





Hotline Page #	Test Number	Summary of Changes by Test Name	Name Change	Methodology	Performed/Reported Schedule	Specimen Requirements	Reference Interval	Interpretive Data	Note	CPT Code	Component Change	Other Interface Change	New Test	Inactive
8	0080427	Alpha Fetoprotein (Amniotic Fluid) with Reflex to Acetylcholinesterase and Fetal Hemoglobin					х							
24	<u>2001582</u>	Alpha Globin (HBA1 and HBA2) Sequencing												х
24	<u>2002394</u>	Alport Syndrome, X-linked (<i>COL4A5</i>) Deletion/Duplication												x
8	<u>0099266</u>	Aluminum, Serum					х	х				х		
8	<u>0099408</u>	Aluminum, Urine					х					х		
24	<u>2008462</u>	Antimicrobial Susceptibility - Carbapenem Resistance Confirmation by PCR												x
24	<u>2008443</u>	<i>ATP7A</i> -Related Copper Transporter Disorders (<i>ATP7A</i>) Deletion/Duplication												x
24	<u>0060762</u>	Bartonella Species by PCR, Whole Blood												х
8	<u>2002926</u>	Blastomyces dermatitidis Antigen Quantitative by EIA				x					x			
24	<u>2011915</u>	Breast and Ovarian Hereditary Cancer Syndrome (<i>BRCA1</i> and <i>BRCA2</i>) Deletion/Duplication												x
9	<u>2008708</u>	Calculi Risk Assessment, Urine				х								
9	<u>0080461</u>	Cancer Antigen-GI (CA 19-9)				х								
9	<u>2011763</u>	Carbamazepine, Free and Total, Serum or Plasma			х									
24	<u>2004927</u>	CDKL5-Related Disorders (CDKL5) Deletion/Duplication												x
24	<u>2003172</u>	Cerebral Cavernous Malformation (<i>CCM1</i> , <i>CCM2</i> and <i>CCM3</i>) Deletion/Duplication												x
9	<u>2011075</u>	Coccidioides Antigen Quantitative by EIA	х			х					х			
24	<u>2008606</u>	Creatine Transporter Deficiency (SLC6A8) Deletion/Duplication												x
24	<u>0051642</u>	Cystic Fibrosis (CFTR) Deletion/Duplication												х
9	<u>2003414</u>	Cytogenomic SNP Microarray				x								
24	<u>0060031</u>	Cytomegalovirus by PCR, Whole Blood or Bone Marrow												x
24	<u>2005555</u>	Ehlers-Danlos Syndrome Kyphoscoliotic Form, Type VI (<i>PLOD1</i>) Deletion/Duplication												x
10	<u>2013906</u>	Epi proColon				x			х					
24	<u>0051353</u>	Epstein-Barr Virus, Quantitative PCR, Whole Blood												х
24	<u>0055248</u>	F-Actin (Smooth Muscle) Antibody, IgG												х
10	<u>2014248</u>	Factor V, R2 Mutation Detection by PCR											x	
24	<u>2004920</u>	Familial Adenomatous Polyposis (APC) Deletion/Duplication												x
24	<u>0051752</u>	FG Syndrome, FGS1 (MED12) R961W Mutation												х



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11	<u>2014093</u>	Filaria Antibody IgG4 by ELISA, Serum											х	
11	<u>2007228</u>	5-Fluorouracil (5-FU) Toxicity and Chemotherapeutic Response, 5 Mutations								x				
11	<u>2014180</u>	Fluoxetine and Metabolite Quantitative, Serum or Plasma											x	
24	<u>2011424</u>	GLI3-related Disorders (GLI3) Deletion/Duplication												X
11	<u>0099165</u>	Glucagon				х								
12	<u>2001956</u>	Hearing Loss, Nonsyndromic, Connexin 30 (<i>GJB6</i>) 2 Deletions			x									
12	<u>2006686</u>	Helicobacter pylori Culture							х	х				
24	<u>2001751</u>	Hemophilia A (F8) Deletion/Duplication												х
24	<u>2010499</u>	Hemophilia B (F9) Deletion/Duplication												х
12	<u>2014139</u>	Hepatitis C Virus (HCV) <i>NS5A</i> Drug Resistance by Sequencing											x	
24	<u>0051348</u>	Hereditary Hemorrhagic Telangiectasia (ACVRL1 and ENG) Deletion/Duplication												x
24	<u>2007113</u>	Hereditary Paraganglioma-Pheochromocytoma (SDHB, SDHC, and SDHD) Deletion/Duplication												x
24	<u>2005408</u>	Hereditary Persistence of Fetal Hemoglobin (HPFH) 8 Mutations												x
24	<u>0050459</u>	Herpes Simplex Virus Types 1 and 2 Glycoprotein G-Specific Antibodies, IgG by Immunoblot												x
13	<u>2012674</u>	Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by CIA, Reflexive Panel	x	x	x	x	x		x					
14	<u>2006526</u>	Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by CIA, with Reflex to HIV-1 Antibody Confirmation by Western Blot	x	x	x	x	x							
14	<u>2013333</u>	Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by CIA, with Reflex to HIV-1/HIV-2 Antibody Differentiation, Supplemental	x	x	x	x			x					
15	<u>2014234</u>	Human Immunodeficiency Virus 1 (HIV-1) by Qualitative Transcription-Mediated Amplification (TMA)											x	
15	<u>0055598</u>	Human Immunodeficiency Virus 1 by Quantitative PCR				x								
24	<u>2011937</u>	Human Papillomavirus (HPV) 16 and 18 Genotype by PCR, SurePath												x
15	0050157	Hypersensitivity Pneumonitis Extended Panel (Farmer's Lung Panel)				x								



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15	<u>2014183</u>	Ibuprofen Quantitative, Serum or Plasma											х	
16	<u>2006444</u>	IDH1 and IDH2 Mutation Analysis, Exon 4				х				х				
16	<u>2014188</u>	<i>IDH1</i> and <i>IDH2</i> Mutation Analysis, Exon 4, Formalin-Fixed, Paraffin-Embedded (FFPE) Tissue											x	
24	<u>0055557</u>	<i>IGH-CCND1</i> (BCL-1/JH) Translocation, t(11;14) by PCR												x
24	<u>2006344</u>	Inosine Triphosphatase (<i>ITPA</i>) and Interleukin 28 B (<i>IL28B</i>)-Associated Variants, 4 SNPs												x
24	<u>2001976</u>	Juvenile Polyposis (SMAD4) Deletion/Duplication												х
24	<u>2004984</u>	4Juvenile Polyposis Syndrome (BMPR1A)Deletion/Duplication												x
17	<u>0020843</u>	Kidney Stone Risk Panel, Urine				х		х						
17	<u>2007935</u>	Lactate to Pyruvate Ratio, Whole Blood				х			х					
17	0020504	Lactic Acid, Body Fluid				х		x						
24	<u>2003987</u>	Laminin by Immunohistochemistry												х
24	<u>2008373</u>	Legius Syndrome (SPRED1) Deletion/Duplication												х
24	<u>2009294</u>	Li-Fraumeni Syndrome (TP53) Deletion/Duplication												х
24	<u>2005580</u>	Marfan Syndrome (FBN1) Deletion/Duplication												х
18	<u>0098816</u>	Melatonin					х							
18	<u>2005405</u>	Methotrexate, Sensitive				х								
24	<u>2005346</u>	Multiple Endocrine Neoplasia Type 1 (<i>MEN1</i>) Deletion/Duplication												x
18	<u>2010775</u>	<i>Mycobacterium tuberculosis</i> Complex Detection and Rifampin Resistance by PCR				x			x					
24	<u>0060771</u>	Mycobacterium tuberculosis Complex Speciation												х
24	<u>2004892</u>	Ornithine Transcarbamylase Deficiency (<i>OTC</i>) Deletion/Duplication												x
19	0020482	Oxalate, Urine				х	х	х						
19	<u>2001491</u>	Parathyroid Hormone, Fine Needle Aspiration (FNA)				х								
19	<u>2010677</u>	Parathyroid Hormone-Related Peptide (PTHrP) by LC-MS/MS, Plasma				x								
24	<u>0060028</u>	Parvovirus B19, by PCR, Bone Marrow												х
20	<u>2013284</u>	PD-L1 22C3 pharmDx by Immunohistochemistry with Interpretation, pembrolizumab (KEYTRUDA)				х			х	х				
24	<u>2008377</u>	Peutz-Jeghers Syndrome (<i>STK11</i>) Deletion/Duplication												x
24	0020507	pH, Body Fluid												х



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25	<u>2012246</u>	Polycystic Kidney Disease, Autosomal Dominant (<i>PKD1</i> and <i>PKD2</i>) Deletion/Duplication												x
25	<u>2004199</u>	Primary Carnitine Deficiency (<i>SLC22A5</i>) Deletion/Duplication												x
20	0070121	Prostate Specific Antigen, Total				х								
20	0070234	Prostate Specific Antigen, Total - Medicare Screening				х								
20	0098581	Prostate Specific Antigen, Ultrasensitive				х								
20	2014059	Prostate-Specific Kallikrein, 4Kscore								х				
25	<u>2002726</u>	PTEN-Related Disorders (PTEN) Deletion/Duplication												x
25	<u>2003401</u>	Pulmonary Arterial Hypertension (<i>BMPR2</i>) Deletion/Duplication												x
21	<u>0080310</u>	Pyruvic Acid				х			х					
25	<u>2007830</u>	RASA1-Related Disorders (RASA1) Deletion/Duplication												x
25	<u>0051618</u>	Rett Syndrome (MECP2), Deletion and Duplication												х
21	<u>2013011</u>	Selenium, RBCs			х	х								
21	<u>2002098</u>	Signal Recognition Particle (SRP) Antibody				х								
21	<u>2008771</u>	Supersaturation Profile, Urine				х								
25	<u>2008409</u>	T-Cell Clonality by Next Generation Sequencing												х
21	<u>0090064</u>	Thiocyanate, 24-Hour Urine					х							
22	<u>2011575</u>	Thiocyanate, Serum or Plasma					х							
22	0020753	Thyroglobulin, Fine Needle Aspiration (FNA)				х								
22	<u>0093244</u>	Thyroxine, Free by Equilibrium Dialysis/HPLC- Tandem Mass Spectrometry				х								
22	<u>2014109</u>	Total Inhibin Serum											x	
23	<u>2014025</u>	Trypsin				х								
23	<u>0099435</u>	Vasoactive Intestinal Peptide				х								
25	<u>2004208</u>	Very Long-Chain Acyl-CoA Dehydrogenase Deficiency (<i>ACADVL</i>) Deletion/Duplication												x
25	<u>2002988</u>	von Hippel-Lindau (VHL) Deletion/Duplication												х
23	<u>0030002</u>	von Willebrand Multimeric Panel		x										
23	<u>2003387</u>	von Willebrand Panel with Reflex to von Willebrand Multimeric Analysis		x										
25	<u>2004434</u>	X Chromosome Ultra-High Density Microarray												х



