

Summary of Core/Supplemental – Highly Recommended Recommendations: Mitochondrial Disease CDEs

Start-up Resource – NINDS Mitochondrial Disease CDE Recommendations

The National Institute of Neurological Disorders and Stroke (NINDS) and other Federal agencies and international organizations have the common mission of developing data standards for clinical research. Through the efforts of subject-specific working groups, topic-driven data elements have been created. The first set of Common Data Elements (CDEs) for Mitochondrial Disease was developed in 2015. A Mitochondrial Disease v2.0 CDE Working Group was convened in 2022 to perform a comprehensive review of the Mitochondrial Disease CDEs. The Mitochondrial Disease v2.0 CDEs were posted in March 2024. The Core data elements to be used by an investigator when beginning a research study in this disease/disorder are listed in this resource document. All other recommendations are listed on the website and should be considered based on study type.

Each CDE or instrument could be classified according to the definitions below:

General Core: A data element that is required for all NINDS funded studies.

Disease Core: A data element that collects essential information applicable to any disease-specific study, including all therapeutic areas. The NINDS and its appointed working groups assign the disease “Core” classification based on the current clinical research best practices. In each case, the disease Core CDEs are a small subset of the available CDEs, where it is anticipated that investigators will need to collect the disease Core CDEs on any type of study. These are required for all disease-specific studies.

Disease Supplemental – Highly Recommended: A data element which is essential based on certain conditions or study types in clinical research studies. In most cases, these have been used and validated in the disease area. These data elements are strongly recommended for the specified disease condition, study type or design.

Disease Supplemental: A data element which is commonly collected in clinical research studies. Use depends upon the study design, protocol or type of research involved. These are recommended, but not required, for studies.

Disease Exploratory: A data element that requires further validation but may fill current gaps in the CDEs and/or substitute for an existing CDE once validation is complete. Such data elements show great promise but require further validation before they are ready for prime-time use in clinical research studies. They are reasonable to use with the understanding that it has limited validation in the target group.

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<p>National Institute of Health (NIH) Resources: <i>The NINDS also strongly encourages researchers to use these NIH developed materials for NINDS-sponsored research, when appropriate. Utilization of these resources will enable greater consistency for NINDS-sponsored research studies. These tools are free of charge.</i></p>	<ul style="list-style-type: none"> • NIH Toolbox <ul style="list-style-type: none"> • Quality of Life in Neurological Disorders (Neuro-QOL) • Patient-Reported Outcomes Measurement Information System (PROMIS)
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Core CDEs for all NINDS Studies¹:

Domain; Sub-Domain	CDE Name	CDE ID	Study Type
Participant Characteristics; Demographics	Birth date	C00007	All studies
Participant Characteristics; Demographics	Ethnicity USA category	C00020	All studies
Participant Characteristics; Demographics	Race USA category	C00030	All studies
Participant Characteristics; Demographics	Birth sex assigned type	C58676	All studies
Participant Characteristics; Demographics	Gender identity type	C58677	All studies
Participant Characteristics; Demographics	Medical history condition text	C00322	All studies
Participant Characteristics; Demographics	Medical history condition SNOMED CT code	C00313	All studies

¹ Note: Education year count C00015 is no longer a general Core CDE

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Core Elements for Mito:

Domain; Subdomain	CDE Name	CDE ID
Participant History and Family History; General Health History	Medical history taken date and time	C00314
Participant History and Family History; General Health History	Family history collection source	C17681
Participant History and Family History; General Health History	Medical history global assessment indicator	C00315
Participant History and Family History; General Health History	Adopted indicator	C10813
Participant History and Family History; General Health History	Familial inheritance status	C19903
Assessments and Examinations; Audiology	Otoscopy anatomic site	C59777
Assessments and Examinations; Audiology	Otoscopy result status	C59778
Assessments and Examinations; Audiology	Otoscopy cannot assess text	C59779
Assessments and Examinations; Audiology	Otoscopy pre-auricular region abnormal type	C59780
Assessments and Examinations; Audiology	Otoscopy pre-auricular region abnormal type other text	C59781
Assessments and Examinations; Audiology	Otoscopy pinna abnormal type	C59782
Assessments and Examinations; Audiology	Otoscopy pinna abnormal type other text	C59783
Assessments and Examinations; Audiology	Otoscopy external auditory canal abnormal type	C59784
Assessments and Examinations; Audiology	Otoscopy external auditory canal abnormal type other text	C59785
Assessments and Examinations; Audiology	Otoscopy tympanic membrane abnormal type	C59786
Assessments and Examinations; Audiology	Otoscopy tympanic membrane abnormal type other text	C59787
Assessments and Examinations; Audiology	Tympanometry assessment status	C59788
Assessments and Examinations; Audiology	Audiometry test not perform text	C59789
Assessments and Examinations; Audiology	Audiometry test laterality type	C59790
Assessments and Examinations; Audiology	Tympanometry stimulus tone frequency type	C59791
Assessments and Examinations; Audiology	Tympanometry ear canal volume measurement	C59792
Assessments and Examinations; Audiology	Tympanometry compensated amplitude measurement	C59793
Assessments and Examinations; Audiology	Tympanometry peak pressure measurement	C59794
Assessments and Examinations; Audiology	Audiometry threshold pure tone assessment status	C59802
Assessments and Examinations; Audiology	Audiometry threshold pure tone alternative stimulus text	C59803
Assessments and Examinations; Audiology	Audiometry test location	C59804

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Audiology	Audiometry transducer type	C59805
Assessments and Examinations; Audiology	Audiometry threshold pure tone air conduction stimulus frequency type	C59806
Assessments and Examinations; Audiology	Audiometry threshold pure tone hearing level measurement	C59807
Assessments and Examinations; Audiology	Audiometry masking status	C59808
Assessments and Examinations; Audiology	Audiometry threshold pure tone bone conduction stimulus frequency type	C59809
Assessments and Examinations; Audiology	Audiometry speech assessment status	C59810
Assessments and Examinations; Audiology	Audiometry speech test name	C59811
Assessments and Examinations; Audiology	Audiometry speech test item count	C59812
Assessments and Examinations; Audiology	Audiometry speech recognition threshold measurement	C59813
Assessments and Examinations; Audiology	Audiometry speech awareness threshold measurement	C59814
Assessments and Examinations; Audiology	Audiometry word recognition score	C59815
Assessments and Examinations; Audiology	Audiometry speech test score	C59816
Assessments and Examinations; Audiology	Audiometry speech hearing level measurement	C59817
Assessments and Examinations; Audiology	Otoacoustic emission test perform status	C59818
Assessments and Examinations; Audiology	Otoacoustic emission test type	C59819
Assessments and Examinations; Audiology	Otoacoustic emission present frequency text	C59820
Assessments and Examinations; Audiology	Otoacoustic emission absent frequency text	C59821
Assessments and Examinations; Audiology	Otoacoustic emission artifact frequency text	C59822
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Diagnosis primary clinical mitochondrial disease type	C60250
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Diagnosis primary clinical mitochondrial disease type other text	C60251
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Diagnosis primary clinical mitochondrial disease status	C60252
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Symptom onset age value	C10500
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test tissue other text	C19598

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene name	C12690
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	DNA type	C60265
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	DNA change text	C19614
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test tissue type	C19601
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test methodology text	C60266
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test sequence range	C19609
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mutation clinical category	C19602
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	References text	C19611
Assessments and Examinations; Imaging Diagnostics	Imaging brain magnetic resonance imaging perform multiple status	C12467
Assessments and Examinations; Imaging Diagnostics	Imaging brain computed tomography perform multiple status	C60143
Assessments and Examinations; Imaging Diagnostics	Imaging cerebrum lobe anatomic site	C19689
Assessments and Examinations; Imaging Diagnostics	Imaging brain concurrent magnetic resonance imaging perform indicator	C60191
Assessments and Examinations; Imaging Diagnostics	Imaging brain magnetic resonance imaging perform multiple count type	C12468
Assessments and Examinations; Imaging Diagnostics	Imaging brain computed tomography perform multiple count type	C60144
Assessments and Examinations; Imaging Diagnostics	Imaging spine multiple timepoint magnetic resonance imaging perform status	C60192
Assessments and Examinations; Imaging Diagnostics	Imaging cerebrum component type	C19687
Assessments and Examinations; Imaging Diagnostics	Laterality type	C02411
Assessments and Examinations; Imaging Diagnostics	Imaging spine multiple timepoint magnetic resonance imaging perform count type	C60193

