Mandatory Reflex Testing

Approved by MEC February 2020

INITIAL TEST and RESULT	CONFIRMATION TESTING/ ADDITIONAL WORKUP
All newly diagnosed patients with Acute Myeloid Leukemia under age 80, unless otherwise specified by physician. (Bone Marrow or Whole Blood)	Heme Molecular Sequence Analysis
aPTT >150 without clot detection	Unfractionated Heparin
aPTT Mixing Study	APTT and, if the APTT Mixing Study does not correct, order a Lupus Anticoagulant Screen (LA1)
aPTT Mixing Studies (Test Code 4120) greater than or equal to 6 seconds above the normal range.	Heparin Neutralization (Policy 6679) to rule out anticoagulant: • If aPTT corrects to normal, then a Mixing Study is not indicated. • If aPTT remains elevated, then Unfractionated Heparin Level (Test Code 8101) assay is ordered. • If Unfractionated Heparin Level is greater than 1.0 U/mL, then a Mixing Study is not indicated.
Anaerobic Culture	Aerobic culture on all orders that do not already have an aerobic culture ordered on the same specimen.
Antibody Screens	ABO/RH
AntiNuclear Antibody (ANA) EIA Screen	AntiNuclear Antibody (ANA) Hep-2 Substrate with Reflex positive
AntiNuclear Antibody (ANA) Hep-2 Substrate with Reflex positive	AntiNuclear Antibody (ANA) Titer and Pattern
Blood Culture (Test Codes 8894 & 8896); if positive for growth of bacteria	• Bacterial identification will be performed if growth occurs any bottle. An antibiotic susceptibility will be performed on all pathogenic isolates.
All newly diagnosed patients with B-Cell Lymphomas under age 80, unless otherwise specified by physician	• MyD testing on bone marrow aspirate
All patients with Invasive ductal, lobular, mixed ductal/lobular, mammary NOS, or micrometastatic lymph node breast carcinoma meeting the following criteria: • Age less than 70 years • Not pure tubular, mucinous, or colloid carcinoma (grade 1 special subtypes with good prognosis) • Tumor is pathologic stage pT1b, T1c, T2, or T3 • Tumor is not stage T4 • Tumor is pathologic stage N0 or N1mi • Tumor is ER positive and Her2/neu negative • Not post-treatment (y), recurrent tumor (r) or with known distant metastatic tumor (M1)	Send for Oncotype DX testing: 1) If multifocal,and meet above criteria 2) . Perform Oncotype on largest primary tumor (if same histology) 3) Perform Oncotype on up to three primary tumors (if different histology), indicate order of testing to Oncotype (as they will stop further testing if high recurrence score is resulted 4) If bilateral, perform Oncotype on both sides. 5) If high risk tumor: stage (T4, N1b+), ER-, or Her2 positive concurrent cancer that would not reflex, do not reflect test lower risk tumor(s)
All newly diagnosed or previously untested Adult Granulosa Cell Tumors, Serous Boderline Tumors, and Low Grade Serous Carcinomas	IHC for Estrogen and Progesterone receptors
Bone Marrow samples with clinical indications for possible need	Sort CD138 to purify (concentrate) sample and hold

