

Supplementary Data: ICGNMD REDCap Database Instrument

Consent obtained

- Consent by subject
- Consent by parent/guardian, advocate, or next of kin
- Other

Consent obtained - other

Consent taken by (must be authorised member of study team)

(Full name)

Consent Method Used

- In person (face to face)
 - Postal Consent*
 - Telephone Consent*
 - Online Consent*
- (*Only where permitted under local ethics)

After determination of eligibility and consent, assign and record ICGNMD study ID

ICGNMD study ID

(IC_[site code]_[participant number]; IC_XXX_XXXX, e.g. IC_UTH_00001)

Other local study ID (optional)

(Other local study ID for participant (in addition to ICGNMD study ID))

Date consent form signed

(YYYY-MM-DD)

Participant type

Participant type

- Affected proband
 - Affected relative
 - Unaffected relative
 - Unrelated control subject
- (Clinical status)

Proband study ID (family grouping code)

(The ICGNMD study ID of the Proband, e.g. IC_UTH_00001)

Proband initials

(For data validation)

Proband year of birth

(For data validation)

Relation

Relationship to Proband

- Mother
- Father
- Son
- Daughter
- Grandchild
- Brother - non-identical
- Sister - non-identical
- Identical twin
- Paternal aunt/uncle
- Maternal aunt/uncle
- Paternal grandparent
- Maternal grandparent
- Paternal cousin
- Maternal cousin
- Niece/nephew
- Other

Relationship to Proband - other

Diagnosis

Diagnostic category

- Genetic motor neuron disease
 - Spinal muscular atrophy
 - Genetic peripheral neuropathy
 - Congenital myasthenic syndrome
 - Congenital muscular dystrophy or myopathy
 - Duchenne or Becker muscular dystrophy
 - Facioscapulohumeral muscular dystrophy
 - Myotonic dystrophy type I
 - Limb girdle muscular dystrophy
 - Distal myopathy
 - Adult onset myopathy
 - Metabolic myopathy
 - Mitochondrial disease
 - Skeletal muscle channelopathy
 - Undetermined genetic neuromuscular or neurological disorder
- (Clinical diagnosis most likely, in opinion of researcher)

Confirmed diagnosis

(Orphanet)

Other confirmed diagnosis - 1

(Orphanet)

Other confirmed diagnosis - 2

(Orphanet)

Confirmed diagnoses - freetext

(Offline entry)

Age clinically diagnosed - years

Age clinically diagnosed - months

Pre-existing samples available

Pre-existing samples available for genetic analysis

- No
- Yes
- Unknown

DNA

- No
- Yes
- Unknown

Blood

- No
- Yes
- Unknown

Skin tissue/fibroblast

- No
- Yes
- Unknown

Muscle tissue

- No
- Yes
- Unknown

Buccal

- No
- Yes
- Unknown

Saliva

- No
- Yes
- Unknown

Urine

- No
- Yes
- Unknown

New samples collected

New samples collected at study visit

- No
- Yes
- Unknown

DNA

- No
- Yes
- Unknown

Blood

- No
- Yes
- Unknown

Skin tissue/fibroblast No
 Yes
 Unknown

Muscle tissue No
 Yes
 Unknown

Buccal No
 Yes
 Unknown

Saliva No
 Yes
 Unknown

Urine No
 Yes
 Unknown

Demographics

Current age - years _____

Current age - months _____

Sex Male
 Female
(Biological sex at birth)

Proband year of birth _____

Ethnicity (self-reported)

Country of birth Brazil
 India
 South Africa
 Turkey
 United Kingdom
 Zambia
 Other

Country of birth - other _____

Region/province of birth _____

Main language _____

Ethnicity

(Please describe the ethnic origin)

Ethnicity - subgroup

((if applicable))

Father's ethnicity

(Please describe the paternal ethnic origin)

Father's ethnicity - subgroup

((if applicable))

Mother's ethnicity

(Please describe the maternal ethnic origin)

Mother's ethnicity - subgroup

((if applicable))

Brazil

Ethnicity

- White
- Amerindians
- Pardo-Brazilians
- African-Brazilians
- Asian-Brazilians
- Other