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging brain computed tomography perform greater than six count	C60145
Assessments and Examinations; Imaging Diagnostics	Imaging brain magnetic resonance imaging perform greater than six count	C60059
Assessments and Examinations; Imaging Diagnostics	Imaging magnetic resonance imaging session number	C12469
Assessments and Examinations; Imaging Diagnostics	Imaging computed tomography number	C60146
Assessments and Examinations; Imaging Diagnostics	Imaging spine multiple timepoint magnetic resonance imaging perform greater than six count	C60194
Assessments and Examinations; Imaging Diagnostics	Imaging cerebrum finding type	C19688
Assessments and Examinations; Imaging Diagnostics	Imaging study analysis type	C60195
Assessments and Examinations; Imaging Diagnostics	Imaging white matter anatomic site	C19690
Assessments and Examinations; Imaging Diagnostics	Imaging study date and time	C02494
Assessments and Examinations; Imaging Diagnostics	Imaging magnetic resonance imaging date and time	C22866
Assessments and Examinations; Imaging Diagnostics	Age value	C00008
Assessments and Examinations; Imaging Diagnostics	Imaging interpretation spine segment anatomic site	C60196
Assessments and Examinations; Imaging Diagnostics	Imaging deep grey nuclei finding type	C19997
Assessments and Examinations; Imaging Diagnostics	Imaging scanner strength value type	C02495
Assessments and Examinations; Imaging Diagnostics	Imaging deep grey nuclei anatomic site	C19691
Assessments and Examinations; Imaging Diagnostics	Site name	C17402
Assessments and Examinations; Imaging Diagnostics	Imaging scanner strength value type other text	C18718
Assessments and Examinations; Imaging Diagnostics	Sedation used indicator	C14964
Assessments and Examinations; Imaging Diagnostics	Imaging cerebellum component type	C19703
Assessments and Examinations; Imaging Diagnostics	Imaging scanner manufacturer name	C02496
Assessments and Examinations; Imaging Diagnostics	Imaging cerebellum finding type	C19692
Assessments and Examinations; Imaging Diagnostics	Imaging field of view measurement description text	C12474
Assessments and Examinations; Imaging Diagnostics	Imaging scanner manufacturer name other text	C18716
Assessments and Examinations; Imaging Diagnostics	Imaging scanner model name text	C20247
Assessments and Examinations; Imaging Diagnostics	Imaging brainstem finding type	C19693

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging MRS sequence type	C59012
Assessments and Examinations; Imaging Diagnostics	Imaging white matter tract type	C19999
Assessments and Examinations; Imaging Diagnostics	Imaging scanner software name	C08236
Assessments and Examinations; Imaging Diagnostics	Imaging scanner software version number text	C02498
Assessments and Examinations; Imaging Diagnostics	Head circumference measurement	C01520
Assessments and Examinations; Imaging Diagnostics	Imaging magnetic resonance imaging T1 T2 sequence name	C12475
Assessments and Examinations; Imaging Diagnostics	Imaging white matter tract finding type	C19998
Assessments and Examinations; Imaging Diagnostics	Imaging development malformation miscellaneous anatomic site	C60169
Assessments and Examinations; Imaging Diagnostics	Imaging scanner acquisition mode type	C60147
Assessments and Examinations; Imaging Diagnostics	Imaging slice orientation type	C10685
Assessments and Examinations; Imaging Diagnostics	Imaging acquisition duration	C08242
Assessments and Examinations; Imaging Diagnostics	Imaging slice thickness value	C08244
Assessments and Examinations; Imaging Diagnostics	Imaging scanner pitch value	C60148
Assessments and Examinations; Imaging Diagnostics	Imaging radio frequency coil type	C10567
Assessments and Examinations; Imaging Diagnostics	Imaging development malformation corpus callosum type	C19694
Assessments and Examinations; Imaging Diagnostics	Imaging development malformation cerebellum type	C19695
Assessments and Examinations; Imaging Diagnostics	Imaging scanner parameter kVp value	C60149
Assessments and Examinations; Imaging Diagnostics	Imaging radio frequency coil channel count text	C60060
Assessments and Examinations; Imaging Diagnostics	Imaging gap between slices measurement	C10837
Assessments and Examinations; Imaging Diagnostics	Imaging repetition gap duration	C08238
Assessments and Examinations; Imaging Diagnostics	Imaging scanner parameter mA value	C60150
Assessments and Examinations; Imaging Diagnostics	Imaging development malformation polymicrogyria anatomic site	C19696
Assessments and Examinations; Imaging Diagnostics	Imaging pulse sequence type	C02499
Assessments and Examinations; Imaging Diagnostics	Imaging development malformation heterotopia anatomic site	C19697
Assessments and Examinations; Imaging Diagnostics	Imaging pulse sequence type other text	C18708
Assessments and Examinations; Imaging Diagnostics	Imaging echo duration	C08239

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging axial plane slice orientation text	C60151
Assessments and Examinations; Imaging Diagnostics	Imaging gradient echo sequence type	C60197
Assessments and Examinations; Imaging Diagnostics	Imaging myelination type	C19698
Assessments and Examinations; Imaging Diagnostics	Imaging contrast agent used indicator	C10570
Assessments and Examinations; Imaging Diagnostics	Imaging inversion time duration	C10927
Assessments and Examinations; Imaging Diagnostics	Imaging myelination abnormal distribution text	C19699
Assessments and Examinations; Imaging Diagnostics	Imaging myelination pattern calculated age value	C19700
Assessments and Examinations; Imaging Diagnostics	Imaging contrast agent name	C17798
Assessments and Examinations; Imaging Diagnostics	Imaging diffusion-weighted imaging sequence type	C60062
Assessments and Examinations; Imaging Diagnostics	Imaging diffusion b-value type	C60063
Assessments and Examinations; Imaging Diagnostics	Imaging contrast agent dose	C17925
Assessments and Examinations; Imaging Diagnostics	Imaging contrast agent dose unit of measure	C60061
Assessments and Examinations; Imaging Diagnostics	Imaging diffusion b-value type other text	C60064
Assessments and Examinations; Imaging Diagnostics	Imaging postcontrast magnetic resonance imaging T1WI sequence name	C60198
Assessments and Examinations; Imaging Diagnostics	Imaging visual analysis blinded indicator	C08255
Assessments and Examinations; Imaging Diagnostics	Imaging field of view axis 1 measurement	C08241
Assessments and Examinations; Imaging Diagnostics	Imaging quality technically satisfactory status	C10931
Assessments and Examinations; Imaging Diagnostics	Imaging quality technically satisfactory partial specify text	C60065
Assessments and Examinations; Imaging Diagnostics	Imaging in plane resolution axis 1 measurement	C10576
Assessments and Examinations; Imaging Diagnostics	Imaging lesion found indicator	C10932
Assessments and Examinations; Imaging Diagnostics	Imaging spinal cord lesion anatomic site type	C60357
Assessments and Examinations; Imaging Diagnostics	Imaging lesion found type	C10933
Assessments and Examinations; Imaging Diagnostics	Imaging slice count	C08245
Assessments and Examinations; Imaging Diagnostics	Imaging normal cervical spine indicator	C60199
Assessments and Examinations; Imaging Diagnostics	Imaging lesion hypodensity anatomic site	C60152
Assessments and Examinations; Imaging Diagnostics	Imaging lesion hypodensity anatomic site other text	C60153
Assessments and Examinations; Imaging Diagnostics	Imaging spinal cord expansion indicator	C60200
Assessments and Examinations; Imaging Diagnostics	Imaging white matter hypodensity status	C60154
Assessments and Examinations; Imaging Diagnostics	Imaging spinal cord atrophy indicator	C60201