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to perform FISH Myltiple Myeloma Panel	for possible FISH Multiple Myeloma Panel
Diagnostic sample of B-lymphoblastic leukemia (B-ALL) and B-cell non-Hodgkin lymphoma with anti CD-19 therapy	Flow cytometry Blinatumomab tube (anti-CD19 therapy tubes)
CBC w/man diff - will reflex to CBC w/out diff "if" the WBC is less than 0.4.	CBC w/out differential
CBC w/man diff - will reflex to CBC w/out diff "if" requested within in 24 hours.	CBC w/out differential
Flow cytometry testing	1. CBC w diff on all orders that do not already have a CBC w diff ordered on patient on the same date and specimen is less than 10 hours old. 2. And Flow cytometry is unable to get WBC and automated differential.
Celiac Disease Cascade Celiac TTG Ab IgA and Celiac Total IgA performed initially	• Normal IgA, negative TTG (IgA at or above Normal Low for patient's age, TTG IgA <=6.9) (Celiac disease unlikely. Further reflex testing not indicated.) • Normal IgA, positive TTG (IgA at or above Normal Low for patient's age, TTG IgA >=10.1) (Celiac disease likely. Further reflex testing not indicated.) • Normal IgA, equivocal TTG (IgA at or above Normal Low for patient's age, TTG IgA 7.0 - 10.0) (Endomysial Ab IgA ordered by reflex rule for further evaluation) • Decreased IgA, negative TTG (IgA below Normal Low for patient's age, TTG IgA <=6.9), (Transglutaminase Ab IgG, Gliadin Ab IgG, and Gliadin Ab IgA ordered by reflex rule for further evaluation.) • Decreased IgA, positive TTG IgA (IgA below Normal Low for patient's age, TTG IgA>=10.1) (Transglutaminase Ab IgG, Gliadin Ab IgG, and Gliadin Ab IgA ordered by reflex rule for further evaluation.) • Decreased IgA, equivocal TTG IgA (IgA below Normal Low for patient's age, TTG IgA 7.0 - 10.0): (Endomysial Ab IgA, Transglutaminase Ab IgG, Gliadin Ab IgG, and Gliadin Ab IgA ordered by reflex rules for further evaluation.
Cerebral Spinal Fluid (CSF) If Protein Electrophoresis [Test Code 8651] is requested	IgG Index Synthesis CSF Careset [Test Code 11593], IgG Index Serum [Test Code 11592]
Cerebral Spinal Fluid (CSF) RBC Cell Count greater than or equal to 25 cells in tube 3	Additional count of tube 1
Cerebral Spinal Fluid (CSF) WBC Cell Count greater than 0, in tube 3	Manual differential
Cryptococcus Antigen ordered on CSF	Cryptococcus CSF Panel (Cryptococcus Ag and

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	Fungal Culture)
Clostridium difficile by EIA Toxin Positive Antigen Negative Toxin Negative Antigen Positive	Clostridium difficile by PCR
Culture from catheter tip or foreign bodies	Culture catheter/device
Direct Antiglobulin	ABO/RH
Mononucleosis Screen, Epstein Barr (EBV) IgM if Negative (Test Code 236): If Mononucleosis Screen is Negative	Epstein Barr (EBV) VCA IgM Acute Antibody (Test Code 4268)
All Hematopoietic neoplasms	DNA extraction and hold, cytogenetics, and flow cytometry
Hemoglobin (Hgb) A2 result is greater than 10%	Capillarys Hemoglobin Electrophoresis (to confirm Hgb E)
Hemoglobin Fractionation that identifies new Hemoglobin S	Sickle Cell Screen
Hemoglobin Fractionation	CBC on all orders for Hemoglobin Fractionation that do not already have a CBC ordered in the past 30 days.
Hepatitis C Genotype w/Amplification: Positive Hepatitis C Virus amplification result	Hepatitis C Genotype
Her2/neu immunohistochemistry 2+ positive	FISH for Her2/neu
Herpes Simplex, IgM, Antibody Screen result is positive or equivocal	Herpes Ab IgM IFA
HIV 1/2 Antibody EIA and Quick Test If HIV 1/2 Antibody is positive	a) HIV Quick test. If Positive: reflex to Roche HIV. b) Roche HIV: If positive for Antibody then reflex to Geenius for confirmation. (Positive Antigens do not reflex; HIV RNA testing requires a new order and a new specimen).
HIV Quick (Spectrum Health Regional Lab only)	Cancel and reorder as HIV ½ Antibody EIA
Immunohistochemical (IHC) Stain [Test Code 1098] All newly diagnosed patients with endometrial cancer, including cases of recurrence when no IHC was previously performed. a) If MLH1 is absent: b) If PMS2, MSH2, and/or MSH6 is/are absent:	MLH1 Promoter Hypermethylation Analysis [Test Code 7091] If hypermethylation is absent: refer to genetics consult. Refer to genetics consult.