New Test Available Now	2014168Alagille Syndrome (JAG1) Sequencing and MicroarrayJA	AG1
	Additional Technical Information Patient History and Informed Consent	
Methodology: Performed: Reported:	Sequencing/Exonic Oligonucleotide-based CGH Microarray Varies 7-8 weeks	
Specimen Required	cd: <u>Collect:</u> Lavender (EDTA). Also acceptable: Pink (K ₂ EDTA). <u>Specimen Preparation:</u> Transport 5 mL whole blood. (Min: 2 mL) <u>Storage/Transport Temperature:</u> Refrigerated. Protect from extreme temperatures. <u>Remarks:</u> Clinical indication or reason for testing is required. <u>Stability (collection to initiation of testing)</u> : Ambient: 24 hours; Refrigerated: 1 week; Frozen: Unacceptable	
Reference Interv	val: By report	
Note: Test provide: gene.	es sequence analysis of exons 1-6, 9, 12, 16, 17, 20, 23 and 24, to evaluate for a deletion or duplication of one or more exons of	the JA
CPT Code(s):	81479	
New York DOH Ap		
New York DOH Ap	pproved.	PAN
New York DOH Ap HOTLINE NOT New Test	pproved. E: Refer to the Test Mix Addendum for interface build information.	PAN
New York DOH Ap HOTLINE NOT New Test Available Now Methodology: Performed: Reported:	Description 2014011 Allergen, Food, Alpha-Gal (galactose-alpha-1,3-galactose) Panel ALPHAG F Immunoassay/Quantitative ImmunoCAP Fluorescent Enzyme Immunoassay Varies	PAN
New York DOH Ap HOTLINE NOT New Test Available Now Methodology: Performed: Reported:	T: Refer to the Test Mix Addendum for interface build information. 2014011 Allergen, Food, Alpha-Gal (galactose-alpha-1,3-galactose) Panel ALPHAG F Immunoassay/Quantitative ImmunoCAP Fluorescent Enzyme Immunoassay Varies 3-6 days d: Collect: Plain red or serum separator tube (SST). Specimen Preparation: Transfer 2 mL serum to an ARUP Standard Transport Tube. (Min: 1 mL) Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated or frozen. Unacceptable Conditions: Lipemic specimens. Stability (collection to initiation of testing): Ambient: 1 month; Refrigerated: 1 month; Frozen: 1 year	PAN
New York DOH Ap HOTLINE NOT New Test Available Now Methodology: Performed: Reported: Specimen Required	Proved. TE: Refer to the Test Mix Addendum for interface build information. 2014011 Allergen, Food, Alpha-Gal (galactose-alpha-1,3-galactose) Panel ALPHAG F Immunoassay/Quantitative ImmunoCAP Fluorescent Enzyme Immunoassay Varies 3-6 days d: Collect: Plain red or serum separator tube (SST). Specimen Preparation: Transfer 2 mL serum to an ARUP Standard Transport Tube. (Min: 1 mL) Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated or frozen. Unacceptable Conditions: Lipemic specimens. Stability (collection to initiation of testing): Ambient: 1 month; Refrigerated: 1 month; Frozen: 1 year	PAN

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.



New Test2014247Allergens, Respiratory IgE Panel, Region 1, North Atlantic (CT,
MA, NJ, PA, VT, ME, NH, NY, RI)REG1PANAvailable NowAvailable NowAvailable NowAvailable Now

Methodology:	Quantitative ImmunoCAP Fluorescent Enzyme Immunoassay
Performed:	Sun-Sat
Reported:	1-2 days

 Specimen Required:
 Patient Prep: Multiple patient encounters should be avoided.

 Collect:
 Serum Separator Tube (SST). Multiple specimen tubes should be avoided.

 Specimen Preparation:
 Separate from cells ASAP or within 2 hours of collection. Transfer 4 mL serum to an ARUP Standard Transport Tube. (Min: 1.4 mL)

 Storage/Transport Temperature:
 Refrigerated.

 Unacceptable Conditions:
 Hemolyzed, icteric, or lipemic specimens.

 Stability (collection to initiation of testing):
 After separation from cells: Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: 1 year

Reference Interval:

Allergens, Respiratory Panel, Region 1, North Atlantic (CT, MA, NJ, PA, VT, ME, NH, NY, RI) Reference Intervals for all Components

	Probability of IgE Mediated Clinical Reaction	Class Scoring
Reporting Range (reported in kU/L)		
Less than 0.10	No significant level detected	0
0.10-0.34	Clinical relevance undetermined	0/1
0.35-0.70	Low	1
0.71-3.50	Moderate	2
3.51-17.50	High	3
17.51 - 50.00	Very High	4
50.01 - 100.00	Very high	5
Greater than 100.00	Very high	6

Test Number	Components	Reference Interval	
0050345	Immunoglobulin E	Effective November 17, 201	4
		Age	Reference Interval
		0-5 months	13 kU/L or less
		6-12 months	34 kU/L or less
		1-2 years	97 kU/L or less
		3 years	199 kU/L or less
		4-6 years	307 kU/L or less
		7-8 years	403 kU/L or less
		9-12 years	696 kU/L or less
		13-15 years	629 kU/L or less
		16-17 years	537 kU/L or less
		18 years and older	214 kU/L or less

Interpretive Data: Allergen results of 0.10-0.34 kU/L are intended for specialist use as the clinical relevance is undetermined. Even though increasing ranges are reflective of increasing concentrations of allergen-specific IgE, these concentrations may not correlate with the degree of clinical response or skin testing results when challenged with a specific allergen. The correlation of allergy laboratory results with clinical history and in vivo reactivity to specific allergens is essential. A negative test may not rule out clinical allergy or even anaphylaxis.

Note: Allergens included in this panel: *Alternaria alternata (tenuis), Aspergillus fumigatus*, Bermuda Grass, Birch Tree, Box Elder/Maple Tree, Cat Dander, Cockroach (German), Common Short Ragweed, Cottonwood Tree, *D. pteronyssinus* (mites), *D. farinae* (mites), Dog Dander, Elm Tree, *Hormodendrum (Cladosporium)*, Mouse Epithelium, Mountain Cedar (Juniper) Tree, *Mucor racemosus*, Mugwort, Oak Tree, *Penicillium notatum*, Pigweed, Sheep Sorrel (Dock), Sycamore Tree, Timothy Grass, Walnut Tree, White Ash Tree, White Mulberry Tree, and IgE Serum Total.

CPT Code(s): 86003 x27; 82785

New York DOH Approved.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.



0080427 Alpha Fetoprotein (Amniotic Fluid) with Reflex to Acetylcholinesterase and Fetal AFP AF Hemoglobin

Reference Interval: Effective May 15, 2017

Test Number	Components	Reference Interval
	AFP, Amniotic Fluid	By report
		Ranges are based upon the weeks of gestation.
	Multiple of Median	1.99 or less
2006848	Acetylcholinesterase and	Acetylcholinesterase: Negative
	Fetal Hemoglobin,	Fetal Hemoglobin: Negative
	Amniotic Fluid	

0099266 Aluminum, Serum

Reference Interval: 0.0-15.0 µg/L

Interpretive Data: Serum aluminum greater than $50.0 \ \mu g/L$ is consistent with overload and may correlate with toxicity. See Compliance Statement B: www.aruplab.com/CS

HOTLINE NOTE: There is a numeric map change associated with this test.

The numeric map for component 0099266, Aluminum, Serum is changing from XXXX to XXXX.X

0099408 Aluminum, Urine

Reference Interval:

Test Number	Components	Reference Interval					
	Aluminum, Urine	Effective May 15, 2017					
		0.0-7.0 μg/L					
	Aluminum, Urine (24-hour)	0-10 µg/d					
0020473	Creatinine, 24-Hour Urine	Age	Male	Female			
		3-8 years	140-700 mg/d	140-700 mg/d			
		9-12 years	300-1300 mg/d	300-1300 mg/d			
		13-17 years	500-2300 mg/d	400-1600 mg/d			
		18-50 years	1000-2500 mg/d	700-1600 mg/d			
		51-80 years	800-2100 mg/d	500-1400 mg/d			
		81 years and older	600-2000 mg/d	400-1300 mg/d			
	Aluminum per gram of creatinine	No reference interval	(µg/g crt)				

HOTLINE NOTE: There is a numeric map change associated with this test.

The numeric map for component 0099268, Aluminum, Urine $-\mu g/L$ is changing from XXX to XXX.X

2002926 Blastomyces dermatitidis Antigen Quantitative by EIA

Specimen Required: Collect: Urine, Plain Red, Serum Separator Tube (SST), Lavender (EDTA), Green (Sodium or Lithium Heparin), Light Blue (Sodium Citrate), CSF, or BAL.

> Specimen Preparation: Urine or BAL: Transfer 1 mL urine or BAL to an ARUP Standard Transport Tube. (Min: 0.5 mL) Serum or Plasma: Transfer 2 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 1.2 mL) CSF: Transfer 1 mL CSF to an ARUP Standard Transport Tube. (Min: 0.8 mL) Storage/Transport Temperature: Refrigerated. Also acceptable: Room temperature or frozen. Stability (collection to initiation of testing): Ambient: 2 weeks; Refrigerated: 2 weeks; Frozen: Indefinitely

HOTLINE NOTE: There is a component change associated with this test. Add component 2014217, Balstomyces dermatididis Ag - Source

AL S

AL U

BLAST DERM



2008708 Calculi Risk Assessment, Urine

Specimen Required: Collect: 24-hour urine. Refrigerate during collection.