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging white matter hypodensity anatomic site	C60155
Assessments and Examinations; Imaging Diagnostics	Imaging spinal cord lesion indicator	C60202
Assessments and Examinations; Imaging Diagnostics	Imaging cavitation indicator	C60076
Assessments and Examinations; Imaging Diagnostics	Imaging spinal cord lesion anatomic site	C15458
Assessments and Examinations; Imaging Diagnostics	Imaging cavitation anatomic site	C60077
Assessments and Examinations; Imaging Diagnostics	Imaging spine enhancement indicator	C60203
Assessments and Examinations; Imaging Diagnostics	Imaging cavitation anatomic site other text	C60156
Assessments and Examinations; Imaging Diagnostics	Imaging enhancement spine level text	C60204
Assessments and Examinations; Imaging Diagnostics	Imaging restrict diffusion status	C60205
Assessments and Examinations; Imaging Diagnostics	Imaging acute infarct present status	C13756
Assessments and Examinations; Imaging Diagnostics	Imaging acute infarct count	C13761
Assessments and Examinations; Imaging Diagnostics	Imaging restrict diffusion spine level text	C60206
Assessments and Examinations; Imaging Diagnostics	Imaging nerve root enhancement status	C60207
Assessments and Examinations; Imaging Diagnostics	Imaging brain acute infarct anatomic site	C13766
Assessments and Examinations; Imaging Diagnostics	Imaging nerve root enhancement anatomic site	C60208
Assessments and Examinations; Imaging Diagnostics	Imaging spinal cord lesion primary pattern type	C60209
Assessments and Examinations; Imaging Diagnostics	Imaging chronic infarct present indicator	C13786
Assessments and Examinations; Imaging Diagnostics	Imaging chronic infarct count	C13787
Assessments and Examinations; Imaging Diagnostics	Imaging white matter spinal cord anatomic site	C60210
Assessments and Examinations; Imaging Diagnostics	Imaging grey matter spinal cord anatomic site	C60211
Assessments and Examinations; Imaging Diagnostics	Imaging chronic infarct anatomic site	C13788
Assessments and Examinations; Imaging Diagnostics	Imaging bright spot lesion indicator	C60212
Assessments and Examinations; Imaging Diagnostics	Imaging lesion found other text	C18813
Assessments and Examinations; Imaging Diagnostics	Imaging hemorrhage anatomic site	C60157
Assessments and Examinations; Imaging Diagnostics	Imaging abnormal finding text	C08023
Assessments and Examinations; Imaging Diagnostics	Imaging bright spot lesion spine level text	C60213
Assessments and Examinations; Imaging Diagnostics	Imaging hemorrhage lobe anatomic site specify text	C60158
Assessments and Examinations; Imaging Diagnostics	Imaging hemorrhage anatomic site other text	C60159
Assessments and Examinations; Imaging Diagnostics	Imaging cortical migration anomaly indicator	C60066
Assessments and Examinations; Imaging Diagnostics	Imaging current prior result status	C60214

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging cortical migration anomaly anatomic site	C60067
Assessments and Examinations; Imaging Diagnostics	Imaging cervicomedullary junction lesion indicator	C60215
Assessments and Examinations; Imaging Diagnostics	Imaging cortical malformation indicator	C60160
Assessments and Examinations; Imaging Diagnostics	Imaging commissural fiber normality status	C60068
Assessments and Examinations; Imaging Diagnostics	Imaging normal thoracic spine indicator	C60216
Assessments and Examinations; Imaging Diagnostics	Imaging cortical malformation anatomic site	C60161
Assessments and Examinations; Imaging Diagnostics	Imaging normal lumbosacral spine indicator	C60217
Assessments and Examinations; Imaging Diagnostics	Imaging striatum normality status	C60069
Assessments and Examinations; Imaging Diagnostics	Imaging cortical malformation frontoparietal anatomic site specify text	C60162
Assessments and Examinations; Imaging Diagnostics	Imaging cortical malformation temporal anatomic site specify text	C60163
Assessments and Examinations; Imaging Diagnostics	Imaging brainstem normality status	C12492
Assessments and Examinations; Imaging Diagnostics	Imaging conus medullaris lesion indicator	C60218
Assessments and Examinations; Imaging Diagnostics	Imaging conus medullaris enhancement indicator	C60219
Assessments and Examinations; Imaging Diagnostics	Imaging cerebellum normality status	C12496
Assessments and Examinations; Imaging Diagnostics	Imaging cortical malformation occipital anatomic site specify text	C60164
Assessments and Examinations; Imaging Diagnostics	Imaging T2 white matter status	C12498
Assessments and Examinations; Imaging Diagnostics	Imaging corpus callosum status	C60165
Assessments and Examinations; Imaging Diagnostics	Imaging restrict diffusion conus medullaris status	C60220
Assessments and Examinations; Imaging Diagnostics	Imaging cauda equina root enhancement status	C60221
Assessments and Examinations; Imaging Diagnostics	Imaging T2 weighted white matter abnormality site type	C12499
Assessments and Examinations; Imaging Diagnostics	Imaging subependymal cyst indicator	C60080
Assessments and Examinations; Imaging Diagnostics	Imaging T2 weighted white matter abnormality pattern type	C60070
Assessments and Examinations; Imaging Diagnostics	Imaging cauda equina root enhancement anatomic site	C60222
Assessments and Examinations; Imaging Diagnostics	Imaging corpus callosum change status	C12500
Assessments and Examinations; Imaging Diagnostics	Imaging subependymal cyst anatomic site	C60081
Assessments and Examinations; Imaging Diagnostics	Imaging other incidental finding indicator	C12476

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging ventricle normality status	C12490
Assessments and Examinations; Imaging Diagnostics	Imaging anterior limb internal capsule change status	C60071
Assessments and Examinations; Imaging Diagnostics	Imaging other incidental finding type	C12477
Assessments and Examinations; Imaging Diagnostics	Imaging posterior limb internal capsule change status	C60072
Assessments and Examinations; Imaging Diagnostics	Imaging ventricle abnormality type	C12491
Assessments and Examinations; Imaging Diagnostics	Imaging other incidental finding tumor text	C60223
Assessments and Examinations; Imaging Diagnostics	Imaging anterior commissure change status	C12502
Assessments and Examinations; Imaging Diagnostics	Imaging ventricle abnormality other text	C18856
Assessments and Examinations; Imaging Diagnostics	Imaging diffusion-weighted imaging white matter normality status	C60073
Assessments and Examinations; Imaging Diagnostics	Imaging diffusion-weighted imaging white matter abnormality anatomic site	C60074
Assessments and Examinations; Imaging Diagnostics	Imaging diffusion-weighted imaging white matter abnormality characteristic specify text	C60075
Assessments and Examinations; Imaging Diagnostics	Imaging brain atrophy status	C60166
Assessments and Examinations; Imaging Diagnostics	Imaging brain atrophy anatomic site	C60167
Assessments and Examinations; Imaging Diagnostics	Imaging brain abnormal enhancement indicator	C60082
Assessments and Examinations; Imaging Diagnostics	Imaging T2 fluid attenuated inversion recovery gray matter hyperintensity indicator	C12503
Assessments and Examinations; Imaging Diagnostics	Imaging brain abnormal enhancement anatomic site	C60083
Assessments and Examinations; Imaging Diagnostics	Imaging T2 fluid attenuated inversion recovery gray matter hyperintensity anatomic site	C12504
Assessments and Examinations; Imaging Diagnostics	Imaging eye abnormality indicator	C12505
Assessments and Examinations; Imaging Diagnostics	Imaging T2 fluid attenuated inversion recovery gray matter hyperintensity anatomic site other text	C18860
Assessments and Examinations; Imaging Diagnostics	Imaging eye abnormality type	C12506
Assessments and Examinations; Imaging Diagnostics	Imaging cortical involve type	C60078
Assessments and Examinations; Imaging Diagnostics	Imaging eye abnormality other text	C60168
Assessments and Examinations; Imaging Diagnostics	Imaging cortical involve type other text	C60079

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging abnormality cortical anatomic site	C13977
Assessments and Examinations; Imaging Diagnostics	Comment text	C18027

General Core for all Studies:

Investigators should review the FDA's ["Guidance for Industry: Suicidal Ideation and Behavior: Prospective Assessment of Occurrence in Clinical Trials"](#) for the most up-to-date information about suicidal ideation and behavior. One scale that FDA suggests is the Columbia Suicide Severity Rating Scale (C-SSRS) (available at [Columbia Suicide Severity Rating Scale Website](#)).

