Reflex Testing

- Reflex Tests refer to the additional testing, which occurs when initial test results are positive or outside of normal parameters and indicate that a second related test (second level) is medically appropriate. These tests have been performed automatically in the past because the standard of practice dictates that these tests be performed as follow-up tests, and to prevent the patient from having to submit a second sample. Since there is not a specific order for these tests, HCFA will allow us to continue this practice if the client physicians are supplied with a list of all reflex testing. This list will define what secondary tests will automatically be performed and what will trigger the reflex tests.

- The medical directors of the laboratory in consultation with the Indiana University Health Health Physician Medical Council will determine the Standard of Practice for this medical community.

- Secondary Testing that is not listed on the approved Reflex Test menu will require a specific order for the desired follow-up test.
    - Request follow-up tests in the original order.
    - Requests for follow-up testing after initial testing has been completed may not be possible due to lack of sample, or condition of original sample.

Version 1, October 2000
Updated May 2010

REFLEX TESTING

Area/Section	Primary Test	Results (Reflex Criteria)	Reflex Test
Microbiology	Acid-fast culture	Significant growth	Acid-fast stain & Identification susceptibility for M. tuberculosis
	Anaerobe or aerove, cystic fibrosis, spinal fluid, respiratory and other cultures	Significant growth	Gram Stains, identification & susceptibiligy if needed (each organism)
	Culture & Stains	Infectious Disease Pathology Consultation	Cultures & stains may be added by reviewing pathologists
	DNA antibody	Positive screen	Quantitative assay
	Fungal culture	Significant growth	Fungal stain & identification
	MBC (Non-routine)	MIC must be ordered when MBC is ordered	
	Rapid Strep Ag	Negative	Strep Culture
	Susceptibility Studies	Multi-Drug resistant organisms	Additional antibiotics
	Syphillis Treponemal IgG	Reactive	RPR
Chemistry	Cryoglobulins Positive		Serum immunofixation
	Electrophoresis	Monoflonal peak, no prior data	Immuno-fixation
	Fetal lung maturity	Immature or borderline	L/S ratio
	Hemoglobin electrophoresis	Atypical variant	Citrate agar conformation (or) isoelectric focusing (NBS)
	Hepatitis B surface Ag	Positive	Confirmatory

Area/Section	Primary Test	Results (Reflex Criteria)	Reflex Test
Chemistry cont	Hepatitis C Antibody	Positive	ABIB
	HIV ½ Ab HIV Ag	Positive on 2 of 3	Western blot confirmatory
	L/S ratio	Certain parameters exceeded	SPC (Saturated phosphatidylcholine)
Molecular	Group B PCR	Negative	Group B Strep Culture
Blood Bank	Direct Coombs	Positive (IgG)	Antiglobulin differential elution & identification
	Direct Coombs cord blood	Positive	Elution & Identification
	FMH screen for RHIg	Positive	Kleihauer-Betke stain for quant. Fetal Hgb
	Transfusion reaction	Visible hemolysis	Free hemoglobin and/or bilirubin
	Unexpected antibody screen	Positive	Antibody Identification
	(Indirect Coombs)		Antigen testing for compatible units
Hematology	All hematology / oncology patients	>10 WBC / cumm.	MD or technologist's request
	All hematology / oncology patients	< 10 WBC / cu mm. On all patients <18 yrs.	To pathologists for interpretation
	Body fluids (including CSF)	Presence of organisms and/or crystals	Confirmation and pathologist's review
	CBC Extre	mely abnormal parameters with no history	To pathologist for interpretation
	Flow cytometry markers	Abnormal	As directed by pathologist

Area/Section	Primary Test	Results (Reflex Criteria)	Reflex Test
Coagulation	Abnormal Bleeding Panel	PT and/or PTT abnormal	Incubated Mixing studies will be performed
	Lupus Anticoagulant (LA)	LA/aPTT/dRVVT equivocal	Staclot LA test performed
	Mixing Study Panel	Abnormal	Factor deficiency or circulating anticoagulant workup
	Thrombotic Risk Panel	Positive APCR Screen	Factor V Leiden by PCR
	Von Willebrand Disease Panel	Abnormal Screening Tests	vWD ristocetin-induced platelet aggregation (RIPA)
Cytology	High Risk HPV	ASC-US (Atypical squamous cells of undetermined significance)	Detection of 13 High-Risk HPV types by Hybrid Capture Technique
Reference Lab	ADAMTS13 Activity	If abnormal	ADAMSTS13 Antigen +/or inhibitor will be performed
Send Outs	AFP Amniotic Fluid	Positive AFP	Acetycholinesterase
	ANCA Reflex Panel	Positive	MPO Ab/Serine Protease 3 Ab
	B pertussis IgG/IgA	Positive	Immunoblot
	B pertussis IgM	Positive	Immunoblot
	Brucella Ab Scrn IgG/IgM	Positive	Agglutination
	DAS-9 Reflex Conf	Positive screen	Confirmation
	Drug Screen-Meconium 4	Positive	Confirmation
	Drug Screen (Non-forensic)	Positive screen	Confirmation
	Drugs of Abuse Screen 9	Positive screen	Confirmatin
	Hemoglobin Eval Bld %	Abnormal	Hgb Electrophoresis or HPLC
	Hemolytic Anemia Eval.	Abnormal	Consultative evaluation and additional testing

Area/Section	Primary Test	Results (Reflex Criteria)	Reflex Test
Reference Lab *Send Outs*	Hemoglobin Electrophoresis Cascade	Abnormal	Consultative evaluation and additional testing
	HSV ½ IgM Rflx	Reactive	IFA
	HIV Ag (non-ICD) Ser Elisa	Positive	P24 confirmation
	HTLV I/II Ab Screen	Positive	HTLV Ab Confirmation
	Ipecac Use Markers, Ser or Ur	Positive	Confirmation
	Lyme Disease Serology	Positive	Western Blot
	MG Adult w/ reflex	AChR modulating antibodies are >=90% and striational antibodies are >= 1:60	AChR ganglionic neuronal autoantibody, glutamic acid decaroxylase autoantibody, neuronal voltage-gated potassium channel (VGKC) autoantibody and CRMP-5-IgG Western blot
	Ovarian Ab Ser IFA Ttr	Positive	Ab Titer
	NMO-IgG Serum	Indeterminate	IFA
	Paraneop Ab CSF/ Ser rflx	Abnormal or indeterminate	Western Blot &/or radioimmunoprecipitan
	Porphyrins Frac PL QN	Abnormal Total	Fractionation
	Reticulin IgA Ser IFA	Positive	Reticulin IgA Titer
	Striated Muscle IgG	Positive	Ab Titer
Serology	RPR Reactive		Treponemal antibody
	HIV-I antibody, EIA	Positive on 2 of 3	Western blot confirmatory

*Note: ordering physician may request that Reflex Testing not be performed at the time that the test is ordered.

Updated May 2011

This reflex-testing list was not established for the convenience of the laboratory, the medical staff, a particular physician or physician group, but rather based on generally accepted good clinical practice.