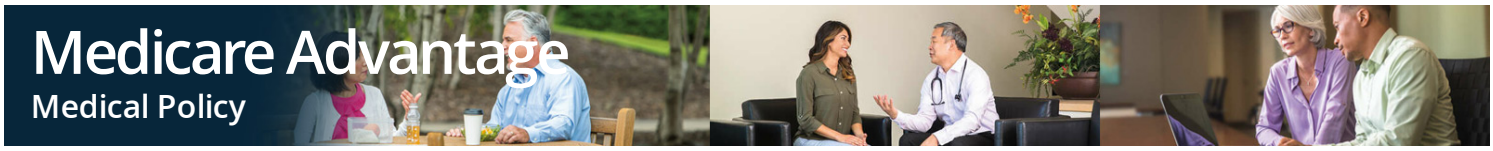
Independence



Policy Attachment

Attachment to Policy #

MA06.017u
Attachment:

C
Policy #:

MA06.017u
Description:

Services that are Considered Experimental/Investigational
Title:

Molecular Diagnostics

Inclusion of a code in this table does not imply reimbursement. Eligibility, benefits, limitations, exclusions, precertification/referral requirements, provider contracts, and Company policies apply.

The codes listed below are updated on a regular basis, in accordance with nationally accepted coding guidelines. Therefore, this policy applies to any and all future applicable coding changes, revisions, or updates.

In order to ensure optimal reimbursement, all health care services, devices, and pharmaceuticals should be reported using the billing codes and modifiers that most accurately represent the services rendered, unless otherwise directed by the Company.

The Coding Table lists any CPT, ICD-10, and HCPCS billing codes related only to the specific policy in which they appear.

Please refer to the NewsFLASH:
GeneSight Psychotropic panel (by Assurex Health, Mason, OH)

TABLE 1: MOLECULAR DIAGNOSTIC TESTS THAT ARE REPRESENTED BY SPECIFIC PROCEDURE CODES

The following procedure codes and services are considered experimental/investigational and, therefore, not covered.

Code	Narrative (and names of associated services, where applicable)

81227	CYP2C9 (cytochrome P450, family 2, subfamily C, polypeptide 9) (eg, drug metabolism), gene analysis, common variants (eg, *2, *3, *5, *6) See Attachment E of this policy (# MA06.017) for information on when CPT code 81227 may be covered via Coverage with Evidence Development (CED), registry-based approach, or other properly-designed methods of investigation when these investigations are approved by the Medicare Administrative Contractor (MAC). Additionally, see policy # MA06.008 Pharmacogenomic Testing to Determine Drug Sensitivity for information on CPT code 81227 and genotyping for the purpose of managing the administration and dosage of warfarin.
81228	Cytogenomic constitutional (genome-wide) microarray analysis; interrogation of genomic regions for copy number variants (eg, Bacterial Artificial Chromosome [BAC] or oligo-based comparative genomic hybridization [CGH] microarray analysis) The following cytogenomic constitutional microarray analysis services may be represented with this procedure code (not an all-inclusive list): 1. Cytogenomic SNP Microarray 2. Cytogenomic SNP Microarray Buccal Swab 3. Genomic Alerations, Prenatal, Clarisure Oligo-SNP Array 4. Genomic Alterations, Postnatal, ClariSure(R) Oligo-SNP (Follow-up) 5. Signature PrenatalChipÂ®OS + SNP - Cultured Amnio/CVS 6. Signature PrenatalChipÂ®OS + SNP - Direct Amnio/CVS 7. Signature PrenatalChipÂ®TE + SNP - Culture Amnio/CVS 8. Signature PrenatalChipÂ®TE + SNP - Direct Products of Conception or Tissue 9. Signature PrenatalChipÂ®TE +SNP - Prenatal blood 10. Signature PrenatalChipÂ®TES + SNP - DNA 11. SignatureChipOSÂ® + SNP - DNA 12. SignatureChipOSÂ® + SNP - Peripheral Blood 13. NP Array CGH
81229	Cytogenomic constitutional (genome-wide) microarray analysis; interrogation of genomic regions for copy number and single nucleotide polymorphism (SNP) variants for chromosomal abnormalities The following cytogenomic constitutional microarray analysis services may be represented with this procedure code (not an all-inclusive list): 1. Cytogenomic SNP Microarray 2. Cytogenomic SNP Microarray Buccal Swab 3. Genomic Alerations, Prenatal, Clarisure Oligo-SNP Array 4. Genomic Alterations, Postnatal, ClariSure(R) Oligo-SNP (Follow-up) 5. Signature PrenatalChipÂ®OS + SNP - Cultured Amnio/CVS 6. Signature PrenatalChipÂ®OS + SNP - Direct Amnio/CVS 7. Signature PrenatalChipÂ®TE + SNP - Culture Amnio/CVS 8. Signature PrenatalChipÂ®TE + SNP - Direct Products of Conception or Tissue 9. Signature PrenatalChipÂ®TE +SNP - Prenatal blood 10. Signature PrenatalChipÂ®TES + SNP - DNA 11. SignatureChipOSÂ® + SNP - DNA 12. SignatureChipOSÂ® + SNP - Peripheral Blood 13. NP Array CGH
81350	UGT1A1 (UDP glucuronosyltransferase 1 family, polypeptide A1) (eg, drug metabolism, hereditary unconjugated hyperbilirubinemia [Gilbert syndrome]) gene analysis, common variants (eg, *28, *36, *37)