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Supplemental – Highly Recommended Elements for Mito:

Domain; Subdomain	CDE Name	CDE ID
Participant History and Family History; General Health History	Diabetes diagnosis indicator	C20241
Participant History and Family History; General Health History	Hyperglycemia history indicator	C59704
Participant History and Family History; General Health History	Pre-diabetes diagnosis ever indicator	C59705
Participant History and Family History; General Health History	Hypoglycemia history indicator	C59707
Assessments and Examinations; Audiology	Ocular motor assessment type	C59840
Assessments and Examinations; Audiology	Ocular motor assessment horizontal status	C59841
Assessments and Examinations; Audiology	Ocular motor assessment vertical status	C59842
Assessments and Examinations; Audiology	Optokinetic reflex status	C59843
Assessments and Examinations; Audiology	Ocular motor assessment spontaneous test eye open status	C59844
Assessments and Examinations; Audiology	Ocular motor assessment spontaneous test eye close status	C59845
Assessments and Examinations; Audiology	Tympanometry gradient measurement	C59795
Assessments and Examinations; Audiology	Tympanometry middle ear resonance estimate measurement	C59796
Assessments and Examinations; Audiology	Acoustic reflex test perform status	C59797
Assessments and Examinations; Audiology	Acoustic reflex stimulus tone frequency type	C59798
Assessments and Examinations; Audiology	Acoustic reflex test condition type	C59799
Assessments and Examinations; Audiology	Acoustic reflex threshold measurement	C59800
Assessments and Examinations; Audiology	Acoustic reflex decay status	C59801
Assessments and Examinations; Audiology	Auditory brainstem response test perform status	C59823
Assessments and Examinations; Audiology	Auditory brainstem response stimulus conduction type	C59824
Assessments and Examinations; Audiology	Auditory brainstem response stimulus type	C59825
Assessments and Examinations; Audiology	Auditory brainstem response stimulus level measurement	C59826
Assessments and Examinations; Audiology	Auditory brainstem response threshold measurement	C59827
Assessments and Examinations; Audiology	Auditory brainstem response latency measurement	C59828
Assessments and Examinations; Audiology	Auditory brainstem response wave peak latency measurement	C59830
Assessments and Examinations; Audiology	Auditory brainstem response wave peak number	C59831

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Audiology	Auditory brainstem response wave form morphology text	C59832
Assessments and Examinations; Exercise Physiology	Pre test comment text	C56161
Assessments and Examinations; Exercise Physiology	Post test comment text	C56162
Assessments and Examinations; Exercise Physiology	Last calibration date time	C56163
Assessments and Examinations; Exercise Physiology	Start exercise time	C57112
Assessments and Examinations; Exercise Physiology	Start recovery time	C57113
Assessments and Examinations; Exercise Physiology	Rest time count	C57114
Assessments and Examinations; Exercise Physiology	Time submaximal absolute trial complete elapse minute total count	C59889
Assessments and Examinations; Exercise Physiology	Time ventilatory anaerobic threshold elapse minute total count	C59890
Assessments and Examinations; Exercise Physiology	Time oxygen uptake peak elapse minute total count	C59891
Assessments and Examinations; Exercise Physiology	Time exclude rest submaximal absolute trial complete elapse minute count	C59892
Assessments and Examinations; Exercise Physiology	Time exclude rest ventilatory anaerobic threshold elapse minute count	C59893
Assessments and Examinations; Exercise Physiology	Time exclude rest oxygen uptake peak elapse minute count	C59894
Assessments and Examinations; Exercise Physiology	Rest work measurement	C56171
Assessments and Examinations; Exercise Physiology	Work submaximal absolute trial measurement	C59895
Assessments and Examinations; Exercise Physiology	Work ventilatory anaerobic threshold measurement	C59896
Assessments and Examinations; Exercise Physiology	Work oxygen uptake peak measurement	C59897
Assessments and Examinations; Exercise Physiology	Work oxygen uptake peak predict value	C59898
Assessments and Examinations; Exercise Physiology	Work submaximal absolute trial complete oxygen uptake peak ratio value	C59899
Assessments and Examinations; Exercise Physiology	Work oxygen uptake peak measure predict ratio value	C59900
Assessments and Examinations; Exercise Physiology	Speed submaximal absolute trial measurement	C59901
Assessments and Examinations; Exercise Physiology	Speed ventilatory anaerobic threshold measurement	C59902

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Speed oxygen uptake peak measurement	C59903
Assessments and Examinations; Exercise Physiology	Speed submaximal absolute trial complete oxygen uptake peak ratio value	C59904
Assessments and Examinations; Exercise Physiology	Rest tidal volume body temperature and pressure saturated measurement	C56183
Assessments and Examinations; Exercise Physiology	Tidal volume body temperature pressure saturate submaximal absolute trial measurement	C59905
Assessments and Examinations; Exercise Physiology	Tidal volume body temperature pressure saturate ventilatory anaerobic threshold measurement	C59906
Assessments and Examinations; Exercise Physiology	Tidal volume body temperature pressure saturate oxygen uptake peak measurement	C59907
Assessments and Examinations; Exercise Physiology	Tidal volume body temperature pressure saturate submaximal absolute trial complete oxygen uptake peak ratio value	C59908
Assessments and Examinations; Exercise Physiology	Rest respiratory rate	C56189
Assessments and Examinations; Exercise Physiology	Respiration submaximal absolute trial rate	C59909
Assessments and Examinations; Exercise Physiology	Respiration ventilatory anaerobic threshold rate	C59910
Assessments and Examinations; Exercise Physiology	Respiration oxygen uptake peak measure rate	C59911
Assessments and Examinations; Exercise Physiology	Respiration submaximal absolute trial complete oxygen uptake peak ratio value	C59912
Assessments and Examinations; Exercise Physiology	Rest ventilation body temperature and pressure saturated measurement	C56195
Assessments and Examinations; Exercise Physiology	Gas exhale volume submaximal absolute trial measurement	C59913
Assessments and Examinations; Exercise Physiology	Gas exhale volume ventilatory anaerobic threshold measurement	C59914
Assessments and Examinations; Exercise Physiology	Gas exhale volume oxygen uptake peak measurement	C59915
Assessments and Examinations; Exercise Physiology	Gas exhale volume oxygen uptake peak predict value	C59916
Assessments and Examinations; Exercise Physiology	Gas exhale volume submaximal absolute trial complete oxygen uptake peak ratio value	C59917

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Gas exhale volume oxygen uptake peak measure predict ratio value	C59918
Assessments and Examinations; Exercise Physiology	Rest oxygen uptake kilogram measurement	C56201
Assessments and Examinations; Exercise Physiology	Oxygen uptake submaximal absolute trial unit mass measurement	C59919
Assessments and Examinations; Exercise Physiology	Oxygen uptake ventilatory anaerobic threshold unit mass measurement	C59920
Assessments and Examinations; Exercise Physiology	Oxygen uptake peak unit mass measurement	C59921
Assessments and Examinations; Exercise Physiology	Oxygen uptake peak predict unit mass value	C59922
Assessments and Examinations; Exercise Physiology	Oxygen uptake unit mass submaximal absolute trial complete oxygen uptake peak ratio value	C59923
Assessments and Examinations; Exercise Physiology	Oxygen uptake unit mass peak measure predict ratio value	C59924
Assessments and Examinations; Exercise Physiology	Rest oxygen uptake measurement	C56207
Assessments and Examinations; Exercise Physiology	Oxygen uptake submaximal absolute trial measurement	C59925
Assessments and Examinations; Exercise Physiology	Oxygen uptake ventilatory anaerobic threshold measurement	C59926
Assessments and Examinations; Exercise Physiology	Oxygen uptake peak measurement	C59927
Assessments and Examinations; Exercise Physiology	Oxygen uptake peak predict value	C59928
Assessments and Examinations; Exercise Physiology	Oxygen uptake submaximal absolute trial complete oxygen uptake peak ratio value	C59929
Assessments and Examinations; Exercise Physiology	Oxygen uptake peak measure predict ratio value	C59930
Assessments and Examinations; Exercise Physiology	Rest carbon dioxide output measurement	C56213
Assessments and Examinations; Exercise Physiology	Carbon dioxide output submaximal absolute trial measurement	C59931
Assessments and Examinations; Exercise Physiology	Carbon dioxide output anaerobic threshold measurement	C59932
Assessments and Examinations; Exercise Physiology	Carbon dioxide output oxygen uptake peak measurement	C59933
Assessments and Examinations; Exercise Physiology	Carbon dioxide output oxygen uptake peak predict value	C59934