Specimen Preparation: Thoroughly mix entire collection (24-hour) in one container. Transport four separate 4 mL aliquots of urine using Calculi Risk/Supersaturation Urine Collection Kit (ARUP supply# 46007) available online through eSupply using ARUP Connect[™] or contact Client Services at (800) 522-2787. Do not exceed 4 mL in tubes. Aliquot according to the following specifications: 1st aliquot (pH 2): Transfer 4 mL urine into a Sulfamic Acid Tube. (Min: 4 mL) Mix well. Freeze immediately. 2nd aliquot (pH 2): Transfer 4 mL urine into a Sulfamic Acid Tube. (Min: 4 mL) Mix well. Freeze immediately. 3rd aliquot (pH 9): Transfer 4 mL urine into a Sodium Carbonate Tube. (Min: 4 mL) Mix well. Freeze immediately. 4th aliquot: Transfer 4 mL urine into an Unpreserved Tube. (Min: 4 mL) Freeze immediately. If collection kit is unavailable, transport four 4 mL unadjusted aliquots of urine. Storage/Transport Temperature: Frozen. Remarks: Record total volume and collection time interval on transport tube and test request form. Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 2 weeks

HOTLINE NOTE: Remove information found in the Unacceptable Conditions field.

Cancer Antigen-GI (CA 19-9)

0080461

Specimen Required: Collect: Serum Separator Tube (SST) or Plasma Separator Tube (PST). Also acceptable: Green (Sodium or Lithium Heparin), Lavender (EDTA), or Pink (K2EDTA). Specimen Preparation: Allow specimen to clot completely at room temperature. Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL) Storage/Transport Temperature: Refrigerated. Unacceptable Conditions: Body Fluid (refer to Cancer Antigen-GI (CA19-9), Body Fluid, ARUP test code 0020746). Specimens collected in sodium citrate. Stability (collection to initiation of testing): After separation from cells: Ambient: 5 days; Refrigerated: 2 weeks; Frozen: 3 months 2011763 Carbamazepine, Free and Total, Serum or Plasma CARB FT **Performed:** Mon, Thu, Fri **Reported:** 1-5 days 2011075 **COCCIAG** Coccidioides Antigen Quantitative by EIA Specimen Required: Collect: Urine, Plain Red, Serum Separator Tube (SST), Lavender (EDTA), Pink (K2EDTA), Green (Sodium or Lithium Heparin),

Light Blue (CTAD), CSF, or BAL. Specimen Preparation: Urine or BAL: Transfer 1 mL urine or BAL to an ARUP Standard Transport Tube. (Min: 0.5 mL) Serum or Plasma: Transfer 2 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 1.2 mL) CSF: Transfer 1 mL CSF to an ARUP Standard Transport Tube. (Min: 0.8 mL) Storage/Transport Temperature: Refrigerated. Also acceptable: Frozen. Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 2 weeks; Frozen: Indefinitely

HOTLINE NOTE: There is a component change associated with this test. Add component 2014179, Coccidioides Antigen - Source

2003414 **Cytogenomic SNP Microarray**

Specimen Required: Collect: Green (Sodium Heparin). Peripheral blood required. Also acceptable, Lavender (EDTA). New York State Clients: Green (Sodium Heparin) AND Lavender (EDTA). Specimen Preparation: Transport 5 mL whole blood. (Min: 1 mL). New York State Clients: Transport 8 mL (4 mL per tube) whole blood or bone marrow. (Min: 4 mL total (2 mL per tube)). Do not send to ARUP Laboratories. Specimen must be received at performing laboratory within 48 hours of collection. For specimen requirements and direct submission instructions please contact ARUP Referral Testing at (800) 242-2787, ext. 5145. Storage/Transport Temperature: Room temperature. Unacceptable Conditions: Clotted specimens. Stability (collection to initiation of testing): Ambient: 48 hours; Refrigerated: 72 hours; Frozen: Unacceptable New York State Clients: Ambient: 48 hours; Refrigerated: 48 hours; Frozen: Unacceptable

CA-GI

CMA SNP





2013906 Epi proColon

Specimen Required: Collect: Lavender (K₂EDTA). Collect 20 mL whole blood. (Min: 10 mL). Blood collection tubes should be allowed to complete the evacuated fill.

Specimen Preparation: Plasma preparation should be performed ASAP or within 4 hours of collection. Centrifuge for 12 min at 1350 ± 150 rcf. Transfer the plasma to a 15 mL conical tube and centrifuge for an additional 12 minutes at 1350 ± 150 rcf. Ensure a minimum of 8 mL plasma is obtained following centrifugation. Transfer 4 mL plasma into 2 cryovial tubes or freezable specimen transport tubes. (Min: 4 mL, no repeat testing) Storage/Transport Temperature: Frozen. Also acceptable: Refrigerated. Unacceptable Conditions: Serum, stool, or whole blood. Hemolyzed specimens. Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 72 hours; Frozen: 2 weeks

Note: This test is not intended to replace a colonoscopy. NOT recommended for pregnant women because of a potential for false-positive results in these individuals.

Accurate test performance requires following the specimen preparation instructions. Minimum volume of 4 mL is required for testing without repeats. If a repeat is necessary, an additional specimen will be requested.

New Test	<u>2014248</u>	Factor V, R2 Mutation Detection by PCR	F5R2 MUTAT
Available Now			
	Additional Ta	abrical Information	



Additional Technical Information

Methodology:	Polymerase Chain Reaction
Performed:	Varies
Reported:	3-12 days

 Specimen Required:
 Collect:
 Lavender (EDTA).
 Also acceptable:
 Yellow (ACD solution A or B).

 Specimen Preparation:
 Transfer 5 mL whole blood to an ARUP Standard Transport Tube. (Min: 1 mL)

 Storage/Transport Temperature:
 Room temperature. Also acceptable: Refrigerated.

 Stability (collection to initiation of testing):
 Ambient: 1 week, Refrigerated: 1 week; Frozen: Unacceptable

CPT Code(s): 81400

New York DOH Approved.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.

EPIPRO



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New Test Available Now	2014093 Filaria Antibody IgG4 by ELISA, Serum	FILARIA
Methodology: Performed: Reported:	Semi-Quantitative Enzyme-Linked Immunosorbent Assay Varies 3-17 days	
Specimen Required	I: <u>Collect:</u> Plain Red. Also acceptable: Serum Separator Tube (SST). <u>Specimen Preparation:</u> Transfer 0.2 mL serum to an ARUP Standard Transport Tube. (Min: 0.1 mL) <u>Storage/Transport Temperature:</u> Refrigerated. Also acceptable: Room temperature or frozen. <u>Stability (collection to initiation of testing):</u> Ambient: 1 week; Refrigerated: 2 weeks; Frozen: 1 month	
Reference Interv	al: By Report	
CPT Code(s):	86682	
New York DOH Ap	proved.	
HOT LINE NOT	E: Refer to the Test Mix Addendum for interface build information.	
2007228	5-Fluorouracil (5-FU) Toxicity and Chemotherapeutic Response, 5 Mutations	5-FU PANEL
CPT Code(s):	81400; <mark>81401</mark>	
New Test	2014180 Fluoxetine and Metabolite Quantitative, Serum or Plasma	FLUOX SP
Available Now		
Methodology: Performed: Reported:	Quantitative Gas Chromatography/Mass Spectrometry (GC/MS) Varies 3-10 days	
Specimen Required	I: <u>Collect:</u> Plain Red. Also acceptable: Lavender (EDTA) or Pink (K ₂ EDTA). <u>Specimen Preparation:</u> Separate from cells ASAP or within 2 hours of collection. Transfer 3 mL serum or pl Standard Transport Tube. (Min: 1.2 mL) <u>Storage/Transport Temperature:</u> Refrigerated. Also acceptable: Room temperature or frozen. <u>Unacceptable Conditions:</u> Separator tubes. <u>Stability (collection to initiation of testing):</u> Ambient: 1 week; Refrigerated: 2 weeks; Frozen: 18 months	asma to an ARUP
CPT Code(s):	80332 (Alt code: G0480)	
New York DOH Ap	proved.	
HOTLINE NOT	E: Refer to the Test Mix Addendum for interface build information.	
<u>0099165</u>	Glucagon	GLUCA
Spec:	imen Collection and Handling	
Specimen Required	I: <u>Collect</u> : Protease Inhibitor tube (PPACK; Phe-Pro-Arg-cholormethylketone) (ARUP supply #49662), availa eSupply using ARUP Connect [™] or contact ARUP Client Services at (800) 522-2787. A winged collection s <u>Specimen Preparation</u> : Mix well. Separate from cells within 1 hour of collection. Transfer 1 mL plasma to an Transport Tube. (Min: 0.5 mL) <u>Storage/Transport Temperature</u> : Frozen. Separate specimens must be submitted when multiple tests are orde Unacceptable Conditions: Grossly hemolyzed specimens.	et must be used. n ARUP Standard

<u>Unacceptable Conditions:</u> Grossly hemolyzed specimens. <u>Stability (collection to initiation of testing):</u> After separation from cells: Ambient: Unacceptable; Refrigerated: 48 hours; Frozen: 3 months



<u>2001956</u>	Hearing Loss, Nonsyndromic, Connexin 30 (GJB6) 2 Deletions	GJB6 DEL
Performed:	Varies	
Reported:	7-10 days	
<u>2006686</u>	Helicobacter pylori Culture	MC HPYL
Note: Identification Medical Lab.	and susceptibility tests are billed separately from culture. Cultures positive for H. pylori will be sent for suscept	ibility testing to Mayo
CPT Code(s):	87070, 87176; Identification and susceptibility CPT codes may vary based on method.	
New Test Available Now	2014139 Hepatitis C Virus (HCV) <i>NS5A</i> Drug Resistance by Sequencing	HCV NS5A
Methodology:	Polymerase Chain Reaction/Sequencing	
Performed: Reported:	Mon 10-13 days	
Specimen Required	 <u>Collect:</u> Lavender (EDTA), Pink (K₂EDTA), Plasma Preparation Tube (PPT), or Serum Separator Tube (SST). <u>Specimen Preparation</u>: Separate from cells ASAP or within 2 hours of collection. Transfer 2 mL serum or plass Standard Transport Tube. (Min: 1 mL) <u>Storage/Transport Temperature</u>: Frozen. <u>Unacceptable Conditions</u>: Heparinized specimens. <u>Stability (collection to initiation of testing)</u>: Ambient: Unacceptable; Refrigerated: 72 hours; Frozen: 4 months 	

Reference Interval: By Report

_

Interpretive Data: This assay detects resistance-associated variants in *NS5A* codons 20-101 for HCV genotypes 1a and 1b. Variants in viral subpopulations below 20 percent of total may not be detected. For further information, please refer to drug package inserts for the applicable direct-acting antiviral drug and current HCV treatment guidelines (eg., AASLD/IDSA guidelines or EASL HCV treatment recommendations).