81355	VKORC1 (VITAMIN K EPOXIDE REDUCTASE COMPLEX, SUBUNIT 1) (EG, WARFARIN METABOLISM), GENE ANALYSIS, COMMON VARIANTS (EG, -1639G<A, C.173=1000C>T) See Attachment E of this policy (# MA06.017) for information on when CPT code 81355 may be covered via Coverage with Evidence Development (CED), registry-based approach, or other properly designed methods of investigation when these investigations are approved by the Medicare Administrative Contractor (MAC). Additionally, see policy # MA06.008 Pharmacogenomic Testing to Determine Drug Sensitivity for information on CPT code 81335 and genotyping for the purpose of managing the administration and dosage of warfarin
81506	Endocrinology (type 2 diabetes), biochemical assays of seven analytes (glucose, HbA1c, insulin, hs-CRP, adoponectin, ferritin, interleukin 2-receptor alpha), utilizing serum or plasma, algorithm reporting a risk score
G9143	Warfarin responsiveness testing by genetic technique using any method, any number of specimen(s) See policy # MA06.008 Pharmacogenomic Testing to Determine Drug Sensitivity for information on HCPCS code G9143 and genotyping for the purpose of managing the administration and dosage of warfarin
S3721	Prostate Cancer Antigen 3 (PCA3) Testing
S3800	Genetic testing for amyotrophic lateral sclerosis (ALS)
S3852	DNA analysis for APOE epsilon 4 allele for susceptibility to Alzheimer's disease
S3861	Genetic testing, sodium channel, voltage-gated, type V, alpha subunit (SCN5A) and variants for suspected Brugada Syndrome
S3870	Comparative genomic hybridization (cgh) microarray testing for developmental delay, autism spectrum disorder and/or intellectual disability • The following cytogenomic constitutional microarray analysis services may be represented with this procedure code (not an all-inclusive list): 1. Cytogenomic SNP Microarray 2. Cytogenomic SNP Microarray Buccal Swab 3. Genomic Alerations, Prenatal, Clarisure Oligo-SNP Array 4. Genomic Alterations, Postnatal, ClariSure(R) Oligo-SNP (Follow-up) 5. Signature PrenatalChipÂ®OS + SNP - Cultured Amnio/CVS 6. Signature PrenatalChipÂ®OS + SNP - Direct Amnio/CVS 7. Signature PrenatalChipÂ®TE + SNP - Culture Amnio/CVS 8. Signature PrenatalChipÂ®TE + SNP - Direct Products of Conception or Tissue 9. Signature PrenatalChipÂ®TE +SNP - Prenatal blood 10. Signature PrenatalChipÂ®TES + SNP - DNA 11. SignatureChipOSÂ® + SNP - DNA 12. SignatureChipOSÂ® + SNP - Peripheral Blood 13. NP Array CGH
0004M	Scoliosis, DNA analysis of 53 single nucleotide polymorphisms (SNPs), using saliva, prognostic algorithm reported as a risk score
0006M	Oncology (hepatic), mRNA expression levels of 161 genes, utilizing fresh hepatocellular carcinoma tumor tissue, with alpha-fetoprotein level, algorithm reported as a risk classifier
0007M	Oncology (gastrointestinal neuroendocrine tumors), real-time PCR expression analysis of 51 genes, utilizing whole peripheral blood, algorithm reported as a nomogram of tumor disease index

0010M	Oncology (High-Grade Prostate Cancer), biochemical assay of four proteins (Total PSA, Free PSA, Intact PSA and human kallikrein 2 [hK2]) plus patient age, digital rectal examination status, and no history of positive prostate biopsy, utilizing plasma, prognostic algorithm reported as a probability score

TABLE 2: MOLECULAR DIAGNOSTIC TESTS REPRESENTED BY PROCEDURE CODES THAT CAN BE REPORTED FOR OTHER SERVICES

The following services that are considered experimental/investigational and, therefore, not covered. These services are represented by procedure codes that can be reported for other services.