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Carbon dioxide output submaximal absolute trial complete oxygen uptake peak ratio value	C59935
Assessments and Examinations; Exercise Physiology	Carbon dioxide output oxygen uptake peak measure predict ratio value	C59936
Assessments and Examinations; Exercise Physiology	Rest respiratory exchange ratio value	C56219
Assessments and Examinations; Exercise Physiology	Respiratory exchange ratio submaximal absolute trial value	C59937
Assessments and Examinations; Exercise Physiology	Respiratory exchange ratio ventilatory anaerobic threshold value	C59938
Assessments and Examinations; Exercise Physiology	Respiratory exchange ratio oxygen uptake peak value	C59939
Assessments and Examinations; Exercise Physiology	Respiratory exchange ratio submaximal absolute trial complete oxygen uptake peak ratio value	C59940
Assessments and Examinations; Exercise Physiology	Rest heart rate measurement	C56225
Assessments and Examinations; Exercise Physiology	Heart rate submaximal absolute trial measurement	C59941
Assessments and Examinations; Exercise Physiology	Heart rate ventilatory anaerobic threshold measurement	C59942
Assessments and Examinations; Exercise Physiology	Heart rate oxygen uptake peak measurement	C59943
Assessments and Examinations; Exercise Physiology	Heart rate oxygen uptake peak predict value	C59944
Assessments and Examinations; Exercise Physiology	Heart rate submaximal absolute trial complete oxygen uptake peak ratio value	C59945
Assessments and Examinations; Exercise Physiology	Heart rate oxygen uptake peak measure predict ratio value	C59946
Assessments and Examinations; Exercise Physiology	Rest oxygen pulse value	C56231
Assessments and Examinations; Exercise Physiology	Oxygen uptake heart rate submaximal absolute trial ratio value	C59947
Assessments and Examinations; Exercise Physiology	Oxygen uptake heart rate ventilatory anaerobic threshold ratio value	C59948
Assessments and Examinations; Exercise Physiology	Oxygen uptake heart rate oxygen uptake peak measure ratio value	C59949
Assessments and Examinations; Exercise Physiology	Oxygen uptake heart rate oxygen uptake peak predict ratio value	C59950

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Oxygen uptake heart rate submaximal absolute trial complete oxygen uptake peak ratio value	C59951
Assessments and Examinations; Exercise Physiology	Oxygen uptake heart rate oxygen uptake peak measure predict ratio value	C59952
Assessments and Examinations; Exercise Physiology	Rest carbon dioxide ventilatory equivalent value	C56237
Assessments and Examinations; Exercise Physiology	Carbon dioxide ventilatory equivalent submaximal absolute trial value	C59953
Assessments and Examinations; Exercise Physiology	Carbon dioxide ventilatory equivalent ventilatory anaerobic threshold value	C59954
Assessments and Examinations; Exercise Physiology	Carbon dioxide ventilatory equivalent oxygen uptake peak measure value	C59955
Assessments and Examinations; Exercise Physiology	Carbon dioxide ventilatory equivalent oxygen uptake peak predict value	C59956
Assessments and Examinations; Exercise Physiology	Carbon dioxide ventilatory equivalent submaximal absolute trial complete oxygen uptake peak ratio value	C59957
Assessments and Examinations; Exercise Physiology	Carbon dioxide ventilatory equivalent oxygen uptake peak measure predict ratio value	C59958
Assessments and Examinations; Exercise Physiology	Rest oxygen ventilatory equivalent value	C56243
Assessments and Examinations; Exercise Physiology	Oxygen ventilatory equivalent submaximal absolute trial value	C59959
Assessments and Examinations; Exercise Physiology	Oxygen ventilatory equivalent ventilatory anaerobic threshold value	C59960
Assessments and Examinations; Exercise Physiology	Oxygen ventilatory equivalent oxygen uptake peak measure value	C59961
Assessments and Examinations; Exercise Physiology	Oxygen ventilatory equivalent oxygen uptake peak predict value	C59962
Assessments and Examinations; Exercise Physiology	Oxygen ventilatory equivalent submaximal absolute trial complete oxygen uptake peak ratio value	C59963
Assessments and Examinations; Exercise Physiology	Oxygen ventilatory equivalent oxygen uptake peak measure predict ratio value	C59964
Assessments and Examinations; Exercise Physiology	Rest partial pressure end tidal carbon dioxide measurement	C56249

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Carbon dioxide end tidal partial pressure submaximal absolute trial measurement	C59965
Assessments and Examinations; Exercise Physiology	Carbon dioxide end tidal partial pressure ventilatory anaerobic threshold measurement	C59966
Assessments and Examinations; Exercise Physiology	Carbon dioxide end tidal partial pressure oxygen uptake peak measurement	C59967
Assessments and Examinations; Exercise Physiology	Carbon dioxide end tidal partial pressure submaximal absolute trial complete oxygen uptake peak ratio value	C59968
Assessments and Examinations; Exercise Physiology	Rest partial pressure end tidal oxygen measurement	C56255
Assessments and Examinations; Exercise Physiology	Oxygen end tidal partial pressure submaximal absolute trial measurement	C59969
Assessments and Examinations; Exercise Physiology	Oxygen end tidal partial pressure ventilatory anaerobic threshold measurement	C59970
Assessments and Examinations; Exercise Physiology	Oxygen end tidal partial pressure oxygen uptake peak measurement	C59971
Assessments and Examinations; Exercise Physiology	Oxygen end tidal partial pressure submaximal absolute trial complete oxygen uptake peak ratio value	C59972
Assessments and Examinations; Exercise Physiology	Rest systolic pressure measurement	C56261
Assessments and Examinations; Exercise Physiology	Blood pressure systolic submaximal absolute trial measurement	C59973
Assessments and Examinations; Exercise Physiology	Blood pressure systolic ventilatory anaerobic threshold measurement	C59974
Assessments and Examinations; Exercise Physiology	Blood pressure systolic oxygen uptake peak measurement	C59975
Assessments and Examinations; Exercise Physiology	Blood pressure systolic submaximal absolute trial complete oxygen uptake peak ratio value	C59976
Assessments and Examinations; Exercise Physiology	Rest diastolic pressure measurement	C56267
Assessments and Examinations; Exercise Physiology	Blood pressure diastolic submaximal absolute trial measurement	C59977
Assessments and Examinations; Exercise Physiology	Blood pressure diastolic ventilatory anaerobic threshold measurement	C59978

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Blood pressure diastolic oxygen uptake peak measurement	C59979
Assessments and Examinations; Exercise Physiology	Blood pressure diastolic submaximal absolute trial complete oxygen uptake peak ratio value	C59980
Assessments and Examinations; Exercise Physiology	Rate pressure product rest value	C59981
Assessments and Examinations; Exercise Physiology	Rate pressure product submaximal absolute trial value	C59982
Assessments and Examinations; Exercise Physiology	Rate pressure product ventilatory absolute threshold value	C59983
Assessments and Examinations; Exercise Physiology	Rate pressure product oxygen uptake peak measure value	C59984
Assessments and Examinations; Exercise Physiology	Rate pressure product oxygen uptake peak predict value	C59985
Assessments and Examinations; Exercise Physiology	Rate pressure product submaximal absolute trial oxygen uptake peak ratio value	C59986
Assessments and Examinations; Exercise Physiology	Rate pressure product oxygen uptake peak measure predict ratio value	C59987
Assessments and Examinations; Exercise Physiology	Breathlessness rest Borg scale	C59988
Assessments and Examinations; Exercise Physiology	Breathlessness submaximal absolute trial Borg scale	C59989
Assessments and Examinations; Exercise Physiology	Breathlessness ventilatory anaerobic threshold Borg scale	C59990
Assessments and Examinations; Exercise Physiology	Breathlessness oxygen uptake peak measure Borg scale	C59991
Assessments and Examinations; Exercise Physiology	Breathlessness submaximal absolute trial complete oxygen uptake peak Borg scale ratio value	C59992
Assessments and Examinations; Exercise Physiology	Leg fatigue rest Borg scale	C59993
Assessments and Examinations; Exercise Physiology	Leg fatigue submaximal absolute trial Borg scale	C59994
Assessments and Examinations; Exercise Physiology	Leg fatigue ventilatory anaerobic threshold Borg scale	C59995
Assessments and Examinations; Exercise Physiology	Leg fatigue oxygen uptake peak measure Borg scale	C59996
Assessments and Examinations; Exercise Physiology	Leg fatigue submaximal absolute trial complete oxygen uptake peak Borg scale ratio value	C59997