See Compliance Statement B: www.aruplab.com/CS

Note: This test may be unsuccessful if the HCV RNA viral load is less than log 3.4 or 2500 IU/mL and/or if the HCV RNA genotype is not 1a or 1b.

CPT Code(s): 87902

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.



2012674 Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by HIV PANEL CIA, Reflexive Panel

Methodology:Qualitative Chemiluminescent Immunoassay/Qualitative Immunoassay/Quantitative Polymerase Chain ReactionPerformed:Sun-SatReported:1-3 days

Specimen Required: Collect: Lavender (EDTA) or Pink (K₂EDTA).

Specimen Preparation: Separate from cells ASAP or within 2 hours of collection. Transfer 3 mL plasma into an ARUP Standard Transport Tube. (Min: 2 mL) Remove particulate material. This test requires a dedicated transport tube submitted only for HIV testing.

Storage/Transport Temperature: Frozen.

<u>Unacceptable Conditions:</u> Serum. Heparinized or citrated plasma specimens. Plasma preparation tubes. Specimens containing particulate material. Severely hemolyzed or heat-inactivated specimens.

Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: 6 days; Frozen: 6 weeks (avoid repeated freeze/thaw cycles)

Reference Interval:

Test Number	Components	Reference Interval		
	HIV 1,2 Combo Antigen/Antibody	Negative		
2012669	Human Immunodeficiency Virus Types 1 and 2 (HIV-1/2) Antibody	Test Number	Components	Reference Interval
	Differentiation, Supplemental, with Reflex to HIV-1 Quantitative PCR		HIV-1 Antibody	Negative
			HIV-2 Antibody	Negative
		0055598	Human Immunodeficiency Virus 1 by Quantitative PCR	Not detected

Note: The fourth-generation screen test is for the simultaneous qualitative detection of Human Immunodeficiency Virus Type 1 (HIV-1) p24 antigen and antibodies to HIV Type 1 (HIV-1 groups M and O) and HIV Type 2 (HIV-2). Results of the screen cannot be used to distinguish between the presence of HIV-1 p24 antigen, HIV-1 antibody, or HIV-2 antibody.

If the HIV-1,2 Combo Antigen/Antibody screen is repeatedly reactive, then the HIV-1/2 Ab Differentiation Immunoassay will be performed. Additional charges apply. The HIV-1/2 Ab Differentiation Immunoassay confirms and discriminates between HIV-1 and HIV-2 antibodies. Results for each type are reported.

If the HIV-1/2 Ab Differentiation Immunoassay is Negative or Indeterminate, then the Human Immunodeficiency Virus 1 by Quantitative PCR will be added. Additional charges apply.

This multi-test algorithm is recommended by the Centers for Disease Control and Prevention (CDC) and was adopted by the Clinical Laboratory Standards Institute (CLSI) for the diagnosis of HIV (refer to http://www.arupconsult.com/Topics/HIV.html).

Refer to the following tests for additional information regarding Performed or Reported times, Interpretive Data and Notes for the reflex tests of this panel: Human Immunodeficiency Virus Types 1 and 2 (HIV-1/2) Antibody Differentiation, Supplemental with Reflex to HIV-1 Quantitative PCR (2012669); Human Immunodeficiency Virus 1 by Quantitative PCR (0055598)

HOTLINE NOTE: Remove information found in the Remarks field.



2006526 Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by HIV AGAB CIA, with Reflex to HIV-1 Antibody Confirmation by Western Blot

Methodology:	Qualitative Chemiluminescent Immunoassay /Qualitative Western Blot
Performed:	Sun-Sat
Reported:	1-2 days

 Specimen Required:
 Collect:
 Serum Separator Tube (SST). Also acceptable: Lavender (EDTA) or Pink (K2EDTA).

 Specimen Preparation:
 Separate from cells ASAP or within 2 hours of collection. Transfer 1.5 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.75 mL) Remove particulate material.

 Storage/Transport Temperature:
 Refrigerated.

 Unacceptable Conditions:
 Specimens containing particulate material.

 Stability (collection to initiation of testing):
 After separation from cells: Ambient: Unacceptable; Refrigerated: 1 week; Frozen: 8 months (avoid repeated freeze/thaw cycles)

Reference Interval:

Test Number	Components	Reference Interval
	Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by CIA	Negative
0020284	Human Immunodeficiency Virus Type 1 (HIV-1) Antibody Confirmation by Western Blot	Negative

2013333 Human Immunodeficiency Virus (HIV) Combo Antigen/Antibody (HIV-1/O/2) by CIA, with Reflex to HIV-1/HIV-2 Antibody Differentiation, Supplemental

Methodology:Qualitative Chemiluminescent Immunoassay/Qualitative ImmunoassayPerformed:Sun-SatReported:1-2 days

Specimen Required: Collect: Serum Separator Tube (SST). Also acceptable: Lavender (EDTA) orPink (K2EDTA).

<u>Specimen Preparation:</u> Separate from cells ASAP or within 2 hours of collection. Transfer 1.5 mL serum into an ARUP Standard Transport Tube. (Min: 0.75 mL) Remove particulate material.

HIVAGABGE

Storage/Transport Temperature: Refrigerated.

<u>Unacceptable Conditions:</u> Specimens containing particulate material. Severely hemolyzed or heat-inactivated specimens. Stability (collection to initiation of testing): After separation from cells: Ambient: Unacceptable; Refrigerated: 1 week; Frozen: 8 months (avoid repeated freeze/thaw cycles)

Note: The fourth-generation screen test is for the simultaneous qualitative detection of Human Immunodeficiency Virus Type 1 (HIV-1) p24 antigen and antibodies to HIV Type 1 (HIV-1 groups M and O) and HIV Type 2 (HIV-2). Results of the screen cannot be used to distinguish between the presence of HIV-1 p24 antigen, HIV-1 antibody, or HIV-2 antibody.

The reflexed HIV-1/HIV-2 Antibody Differentiation test discriminates between HIV-1 and HIV-2 antibodies. Results for each type are reported.

If the HIV-1,2 Combo Antigen/Antibody screen is repeatedly reactive, then the HIV-1/ HIV-2 Antibody Differentiation test will be performed. Additional charges apply. A recommendation to order further testing on a separate specimen for HIV-1 Nucleic Acid will be made for certain results. This multi-test algorithm is recommended by the Centers for Disease Control and Prevention (CDC) and was adopted by the Clinical Laboratory Standards Institute (CLSI) for the diagnosis of HIV.