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Leukemia/Lymphoma/Myeloma and/or Non-Hodgkin lymphoma panels by flow cytometry: if indicated, reflex testing may be added to further characterize possible abnormal cell populations identified by the screening panel. These panels are reviewed continuously in multidisciplinary conferences and by the flow cytometry laboratory and hematopathologists.	The following add on panels may be employed after initial testing, as needed and appropriate, to further evaluate any possible abnormal population of cells. B lymphoblastic leukemia (B-ALL) panel T lymphoblastic leukemia (T-ALL) panel Chronic lymphocytic leukemia (CLL) panel Hairy cell leukemia (HCL) panel Extended B-cell tube panel Extended T-cell tube panel NK cell or LGL panel CD10 positive B-cell panel CD5 positive B-cell panel Acute myeloid leukemia (AML) panel Extended myeloid or monocytic panel Plasma cell panel Mast cell panel Solid tumor panel Neuroblastoma panel
NICU patients with a cord blood workup	Antibody Screen
Non SHGR 1) Patients with a diagnosis of Influenza during Influenza season 2) Patients with a diagnosis of Influenza during Non-influenza season	Influenza (Flu) A/B Rapid [test code 4626]; If Influenza (Flu) A/B Rapid is Negative, then Influenza (Flu) A/B PCR [test code 156] Influenza (Flu) A/B PCR [test code 156]
SHGR: Influenza A/B Rapid (Test Code 155); if negative	Influenza A/B PCR (Test Code 156)
Adults (pts >17) Inpatient or Observational at Butterworth or Blodgett with active warfarin order and no active INR order	Cerner will automatically order a PT/INR when: The rule is evoked upon administration of a warfarin dose being signed in the eMAR. Once evoked the rule looks for: 1. Pt age > 17 years, 2. Inpatient, Observation enounters at BW, BL if 1 and 2 are true then rule keeps evaluating for, 3. an active PT(with INR) order with a requested date and time within a future 24 hours of the administration of the warfarin dose. or 4. an active PT (with INR) with a frequency of; q 24hr, q am, q daily. (child order to be placed approx 00:30 with an ops job) If neither 3 or 4 of these conditions are met the rule will order orderable Protime (with INR) w/ order entry fields.
Malaria Rapid Screen (Test Code: 7087) 1) If presumptive positive for malaria antigens 2) If presumptive negative for malaria antigens	1) Parasitemia Level (Test Code: 7089); Malaria speciation confirmation by thin/thick smear microscopy evaluation 2) Negative result confirmed by thin/thick smear microscopy evaluation. If smear is positive,

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	then reflex to Parasitemia Level (Test Code: 7089)
Myeloproliferative Neoplasms (MPN) If negative for JAK2 V617F mutation (Test Code 7093)	Then MPN Expanded Panel (Test Code 7090)
All newly diagnosed of MDS and MDS/MPN **Under age 80**	Heme molecular Sequence Analysis on all adult patients
Pathologist Review (Test Code: 8367) If review of peripheral blood smear is ordered without required accompanying CBC with differential, and if the specimen is within 10 hours of collection.	Complete Blood Count (CBC) with Differential (Test Code: 8411)
Platelet Count less than 75,000/µL	Immature platelet fraction (IPF)
Patient is less than 6 months of age and has suspected Hgb S by the Hgb fractionation test	Capillarys Hemoglobin Electrophoresis
Patient is suspected of having Hgb C by the Hgb fractionation test	Capillarys Hemoglobin Electrophoresis
Platelet Aggregation Studies	Platelet Count
Platelet Function Assay (PFA 100) with Collagen/Epinephrine results greater than 180 seconds.	Collagen/ADP test
Platelet Function Assay (PFA)	Platelet Count and hematocrit
Positive Antibody Screen, or a positive Direct Antiglobulin Test (DAT) on inpatients, outpatients, and surgical patients	Relevant studies as needed including antibody identification, antigen typing, direct antiglobulin test, elution and absorption. In addition, packed blood cells will be antigen typed and crossmatched.
Positive culture for pathogen or organism with clinically significant concentration (bacteria or mycobacteria)	Susceptibility and typing as necessary.
Positive Cryoglobulin test	Positive Cryoglobulins which have not had an identification in the past 2 months will have the Reflex Cryoglobulin Interpretation ordered.
Positive Group B Strep, Penicillin allergy, PCR on OB patients	Susceptibility testing.
Positive Hepatitis B surface antigen	HbsAg Confirmation test
Positive Lyme Disease Screen	Western Blot
Positive Amphetamine, Cannabinoids, Ethanol, Methadone, opiates, Oxycodone or cocaine on a Drug of Abuse screen for Inpatient Obstetric Patients (Mothers and their babies).	LC/MS Confirmation
Positive opiates on Comprehensive Drug Screens	LC/MS Confirmation
Positive Gamma HydroxyButyrate (GHB)	GC/MS Confirmation (Mayo)
Positive prenatal Profile Type &Antibody Screen	Antibody identification with titer if identified antibody is clinically significant
Prostate Specific Antigen (PSA) Free Level	PSA total on all orders that do not already have a PSA ordered on the same specimen.
Positive Syphilis IgG Antibody	RPR Titer at Spectrum Health, also confirmation by MHA-TPA at State Health Department
Rapid Plasma Reagin (RPR) test for syphilis	SYPHILIS IgG SCREEN will be performed instead of the RPR.
Prothrombin Time (PT) Mixing Study	PT and, if the PT Mixing Study does not correct, order a Lupus Anticoagulant Screen (LA1)
Random urine microalbumin	Urine creatinine
Sputum Culture without gram stain order	Gram stain for specimen suitability. If unsuitable, “culture” is cancelled.
Sputum Gram Stain without culture	Sputum Culture ordered. If Gram Stain is unsuitable, “culture” is cancelled.
Thyroglobulin	Automatically cancel AntiTgAB request when ordered with srTg
Type & Screen (T&S) on a patient with autologous or directed	Crossmatch of the units