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Work trial start measurement	C59998
Assessments and Examinations; Exercise Physiology	Oxygen uptake trial start measurement	C59999
Assessments and Examinations; Exercise Physiology	Oxygen uptake unit mass trial start measurement	C60000
Assessments and Examinations; Exercise Physiology	Carbon dioxide trial start measurement	C60001
Assessments and Examinations; Exercise Physiology	Respiratory exchange ratio trial start value	C60002
Assessments and Examinations; Exercise Physiology	Heart trial start rate	C60003
Assessments and Examinations; Exercise Physiology	Gas exhale volume trial start measurement	C60004
Assessments and Examinations; Exercise Physiology	Tidal volume body temperature pressure saturate trial start measurement	C60005
Assessments and Examinations; Exercise Physiology	Respiration rate trial start measurement	C60006
Assessments and Examinations; Exercise Physiology	Blood oxygen saturation trial start measurement	C60007
Assessments and Examinations; Exercise Physiology	Blood pressure systolic trial start measurement	C60008
Assessments and Examinations; Exercise Physiology	Blood pressure diastolic trial start measurement	C60009
Assessments and Examinations; Exercise Physiology	Perceived exertion trial start Borg scale	C60010
Assessments and Examinations; Exercise Physiology	Work trial other timepoint elapsed time minute count	C60011
Assessments and Examinations; Exercise Physiology	Work trial other timepoint measurement	C60012
Assessments and Examinations; Exercise Physiology	Oxygen uptake trial other timepoint measurement	C60013
Assessments and Examinations; Exercise Physiology	Oxygen uptake unit mass trial other timepoint measurement	C60014
Assessments and Examinations; Exercise Physiology	Carbon dioxide trial other timepoint measurement	C60015
Assessments and Examinations; Exercise Physiology	Respiratory exchange ratio trial other timepoint value	C60016
Assessments and Examinations; Exercise Physiology	Heart trial other timepoint rate	C60017
Assessments and Examinations; Exercise Physiology	Gas exhale volume trial other timepoint measurement	C60018
Assessments and Examinations; Exercise Physiology	Tidal volume body temperature pressure saturate trial other timepoint measurement	C60019
Assessments and Examinations; Exercise Physiology	Respiration rate trial other timepoint measurement	C60020
Assessments and Examinations; Exercise Physiology	Blood oxygen saturation trial other timepoint measurement	C60021
Assessments and Examinations; Exercise Physiology	Blood pressure systolic trial other timepoint measurement	C60022

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Blood pressure diastolic trial other timepoint measurement	C60023
Assessments and Examinations; Exercise Physiology	Perceived exertion trial other timepoint Borg scale	C60024
Assessments and Examinations; Exercise Physiology	Submaximal absolute trial end minute count	C60025
Assessments and Examinations; Exercise Physiology	Work submaximal absolute trial end measurement	C60026
Assessments and Examinations; Exercise Physiology	Oxygen uptake submaximal absolute trial end measurement	C60027
Assessments and Examinations; Exercise Physiology	Oxygen uptake unit mass submaximal absolute trial end measurement	C60028
Assessments and Examinations; Exercise Physiology	Carbon dioxide submaximal absolute trial end measurement	C60029
Assessments and Examinations; Exercise Physiology	Respiratory exchange ratio submaximal absolute trial end value	C60030
Assessments and Examinations; Exercise Physiology	Heart submaximal absolute trial end rate	C60031
Assessments and Examinations; Exercise Physiology	Gas exhale volume submaximal absolute trial end measurement	C60032
Assessments and Examinations; Exercise Physiology	Tidal volume body temperature pressure saturate submaximal absolute trial end measurement	C60033
Assessments and Examinations; Exercise Physiology	Respiration rate submaximal absolute trial end measurement	C60034
Assessments and Examinations; Exercise Physiology	Blood oxygen saturation submaximal absolute trial end measurement	C60035
Assessments and Examinations; Exercise Physiology	Blood pressure systolic submaximal absolute trial end measurement	C60036
Assessments and Examinations; Exercise Physiology	Blood pressure diastolic submaximal absolute trial end measurement	C60037
Assessments and Examinations; Exercise Physiology	Perceived exertion submaximal absolute trial end Borg scale	C60038
Assessments and Examinations; Exercise Physiology	Work trial recovery start measurement	C60039
Assessments and Examinations; Exercise Physiology	Oxygen uptake trial recovery start measurement	C60040
Assessments and Examinations; Exercise Physiology	Oxygen uptake unit mass trial recovery start measurement	C60041
Assessments and Examinations; Exercise Physiology	Carbon dioxide trial recovery start measurement	C60042

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Exercise Physiology	Respiratory exchange ratio trial recovery start value	C60043
Assessments and Examinations; Exercise Physiology	Heart trial recovery start rate	C60044
Assessments and Examinations; Exercise Physiology	Gas exhale volume trial recovery start measurement	C60045
Assessments and Examinations; Exercise Physiology	Tidal volume body temperature pressure saturate trial recovery start measurement	C60046
Assessments and Examinations; Exercise Physiology	Respiration rate trial recovery start measurement	C60047
Assessments and Examinations; Exercise Physiology	Blood oxygen saturation trial recovery start measurement	C60048
Assessments and Examinations; Exercise Physiology	Blood pressure systolic trial recovery start measurement	C60049
Assessments and Examinations; Exercise Physiology	Blood pressure diastolic trial recovery start measurement	C60050
Assessments and Examinations; Exercise Physiology	Perceived exertion trial recovery start Borg scale	C60051
Assessments and Examinations; Exercise Physiology	Exercise test date	C60052
Assessments and Examinations; Exercise Physiology	Participant subjective status trial 1 end text	C60053
Assessments and Examinations; Exercise Physiology	Participant subjective status trial 1 next day text	C60054
Assessments and Examinations; Exercise Physiology	Participant subjective status trial 2 end text	C60055
Assessments and Examinations; Exercise Physiology	Participant subjective status trial 2 next day text	C60056
Assessments and Examinations; Exercise Physiology	Participant recover elapsed time day count text	C60057
Assessments and Examinations; Exercise Physiology	Participant subjective status all trial end text	C60058
Assessments and Examinations; Imaging Diagnostics	Imaging scanner strength value type	C02495
Assessments and Examinations; Imaging Diagnostics	Imaging scanner manufacturer name	C02496
Assessments and Examinations; Imaging Diagnostics	Echocardiogram perform date and time	C10724
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left atrial antero - posterior dimension measurement	C10729
Assessments and Examinations; Imaging Diagnostics	Imaging scanner manufacturer name other text	C18716
Assessments and Examinations; Imaging Diagnostics	Imaging scanner strength value type other text	C18718
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left atrial antero - posterior dimension z-score	C10772
Assessments and Examinations; Imaging Diagnostics	Imaging scanner model name text	C20247
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left atrial enlargement status	C12862
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left atrium view type	C12863

