



TO: Medical Staff, House Staff, Patient Care Centers, Outpatient Clinics and UC Med Labs Clients

FROM: Krzysztof Mikrut, B.S. MT (ASCP)
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DATE: July 21, 2017

RE: Availability of 24/7 Thromboelastography (TEG) Testing at University of Chicago Medicine

Effective Thursday July 27, 2017 the next phase of Thromboelastography (TEG) testing implementation will take place at University of Chicago Medicine. Specifically, we will begin to offer TEG 6S testing 24 hours a day, 7 days a week for all hospital/clinic locations within the Hyde Park campus.

TEG testing employing the TEG 5000 instrument was first introduced in the Coagulation Laboratory in December 2016. These testing packages will continue to be available.

		TEG 6S	TEG 5000 TEG1 Standard	TEG 5000 TEG2 Heparin	TEG 5000 TEG3 Complex
Availability		24/7	M-F 7:30 AM-3:00 PM	M-F 7:30 AM-3:00 PM	M-F 7:30 AM-3:00 PM
Pathologist Interpretation		NO	YES	YES	YES
Send to		Coag Lab Tube Station 904 <i>(For intra-operative, send to Blood Bank Tube Station 400)</i>	Coag Lab Tube Station 904	Coag Lab Tube Station 904	Coag Lab Tube Station 904
TEG Reagents and Parameters Reported	Kaolin	R K Angle MA	R K Angle MA Ly30	R K Angle MA Ly30	R K Angle MA Ly30
	Kaolin with Heparinase	R		R K Angle MA Ly30	
	Rapid TEG				R K

		MA	Angle MA
	Functional Fibrinogen	FFMA FBGN	FFMA FBGN

Due to the technical complexity required for the TEG 5000 system, such testing is able to be provided only on specimens received at the Coagulation Laboratory during first shift (7:30 AM through 3:00 PM) Monday through Friday.

To extend availability of TEG throughout the hospital 24/7, beginning Thursday July 27, 2017 the Coagulation Laboratory will begin providing testing on the new TEG 6S instrument without restrictions to specimen receipt time (i.e., **TEG 6S testing to be available 24/7**). Numeric results will be entered into EPIC. In contrast to testing with the TEG 5000, testing with the TEG 6S will not include a pathologist interpretation. Real-time viewing of clot development will be available through TEG Manager software for testing performed both on the TEG 5000 and TEG 6S instruments (see below). Please further note that while the reference intervals obtained with the TEG 5000 and 6S instruments are in many instances similar, they are not identical. Accordingly, patient results in EPIC will always be displayed with reference to the specific testing platform employed on that specimen. Additionally it is important to note that while the TEG 5000 tracings continue beyond the time of maximal clot amplitude, with the potential to identify abnormally increased clot lysis, tracings on the TEG 6S instruments presently operational in the U.S.A. terminate upon attainment of maximal clot attainment due to current FDA approval limitations.

As of July 27, 2017 a single EPIC test code ("TEG 6S") will be employed both for the TEG 6S testing performed in the Coagulation Lab described in this memo and for Intraoperative TEG 6S testing that has been underway in the Blood Bank since March 2017.

Of note, while TEG 6S testing has been available within the EPIC OR environment as "TEG 6S intraoperative", the "TEG 6S" will now be available for ordering within all EPIC environments.

TEG 6S PACKAGE

Ordered in EPIC as "TEG 6S"

The package (using the Haemonetics Global Hemostasis cartridge) includes results with TEG Kaolin, Rapid TEG, and TEG Functional Fibrinogen modules.

Type of Collection Container and Amount of Specimen Required:

Whole blood collected in two light blue top vacutainer tubes containing 3.2% sodium citrate anticoagulant. The tubes must be filled to capacity \pm 10%.

Specimen Collection:

For samples drawn by venipuncture (with 21G or larger bore needle) discard the first 3 mL of blood using a third blue top tube. Gently invert the sample tube at least five times to ensure complete mixing of the contents.

Whole blood samples that are obtained from an indwelling catheter should be collected after sufficient discard (approximately 5 mL) has been drawn to clear the line. Ensure indwelling catheter is free of clots.

Specimen Labeling:

Properly identify patient and label tubes (ideally with Sunquest labels)

Specimen Transportation:

Samples must be packed appropriately and sent via pneumatic tube system. Sample testing must be performed within 2 hours of blood collection.

For intraoperative TEG 6S testing, all samples should be tubed to Blood Bank (pneumatic tube station 400).

ALL other TEG 6S testing samples should be tubed directly to the Coagulation Lab (pneumatic tube station 904) just as is presently done for PT, aPTT, etc.

Locally Determined Adult Reference Intervals for TEG 6S Testing:

Normal Ranges for TEG 6S Citrated Kaolin (CK) whole blood samples:

R: 5.0 - 8.6 minutes
K: 0.8 – 2.6 minutes
Angle: 61.0 – 78.0 degrees
MA: 52.0 – 69.0 mm

Normal Range for TEG 6S Citrated Rapid TEG
MA: 55.0 – 71.0 mm

Normal Range for TEG 6S Citrated Heparinase Kaolin (CKH):
R: 4.8 – 8.8 minutes

Normal Ranges for TEG 6S Citrated Functional Fibrinogen
MA: 14.0 – 32.0 mm
Fib. Level: 250.0 – 600.0 mg/dL

Remote TEG Curve Viewing

Remote viewing of the tracing is via TEG Manager software which can be accessed from UCMC Applications. If the TEG Manager icon is not displayed in your EPIC applications menu page, you will need to fill out a SARF for access to the TEG Manager program:

<http://home.uchospitals.edu/tools/apps/sarf>

Please contact the Technical Director of the Coagulation Laboratory, Mr. Krzysztof Mikrut, or the Medical Director of the Coagulation Laboratory, Dr. Jonathan Miller, at (773) 702-1315, with any questions concerning this implementation.