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units	
Type & Screen (T&S) on a pre-op patient with an antibody	Crossmatch of two antigen negative units
Metastatic Gastric and Esophageal Adenocarcinomas	Perform Her2/neu immunohistochemistry. When metastasis is pathologically confirmed (can use either metastatic site or primary tumor). • Equivocal immuno results will reflex to FISH testing.
All colorectal carcinoma resections at Butterworth and Blodgett Hospitals	• Immunohistochemical (IHC) protein studies for MSH2, MSH6, MLH1, PMS2 [Test Code 1098] • PCR for Microsatellite Instability (MSI)[Test Code 904] • Additional reflex to BRAF [Test Code 709], if MSI-H with loss of MLH1 on IHC
Metastatic Colorectal Carcinoma	Colon Mutation Analysis Panel (Test Code 7094) -includes genotyping for KRAS, NRAS, and BRAF mutations
All Diffuse Large B-cell Lymphoma/other B-cell Lymphoma	1. Immunohistochemical/In situ hybridization staining to include: CD3, CD20, CD5, CD10, BCL-1, Ki-67, EBERish, BCL-2, BCL-6, MUM1, MYC, CD30, and CD45 2. Cytogenetic FISH testing to include: BCL-2, BCL-6, and MYC rearrangement testing.
All newly diagnosed lung (non-small cell) adenocarcinomas	Molecular Lung Cancer Panel (Test Code 7030)
Metastatic melanoma Including Cases with Positive lymph nodes	BRAF IHC if IHC negative reflex to BRAF molecular testing
Glioblastoma (brain) Grade 4 Anaplastic Astrocytoma IDH-wildtype	MGMT Methylation Analysis [Test Code706] p53 [Test Code1098] IDH1 [Test Code 1098] Cancer Hotspot analysis
Glioblastoma (brain) Grade 4 Recurrent Glioblastoma initially MGMT positive (Methylated)	MGMT Methylation Analysis [Test Code706]
Glioma Grade 2 and 3	p53 [Test Code 1098] IDH1 [Test Code 1098] Del 1p/19q by FISH [Test Code 955] Ki-67 [Test Code 1098] ATRX by Immunohistochemistry
All newly diagnosed or previously untested oropharyngeal squamous cell carcinomas	p16 immunohistochemistry (surrogate marker for HPV)
Pain Management Panel If positive screen result:	○ Amphetamines-reflex to methamphetamine and amphetamine if screen positive Barbituarates-reflex to Butalbital, Secobarbital, and Pentobarbital if screen positive ○ Benzodiazapines-reflex to Benzodiazapines Urine Level Panel if screen positive ○ Cannabinoids-reflex to confirmation if positive ○ Cocaine Metabolite-reflex to confirmation if screen positive ○ Ethanol-reflex to confirmation if screen positive ○ Methadone Metabolite-reflex to Methadone and EDDP if screen positive
UA or UA culture if (where volume is inadequate for microscopic exam	Urine Dipstick (U dip)