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging scanner software version number text	C02498
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left atrial dimension measurement	C12864
Assessments and Examinations; Imaging Diagnostics	Imaging perfusion method type	C10569
Assessments and Examinations; Imaging Diagnostics	Imaging post-processing raw data save indicator	C12511
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left atrial volume measurement	C12865
Assessments and Examinations; Imaging Diagnostics	Imaging contrast agent name	C17798
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left atrial area measurement	C12866
Assessments and Examinations; Imaging Diagnostics	Imaging acute metabolic crisis indicator	C60170
Assessments and Examinations; Imaging Diagnostics	Imaging single-voxel spectroscopy voxel one indicator	C60171
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular trabeculation status	C12867
Assessments and Examinations; Imaging Diagnostics	Imaging contrast agent dose	C17925
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular trabeculation ratio indicator	C12868
Assessments and Examinations; Imaging Diagnostics	Imaging contrast agent dose unit of measure	C60061
Assessments and Examinations; Imaging Diagnostics	Imaging pulse sequence type	C02499
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular trabeculation location type	C12869
Assessments and Examinations; Imaging Diagnostics	Imaging pulse sequence type other text	C18708
Assessments and Examinations; Imaging Diagnostics	Imaging contrast agent injection rate	C17797
Assessments and Examinations; Imaging Diagnostics	Imaging repetition gap duration	C08238
Assessments and Examinations; Imaging Diagnostics	Echocardiogram tricuspid valve stenosis degree status	C12873
Assessments and Examinations; Imaging Diagnostics	Echocardiogram mitral valve stenosis degree status	C12872
Assessments and Examinations; Imaging Diagnostics	Imaging echo duration	C08239
Assessments and Examinations; Imaging Diagnostics	Imaging signal averages number	C10577
Assessments and Examinations; Imaging Diagnostics	Echocardiogram aortic valve stenosis degree status	C12871
Assessments and Examinations; Imaging Diagnostics	Echocardiogram pulmonic valve stenosis degree status	C12870
Assessments and Examinations; Imaging Diagnostics	Imaging shimming procedure type	C15569
Assessments and Examinations; Imaging Diagnostics	Imaging flip angle measurement	C08240
Assessments and Examinations; Imaging Diagnostics	Imaging shimming procedure type other text	C19017

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Echocardiogram tricuspid valve regurgitation degree status	C10743
Assessments and Examinations; Imaging Diagnostics	Echocardiogram mitral valve regurgitation degree status	C10742
Assessments and Examinations; Imaging Diagnostics	Imaging unsuppress spectrum indicator	C59015
Assessments and Examinations; Imaging Diagnostics	Imaging volume count	C10839
Assessments and Examinations; Imaging Diagnostics	Imaging voxel volume measurement	C10945
Assessments and Examinations; Imaging Diagnostics	Imaging preload contrast agent previous injection indicator	C60084
Assessments and Examinations; Imaging Diagnostics	Echocardiogram aortic valve regurgitation degree status	C10741
Assessments and Examinations; Imaging Diagnostics	Imaging voxel anatomic site type	C59013
Assessments and Examinations; Imaging Diagnostics	Imaging preload contrast agent previous injection dose value	C60085
Assessments and Examinations; Imaging Diagnostics	Echocardiogram pulmonic valve regurgitation degree status	C12874
Assessments and Examinations; Imaging Diagnostics	Cardiovascular tricuspid valve stenosis regurgitation comment text	C17962
Assessments and Examinations; Imaging Diagnostics	Imaging voxel anatomic site type other text	C59014
Assessments and Examinations; Imaging Diagnostics	Imaging post processing analysis type	C60086
Assessments and Examinations; Imaging Diagnostics	Imaging post processing analysis method software provided type	C60087
Assessments and Examinations; Imaging Diagnostics	Imaging voxel signal abnormal area indicator	C60172
Assessments and Examinations; Imaging Diagnostics	Cardiovascular mitral valve stenosis regurgitation comment text	C17963
Assessments and Examinations; Imaging Diagnostics	Cardiovascular aortic valve stenosis regurgitation comment text	C17961
Assessments and Examinations; Imaging Diagnostics	Imaging voxel diffusion reduce area indicator	C60173
Assessments and Examinations; Imaging Diagnostics	Imaging post processing analysis method software provided type other text	C60088
Assessments and Examinations; Imaging Diagnostics	Imaging intermediate echo time 3T adiabatic excitation pulse use indicator	C60174

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Imaging post processing analysis method software leakage correction indicator	C60089
Assessments and Examinations; Imaging Diagnostics	Cardiovascular pulmonic valve stenosis regurgitation comment text	C17964
Assessments and Examinations; Imaging Diagnostics	Echocardiogram mitral valve prolapse indicator	C12875
Assessments and Examinations; Imaging Diagnostics	Imaging visual spectral quality status	C60175
Assessments and Examinations; Imaging Diagnostics	Parameter map calculation type	C10599
Assessments and Examinations; Imaging Diagnostics	Parameter map calculation other text	C60090
Assessments and Examinations; Imaging Diagnostics	Imaging single-voxel spectroscopy voxel two indicator	C60176
Assessments and Examinations; Imaging Diagnostics	Echocardiogram early mitral inflow velocity measurement	C10745
Assessments and Examinations; Imaging Diagnostics	Echocardiogram late mitral inflow velocity measurement	C10746
Assessments and Examinations; Imaging Diagnostics	Imaging voxel 2 same location indicator	C60177
Assessments and Examinations; Imaging Diagnostics	Imaging arterial spin labeling scheme type	C60091
Assessments and Examinations; Imaging Diagnostics	Imaging arterial spin labeling scheme type other text	C60092
Assessments and Examinations; Imaging Diagnostics	Imaging multivoxel spectroscopy indicator	C60178
Assessments and Examinations; Imaging Diagnostics	Echocardiogram tissue doppler mitral annulus E' velocity measurement	C10751
Assessments and Examinations; Imaging Diagnostics	Imaging arterial spin labeling acquisition type	C60093
Assessments and Examinations; Imaging Diagnostics	Imaging MRS sequence type	C59012
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular hypertrophy status	C10735
Assessments and Examinations; Imaging Diagnostics	Imaging acquisition type	C15580
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular concentric remodel status	C12887
Assessments and Examinations; Imaging Diagnostics	Imaging slice thickness value	C08244
Assessments and Examinations; Imaging Diagnostics	Imaging acquisition type other text	C19019
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right atrial enlargement status	C10731
Assessments and Examinations; Imaging Diagnostics	Imaging slab slice level anatomic site	C60179
Assessments and Examinations; Imaging Diagnostics	Imaging arterial spin labeling phase type	C60094
Assessments and Examinations; Imaging Diagnostics	Imaging slab slice level anatomic site other text	C60180

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Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricular enlargement status	C10732
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricular systolic dysfunction status	C10733
Assessments and Examinations; Imaging Diagnostics	Imaging metabolite absolute quantification procedure indicator	C60181
Assessments and Examinations; Imaging Diagnostics	Imaging arterial spin labeling single phase type delay time	C60095
Assessments and Examinations; Imaging Diagnostics	Imaging arterial spin labeling multiphase type phase count	C60096
Assessments and Examinations; Imaging Diagnostics	Imaging metabolite quantification software name	C60182
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle ejection fraction measurement	C10740
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle ejection fraction measurement	C12888
Assessments and Examinations; Imaging Diagnostics	Imaging post processing analysis method quantitative indicator	C60097
Assessments and Examinations; Imaging Diagnostics	Imaging metabolite type	C15559
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle fractional shortening measurement	C10744
Assessments and Examinations; Imaging Diagnostics	Imaging label pulse duration	C10578
Assessments and Examinations; Imaging Diagnostics	Imaging metabolite type other text	C19016
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle fractional shortening measurement	C12889
Assessments and Examinations; Imaging Diagnostics	Imaging crusher gradient use indicator	C60098
Assessments and Examinations; Imaging Diagnostics	Imaging metabolite level category	C60183
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle function status	C12890
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle function status	C12891
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle wall motion abnormal indicator	C12892
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle wall motion abnormal indicator	C12893

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular internal dimension end diastole measurement	C10727
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricular internal dimension end diastole measurement	C12894
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular internal dimension end systole measurement	C10728
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricular internal dimension end systole measurement	C12895
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle end diastolic volume measurement	C12896
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle end diastolic volume measurement	C12897
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle end diastolic volume index measurement	C12898
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle end diastolic volume index measurement	C12899
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle end systolic volume measurement	C12900
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle end systolic volume measurement	C12901
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle end systolic volume index measurement	C12902
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle end systolic volume index measurement	C12903
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left interventricular septal thickness end diastole measurement	C10726
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right interventricular septal thickness end diastole measurement	C54234
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular posterior wall thickness end diastole measurement	C10725
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricular posterior wall thickness end diastole measurement	C54235
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular mass measurement	C12904