New Test	<u>2014234</u>	Human Immunodeficiency Virus 1 (HIV-1) by Qualitative Transcription-Mediated Amplification (TMA)	HIV-1 TMA
Methodology:	Qualitative Tra	inscription-Mediated Amplification	
Performed:	Varies		
Reported:	3-12 days		
Specimen Required:	Collect: Laveno (PPT).	der (EDTA). Also acceptable: Yellow (ACD Solution A), Light Blue (Sodium Citrate)	or Plasma Preparation Tube
	Storage/Transp Unacceptable C	<u>aration:</u> Transfer 1.6 mL plasma or serum to an ARUP Standard Transport Tube. (Min: <u>bort Temperature:</u> Frozen. Also acceptable: Refrigerated. <u>Conditions:</u> Frozen plasma in Plasma Preparation Tube (PPT). ction to initiation of testing): Ambient: 72 hours; Refrigerated: 5 days; Frozen: 35 days	
Reference Interva	l: By report		
CPT Code(s):	87535		
New York DOH App	roved.		
HOTLINE NOTE	: Refer to the Te	est Mix Addendum for interface build information.	
<u>0055598</u>	Human Imn	nunodeficiency Virus 1 by Quantitative PCR	HIVPCRQ
Specimen Required:	Specimen Prepa and freeze. (Mi Storage/Transp Unacceptable C	der (EDTA), Pink (K ₂ EDTA), or Plasma Preparation Tube (PPT). <u>aration:</u> Separate from cells within 24 hours of collection. Transfer 3 mL plasma to an in: 1.5 mL) <u>wort Temperature:</u> Frozen. <u>Conditions:</u> Serum. Heparinized specimens. Specimens submitted in plasma preparation ction to initiation of testing): After separation from cells: Ambient: 24 hours; Refrigera	n tube.
			tear o days, riszenr o weens
<u>0050157</u>	Hypersensit	tivity Pneumonitis Extended Panel (Farmer's Lung Panel)	-
	<u>Collect:</u> Serum <u>Specimen Prep</u> ARUP Standard <u>Storage/Transp</u> <u>Unacceptable C</u> Stability (collect	tivity Pneumonitis Extended Panel (Farmer's Lung Panel) Separator Tube (SST). <u>aration:</u> Separate from cells ASAP or within 2 hours of collection. Transfer two 2.5 mI d Transport Tubes. (Min: 1 mL each) <u>wort Temperature:</u> Refrigerated. <u>Conditions:</u> Plasma. Contaminated, hemolyzed, or severely lipemic specimens. <u>ction to initiation of testing):</u> After separation from cells: Ambient: 48 hours; Refrigera I freeze/thaw cycles)	HYPER EXT
Specimen Required: New Test	<u>Collect:</u> Serum <u>Specimen Prep</u> ARUP Standard <u>Storage/Transp</u> <u>Unacceptable C</u> Stability (collect	Separator Tube (SST). <u>aration:</u> Separate from cells ASAP or within 2 hours of collection. Transfer two 2.5 mI d Transport Tubes. (Min: 1 mL each) <u>bort Temperature:</u> Refrigerated. <u>Conditions:</u> Plasma. Contaminated, hemolyzed, or severely lipemic specimens. <u>ction to initiation of testing):</u> After separation from cells: Ambient: 48 hours; Refrigera	HYPER EXT
	Collect: Serum Specimen Prepa ARUP Standard Storage/Transp Unacceptable C Stability (collec (avoid repeated 2014183	Separator Tube (SST). <u>aration:</u> Separate from cells ASAP or within 2 hours of collection. Transfer two 2.5 mI d Transport Tubes. (Min: 1 mL each) <u>bort Temperature:</u> Refrigerated. <u>Conditions:</u> Plasma. Contaminated, hemolyzed, or severely lipemic specimens. <u>ction to initiation of testing):</u> After separation from cells: Ambient: 48 hours; Refrigera I freeze/thaw cycles)	HYPER EXT - aliquots of serum to individua ted: 2 weeks; Frozen: 1 year
Specimen Required: New Test Available Now Methodology: Performed: Reported:	Collect: Serum Specimen Prepr ARUP Standard Storage/Transp Unacceptable C Stability (collec (avoid repeated 2014183 Quantitative Hi Varies 3-10 days <u>Collect:</u> Plain F <u>Specimen Prepr</u> Standard Transp Unacceptable C	Separator Tube (SST). <u>aration:</u> Separate from cells ASAP or within 2 hours of collection. Transfer two 2.5 mI d Transport Tubes. (Min: 1 mL each) <u>sort Temperature:</u> Refrigerated. <u>Conditions:</u> Plasma. Contaminated, hemolyzed, or severely lipemic specimens. <u>ction to initiation of testing):</u> After separation from cells: Ambient: 48 hours; Refrigera I freeze/thaw cycles) Ibuprofen Quantitative, Serum or Plasma	HYPER EXT
Specimen Required: New Test Available Now Methodology: Performed: Reported:	Collect: Serum Specimen Prepr ARUP Standard Storage/Transp Unacceptable C Stability (collec (avoid repeated 2014183 Quantitative Hi Varies 3-10 days <u>Collect:</u> Plain F <u>Specimen Prepr</u> Standard Transp Unacceptable C	Separator Tube (SST). <u>aration:</u> Separate from cells ASAP or within 2 hours of collection. Transfer two 2.5 mI d Transport Tubes. (Min: 1 mL each) <u>nort Temperature:</u> Refrigerated. <u>Conditions:</u> Plasma. Contaminated, hemolyzed, or severely lipemic specimens. ction to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigera I freeze/thaw cycles) Ibuprofen Quantitative, Serum or Plasma igh Performance Liquid Chromatography Red. Also acceptable: Lavender (EDTA) or Pink (K ₂ EDTA). <u>aration:</u> Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serur port Tube. (Min: 0.4 mL) <u>iort Temperature:</u> Refrigerated. Also acceptable: Room temperature or frozen. <u>Conditions:</u> Separator tubes ction to initiation of testing): Ambient: 16 days; Refrigerated: 16 days; Frozen: 6 month	HYPER EXT aliquots of serum to individua ted: 2 weeks; Frozen: 1 year IBUPRO SP
Specimen Required: New Test Available Now Methodology: Performed: Reported: Specimen Required:	Collect: Serum Specimen Prepa ARUP Standard Storage/Transp Unacceptable C Stability (collec (avoid repeated 2014183 Quantitative Hi Varies 3-10 days Collect: Plain F Specimen Prepa Standard Transs Storage/Transp Unacceptable C Stability (collect 80329 (Alt code	Separator Tube (SST). <u>aration:</u> Separate from cells ASAP or within 2 hours of collection. Transfer two 2.5 mI d Transport Tubes. (Min: 1 mL each) <u>nort Temperature:</u> Refrigerated. <u>Conditions:</u> Plasma. Contaminated, hemolyzed, or severely lipemic specimens. ction to initiation of testing): After separation from cells: Ambient: 48 hours; Refrigera I freeze/thaw cycles) Ibuprofen Quantitative, Serum or Plasma igh Performance Liquid Chromatography Red. Also acceptable: Lavender (EDTA) or Pink (K ₂ EDTA). <u>aration:</u> Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serur port Tube. (Min: 0.4 mL) <u>iort Temperature:</u> Refrigerated. Also acceptable: Room temperature or frozen. <u>Conditions:</u> Separator tubes ction to initiation of testing): Ambient: 16 days; Refrigerated: 16 days; Frozen: 6 month	HYPER EXT aliquots of serum to individua ted: 2 weeks; Frozen: 1 year IBUPRO SP



2006444 *IDH1* and *IDH2* Mutation Analysis, Exon 4

Specimen Required: Collect: Lavender (EDTA). Also acceptable: Bone Marrow (EDTA).

 Specimen Preparation: Whole Blood: Transport 5 mL whole blood. (Min: 1 mL)

 Bone Marrow: Transport 3 mL bone marrow. (Min: 1 mL)

 Storage/Transport Temperature: Refrigerated.

 Unacceptable Conditions: Serum or plasma. Specimens collected in anticoagulants other than EDTA. Clotted or grossly hemolyzed specimens.

 Stability (collection to initiation of testing):

 Ambient: 24 hours; Refrigerated: 5 days; Frozen: Unacceptable

CPT Code(s): 81403 x2

HOTLINE NOTE: Remove information found in the Remarks field.

New Test	<u>2014188</u>	IDH1 and IDH2 Mutation Analysis, Exon 4, Formalin-Fixed,	IDH1-2FFPE
		Paraffin-Embedded (FFPE) Tissue	

Available Now



Additional Technical Information

Methodology:	Polymerase Chain Reaction/Sequencing
Performed:	Sun, Tue, Thu
Reported:	12-14 days

Specimen Required: Collect: Tumor tissue.

<u>Specimen Preparation</u>: Formalin fix (10 percent neutral buffered formalin) and paraffin embed tissue. Protect from excessive heat. Transport tissue block or 4 unstained 5-micron slides. (Min: 3 slides) Transport block and/or slide(s) in a tissue transport kit (ARUP supply #47808) available online through eSupply using ARUP ConnectTM or contact ARUP Client Services at (800) 522-2787. <u>Storage/Transport Temperature:</u> Room temperature. Also acceptable: Refrigerated. Ship in cooled containers during summer months. <u>Remarks:</u> For FFPE specimens include surgical pathology report. Tissue block will be returned after testing. <u>Unacceptable Conditions:</u> No tumor in tissue. Specimens fixed/processed in alternative fixatives (alcohol, Prefer) or heavy metal fixatives (B-4 or B-5). Decalcified specimens. <u>Stability (collection to initiation of testing)</u>: Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Interpretive Data: Refer to report. See Compliance Statement B: www.aruplab.com/CS

CPT Code(s): 81403 x2; 88381

New York DOH Approved.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.

IDH1-2



0020843 **Kidney Stone Risk Panel, Urine**

Specimen Required: Collect: 24-hour urine. Refrigerate during collection.

Specimen Preparation: Thoroughly mix entire collection (24-hour) in one container. Transport four separate 4 mL aliquots of urine using Calculi Risk/Supersaturation Urine Collection Kit (ARUP supply# 46007) available online through eSupply using ARUP Connect[™] or contact Client Services at (800) 522-2787. Do not exceed 4 mL in tubes. Aliquot according to the following specifications: 1st aliquot (pH 2): Transfer 4 mL urine into a Sulfamic Acid Tube. (Min: 4 mL) Mix well. Freeze immediately. 2nd aliquot (pH 2): Transfer 4 mL urine into a Sulfamic Acid Tube. (Min: 4 mL) Mix well. Freeze immediately. 3rd aliquot (pH 9): Transfer 4 mL urine into a Sodium Carbonate Tube. (Min: 4 mL) Mix well. Freeze immediately. 4th aliquot: Transfer 4 mL urine into an Unpreserved Tube. (Min: 4 mL) Freeze immediately. If collection kit is unavailable, transport four 4 mL unadjusted aliquots of urine. Storage/Transport Temperature: Frozen. Remarks: Record total volume and collection time interval on transport tube and test request form. Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 2 weeks

HOTLINE NOTE: Remove information found in the Interpretive Data field.

2007935 Lactate to Pyruvate Ratio, Whole Blood

LP RATIO

Specimen Required: Patient Prep: Patient should be fasting and at complete rest. Patient should avoid any exercise of the arm or hand before or during collection. Draw the specimen without the use of a tourniquet or within three minutes of applying the tourniquet, but before releasing the tourniquet.

Collect: Green (Sodium or Lithium Heparin).

Specimen Preparation: If whole blood is collected in a syringe, transfer immediately to green (sodium or lithium heparin) tube before preparing specimen.

1) Immediately after blood is drawn, add exactly 1 mL whole blood to a chilled pyruvate collection tube containing 2 mL 8 percent (w/v) perchloric acid (ARUP supply #16567) available online through eSupply using ARUP Connect™ or contact Client Services at (800) 522-2787.

2) Mix well for 30 seconds then place in an ice bath for 10 minutes.

3) Centrifuge for 10 minutes at 1500 x g.

4) Decant 2 mL supernatant to an ARUP Standard Transport Tube and freeze. (Min: 1 mL)

Storage/Transport Temperature: Frozen.

Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 2 days; Frozen: 4 weeks

Note: If addition to perchloric acid is delayed, lactate concentration of whole blood increases by approximately 30 percent after 30 minutes, 50 percent after 1 hour, and 75 percent after 2 hours at room temperature. If less than 1 mL of blood is added to collection tube, pH of the supernatant will be too low for testing.

HOTLINE NOTE: Remove information found in the Unacceptable Conditions field.

<u>0020504</u>	Lactic Acid, Body Fluid	LA-FL
Specimen Requi	red: Collect: Peritoneal or synovial fluid.	

Specimen Preparation: Centrifuge and separate to remove cellular material. Transport 1 mL peritoneal or synovial fluid in an ARUP Standard Transport Tube. (Min: 0.2 mL)

Storage/Transport Temperature: Frozen.