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Antibody Titer	ABO/Rh and Antibody Screen
Tissue Specimens ordered as a Body Fluid Culture	Cancel and Order as a Tissue Culture
Body Fluid Specimens ordered as a Tissue Culture	Cancel and Order as a Body Fluid Culture
Specimens in Abbott Multi Collect tube ordered as Aptima specimens	Cancel Aptima test and reorder corresponding Abbott test for Chlamydia PCR, Gonococcus PCR
Specimens in Aptima collection tube ordered as Abbott Multi Collect tube specimens	Cancel Abbott test and reorder corresponding Aptima test for Chlamydia NAAT, Gonococcus NAAT, or Trichomonas Only
Lupus Screen LA1 elevated	LA2 if elevated perform Protime and aPTT if these are elevated perform mixing study for Protime/aPTT Pathologist interpretation reported with elevated results and/or mixing study
Heparin Dependent Antibody (HIT) Positive or Borderline	Serotonin Release Assay (SRA)
Platelet Aggregation	Hematocrit
All newly diagnosed adult patients older than 80 with newly diagnosed AML	IDH Mutation Analysis
Bone marrow or blood EDTA samples (Philadelphia positive B-ALL and CML)	RNA extract and hold
Mycoplasma pneumoniae IgM reactive or equivocal	Mycoplasma pneumoniae IgM by IFA
Blastomyces Antibody by EIA, Serum equivocal or Positive	Blastomyces Antibody by Immunodiffusion
Serum Protein Electrophoresis IFE if indicated	Serum Protein Electrophoresis with paraprotein found or elevation of protein fraction in electrophoresis pattern. Reflex to Immunofixation for identification.
24 hour Urine Protein Electrophoresis IFE if indicated	Urine Protein Electrophoresis with paraprotein found or elevation of protein fraction in electrophoresis pattern. Reflex to Immunofixation for identification.
Random Urine Protein Electrophoresis IFE if indicated	Urine Protein Electrophoresis with paraprotein found or elevation of protein fraction in electrophoresis pattern. Reflex to Immunofixation for identification.
HSV viral culture from cutaneous and mucocutaneous lesions	Cancel and change to HSV PCR order
Group A Streptococcus negative antigen test on pediatric patients	Throat Culture
Pap test and HPV	Reflex Information Is HPV Requested? a. If NO HPV testing is desired, select NO and only the pap test will be ordered. b. If YES, HPV testing is desired, select one of two options: i. CO-TESTING (30-64 y/o) 1. If Co-testing is selected, the HPV test will be ordered and performed regardless of the pap test final diagnosis. 2. Note: Co-testing is recommended for patients age 30-64. ii. HPV REFLEX (see link below for criteria) 1. If reflex is selected the HPV test will only be performed in the following scenarios: a. The pap test final diagnosis is NIL and the patient is between ages 30-64. b. The pap test final diagnosis is ASCUS and the patient is between ages 21-64. c. The pap test final diagnosis is LSIL and the patient is between ages 25-64 and is not pregnant.

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	c. The HPV Genotype test will automatically reflex for all patients between the ages of 30-64 with a NIL pap test diagnosis and a positive HPV test diagnosis. 1. Note: Add on HPV and HPV Genotype tests can be added up to 4 weeks from the collection date
Body Fluid culture greater than 1mL sample with only aerobic culture	Add anaerobic culture