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Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricular mass index measurement	C12905
Assessments and Examinations; Imaging Diagnostics	Echocardiogram left ventricle non-compaction status	C12906
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle non-compaction status	C12907
Assessments and Examinations; Imaging Diagnostics	Echocardiogram intracardiac find type	C12908
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricular systolic pressure measurement	C12909
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right atrial pressure measurement	C12910
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle systolic pressure estimation type	C12911
Assessments and Examinations; Imaging Diagnostics	Echocardiogram right ventricle systolic pressure estimation type other text	C18877
Assessments and Examinations; Imaging Diagnostics	Echocardiogram pericardial effusion abnormal indicator	C12912
Assessments and Examinations; Imaging Diagnostics	Echocardiogram pericardial effusion abnormal text	C54237
Assessments and Examinations; Imaging Diagnostics	Echocardiogram study quality type	C12913
Assessments and Examinations; Imaging Diagnostics	Echocardiogram result status	C12914
Assessments and Examinations; Imaging Diagnostics	Echocardiogram abnormal result comment text	C17965
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Laboratory procedure glycosylated hemoglobin measurement	C19722
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Laboratory procedure anti-pancreatic autoantibodies value	C19723
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Lab test result unit of measure	C01711
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Laboratory procedure anti-pancreatic autoantibody name	C60249
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Laboratory procedure fasting glucose measurement	C19724
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test diagnostic laboratory name	C19600

Summary of Core/Supplemental – Highly Recommended Recommendations: Mitochondrial Disease CDEs

Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test result date	C19610
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Variant mutational analysis results available indicator	C12783
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Variant mutational analysis performed indicator	C12944
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene variant mutation detected result type	C12785
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene additional variants unknown significance indicator	C12782
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene additional variants unknown significance text	C17891
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene sequenced with no variant mutation indicator	C12808
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genes sequenced with no mutations text	C17895
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test name	C19615
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mitochondrial DNA panel tissue type	C19590
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene text	C19599
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mitochondrial DNA genome deletion duplication analysis tissue type	C19592
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test karyotype tissue type	C19595
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Allele identifier name	C12786
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene variant mutation category	C12787
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene variant mutation category other text	C18874
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene exon copy number tested indicator	C12788

Summary of Core/Supplemental – Highly Recommended Recommendations: Mitochondrial Disease CDEs

Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene deletions duplications limits clearly defined indicator	C12789
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene exon first deleted duplicated name	C12790
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene exon last deleted duplicated name	C12791
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene whole affect exon deleted duplicated indicator	C59168
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene exon predicted reading frame type	C12793
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene promoter affect exon deleted duplicated indicator	C59169
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene coding region sequenced indicator	C12795
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene targeted variant mutational analysis indicator	C12796
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene targeted variant mutational analysis type	C12797
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene targeted variant mutational analysis other text	C18875
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene missense nonsense variant point mutation location type	C12798
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene missense nonsense variant point mutation location exon text	C17889
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene missense nonsense variant point mutation location intron text	C17894
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene missense nonsense variant point mutation location other text	C17893
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene missense nonsense variant point mutation insertion deletion type	C12800
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene point mutation nonsense variant codon type	C12801
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene variant mutation mRNA analysis performed indicator	C12802

Summary of Core/Supplemental – Highly Recommended Recommendations: Mitochondrial Disease CDEs

Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene variant mutation implications confirmed mRNA analysis indicator	C12803
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene cDNA variant mutation name	C12804
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene mRNA variant mutation name	C12805
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene protein variant mutation name	C12806
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene second disease allele indicator	C12807
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Gene second allele identical indicator	C12818
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mitochondrial DNA variant mutation quantitative analysis evaluation method type	C19605
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mitochondrial DNA variant mutation quantitative analysis evaluation method type other text	C60263
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mitochondrial DNA variant mutation quantitative analysis heteroplasmy level type	C19607
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mitochondrial DNA variant mutation quantitative analysis heteroplasmy level type other text	C60264
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test nuclear DNA clinical evaluation type	C19603
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test prevision software name	C60267
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test nuclear DNA experimental validation type	C19604
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test experimental validation type other text	C60268
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mitochondrial DNA clinical evaluation type	C60269
Assessments and Examinations; Laboratory Tests and Biospecimens/Biomarkers	Genetic test mitochondrial DNA experimental validation type	C60270

Summary of Core/Supplemental – Highly Recommended Recommendations: Mitochondrial Disease CDEs

Domain; Subdomain	CDE Name	CDE ID
Assessments and Examinations; Non-Imaging Diagnostics	ECG PR interval	C04509
Assessments and Examinations; Non-Imaging Diagnostics	ECG QRS duration	C04510
Assessments and Examinations; Non-Imaging Diagnostics	ECG QT interval	C04511
Outcomes and End Points; Digital Technology	Step average daily count	C60347
Outcomes and End Points; Digital Technology	Vigorous activity average duration	C60348
Outcomes and End Points; Digital Technology	Sedentary average daily duration	C60349
Outcomes and End Points; Pulmonary Function Testing/Respiratory Status	Pulmonary function test date and time	C11098
Outcomes and End Points; Pulmonary Function Testing/Respiratory Status	Pulmonary function test type	C11099
Outcomes and End Points; Pulmonary Function Testing/Respiratory Status	Forced expiratory volume second result value	C10173
Outcomes and End Points; Pulmonary Function Testing/Respiratory Status	Forced vital capacity result value	C10172

Summary of Core/Supplemental – Highly Recommended Recommendations: Mitochondrial Disease CDEs

Supplemental – Highly Recommended Instruments for Mito:

1. 12-Item Short Form Health Survey (SF-12)
2. Apathy Evaluation Scale
3. Apathy Scale (AS)
4. Automated Self-Administered 24-hour Dietary Recall (ASA 24)
5. Barry Albright Dystonia Scale (BADs)
6. Beck Anxiety Inventory (BAI)
7. Beck Youth Inventories - 2nd Edition (BYI-II)
8. Behavior Assessment System for Children, Third Edition (BASC-3)
9. Behavior Rating Inventory of Executive Function - Adult Version (BRIEF-A)
10. Behavior Rating Inventory of Executive Function - Second Edition (BRIEF-2)
11. Behavior Rating Inventory of Executive Function- Preschool Version (BRIEF-P)
12. Borg Rating of Perceived Exertion (RPE) Scale
13. Center for Epidemiologic Studies-Depression Scale (CES-D)
14. Child Behavior Checklist (CBCL)
15. Conners Continuous Performance Test 3rd Edition (Conners CPT 3)
16. Delis-Kaplan Executive Function System (D-KEFS)
17. EuroQoL-5 Dimension Questionnaire (EQ-5D)
18. Fatigue Severity Scale (FSS)
19. Generalized Anxiety Disorder (GAD-7)
20. Mitochondrial Myopathy Composite Assessment Tool (MM-COAST)
21. Modified Fatigue Impact Scale (MFIS)
22. Modified Hammersmith Functional Motor Scale for Children with Spinal Muscular Atrophy (MHFMS-SMA/MHFMS-Extend)
23. Motor Function Measure (MFM)
24. Newcastle Mitochondrial Disease Adult Scale (NMDAS)
25. Newcastle Mitochondrial Quality of Life Measure (NMQ)
26. Newcastle Paediatric Mitochondrial Disease Scale (NPMDS)
27. Pediatric Quality of Life Inventory (PedsQL)
28. Quality of Life in Neurological Disorders (Neuro-QOL)
29. Scale for the Assessment and Rating of Ataxia (SARA)
30. Short Form 36-Item Health Survey (SF-36)
31. Test of Variables of Attention (TOVA)
32. Wechsler Preschool and Primary Scale of Intelligence (WPPSI-IV)
33. Zarit Burden Interview (ZBI)

For the complete list of NINDS CDE recommendations for Mito, please see the [NINDS CDE website](#).