

							Revised 6/5/20
	Major Category Code Headings						60000
1	Normal Structure and Function						60200
2	Molecular Genetic Principles						60400
3	Techniques and Methods						60800
4	Assay Performance and Validation						61000
5	Quality						61200
6	Ethical, Legal, and Regulatory issues						61400
7	Indications for testing						61600
8	Inherited Diseases						61800
9	Inherited cancer Syndromes						62100
10	Solid Tumors						62300
11	Hematopathology						62500
12	Pharmacogenetics						62800
13	Infectious Disease						63000
14	Identity Testing						63400
15	Histocompatibility						63600
16	Informatics						63800

Genetic Pathology					60000
1	Normal Structure and Function				60200
	A	Chromosomes			60210
	B	Genes			60215
	C	DNA			60220
			1	exons	60222
			2	introns	60224
			3	noncoding DNA	60226
	D	RNA			60230
			1	miRNA	60235
			2	tRNA	60237
			3	mRNA	60239
			4	lncRNA	60241
	E	Transcription, translation			60250
			1	Transcription	60252
			2	Translation	60254
			3	Posttranslational modification	60256
	F	Mitosis			60260
			1	Replication	60262
			2	Cell cycle	60264
	G	Meiosis			60270
	H	Nomenclature			60280
			1	Gene nomenclature	60282
			2	Protein nomenclature	60284
			3	Variant nomenclature	60286
2	Molecular Genetic Principles				60400
	A	Mechanisms of alteration/types of defect			60410
			1	Ploidy	60420
			2	CNV	60430
			3	Translocation/other rearrangements (to include duplication, deletion, inversion)	60440
			4	SNPs	60450
			5	Methylation, epigenetics	60460
			6	Mitochondrial	60470
			7	Trinucleotide repeats	60480
			8	Multifactorial	60490
			9	Mismatch repair	60495
			10	Point mutations	60500
			11	Mosaicism	60505
	B	Inherited defects			60510
			1	Mendelian inheritance	60520
				a Dominant	60530
				b Recessive	60540
				c X-linked	60550
			2	Non-Mendelian inheritance	60555

			3	Linkage Analysis	60560
			4	Hardy Weinberg	60570
			5	Risk calculations	60580
			6	Bayes analysis	60590
	C	Somatic defects			60600
			1	Oncogenes	60610
			2	Tumor suppressor	60620
			3	LOH	60630
			4	MSI	60640
			5	Clonality	60650
			6	Genomic Instability	60652
			7	Chromothripsis	60654
3	Techniques and Methods				60800
	A	Cytogenetics			60810
	B	FISH			60820
	C	Nucleic acid isolation and quantitation			60830
	D	Restriction enzyme digest			60840
	E	Fragment analysis (gels, capillary electrophoresis)			60850
	F	Hybridization (Southern, dot blot, reverse dot blot)			60860
	G	PCR, RT-PCR and other NAA			60870
	H	Quantitative PCR and RT-PCR			60880
	I	Sequencing (Sanger, pyro)			60890
	J	Next gen Sequencing			60900
	K	Arrays (aCGH, snp and oligo arrays) Constitutional			60910
	L	Arrays (aCGH, snp and oligo arrays) Somatic			60912
	M	MLPA or other mutation scanning methods			60920
	N	Methylation analysis (PCR, Southern blot, sequencing)			60930
	O	Mass spectrometry			60940
	P	Proteomics			60950
	Q	Melt curve analysis			60960
	R	Tumor mutational burden (TMB)			60970
4	Assay Performance and Validation				61000
	A	Proficiency testing			61010
	B	Validation vs. verification			61020
	C	Preanalytical considerations			61030
	D	Analytical considerations			61040
			1	Stability	61041
			2	Sample selection	61042
			3	Sample collection	61043
			4	Anticoagulant	61044
			5	Fixation	61045
	E	Postanalytical considerations (to include results, interpretation, and foll			61050
	F	Variant classification			61055
	G	Reporting			61060