Optional Reflex Testing

ORDER	INITIAL TEST and RESULT	OPTIONAL FOLLOW UP TESTING
ANA Screen	ANA EIA if positive	ANA Hep2 (IFA) if positive reflex to titer. If titer is greater than 1:160 reflex to Anti-dsDNA, anti-Sm, anti-RNP, anti-SSA, anti-SSB, anti Scl70, anti-centromere and anti-Jo1
Breast Biopsy	Primary and recurrent/metastatic Invasive Mammary Carcinoma (excisional biopsy / lumpectomy / mastectomy)	Immunohistochemistry for estrogen receptor, progesterone receptor, Her2/neu protein
Breast Biopsy	Ductal Carcinoma In Situ	Immunohistochemistry stains for estrogen receptor, progesterone
CBC w/diff	WBC less than 3.0 or greater than 18.0 HGB less than 8.0 or greater than 18.0 MCV less than 75.0 or greater than 105.0 Absolute neut count less than 1.50 or greater than 9.00 Absolute lymph count less than 0.39 or greater than 4.50 Absolute mono count greater than 1.50 Absolute eos count greater than 1.00 Absolute bas count greater than 0.20 Abnormal instrument flags suggesting abnormality	Manual WBC differential
CBC	CBC specimens that fulfill criteria listed in Pathologist Review (Hematology #6783)	Pathologist review
CBC w/ Diff	CBC with any of the following criteria: -WBC less 1.5 x10^3/µL and not due to known chemotherapy -WBC greater than 30.0 x10^3/µL and not due to known acute infection, acute trama or steroids -HGB less than 7.0 and not due to know acute blood loss -HGB greater than 19.0 (adult only) -MCV less than 60 fL.0 or greater than 105.0 fL -NRBC greater than 10 in 100 manual cell differential (not newborn) -Moderate or many:schistocytes, spherocytes, teardrops on erythrocyte morphology -Absolute neut count less than 0.50 x10^3/µL (adult only) -Absolute lymph count greater than 5.0 x10^3/µL(adult only) -Absolute mono count greater than 2.00 x10^3/µL and greater than 30% on differential (adult only) -Absolute eos count greater than 2.00 x10^3/µL -Absolute bas count greater than 0.50 x10^3/µL - Blasts or immature cells on manual differential -Abnormal or atyptical lymphocytes	Pathologist Review

ORDER	INITIAL TEST and RESULT	OPTIONAL FOLLOW UP TESTING
	-Platelets less than 50 x10^3/µL or greater than 600 x10^3/µL -Circulating megakaryocytes	
Cell Ct only BFL	Body fluid specimens that fulfill criteria listed in Pathologist Review (Hematology #6783)	Pathologist review
Fetal Cells by Flow Cytometry	Ordered STAT and received in lab outside of flow cytometry testing hours (after 3:30 Mon-Fri or after 10:00am Sat or anytime Sunday)	Fetal Hemoglobin by Kleihauer Betke performed in place of flow cytometry test
Triglyceride do LDL Direct if >400	LDL Direct if the triglycerides are greater than 400.	LDL Direct
Lipid Panel do LDL Direct if Triglycerides >400	LDL Direct if the triglycerides are greater than 400.	LDL Direct
Pap do HPV if	Cervical Cytology with ASCUS, ASC-H OR LSIL	HPV-high risk
PAP Test - HPV if ASCUS or AGUS	Cervical Cytology with ASCUS or AGUS	HPV
PAP Test - HPV if NIL, ASCUS or AGUS	Cervical Cytology with NIL, ASCUS or AGUS	HPV
Preg Serum Quant Progesterone if	HCG greater than 5 mIU/mL	Progesterone level
PSA Sym FPSA if	PSA between 2.5 and 10 ng/mL	Free PSA
Strep A, PCR if Negative	Negative rapid Strep A	Throat Culture
TSH FT4 if indicated	TSH less than 0.3 OR greater than 5.0 mcU/mL	Free T4
Biopsy of Thyroid Aspirate	Diagnosis of atypical follicular neoplasm of uncertain significance and suspicious for follicular/hurthle cell neoplasm (Bethesda Classification-Categories 3 and 4)	Afirma GEC (Veracyte)
Thyroid Function Cascade	1. TSH above 5.0 2. TSH below 0.3 a. TSH below 0.1 and FT4 below 1.6	1. Reflex to FT4 and TPO if TSH is high (above 5.0). 2. Reflex to FT4 if TSH is low (below 0.3). a. Reflex to Free T3 if TSH is very low (below 0.1) and FT4 is normal (below 1.6)
UA culture if	Urinalysis (UA) with two or more of the following abnormal findings, provided there are less than 10 squamous epithelial cells observed per high power field: -Greater than or equal to 10 WBC -Positive leukocyte esterase -Positive nitrite OR if specimen is -Grossly bloody	Culture and sensitivity
UA culture if (Where volume is inadequate for microscopic exam)	Volume is inadequate for microscopic exam and Urine Dipstick (U dip) with one or more of the following abnormal findings: -Positive leukocyte esterase -Positive nitrite	Culture and sensitivity

