UNC HEALTH CARE

MEMORANDUM #102

TO: UNC Hospitals Attending Physicians, Housestaff, Department Heads, Nursing staff and Supervisors

FROM: Catherine Hammett-Stabler, Ph.D., Director Core Laboratory
Robert Mills, MT (ASCP), Supervisor Special Chemistry Laboratory
Herbert C. Whinna, M.D., Ph.D. Director, McLendon Clinical Laboratories

SUBJECT: **Serum Free Light Chain Testing in-house**

DATE: August 10, 2011

The Core laboratory announces the introduction of testing for kappa and lambda serum free light chains effective August 9, 2011. Testing will be performed in the Special Chemistry Section using immunoturbidimetric-based methods (Binding Site Group, Ltd, UK). Previously this test was sent to Mayo Medical Laboratories. The tests are used in conjunction with serum protein electrophoresis to monitor multiple myeloma patients. The specificity of this assay for the detection of monoclonal light chains relies on the calculated ratio of free kappa to free lambda light chains.

There are instrument differences between the methods used by the Core Lab and Mayo which may affect the absolute concentrations of both kappa and lambda free light chains. Importantly, there is little effect on the κ/λ ratio (see table of the κ/λ ratio determined for 35 patient specimens analyzed at Mayo and UNCH).

		Mayo Medical Laboratories		
	κ/λ ratio	<0.26	0.26-1.65	>1.65
CORE Laboratory	<0.26	7	0	0
	0.26-1.65	1[a]	14	0
	>1.65	0	1[b]	12

a. Ratio was 0.23 at Mayo and 0.27 at UNC

b. Ratio was 1.27 at Mayo and 1.67 at UNC

Ordering Information: Test ID –LCQS Test Number – **0140** CPT Code – 83883x2

Specimen Requirements: 4 mL of blood/Serum Separator Tube/Gold Top, or
1.5 mL blood/ 3 microtainers.

Availability: Testing will be performed three times weekly. STAT testing is NOT available.

Reference Range: kappa (κ), 0.33–1.94 mg/dL; lambda (λ), 0.57–2.63 mg/dL and the κ/λ ratio: 0.26-1.65.

For more information or questions, please contact Dr. Catherine Hammett-Stabler or Robert Mills at 966-2361.