Remarks: Indicate source on test request form.

Unacceptable Conditions: Specimens other than those listed.

Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 2 weeks; Frozen: 1 month

Interpretive Data: Reference ranges for this assay have not been established for body fluid. Results should be interpreted in comparison to the lactic acid concentration in blood and in conjunction with clinical context.



<u>0098816</u>	Melatonin	MELATONIN
Reference Interv	al:	
Effective May 15, 2	017	
Adults	Reference Interval	
Daytime	3.4 to 53.9 pg/mL	
Nighttime	7.1 to 89.5 pg/mL	
2005405	Methotrexate, Sensitive	METREXSN
Specimen Require	d: Collect: Plain Red. Also acceptable: Green (Sodium or Lithium Heparin), Lavender (EDTA), or Pink (K2ED	DTA).
• •	Specimen Preparation: Protect from light during collection, storage, and shipment. Separate from cells A	SAP or within 2 hours of
	collection. Transfer 3 mL serum to an ARUP Amber Transport Tube. (Min: 1 mL)	
	Storage/Transport Temperature: Frozen.	
	Unacceptable Conditions: Serum separator tubes. Specimens not protected from light.	
	Stability (collection to initiation of testing): After separation from cells: Ambient: 4 hours; Refrigerated: 2 w	reeks; Frozen: 6 months
<u>2010775</u>	<i>Mycobacterium tuberculosis</i> Complex Detection and Rifampin Resistance by PCR	MTBRIF PCR
Succimon Docuino	d: Collect: Respiratory specimens, CSF, or Pleural Fluid.	
Specimen Require	<u>Specimen Preparation:</u> Unprocessed Specimens: Transport 5-10 mL respiratory specimen, CSF or pleural f	luid in a starila containan
	<u>Specifien Preparation:</u> Unprocessed Specifiens: Transport 3-10 mL respiratory specifien, CSF of pieural 1 (Min: 1 mL) Label as unprocessed.	fuid in a sterne container.
	Processed Specimens: Transport 2-5 mL digested/decontaminated respiratory specimen, CSF or pleural flui	id in a sterile container
	(Min: 1 mL)	iu in a sterne container.
	Place each specimen in an individually sealed bag.	
	Storage/Transport Temperature: Refrigerated.	
	Remarks: Specimen source required. Processed Specimens: Identify method used for digestion and provide	smear results.
	Unacceptable Conditions: Blood, paraffin blocks, stool, swabs, tissue, and urine.	
	Stability (collection to initiation of testing): Unprocessed : Ambient: 3 days; Refrigerated: 1 week; Frozen: 1	month
	Processed: Ambient: Unacceptable; Refrigerated: 1 week; Frozen: 1 month	
Note: Body Fluids	other than Pleural Fluid will be run with a disclaimer.	

Specimen source required. To perform this test it is essential to know whether or not the submitted specimen has been processed (digestion and decontamination procedure). If processed, smear results must be provided as a comment on the test order or requisition. Delayed turnaround time will occur if the required information is not provided.



0020482 Oxalate, Urine

UOXAL

Specimen Required: Patient Prep: Patient should avoid ingestion of vitamin C prior to collection.

Collect: 24-hour urine. Refrigerate during collection.

Specimen Preparation: Thoroughly mix entire collection (24-hour) in one container. Do not exceed 4 mL in tubes. **Preserved:** Transfer 4 mL aliquot to an ARUP Transport Tube with Sulfamic Acid (ARUP supply #48098) available online through eSupply using ARUP ConnectTM or contact ARUP Client Services at (800) 522-2787. (Min: 1.5 mL) Mix well. Freeze immediately. **Unpreserved:** Transfer 4 mL unadjusted aliquot of urine to an ARUP Standard Transport Tube. (Min: 1.5 mL) Freeze immediately. <u>Storage/Transport Temperature:</u> CRITICAL FROZEN. Separate specimens must be submitted when multiple tests are ordered. <u>Remarks:</u> **Record total volume and collection time interval on transport tube and test request form.** <u>Stability (collection to initiation of testing):</u> After collection complete: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 1 month

Reference Interval:

Test Number	Components	Reference Interval		
	Oxalate, Urine - per 24h	Effective May 15, 2017		
		Age	Male	Female
		0-12 years	7-31 mg/d	7-31 mg/d
		13 years and older	16-49 mg/d	13-40 mg/d
	Creatinine, Urine - per 24h	Age	Male	Female
		3-8 years	140-700 mg/d	140-700 mg/d
		9-12 years	300-1300 mg/d	300-1300 mg/d
		13-17 years	500-2300 mg/d	400-1600 mg/d
		18-50 years	1000-2500 mg/d	700-1600 mg/d
		51-80 years	800-2100 mg/d	500-1400 mg/d
		81 years and older	600-2000 mg/d	400-1300 mg/d

HOTLINE NOTE: Remove information found in the Interpretive Data field.

✓ The reference range change also applies to:

- Calculi Risk Assessment, Urine (2008708)
- Kidney Stone Risk Panel, Urine (0020843)
- Supersaturation Profile, Urine (2008771)

2001491 Parathyroid Hormone, Fine Needle Aspiration (FNA)

PTH FNA

PTHRP

Specimen Required: Collect: Fine needle aspiration in saline. Also acceptable: Specimens collected in Green (Sodium or Lithium Heparin) or Lavender (EDTA).

Specimen Preparation: Specimen must be non-viscous and free of particulate matter. Centrifuge to remove cellular material. Transfer 0.5 mL saline needle rinse to an ARUP Standard Transport Tube. (Min: 0.5 mL)

Storage/Transport Temperature: Frozen.

<u>Remarks:</u> Indicate source on test request form.

<u>Unacceptable Conditions:</u> Specimen types other than those listed. Specimens too viscous to be aspirated by the instrument. <u>Stability (collection to initiation of testing)</u>: Ambient: 8 hours; Refrigerated: 24 hours; Frozen: 6 months

<u>2010677</u>

Parathyroid Hormone-Related Peptide (PTHrP) by LC-MS/MS, Plasma



Additional Technical Information



Specimen Collection and Handling

Specimen Required: Collect: Protease Inhibitor tube (PPACK; Phe-Pro-Arg-chlormethylketone) (ARUP supply #49662), available online through eSupply using ARUP ConnectTM or contact ARUP Client Services at (800) 522-2787. A winged collection set must be used.

Specimen Preparation: Mix well. Separate from cells within 1 hour of collection. Transfer 1.5 mL plasma to an ARUP Standard Transport Tube. (Min: 0.7 mL)

<u>Storage/Transport Temperature:</u> Frozen. Separate specimens must be submitted when multiple tests are ordered. <u>Unacceptable Conditions:</u> Grossly hemolyzed specimens.

<u>Stability (collection to initiation of testing)</u>: After separation from cells: Ambient: Unacceptable; Refrigerated: Unacceptable; Frozen: 3 months



2013284 PD-L1 22C3 pharmDx by Immunohistochemistry with Interpretation, pembrolizumab (KEYTRUDA)

Specimen Required: Collect: Tumor tissue.

Specimen Preparation: Formalin fix (10 percent neutral buffered formalin) and paraffin embed specimen. Protect paraffin block and/or slides from excessive heat. Transport tissue block or 5 unstained (3- to 5-micron thick sections), positively charged slides in a tissue transport kit (ARUP supply #47808 recommended but not required), available online through eSupply using ARUP Connector contact ARUP Client Services at (800) 522-2787. (Min: 3 slides) If sending precut slides, do not oven bake. Storage/Transport Temperature: Room temperature. Also acceptable: Refrigerated. Ship in cooled container during summer months. Remarks: Include surgical pathology report and indicate tissue site with the test order. For additional technical details, please contact ARUP Client Services at (800) 522-2787. Unacceptable Conditions: Paraffin block with no tumor tissue remaining. Specimens fixed in any fixative other than 10 percent neutral buffered formalin. Decalcified specimens. Specimens with fewer than 100 viable tumor cells.

Stability (collection to initiation of testing): Ambient: Indefinitely; Refrigerated: Indefinitely; Frozen: Unacceptable

Note: This test code includes pathologist interpretation. At least 100 viable tumor cells are required for interpretation.

CPT Code(s):	88360	
<u>0070121</u>	Prostate Specific Antigen, Total	PSA
Specimen Required	 d: <u>Collect:</u> Serum Separator Tube (SST) or Plasma Separator Tube (PST). Also acceptable: Plain Red, Green (Sodium or Lithium Heparin), Lavender (EDTA), or Pink (K₂EDTA). <u>Specimen Preparation</u>: Allow specimen to clot completely at room temperature. Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL) <u>Storage/Transport Temperature</u>: Frozen. <u>Unacceptable Conditions</u>: Grossly hemolyzed specimens. Vaginal washings. <u>Stability (collection to initiation of testing)</u>: After separation from cells: Ambient: 24 hours; Refrigerated: 3 days; Frozen: 6 models 	f
0070234	Prostate Specific Antigen, Total - Medicare Screening PSA	SCN
Specimen Required	 d: <u>Collect:</u> Serum Separator Tube (SST) or Plasma Separator Tube (PST). Also acceptable: Plain Red, Green (Sodium or Lithium Heparin), Lavender (EDTA), or Pink (K₂EDTA). <u>Specimen Preparation</u>: Transport 1 mL serum or plasma in an ARUP Standard Transport Tube. (Min: 0.5 mL) <u>Storage/Transport Temperature</u>: Frozen. <u>Unacceptable Conditions</u>: Hemolyzed specimens. <u>Stability (collection to initiation of testing)</u>: Ambient: 24 hours; Refrigerated: 3 days; Frozen: 6 months 	
<u>0098581</u>	Prostate Specific Antigen, Ultrasensitive PSA UL	TRA
Specimen Required	 d: <u>Collect:</u> Serum Separator Tube (SST) or Plasma Separator Tube (PST). Also acceptable: Plain Red, Green (Sodium or Lithium Heparin), Lavender (EDTA), or Pink (K₂EDTA). <u>Specimen Preparation</u>: Allow specimen to clot completely at room temperature. Separate from cells ASAP or within 2 hours of collection. Transfer 1 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 0.5 mL) <u>Storage/Transport Temperature</u>: Frozen. <u>Unacceptable Conditions</u>: Grossly hemolyzed specimens. Vaginal washings. <u>Stability (collection to initiation of testing)</u>: After separation from cells: Ambient: 24 hours; Refrigerated: 3 days; Frozen: 6 more content of the second se	f
2014059	Prostate-Specific Kallikrein, 4Kscore 4KSC	ORE
CPT Code(s):	81539	



0080310 Pyruvic Acid

Specimen Required: <u>Patient Prep:</u> Patient should be fasting and at complete rest. Patient should avoid any exercise of the arm or hand before or during collection. Draw the specimen without the use of a tourniquet or within three minutes of applying the tourniquet, but before releasing the tourniquet.