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Hepatitis C Virus Antibody do HCV RNA if indicated	Positive or Indeterminate Hepatitis C Virus Antibody result	HCV RNA
Leukemia or Non-Hodgkins Lymphoma Panel by Flow Cytometry	Cell population is diagnostic of circulating leukemia/lymphoma/myeloma Patients under age of 80 with new diagnosis.	FISH testing
Peanut IgE Reflex	Peanut IgE => 0.10 kU/L	Peanut component allergen panel (Peanut Ara h 1 IgE, Peanut Ara h 2 IgE, Peanut Ara h 3 IgE, Peanut Ara h 8 IgE, and Peanut Ara h 9 IgE)
Egg IgE Reflex	Egg white IgE =>0.10 kU/L	Egg component allergen Panel (Ovomucoid IgE and Ovalbumin IgE)
Milk IgE Reflex	Milk (cow) =>0.10 kU/L	Milk component allergen Panel (Casein IgE, Alpha-Lactalbumin IgE, and Beta-lactoglobulin IgE)

Reference Laboratory Required Reflex Algorithms

INITIAL TEST and RESULT	ADDITIONAL WORKUP
Paraneoplastic Autoantibody Evaluation, Serum If IFA (83381, 83382, 83137, 83383, 83138, 83076, 83386, 83077) patterns are indeterminate, paraneoplastic autoantibody Western blot is performed at an additional charge. If client requests or if IFA patterns suggests CRMP-5-IgG, CRMP-5-IgG Western blot is performed at an additional charge. If calcium channel P/Q-Type or N-Type is greater than 20, CRMP-5-IgG Western blot is performed at an additional charge. If IFA patterns suggests GAD65 antibody, GAD65 antibody radioimmunoassay is performed at an additional charge. If Ach receptor binding antibody is greater than 0.02 or if striational antibodies are > or = 1:60, Ach receptor modulating antibodies and CRMP-5-IgG Western blot are performed at an additional charge. If Ach receptor modulating antibodies are 40% or greater loss, radioimmunoassay for Ach receptor blocking antibodies is performed at an additional charge. If AchR ganglionic neuronal antibodies are 0.03 or greater CRMP-5-IgG Western blot is performed at an additional charge.	Glutamic Acid Decarboxylase (GAD65) Ab Assay, Serum
Myasthenia Gravis (MG) Evaluation, Adult If AchR modulating antibodies are 40-100% loss or indeterminate, AchR blocking antibodies will be performed at an additional charge. If AchR modulating antibody is >= 90% and striational antibodies are 1:60 or greater, AchR ganglionic neuronal antibody and CRMP-5-IgG Western blot will be performed at an additional charge.	Ach Receptor (Muscle) Blocking Ab
C2 Complement, Functional, Serum If the C2 result is less than 15 U/mL, thenC3, C4, and C2AG will be performed at an additional charge.	C4 (Fourth Component of Complement), Serum
Human T-Cell Lymphotropic Virus-I/II (HTLV-I/II) Antibody, Serum If HTLV I/II Ab is reactive, HTLV I/II Ab confirmation by line immunoassay is performed at an additional charge.	HTLV I/II Ab confirmation by line immunoassay is.
Hemolytic Anemia Evaluation This is a consultative evaluation in which the case will be evaluated at Mayo Medical Laboratories, the appropriate tests performed at an additional charge, and the results interpreted.Note: #23544 "Reflexed RBC Enzymes, Blood" includes: adenosine deaminase, adenylate kinase, phosphofructokinase, phosphoglycerate kinase, triosephosphate isomerase, and pyrimidine 5'nucleotidase. Glutathione, Blood	Glutathione, Blood
Hexosaminidase A and Total, Leukocytes/Molecular Reflex If hexosaminidase A is less than 63%, then #82588 "Tay-Sachs Disease, Mutation Analysis, HEXA" will be added and performed at an additional charge.	Tay-Sachs Diagnosis and Carrier Detection
Hemoglobin Electrophoresis Cascade, Blood Hemoglobin A2 and F by HPLC method Additional (reflex) testing to identify rare hemoglobin variants: Hemoglobin Electrophoresis by Capillarys method, Sickle solubility, Hemoglobin heat and isopraponal stability studies, isoelectric focusing, mass spectrometry, HbF distribution by flow cytometry, molecular testing for alpha, beta, gamma, delta chain variants	Hemoglobin Electrophoresis Cascade (Mayo)
HIV Type-1 RNA Standard Quantification with Reflex to HIV-1 Genotypic Drug Resistance Mutation Analysis, Plasma If HIV-1 RNA titer is 1,000 copies/mL or greater, then HIV-1 genotypic drug resistance mutations will be determined at an additional charge.	Human Immunodeficiency Virus Type 1 (HIV-1) Genotyping