Name(s) or Type(s) of Test(s)	Procedure Codes and Narratives
OncoCee	88346, 88313, 88361
ERG molecular marker for prostate cancer	88368
PTEN molecular marker for prostate cancer	88342

TABLE 3: MOLECULAR DIAGNOSTIC TESTS WITHOUT SPECIFIC PROCEDURE CODES

The following services are considered experimental/investigational and, therefore, not covered. These services lack a specific CPT or HCPCS code. Because unlisted procedure codes can be reported with many services, the intent of this section is to provide direction only for the specific genetic testing services listed below.

Name(s) or Type(s) of Test(s)	Unlisted Procedure Codes
Whole Exome Sequencing	81479 84999 89240
Genome-Wide (or Whole-Genome) Scanning/Sequencing	81479 84999 89240
Mitochondrial DNA (mtDNA) Whole-Genome Scanning/Sequencing	81479
MitoMet® Mitochondrial/Metabolic Microarray Analysis	81599 81479 84999 89240
NuclearMitoDx™ (formerly MitoNucleomeDx)	81599 81479 84999 89240
Comprehensive Mitochondial Nuclear Gene Panel	81479
Mitochondrial Disorders Panel	81599 81479 84999 89240

BreastNext™ Next-Gen Cancer Panel	81599 81479 84999 89240
OvaNext™ Next-Gen Cancer Panel	81599 81479 84999 89240
ColoNext™	81599 81479 84999 89240
CancerNext™ Next-Gen Cancer Panel	81599 81479 84999 89240
Counsyl Universal Genetic Test	81599 81479 84999 89240
Macula Risk NXG test	81479 81599
Septin 9 (SEPT9), Methylated DNA Detection by Real-Time PCR	81479 81599 84999 89240
COLOVANTAGE™	81479 81599 84999 89240
HOXD3 for prostate cancer	81479 81599 84999 89240
PreDx® Diabetes Risk Score (DRS) by Tethys Bioscience	84999
Pervenio Lung RS (an assay formerly known as Pinpoint Dx Lung)	84999
PAX6 Gene Sequencing and Deletion/Duplication	81479
L1CAM Gene Sequencing and Deletion/Duplication	81479
HAX1 Gene Sequencing	81479
ELA2 GENE ANALYSIS	81479
4q25-AF Risk Genotype Test	81479 81599 84999 89240

Specimen Validity Testing	81479 81599 84999 89240
TERC Gene Tests, IPF Telomerase (TERT, TERC), TERC Gene Sequencing, Reflex Option to TERC	81479
RPS19 Gene Tests, Diamond-Black FAN DNA ZBS62 81479, DBA Reflex Option All Genes	81479 (Note: Use to report testing for other than full gene sequencing or known familial variant)
Combinations of NSD1 analysis	81479
PTCH1 Gene Sequencing and Dup/Del	81479
PTCH1 Dup/Del	81479
CHD7 testing (other than full gene sequencing)	81479
Stat3 Gene Sequencing	81479
PIK3CA Gene Tests, PIK3CA Mutation Detection, Precision PIK3CA	81479
Colorectal Cancer Mutation Panel (KRAS, PIK3CA, BRAF, NRAS), PIK3CA Mutation Status by RT-PCR, PIK3CA MUTATION ANALYSIS, PIK3CA Mutation Analysis (Bi-Directional Sequencing) OnkoMatch Tumor Genotyping	81479
VEGFR2 mRNA expression analysis	81479
CYP2B6 Test	81479
know error® DNA Specimen Provenance Assay	84999
myPAP™ DNA	84999
SULT4A1 Genetic Testing, single gene testing, panels of tests that include the SULT4A1	81479
ACVRL1	81479
Tests that include ENG and ACVRL1 gene testing	81479
LPA-Intron 25 genotype test	81479
LPA-Aspirin genotype test	81479
KIF6 genotype test	81479
BluePrint®	84999
9p21 Genotype Test	81479
Genetic Testing for Arrhythmogenic Right Ventricular Dysplasia/Cardiomyopathy (ARVD/C)	81479
SF3B1, ex 14-17	81479
MicroRNA testing	89240

miRview kidney assay miRview lung assay	89240
In Vitro Chemosensitivity and Chemoresistance Assays	89240 See the current version of the policy entitled In Vitro Chemosensitivity and Chemoresistance Assays, MA06.02.