Collect: Green (Sodium or Lithium Heparin).

Specimen Preparation: If whole blood is collected in a syringe, transfer immediately to green (sodium or lithium heparin) tube before preparing specimen.

1) Immediately after blood is drawn, add exactly 1 mL whole blood to a chilled pyruvate collection tube containing 2 mL 8 percent (w/v) perchloric acid (ARUP supply #16567) available online through eSupply using ARUP ConnectTM or contact Client Services at (800) 522-2787.

2) Mix well for 30 seconds then place in an ice bath for 10 minutes.

3) Centrifuge for 10 minutes at 1500 x g.

4) Decant 2 mL supernatant to an ARUP Standard Transport Tube and freeze. (Min: 1 mL)

Storage/Transport Temperature: Frozen.

Stability (collection to initiation of testing): Ambient: Unacceptable; Refrigerated: 2 days; Frozen: 4 weeks

Note: If less than 1 mL of blood is added to collection tube, pH of the supernatant will be too low for testing.

HOTLINE NOTE: Remove information found in the Unacceptable Conditions field.

<u>2013011</u>	Selenium, RBCs	SELENI RBC
Performed:	Varies	
Reported:	3-10 days	
Specimen Requir	red: <u>Collect:</u> Royal blue (Trace metal-free EDTA). <u>Specimen Preparation:</u> Separate cells ASAP or within 2 hours of collection. Transport 1 mL RBCs in the (Min: 0.4 mL) <u>Storage/Transport Temperature:</u> Refrigerated. Also acceptable: Room temperature. <u>Stability (collection to initiation of testing):</u> Ambient: 1 month; Refrigerated: 1 month; Frozen: Unacceptable	C
<u>2002098</u>	Signal Recognition Particle (SRP) Antibody	SRP
Specimen Requi	red: <u>Collect:</u> Lavender (EDTA). Also acceptable: Plain Red or Serum Separator Tube (SST). <u>Specimen Preparation:</u> Transfer 2 mL serum or plasma to an ARUP Standard Transport Tube. (Min: 1 m <u>Storage/Transport Temperature:</u> Refrigerated. <u>Stability (collection to initiation of testing):</u> Ambient: 4 days; Refrigerated: 2 weeks; Frozen: 1 month	ıL)
<u>2008771</u>	Supersaturation Profile, Urine	SUPERSAT
Specimen Requin	red: Collect: 24-hour urine. Refrigerate during collection. Specimen Preparation: Thoroughly mix entire collection (24-hour) in one container. Transport four sepa using Calculi Risk/Supersaturation Urine Collection Kit (ARUP supply# 46007) available online throug Connect [™] or contact Client Services at (800) 522-2787. Do not exceed 4 mL in tubes. Aliquot according to the following specifications: 1st aliquot (pH 2): Transfer 4 mL urine into a Sulfamic Acid Tube. (Min: 4 mL) Mix well. Freeze immed 2nd aliquot (pH 2): Transfer 4 mL urine into a Sulfamic Acid Tube. (Min: 4 mL) Mix well. Freeze immed 3rd aliquot (pH 9): Transfer 4 mL urine into a Solidamic Carbonate Tube. (Min: 4 mL) Mix well. Freeze immed 3rd aliquot (pH 9): Transfer 4 mL urine into a Solidamic Carbonate Tube. (Min: 4 mL) Mix well. Freeze immed 3rd aliquot (pH 9): Transfer 4 mL urine into a Sulfamic Acid Tube. (Min: 4 mL) Mix well. Freeze immed 3rd aliquot (pH 9): Transfer 4 mL urine into a Solidamic Carbonate Tube. (Min: 4 mL) Mix well. Freeze immed 3rd aliquot (pH 9): Transfer 4 mL urine into a Unpreserved Tube. (Min: 4 mL) Freeze immediately. If collection kit is unavailable, transport four 4 mL unadjusted aliquots of urine. <u>Storage/Transport Temperature:</u> Frozen. <u>Remarks: Record total volume and collection time interval on transport tube and test request form Stability (collection to initiation of testing):</u> Ambient: Unacceptable; Refrigerated: Unacceptable; Frozer	h eSupply using ARUP diately. ediately. nmediately.

HOTLINE NOTE: Remove information found in the Unacceptable Conditions field.

0090064 Thiocyanate, 24-Hour Urine

Reference Interval:

Effective	May	15	2017

Nonsmoker	Less than or equal to 4 mg/d	
Smoker	7-17 mg/d	

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<u>2011575</u> Thiocyanate, Serum or Plasma

Reference Interval:

Effective May 15, 2017	
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Nonsmoker	Less than or equal to 4 µg/mL
Smoker	3-12 µg/mL
Toxic	Greater than 50 µg/mL
Values seen with nitroprusside therapy	6-29 μg/mL

0020753 Thyroglobulin, Fine Needle Aspiration (FNA)

Specimen Required: Collect: Fine needle aspiration in saline.

<u>Specimen Preparation:</u> Centrifuge to remove cellular material. Specimen must be non-viscous and free of particulate matter. Transport 0.5 mL saline needle rinse. (Min: 0.5 mL) Also acceptable: Heparinized specimens. <u>Storage/Transport Temperature:</u> Frozen.

Remarks: Indicate source on test request form.

Unacceptable Conditions: Specimen types other than those listed. Specimens containing EDTA. Viscous specimens. Stability (collection to initiation of testing): Ambient: 8 hours; Refrigerated: 48 hours; Frozen: 6 months

0093244 Thyroxine, Free by Equilibrium Dialysis/HPLC-Tandem Mass Spectrometry FT4 ED-TMS

Specimen Required: Collect: Plain Red or Serum Separator Tube (SST).

<u>Specimen Preparation:</u> Separate from cells or gel ASAP or within 2 hours of collection. Transfer 2 mL serum to an ARUP Standard Transport Tube. (Min: 0.3 mL) <u>Storage/Transport Temperature:</u> Refrigerated. <u>Unacceptable Conditions:</u> Plasma. <u>Stability (collection to initiation of testing):</u> After separation from cells: Ambient: 4 days; Refrigerated: 2 weeks; Frozen: 1 month

New Test 2014109 Total Inhibin Serum

Available Now

Test not New York DOH approved at any laboratory. An approved NPL form must accompany specimen.

Methodology:	Quantitative Enzyme-Linked Immunosorbent Assay
Performed:	Tue
Reported:	1-8 days

Specimen Required: Collect: Serum Separator Tube (SST) or Plain Red.

<u>Specimen Preparation:</u> Transport 0.5 mL serum in an ARUP Standard Transport Tube. (Min: 0.2 mL) <u>Storage/Transport Temperature:</u> Frozen.

<u>Unacceptable Conditions:</u> Hemolyzed or lipemic specimens. <u>Stability (collection to initiation of testing):</u> After separation from cells: Ambient: 12 hours; Refrigerated: 1 week; Frozen: 3 months

Reference Interval:

Females, Premenopausal	10-300 pg/mL
Females, Postmenopausal	0-10 pg/mL
Males	50–190 pg/mL

Interpretive Data: See Compliance Statement D: www.aruplab.com/CS

CPT Code(s): 83520

New York DOH approval pending. Call for status update.

HOTLINE NOTE: Refer to the Test Mix Addendum for interface build information.

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2014025	Trypsin	TRYPS
Specimen Requir	 <u>Collect:</u> Serum Separator Tube (SST) or Plain Red. <u>Specimen Preparation:</u> Allow specimen to clot for 15-20 minutes at room temperature. Separate from cel collection. Transfer 1 mL serum to an ARUP Standard Transport Tube. (Min: 0.3 mL) <u>Storage/Transport Temperature:</u> Frozen. <u>Unacceptable Conditions:</u> Plasma or cord blood. Grossly hemolyzed or lipemic specimens. <u>Stability (collection to initiation of testing):</u> After separation from cells: Ambient: 2 hours; Refrigerated: 	
0099435	Vasoactive Intestinal Peptide	VIP
Spe	cimen Collection and Handling	
Specimen Requir	ed: <u>Collect:</u> Protease Inhibitor tube (PPACK; Phe-Pro-Arg-cholormethylketone) (ARUP supply #49662), ava eSupply using ARUP Connect [™] or contact ARUP Client Services at (800) 522-2787. A winged collection <u>Specimen Preparation:</u> Mix well. Separate from cells within 1 hour of collection. Transfer 1 mL plasma t Transport Tube. (Min: 0.5 mL) <u>Storage/Transport Temperature:</u> Frozen. Separate specimens must be submitted when multiple tests are o <u>Unacceptable Conditions:</u> Grossly hemolyzed specimens. <u>Stability (collection to initiation of testing):</u> After separation from cells: Ambient: Unacceptable; Refrige months	on set must be used. o an ARUP Standard rdered.
0030002	von Willebrand Multimeric Panel	VW MUL PAN
Methodology:	Electrophoresis/Clotting/Microlatex Particle-Mediated Immunoassay/Platelet Agglutination	
2003387	von Willebrand Panel with Reflex to von Willebrand Multimeric Analysis	VW PANEL R
Methodology:	Electrophoresis/Clotting/Microlatex Particle-Mediated Immunoassay/Platelet Agglutination	



The following will be discontinued from ARUP's test menu on May 15, 2017. Replacement test options are supplied if applicable.