Paraneoplastic Autoantibody Evaluation, Spinal Fluid If IFA (3852, 7472, 21633, 3988, 21632, 21631, 5906, 21650) is indeterminate, paraneoplastic autoantibody Western blot is performed at an additional charge If client requests or if IFA suggests CRMP-5-IgG, CRMP-5-IgG Western blot is performed at an additional charge If IFA suggests GAD65 antibody, GAD65 antibody radioimmuno- preciptation assay is performed at an additional charge	Paraneoplastic Autoantibody Western Blot, CSF
Galactosemia Confirmation Test, Blood Testing begins with #8333 "Galactose-1-Phosphate Uridyltransferase (GALT), Blood." If galactose-1-phosphate uridyltransferase is 18.5 U/g or greater of hemoglobin, testing is complete. No molecular test is ordered. If galactose-1-phosphate uridyltransferase is less than 18.5 U/g of hemoglobin, then the galactosemia gene analysis (6 mutation molecular test) will be performed at an additional charge. If quantitative enzyme analysis (#8333 Galactose-1-Phosphate Uridyltransferase [GALT], Blood") and galactosemia gene analysis results are inconsistent (example: no "G" mutation is found in a patient who appears "DG" by quantitative enzyme value), #80341 "Galactose-1-Phosphate Uridyltransferase Biochemical Phenotyping, Erythrocytes" will be performed at an additional charge. A combined interpretive report is issued consistent with tests performed.	"Galactose-1-Phosphate Uridyltransferase Biochemical Phenotyping, Erythrocytes"
Alpha-1-Antitrypsin Proteotype S/Z by LC-MS, Serum [Test Code 7049] This test includes Alpha-1-Antitrypsin (82103) and A1AT proteotype for S/Z mutations by LC-MS (83788). When appropriate, an A1AT Phenotype will be performed.	A1AT Phenotype (82104)
ADAMTS13 Evaluation ADAMTS13 Evaluation is a reflexive testing algorithm. Activity is always performed. If activity result is <= 30%, the inhibitor assay (1297) will be performed. If inhibitor result is <= 0.7 Inhibitor Units, the antibody assay (1299) will be performed. Blood Center of Wisconsin	ADAMTS13 Inhibitor assay OR ADAMTS13 Antibody Assay
Alpha-Fetoprotein, Amniotic Fluid [Test Code 1066] If alpha-fetoprotein (AFP) is positive, >2.0 MoM, then acetylcholinesterase (AChE) will be performed at an additional charge. Because false-positive AChE may occur from a bloody tap, specimens with positive AChE results will also be tested for the presence of fetal hemoglobin at no additional charge.	Acetylcholinesterase (AChE) Mayo (8115)
Histoplasma Antigen, Urine [8790] If antigen test is indeterminate, the specimen will be sent to Mira Vista Laboratories and Mvista Histoplasma antigen, Urine will be performed at an additional charge.	Histoplasma Antigen, Urine to Mvista
Coccidioides Antibody w/Reflex , Serum [8285] If result is positive by EIA screening method, then Coccidioides by complement fixation and immunodiffusion will be performed at an additional charge	Coccidioides Ab, CF/ID (RSCOC)
Brucella Ab Screen, IgG and IgM, Serum [306] If Brucella Ab Screen, IgG and IgM is positive or equivocal, then Brucella Total Antibody Confirmation, Agglutination will be performed at an additional charge.	Brucella Total Antibody Confirmation, Agglutination (BRUTA)