TABLE 4: TIER 02 CPT CODES

Tier 02 CPT codes, (81400 - 81408), for genetic testing services are nonspecific in nature. Individual tests, which do not have a Tier 01 CPT genetic testing code may be represented with Tier 02 genetic testing CPT codes. In this table 4, there is a list of specific genetic tests, (not an all-inclusive list), for each of the Tier 02 CPT genetic testing codes, which are considered experimental/investigational and, therefore, not covered.

Tier 02 CPT Code	Narrative • Specific Tests
81400	Molecular pathology procedure, Level 1(eg, identification of single germline variant [eg, SNP] by techniques such as restriction enzyme digestion or melt curve analysis) • LCT (lactase-phlorizin hydrolase) (eg, lactose intolerance) 13910 C>T variant • N48K variant DPYD (dihydropyrimidine dehydrogenase) (eg, 5-fluorouracil/5-FU and capecitabine drug metabolism) • ABCC8, F1388del • ACADM, K304E • AGTR1, 1166A>C • BCKDHA, cv • CCR5, del • CLRN1, N48K • DPYD, IVS14+1G>A • DYT1(TOR1A), IVS14+1G>A • FGFR1, P252R • FGFR3, P250R • FKTN, retrotransposon insertion variant • GNE, M712T • IL28B, rs12979860 • IVD, A282V • NEB, exon 55 • PCDH15, R245X • SHOC2, S2G • SLCO1B1, V174A • SMN1, exon 7 del • SRY
81401	Molecular pathology procedure, Level 2 (eg, 2-10 SNPs, 1 methylated variant, or 1 somatic variant [typically using nonsequencing target variant analysis], or detection of a dynamic mutation disorder/triplet repeat) • ABCC8, cv • ACADM, cv • ADRB2, cv • AFF2, • APOB, cv • APOE, cv • AR, alleles • ATN1 • ATXN1 • ATXN2 • ATXN3

	• ATXN7 • ATXN8OS • ATXN10 • CACNA1A • CNBP • CBFB_MYH11, quan qual • CBS, cv • CFH_ARMS2, cv • CSTB • CYP3A4, cv • CYP3A5, cv • DMPK • ETV6/NTRK3 • EWSR1/ATF1 • FGFR3, cv • FLG, cv • FUS/DDIT3 • FXN, alleles • GALC • GALT, cv • H19, ma • HBB, cv • HTT, alleles • KCNQ10T1 , ma • LRRK2, cv • MED12, cv • MEG3_DLK1, ma • MLL_AFF1, ta qual quan • MLL_MLLT3, ta, qual quan • MT–ATP6, cv • MT–ND4, MT–ND6, cv • MT–ND5, cv • MT–RNR1, cv • MT–TK, cv • MT–TL1, cv • MT–TS1, cv • NOD2 • PABPN1 • PPP2R2B • PRSS1, cv • PYGM, cv • SEPT9, ma • SMN1_SMN2, dosage • SS18/SSX1 • SS18/SSX2 • TBP