5	Quality						61200
	A	QA					61210
	B	QC					61220
	C	Controls					61230
			1	internal control			61232
			2	quantitative control			61234
6	Ethical, Legal, and Regulatory issues, Other						61400
	A	Ethical					61410
			1	IRB			61412
			2	Consent			61414
	B	Legal					61420
			1	HIPAA			61422
			2	GINA			61424
			3	Gene patent			61426
	C	Regulatory					61430
			1	CLIA			61432
			2	CAP			61434
			3	CMS			61436
			4	FDA: LDT/LDP, IUO, RUO			61438
	D	Coding and Reimbursement					61450
			1	CPT coding			61452
			2	ICD 9, 10			61454
			3	Lab utilization			61456
7	Indications for testing						61600
	A	Presymptomatic/Predictive					61610
	B	Diagnostic					61620
	C	Carrier screening (population vs. other)					61630
	D	Prenatal diagnosis					61640
	E	PGD					61650
8	Inherited Diseases						61800
	A	Coagulation Disorders					61810
			1	FVL			61811
			2	Prothrombin			61812
			3	MTHFR			61813
			4	Protein C			61814
			5	F VIII			61815
	B	Non-neoplastic hematology					61820
			1	Thalasemia			61821
			2	Hemophila			61822
			3	Sickle cell disease			61823
			4	Hemachromotosis			61824
			5	Rh disease			61825
	C	Cardiovascular					61830
			1	Coronary artery disease, hyperlipidemia			61832

			2	Heritable cardiomyopathy	61834
			3	Heritable arrhythmias: Long QT	61836
	D	Renal			61840
			1	Renal cystic disease	61842
			2	Renal other	61844
	E	Endocrine			61850
			1	Thyroid	61852
			2	other	61854
	F	Gastrointestinal			61860
			1	Celiac Disease	61862
	G	Cystic Fibrosis			61864
	H	Immunologic			61870
			1	SCID	61872
			2	IgA def	61874
	I	Biochemical Genetics			61880
			1	Metabolic disorders: PKU, galactosemia	61882
			2	Storage disorders: Gauchers, Tay Sachs, glycogen storage dis	61884
			3	Leukodystrophies: Krabbe, Canavan	61886
	J	Mitochondrial Disorders			61890
			1	MELAS	61892
			2	MERFF	61894
	K	Neuromuscular Disorders			61900
			1	Huntington	61901
			2	Friedreich Ataxia	61902
			3	Alzheimer's	61903
			4	Parkinson	61904
			5	Dystonia	61905
			6	Muscular Dystrophy	61906
			7	Myotonic dystrophy	61907
			8	SMA	61908
	L	Intellectual disability			61910
			1	Down Syndrome	61912
			2	Autism	61914
			3	Fragile X	61916
	M	Cutaneous/connective tissue			61920
			1	osteogenesis imperfecta	61922
			2	Ehlers-Danlos	61924
			3	Marfan	61926
			4	Epidermolysis bullosa	61928
9	Inherited cancer Syndromes				62100
	A	Gastrointestinal tumors			62110
			1	Lynch	62112
			2	Li-Fraumeni	62114
			3	APC	62116
			4	Puetz-Jeghers	62118

	B	Breast cancer			62120
	C	Prostate			62122
	D	Pancreas			62124
	E	Renal cell carcinoma			62130
	F	Endocrine			62140
		1 Von Hippel Lindau			62142
		2 MEN 1,2			62144
	G	Neuromuscular			62150
		1 Neurofibromatosis			62151
	10 Solid Tumors (sporadic)				62300
	A	Breast			62310
	B	Cervical			62320
	C	Ovarian			62325
	D	Lung, respiratory			62330
	E	GI			62340
		1 Colorectal			62342
		2 Pancreas			62344
	F	GU			62350
		1 Prostate			62352
		2 Bladder, TCC			62354
	G	CNS			62360
		1 Glioma			62362
		2 Oligodendroglioma			62364
		3 Neuroblastoma			62366
	H	Thyroid			62370
	I	Sarcoma			62380
	J	Melanoma			62390
	11 Hematopathology				62500
	A	Clonality			62510
	B	Translocations			62520
	C	Disease monitoring			62530
	D	Mutations			62540
	E	Specific disorders			62550
		1 Lymphoid			62560
		a ALL			62570
		<i>ETV6/AML1</i>			62571
		<i>E2A/PBX1</i>			62572
		<i>BCR/ABL</i>			62573
		<i>MLL/AF4</i>			62574
		<i>other</i>			62575
		b T cell			62580
		<i>TCRB</i>			62582
		<i>TCRG</i>			62584
		<i>NPM/ALK</i>			62586

