studies, IA results compare well with those from mass spectrometry, and the reference range will remain unchanged. Free testosterone will continue to be calculated using the modified Vermeulen equation, with the only change being that the total testosterone input value will now be determined by IA.

**Test Names (and Codes):** Total Testosterone Immunoassay (878774); UCM\_LAB Testosterone, Free and Total (851332)

**Availability:** 24 hours, 7 days per week

**Acceptable Specimen Types:** Lithium heparin plasma (mint top tube) or serum (red or gold top tubes)

**Reference Ranges:**

Male:		Female:	
0 - 5 months	75 - 400 ng/dL	0 - 5 months	20 - 80 ng/dL
6 months - 9 years	<20 ng/dL	6 months - 9 years	<20 ng/dL
10 - 11 years	<130 ng/dL	10 - 11 years	<44 ng/dL
12 - 13 years	<800 ng/dL	12 - 16 years	15 - 60 ng/dL
14 years	<1,200 ng/mL	17 - 40 years	20 - 60 ng/mL
15 - 16 years	100 - 1,200 ng/dL	41 - 60 years	<60 ng/dL
17 - 18 years	300 - 1,200 ng/dL	Post-menopausal (>60 years)	<70 ng/dL
19 - 55 years	240 - 950 ng/dL		
>55 years	180 - 800 ng/dL		

**Questions:**

If there are any questions regarding this change, please contact:

The UCM Clinical Chemistry Lab – Hyde Park at 773-702-1772.

Melissa S Pessin, MD, PhD, Interim Medical Director, Clinical Chemistry Service [pessinm@bsd.uchicago.edu](mailto:pessinm@bsd.uchicago.edu)

Clarence Chan, MD, PhD, Assistant Medical Director, Clinical Chemistry Service [clarence.chan@bsd.uchicago.edu](mailto:clarence.chan@bsd.uchicago.edu)

Vishnu Samara, PhD, Assistant Medical Director, Clinical Chemistry Service [vsamara@bsd.uchicago.edu](mailto:vsamara@bsd.uchicago.edu)