81402	Molecular pathology procedure, Level 3 (eg, >10 SNPs, 2-10 methylated variants, or 2-10 somatic variants [typically using non-sequencing target variant analysis], immunoglobulin and T-cell receptor gene rearrangements, duplication/deletion variants of 1 exon, loss of heterozygosity [LOH], uniparental disomy [UPD]) • C18q • COL1A1/PDGFB, mbp qual quan • CYP21A2 , cv • ESR1_PGR, ratio • MEFV, cv • MPL, cv • TRD, gr • UPD, str
81403	Molecular pathology procedure, Level 4 (eg, analysis of single exon by DNA sequence analysis, analysis of >10 amplicons using multiplex PCR in 2 or more independent reactions, mutation scanning or duplication/deletion variants of 2-5 exons) • ANG, fgs • ARX • CEL, exon 11 • CTNNB1 • DAZ_SRY, cdel • DNMT3A, tsa • EPCAM • ENG, Known Familial Variants (Unlisted) • F12, ts • FGFR3, exon 7 • GJB1, fgs • GNAQ, cv • HBB, dup_del • HRAS, exon 2 • KCNC3, tsa • KCNJ11, fgs • KCNJ2, fgs • Killer cell immunoglobulin–like receptor • KRAS, exon 3 • MC4R, fgs • MICA, cv • MPL , exon 10 • MT–RNR1, fgs • MT–TS1 , fgs • NDP, d_d • NHLRC1, fgs • PHOX2B, dup_del • PLN, fgs • RPS19, if known familial variant • SH2D1A, dup_del • SMN1, kfv • TWIST1, dup_del • UBA1, tsa
81404	Molecular pathology procedure, Level 5 (eg, analysis of 2-5 exons by DNA sequence analysis, mutation scanning or duplication/deletion variants of 6-10 exons, or characterization of a dynamic mutation disorder/triplet repeat by Southern blot analysis) • ACADS, tsa • AFF2

- AVPR2, fgs
- AQP2, fgs
- ARX, fgs
- BBS10, fgs
- BTD, fgs
- C10orf2, fgs
- CAV3, fgs
- CD40LG, fgs
- CLRN1, fgs
- COX6B1, fgs
- CPT2, fgs
- CRX, fgs
- CSTB, fgs
- CYP1B1 , fgs
- DMPK
- EGR2, fgs
- EMD, Dup_del
- EPM2A, fgs
- FGF23, fgs
- FGFR2, exons 8,10
- FGFR3, tsa
- FHL1, fgs
- FKRP, fgs
- FOXG1 , fgs
- FSHMD1A
- FXN, fgs
- GH1, fgs
- GP1BB, fgs
- HBA1_HBA2, dup_del
- HBB, fgs
- HNF1B, dup_del
- HRAS, fgs
- HSD3B2, fgs
- HSD11B2, fgs
- HSPB1, fgs
- INS, fgs
- KCNJ1, fgs
- KCNJ10, fgs
- LITAF, fgs
- MEFV, fgs
- MEN1, dup_del
- MMACHC, fgs
- NDP, fgs
- NDUFA1, fgs
- NDUFAF2, fgs
- NDUFS4, fgs
- NIPA1, fgs
- NLGN4X, dup_del
- NPC2, fgs
- NR0B1, fgs
- PDX1, fgs
- PHOX2B, fgs
- PLP1, Dup_del
- PQBP1, Dup_del

	• PRNP, fgs • PROP1, fgs • PRPH2, fgs • RAF1, exons 7, 12,14,17 • RET, cv • RHO, fgs • SCN1B, fgs • SCO2, fgs • SDHC, dup_del • SDHD, fgs • SGCG, dup_del • SH2D1A, fgs • SLC16A2, dup_del • SLC25A20, dup_del • SLC25A4, fgs • SOD1, fgs • SPINK1, fgs • STK11, dup_del • TACO1, fgs • THAP1, fgs • TOR1A, fgs • TP53, 2–5 exons • TTPA , fgs • TTR, fgs • TWIST1, fgs • TYR, fgs • USH1G, fgs • VWF, tsa (1C, exons 36, 27, 37) • ZEB2, dup_del • ZNF41, fgs • ACTA2, fgs • ANKRD1, fgs • ACTA2, fgs • ANKRD1, fgs
81405	Molecular pathology procedure, Level 6 (eg, analysis of 6-10 exons by DNA sequence analysis, mutation scanning or duplication/deletion variants of 11-25 exons) • ABCD1, fgs • ACADS, fgs • ACTC1, fgs • Mopath procedure level 6 • ABCD1, fgs • ACADS, fgs • ACTC1, fgs • APTX, fgs • AR, fgs • ARSA, fgs • BCKDHA, fgs • BCS1L, fgs • BMPR2 , dup_del • CASQ2, fgs • CASR, fgs • CDKL5, dup_del • CHRNA4 , fgs • CHRNB2, fgs