					c	B cell including CLL	62590
						<i>IGH</i>	62591
						<i>CCND1</i>	62592
						<i>BCL2</i>	62593
						<i>BCL6</i>	62594
						<i>Cyclin D1</i>	62595
						<i>MALT1</i>	62596
						<i>PAX5</i>	62597
						<i>MYC</i>	62598
						other	62599
					d	Plasma Cell	62600
					e	Virally induced lymphoma	62601
						HTLV1	62602
						KSHV.HHV8	62603
						EBV	62604
						HIV	62605
						other	62606
					2	Myeloid including CHIP	62610
					a	Myelodysplastic	62620
						<i>ASLX1</i>	62621
						<i>ETV6</i>	62622
						<i>RUNX1</i>	62623
						<i>EZH2</i>	62624
						<i>TET2</i>	62625
						<i>DNMT3A</i>	62626
						<i>GATA2</i>	62627
					b	Myeloproliferative	62630
						<i>JAK2</i>	62631
						<i>CALR</i>	62632
						<i>MPL</i>	62633
						<i>FGFR1</i>	62634
						<i>PDGFRA</i>	62635
					c	CML	62636
						<i>BCR/ABL1</i>	62637
					d	AML	62640
						<i>RUNX1</i>	62642
						<i>CEBPA</i>	62644
						<i>KMT2A</i>	62646
						<i>FLT3</i>	62648
						<i>NRAS/KRAS</i>	62650
						<i>NPM1</i>	62652
						<i>PML-RARA</i>	62654
						other	62656
						12 Pharmacogenetics	62800

	A	Cytochrome P450		62810
		1 CYP2D6		62812
		2 CYP2C9		62814
		3 CYP2C19		62816
		4 Other		62818
	B	Other drug metabolizing enzymes		62820
		1 UGT1A1		62822
		2 Thymidine Kinase		62824
		4 Other		62826
	C	Other pharmacogenomic mechanisms		62830
		1 Receptors		62832
		2 Transporters		62834
		3 Other		62836
	D	Somatic/Tumor		62840
13		Infectious Disease		63000
	A	Detection		63010
	B	Differentiation/Subtyping		63020
	C	Sequencing		63030
	D	Antimicrobial resistance		63040
	E	Molecular Epidemiology		63050
	F	Viruses		63060
		1 Hepatitis		63070
		a HAV		63072
		b HBV		63074
		c HCV		63076
		d other		63078
		2 HIV		63080
		3 Viral infections of immunocompromised hosts		63090
		4 CNS viral infections		63100
		a Enteroviruses		63101
		b Herpesviruses		63102
		c Varicella		63103
		d Arboviruses		63104
		e other		63105
		5 Respiratory Viruses		63110
		a Influenza		63111
		b Coronaviruses, SARS		63112
		c Enteroviruses		63113
		d Metapneumovirus		63114
		e Adenovirus		63115
		f Other		63116
		6 HPV viruses		63118
		7 GI Viruses		63120
		8 Hemorrhagic fever: Ebola, Marburg		63121
		9 Immunosuppression		63122

				a	CMV	63123
				b	BK	63124
				c	JC polyoma virus	63125
				d	Other	63126
	G	Bacteria				63130
			1		Staph and MRSA	63140
			2		Respiratory bacteria	63150
				a	Bordatella pertussis	63152
				b	Legionella	63154
				c	Mycoplasma	63156
				d	Chlamydia pneumoniae	63158
				e	Mycobacteria	63160
			3		GI Bacteria	63170
				a	Helicobacter pylori	63172
				b	E. Coli	63174
				c	Campylobacter	63176
				d	Tropheryma whippelii	63178
				e	C. difficile	63180
				f	other	63182
			4		STDs	63190
				a	Chlamydia trachomatis	63192
				b	Neisseria gonorrhoeae	63194
				c	other	63196
			5		CNS bacteria	63200
				a	N. meningitidis	63202
				b	other	63204
			6		Microbiome, metagenomics	63206
	H	Fungi/yeast				63210
			1		Candida	63212
			2		Aspergillus	63214
			3		Other	63216
	I	Parasites				63220
			1		Malaria	63222
			2		Toxoplasmosis	63224
			3		other	63226
	J	Prion disorders				63230
	14	Identity Testing				63400
		A	STRs, VNTRs			63410
		B	Applications			63420
			1		Chimerism	63430
			2		Paternity/Relationship testing	63440
			3		Forensic applications	63450
			4		Maternal cell contamination studies	63460
			5		Sample Contamination	63470
	15	Histocompatibility				63600

16 Informatics							63800	
	A	Databases					63810	
	B	LIS					63820	
	C	Statistics					63830	
	D	Genomics					63840	
	E	Clinical decision support						63850
	F	Genomics					63860	