Memorandum Core #186

To: UNCMC Attending Physicians, Eastowne MOB Labs, Housestaff, Nursing Coordinators, Department Heads and Supervisors

From: Herbert C Whinna, MD, PhD
Medical Director, UNCMC McLendon Clinical Laboratories, UNC Hillsborough Hospital Laboratory, and Eastowne MOB Laboratory

Steven W. Cotten, PhD
Director of Automated Chemistry, UNC Medical Center

Date: July 20, 2022

Subject: Cystatin C in-house, Anti-Thyroid Peroxidase Antibody (TPO-Ab) Platform Change

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Effective July 25th 2022, Cystatin C testing with be available at the medical center and TPO-antibody testing will change instrument platforms which will impact its reference intervals.

The increased availability of Cystatin C testing is in alignment with the National Kidney Foundation and the American Society of Nephrology recommendations. Clinical practice recommendations suggest that cystatin C may be a more reliable marker of renal function than creatinine for select adult patients with eGFRcr near medical decision points and in situations in which non-GFR factors may have a large effect on serum creatinine, including but not limited to: alterations in creatinine production (muscle wasting diseases, amputees, body builders, vegan diet), drugs that affect tubular secretion of creatinine (cimetidine, cobicistat, dolutegravir, fenofibrate, ritonovir, trimethoprim and others), and conditions with extra-renal elimination of creatinine (gastrointestinal and “third-space” losses).

An estimated GFR ($eGCR_{cys}$) will be reported with Cystatin C results using the 2012 CKD-EPI cystatin C equation which includes age and sex variables and does not include a race coefficient. Both serum and lithium heparin plasma are acceptable specimen types.

Age	Reference Range	Citation
0-1 year	0.59-1.97 mg/L	Reference ranges for plasma cystatin C and creatinine measurements in premature infants, neonates, and older children PMID: 10630919
>1 year	0.63-1.23 mg/L	Manufacturer package insert

Thyroid Peroxidase Antibodies (TPO-Ab) will move from the Immunology Laboratory to the Core Laboratory at the Medical Center. Changing platforms will impact both the reporting units and reference interval for the test.(Table 1) Results are not interchangeable between instrument platforms and patients with previous TPO antibody results will require remeasurement.

	Previous	New
Instrument Platform	Abbott Architect	Siemens Atellica
Units	IU/mL	U/mL
Reference Range	<5.60	<60
Specimen Type	Serum	Serum

For questions please contact

Director of Automated Chemistry, UNC Medical Center:
Steven.Cotten@unchealth.unc.edu
Medical Director, UNC Hillsborough Hospital Laboratory:
Herbert.Whinna@unchealth.unc.edu