- COX10, fgs
- COX15, fgs
- CYP11B1, fgs
- CYP17A1, fgs
- CYP21A2, fgs
- Cytogenomic constitutional targeted microarray analysis of chromosome 22q13
- Cytogenomic constitutional targeted microarray analysis of the X chromosome
- DBT, dup_del
- DCX, fgs
- DES, fgs
- DFNB59, fgs
- DGUOK, fgs
- DHCR7, fgs
- EIF2B2, fgs
- EMD, fgs
- ENG, dup_del
- EYA1, dup_del
- F9, fgs
- FH, fgs
- FGFR1 , fgs
- FKTN, fgs
- FTSJ1, dup_del
- GABRG2, fgs
- GCH1 , fgs
- GDAP1, fgs
- GFAP, fgs
- GHR, fgs
- GHRHR, fgs
- GLA, fgs
- HBA1_HBA2, fgs
- HNF1A, fgs
- HNF1B, fgs
- HTRA1, fgs
- IDS, fgs
- IL2RG , fgs
- ISPD, fgs
- KRAS, fgs
- LAMP2, fgs
- LDLR, dup_del
- Mitochondrial genome deletions, dup_del
- MMAA, fgs
- MMAB. Fgs
- MPI, fgs
- MPV17, fgs
- MPZ, fgs
- MTM1, dup_del
- MYL2, fgs
- MYL3, fgs
- MYOT, fgs
- NDUFS7, fgs
- NDUFS8, fgs
- NDUFV1, fgs
- NEFL, fgs
- NF2, dup_del

- NLGN3, fgs
- NLGN4X, fgs
- NPHP1, dup_del
- NPHS2, fgs
- NSD1, dup_del
- OTC, fgs
- PAFAH1B1, dup_del
- PARK2, dup_del
- PCCA, dup_del
- PCDH19, fgs
- PDHA1, dup_del
- PDHB, fgs
- PINK1, fgs
- PLP1, fgs
- POU1F1, fgs
- PQBP1, fgs
- PRX, fgs
- PSEN1, fgs
- RAB7A, fgs
- RAI1, fgs
- REEP1, fgs
- RET, tsa
- RPS19, fgs
- RRM2B, fgs
- SCO1, fgs
- SDHB, fgs
- SDHC, fgs
- SGCA, fgs
- SGCB, fgs
- SGCD, fgs
- SGCE, dup_del
- SGCG, fgs
- SHOC2, fgs
- SHOX, fgs
- SIL1, fgs
- SLC16A2, fgs
- SLC22A5, fgs
- SLC25A20, fgs
- SLC2A1, fgs
- SMAD4, dup_del
- SMN1, fgs
- SPAST, dup_del
- SPG7, dup_del
- SPRED1, fgs
- STAT3, tsa
- STK11, fgs
- SURF1, fgs
- TARDBP, fgs
- TBX5, fgs
- TCF4, dup_del
- TGFBR1, fgs
- TGFBR2, fgs
- THRB, fgs >5 exons
- TK2, fgs

	• TNNI3, fgs • TNNC1, fgs • TP53, fgs or tsa >5 exons • TPM1, fgs • TSC1, dup_del • TYMP, fgs • WT1, fgs • ZEB2, fgs • AFG3L2, fgs • AIRE, fgs • ALDH7A1, fgs
81406	Molecular pathology procedure, Level 7 (eg, analysis of 11-25 exons by DNA sequence analysis, mutation scanning or duplication/deletion variants of 26-50 exons, cytogenomic array analysis for neoplasia) • full gene sequence PALB2 (partner and localizer of BRCA2) (eg, breast and pancreatic cancer) • ACADVL, fgs • ACTN4, fgs • ANO5, fgs • APP, fgs • ASS1, fgs • ATL1, fgs • ATP1A2, fgs • ATP7B, fgs • BBS1, fgs • BBS2, fgs • BCKDHB, fgs • BEST1, fgs • BMPR2, fgs • BRAF, fgs • BSCL2, fgs • BTK, fgs • CACNB2, fgs • CBS, fgs • CDH1, fgs • CDKL5, fgs • CLCN1, fgs • CLCNKB, fgs • CNTNAP2, fgs • COL6A2, dup_del • CPT1A, fgs • CRB1, fgs • CREBBP, dup_del • Cytogenomic microarray analysis • DBT, fgs • DLAT, fgs • DLD, fgs • DSC2, fgs • DSG2, fgs • DSP, fgs • EFHC1, fgs • EIF2B3, fgs • EIF2B4, fgs • EIF2B5, fgs