Test Number	Test Name	Refer To Replacement
<u>2011880</u>	Adrenoleukodystrophy, X-Linked (ABCD1) Deletion/Duplication	Adrenoleukodystrophy, X-Linked (<i>ABCD1</i>) Sequencing and
2005717	Allergens, Respiratory Panel, Region 1, North Atlantic (CT, MA, NJ,	Deletion/Duplication (2011906) Allergens, Respiratory IgE Panel, Region 1, North Atlantic (CT, MA,
2001582	PA, VT, ME, NH, NY, RI) IgE Alpha Globin (HBA1 and HBA2) Sequencing	NJ, PA, VT, ME, NH, NY, RI) (<u>2014247</u>)
2002394	Alport Syndrome, X-linked (<i>COL4A5</i>) Deletion/Duplication	Alport Syndrome, X-linked (COL4A5) Sequencing and
2002071	Antimicrobial Susceptibility - Carbapenem Resistance Confirmation by	Deletion/Duplication (2002398)
2008462	PCR	Antimicrobial Susceptibility – Carbapenemase Gene Detection by PCR (2014277)
2008443	ATP7A-Related Copper Transporter Disorders (ATP7A) Deletion/Duplication	ATP7A-Related Copper Transport Disorders (<i>ATP7A</i>) Sequencing and Deletion/Duplication (2008471)
0060762	Bartonella Species by PCR, Whole Blood	Bartonella Species by PCR (0093057)
2011915	Breast and Ovarian Hereditary Cancer Syndrome (<i>BRCA1</i> and <i>BRCA2</i>) Deletion/Duplication	Breast and Ovarian Hereditary Cancer Syndrome (<i>BRCA1</i> and <i>BRCA2</i>) Sequencing and Deletion/Duplication (2011949)
<u>2004927</u>	CDKL5-Related Disorders (CDKL5) Deletion/Duplication	<i>CDKL5</i> -Related Disorders (<i>CDKL5</i>) Sequencing and Deletion/Duplication (2004935)
<u>2003172</u>	Cerebral Cavernous Malformation (<i>CCM1</i> , <i>CCM2</i> and <i>CCM3</i>) Deletion/Duplication	Cerebral Cavernous Malformation (CCM) Panel, Sequencing and Deletion/Duplication, 3 Genes (2009326)
<u>2008606</u>	Creatine Transporter Deficiency (SLC6A8) Deletion/Duplication	Creatine Transporter Deficiency (<i>SLC6A8</i>) Sequencing and Deletion/Duplication (2008610)
0051642	Cystic Fibrosis (CFTR) Deletion/Duplication	Cystic Fibrosis (CFTR) Sequencing with Reflex to Deletion/Duplication (0051640)
0060031	Cytomegalovirus by PCR, Whole Blood or Bone Marrow	Cytomegalovirus by Qualitative PCR (0060040)
2005555	Ehlers-Danlos Syndrome Kyphoscoliotic Form, Type VI (<i>PLOD1</i>) Deletion/Duplication	Ehlers-Danlos Syndrome Kyphoscoliotic Form, Type VI (<i>PLOD1</i>) Sequencing and Deletion/Duplication (2005559)
0051353	Epstein-Barr Virus, Quantitative PCR, Whole Blood	Epstein-Barr Virus by Quantitative PCR (0051352)
<u>0055248</u>	F-Actin (Smooth Muscle) Antibody, IgG	Autoimmune Liver Disease Evaluation with Reflex to Smooth Muscle Antibody (SMA), IgG by IFA (2007210), F-Actin (Smooth Muscle) Antibody, IgG by ELISA with Reflex to Smooth Muscle Antibody, IgG Titer (0051174) or F-Actin and Mitochondrial M2 Antibodies, IgG by ELISA with Reflex to Smooth Muscle Antibody (SMA), IgG by IFA (2007209)
<u>2004920</u>	Familial Adenomatous Polyposis (APC) Deletion/Duplication	Familial Adenomatous Polyposis Panel: (<i>APC</i>) Sequencing and Deletion/Duplication, (<i>MUTYH</i>) 2 Mutations (2004915)
0051752	FG Syndrome, FGS1 (MED12) R961W Mutation	
<u>2011424</u>	GLI3-related Disorders (GLI3) Deletion/Duplication	GLI3-Related Disorders (<i>GLI3</i>) Sequencing and Deletion/Duplication (2011465)
<u>2001751</u>	Hemophilia A (F8) Deletion/Duplication	Hemophilia A (F8) 2 Inversions with Reflex to Sequencing and Reflex to Deletion/Duplication (2001614)
2010499	Hemophilia B (F9) Deletion/Duplication	Hemophilia B (F9) Sequencing and Deletion/Duplication (2010494)
0051348	Hereditary Hemorrhagic Telangiectasia (<i>ACVRL1</i> and <i>ENG</i>) Deletion/Duplication	Hereditary Hemorrhagic Telangiectasia (ACVRL1 and ENG) Sequencing and Deletion/Duplication (0051382)
<u>2007113</u>	Hereditary Paraganglioma-Pheochromocytoma (SDHB, SDHC, and SDHD) Deletion/Duplication	Hereditary Paraganglioma-Pheochromocytoma (<i>SDHB</i> , <i>SDHC</i> , and <i>SDHD</i>) Sequencing and Deletion/Duplication Panel (2007167)
2005408	Hereditary Persistence of Fetal Hemoglobin (HPFH) 8 Mutations	Beta Globin (HBB) Deletion/Duplication (2010113)
0050459	Herpes Simplex Virus Types 1 and 2 Glycoprotein G-Specific Antibodies, IgG by Immunoblot	Herpes Simplex Virus Type 1 and/or 2 Antibodies, IgG with Reflex to Type 1 and 2 Glycoprotein G-Specific Ab, IgG (<u>0051708</u>)
2011937	Human Papillomavirus (HPV) 16 and 18 Genotype by PCR, SurePath	Human Papillomavirus (HPV), High Risk with 16 and 18 Genotype by PCR, SurePath (2011933)
0055557	IGH-CCND1 (BCL-1/JH) Translocation, t(11;14) by PCR	IGH-CCND1 Fusion, t(11;14) by FISH (2007226)
2006344	Inosine Triphosphatase (<i>ITPA</i>) and Interleukin 28 B (<i>IL28B</i>)-Associated Variants, 4 SNPs	Interleukin 28 B (IL28B)-Associated Variants, 2 SNPs (2004680)
<u>2001976</u>	Juvenile Polyposis (SMAD4) Deletion/Duplication	Juvenile Polyposis (<i>SMAD4</i>) Sequencing and Deletion/Duplication (2001971)
2004984	Juvenile Polyposis Syndrome (BMPR1A) Deletion/Duplication	Juvenile Polyposis Syndrome (<i>BMPR1A</i>) Sequencing and Deletion/Duplication (2004992)
2003987	Laminin by Immunohistochemistry	
2008373	Legius Syndrome (SPRED1) Deletion/Duplication	Legius Syndrome (<i>SPRED1</i>) Sequencing and Deletion/Duplication (2008347)
2009294	Li-Fraumeni Syndrome (TP53) Deletion/Duplication	Li-Fraumeni (<i>TP53</i>) Sequencing and Deletion/Duplication (2009313)
2005580	Marfan Syndrome (FBN1) Deletion/Duplication	Marfan Syndrome (FBN1) Sequencing and Deletion/Duplication (2005584)
2005346	Multiple Endocrine Neoplasia Type 1 (MEN1) Deletion/Duplication	Multiple Endocrine Neoplasia Type 1 (<i>MEN1</i>) Sequencing and Deletion/Duplication (2005360)
0060771	Mycobacterium tuberculosis Complex Speciation	Acid-Fast Bacillus (AFB) Identification (0060999)
2004892	Ornithine Transcarbamylase Deficiency (OTC) Deletion/Duplication	Ornithine Transcarbamylase Deficiency (<i>OTC</i>) Sequencing and Deletion/Duplication (2004896)
0060028	Parvovirus B19, by PCR, Bone Marrow	Parvovirus B19 by Qualitative PCR (0060043)
2008377	Peutz-Jeghers Syndrome (<i>STK11</i>) Deletion/Duplication	Peutz-Jeghers Syndrome (STK11) Sequencing and Deletion/Duplication
0020507	pH, Body Fluid	(2008398)



<u>2012246</u>	Polycystic Kidney Disease, Autosomal Dominant (<i>PKD1</i> and <i>PKD2</i>) Deletion/Duplication	Polycystic Kidney Disease, Autosomal Dominant (<i>PKD1</i> and <i>PKD2</i>) Sequencing and Deletion/Duplication (2012250)
<u>2004199</u>	Primary Carnitine Deficiency (SLC22A5) Deletion/Duplication	Primary Carnitine Deficiency (<i>SLC22A5</i>) Sequencing and Deletion/Duplication (2004203)
<u>2002726</u>	PTEN-Related Disorders (PTEN) Deletion/Duplication	PTEN-Related Disorders (<i>PTEN</i>) Sequencing and Deletion/Duplication (2002470)
<u>2003401</u>	Pulmonary Arterial Hypertension (BMPR2) Deletion/Duplication	Pulmonary Arterial Hypertension (<i>BMPR2</i>) Sequencing and Deletion/Duplication (2003405)
<u>2007830</u>	RASA1-Related Disorders (RASA1) Deletion/Duplication	RASA1-Related Disorders (<i>RASA1</i>) Sequencing and Deletion/Duplication (2007852)
<u>0051618</u>	Rett Syndrome (MECP2), Deletion and Duplication	Rett Syndrome (<i>MECP2</i>), Sequencing and Deletion/Duplication (0051614)
2008409	T-Cell Clonality by Next Generation Sequencing	T-Cell Clonality Screening by PCR (0055567)
<u>2004208</u>	Very Long-Chain Acyl-CoA Dehydrogenase Deficiency (ACADVL) Deletion/Duplication	Very Long-Chain Acyl-CoA Dehydrogenase Deficiency (ACADVL) Sequencing and Deletion/Duplication (2004212)
<u>2002988</u>	von Hippel-Lindau (VHL) Deletion/Duplication	von Hippel-Lindau (VHL) Sequencing and Deletion/Duplication (2002965)
<u>2004434</u>	X Chromosome Ultra-High Density Microarray	