- ENG, fgs
- EYA1, fgs
- F8, dup_del
- FAH, fgs
- FASTKD2, fgs
- FIG4, fgs
- FTSJ1, fgs
- FUS, fgs
- GAA, fgs
- GALC, fgs
- GALT, fgs
- GARS, fgs
- GCDH, fgs
- GCK, fgs
- GLUD1, fgs
- GNE, fgs
- GRN, fgs
- HADHA, fgs
- HADHB,fgs
- HEXA, fgs
- HLCS, fgs
- HNF4A, fgs
- IDUA, fgs
- INF2, fgs
- IVD, fgs
- JAG1, dup_del
- JUP, fgs
- KAL1, fgs
- KCNH2, fgs
- KCNQ1, fgs
- KCNQ2, fgs
- LDB3, fgs
- LDLR, fgs
- LEPR, fgs
- LHCGR, fgs
- LMNA, fgs
- LRP5, fgs
- MAP2K1, fgs
- MAP2K2, fgs
- MAPT, fgs
- MCCC1, fgs
- MCCC2, fgs
- MFN2, fgs
- MTM1, fgs
- MUT, fgs
- MUTYH, fgs
- NDUFS1, fgs
- NF2, fgs
- NOTCH3, tsa
- NPC1, fgs
- NPHP1, fgs
- NSD1, fgs
- OPA1, dup_del
- OPTN, fgs

	• PAFAH1B1, fgs • PAH, fgs • PARK2, fgs • PAX2, fgs • PC, fgs • PCCA, fgs • PCCB, fgs • PDHA1, fgs • PCDH15, dup_del • PDHX, fgs • PHEX, fgs • PKD2, fgs • PKP2, fgs • PNKD, fgs • POLG, fgs • POMGNT1, fgs • POMT1, fgs • POMT2, fgs • PRKAG2, fgs • PRKCG, fgs • PSEN2, fgs • PTPN11, fgs • PYGM, fgs • RAF1, fgs • RPE65, fgs • RYR1, tsa • SCNN1A, fgs • SCNN1B, fgs • SCNN1G, fgs • SDHA, fgs • SETX, fgs • SGCE, fgs • SH3TC2, fgs • SLC26A4, fgs • SLC37A4, fgs • SMAD4, fgs • SPAST, fgs • SPG7, fgs • STXBP1, fgs • SOS1, fgs • TAZ, fgs • TCF4, fgs • TH , fgs • TMEM43, fgs • TNNT2, fgs • TRPC6, fgs • TSC1, fgs • TSC2, dup_del • UBE3A, fgs • UMOD, fgs • VWF, etsa • WAS, fgs

81407	Molecular pathology procedure, Level 8 (eg, analysis of 26-50 exons by DNA sequence analysis, mutation scanning or duplication/deletion variants of >50 exons, sequence analysis of multiple genes on one platform) • ABCC8, fgs • AGL, fgs • AHI1, fgs • ASPM , fgs • CACNA1A, fgs • CHD7, fgs • COL4A4, fgs • COL4A5, dup_del • COL6A1, fgs • COL6A2, fgs • COL6A3, fgs • CREBBP, fgs • F8, fgs • JAG1, fgs • KDM5C, fgs • KIAA0196, fgs • L1CAM, fgs • LAMB2 , fgs • MYBPC3, fgs • MYH6, fgs • MYH7, fgs • MYO7A , fgs • NOTCH1, fgs • NPHS1, fgs • OPA1, fgs • PCDH15, fgs • PKD1, fgs • PLCE1, fgs • SCN1A, fgs • SLC12A1, fgs • SLC12A3, fgs • SPG11, fgs • SPTBN2, fgs • TMEM67, fgs • SCN5A, fgs • TSC2, fgs • USH1C, fgs • VPS13B, dup_del • WDR62 , fgs

81408	Molecular pathology procedure, Level 9 (eg, analysis of >50 exons in a single gene by DNA sequence analysis) • ABCA4, fgs • ATM , fgs • CDH23 , fgs • CEP290, fgs • COL1A1, fgs • COL1A2 , fgs • COL4A1 , fgs • COL4A3 , fgs • COL4A5, fgs • DMD, fgs • DYSF, fgs • FBN1, fgs • ITPR1, fgs • LAMA2, fgs • NEB, fgs • NF1, fgs • LRRK2, fgs • MYH11, fgs • PKHD1 , fgs • RYR1, fgs • RYR2, fgs or tsa > 50 • USH2A, fgs • VPS13B, fgs • VWF, fgs

Miscellaneous
Code
0002U
0003U
0008U
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0021U
0026U
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