Ethnicity - other

(Please describe the ethnic origin)

Ethnicity - subgroup

((if applicable))

Father's ethnicity

- White
- Amerindians
- Pardo-Brazilians
- African-Brazilians
- Asian-Brazilians
- Other

Father's ethnicity - other

(Please describe the paternal ethnic origin)

Father's ethnicity - subgroup

((if applicable))

Mother's ethnicity White
 Amerindians
 Pardo-Brazilians
 African-Brazilians
 Asian-Brazilians
 Other

Mother's ethnicity - other _____
(Please describe the maternal ethnic origin)

Mother's ethnicity - subgroup _____
((if applicable))

India

Ethnicity - tribe _____

Ethnicity - other _____
(Please describe the ethnic origin)

Ethnicity - subgroup _____
((if applicable))

Father's ethnicity - tribe _____

Father's ethnicity - other _____
(Please describe the paternal ethnic origin)

Father's ethnicity - subgroup _____
((if applicable))

Mother's ethnicity - tribe _____

Mother's ethnicity - other _____
(Please describe the maternal ethnic origin)

Mother's ethnicity - subgroup _____
((if applicable))

South Africa

Ethnicity Black African
 Mixed ancestry
 White
 Indian/Asian
 Other

Ethnicity - other _____
(Please describe the ethnic origin)

Ethnicity - subgroup _____
((if applicable))

Father's ethnicity Black African
 Mixed ancestry
 White
 Indian/Asian
 Other

Father's ethnicity - other _____
(Please describe the paternal ethnic origin)

Father's ethnicity - subgroup _____
((if applicable))

Mother's ethnicity Black African
 Mixed ancestry
 White
 Indian/Asian
 Other

Mother's ethnicity - other _____
(Please describe the maternal ethnic origin)

Mother's ethnicity - subgroup _____
((if applicable))

Turkey

Ethnicity Turkish
 Kurdish
 Other

Ethnicity - other _____
(Please describe the ethnic origin)

Ethnicity - subgroup _____
((if applicable))

Father's ethnicity Turkish
 Kurdish
 Other

Father's ethnicity - other _____
(Please describe the paternal ethnic origin)

Father's ethnicity - subgroup _____
((if applicable))

Mother's ethnicity Turkish
 Kurdish
 Other

Mother's ethnicity - other _____
(Please describe the maternal ethnic origin)

Mother's ethnicity - subgroup _____
((if applicable))

United Kingdom

Ethnicity White British
 White Irish
 Gypsy or Irish Traveller
 Any other White background
 White and Black Caribbean
 White and Black African
 White and Asian
 Any other Mixed / Multiple ethnic background
 Indian
 Pakistani
 Bangladeshi
 Chinese
 Any other Asian background
 African
 Caribbean
 Any other Black / African / Caribbean background
 Arab
 Any other ethnic group
 Unknown

Ethnicity - other _____
(Please describe the ethnic origin)

Ethnicity - subgroup _____
((if applicable))

Father's ethnicity

- White British
- White Irish
- Gypsy or Irish Traveller
- Any other White background
- White and Black Caribbean
- White and Black African
- White and Asian
- Any other Mixed / Multiple ethnic background
- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background
- African
- Caribbean
- Any other Black / African / Caribbean background
- Arab
- Any other ethnic group
- Unknown

Father's ethnicity - other

(Please describe the paternal ethnic origin)

Father's ethnicity - subgroup

((if applicable))

Mother's ethnicity

- White British
- White Irish
- Gypsy or Irish Traveller
- Any other White background
- White and Black Caribbean
- White and Black African
- White and Asian
- Any other Mixed / Multiple ethnic background
- Indian
- Pakistani
- Bangladeshi
- Chinese
- Any other Asian background
- African
- Caribbean
- Any other Black / African / Caribbean background
- Arab
- Any other ethnic group
- Unknown

Mother's ethnicity - other

(Please describe the maternal ethnic origin)

Mother's ethnicity - subgroup

((if applicable))

Zambia

Ethnicity

Black African
 Mixed ancestry
 White
 Indian/Asian
 Other

Ethnicity - other

 (Please describe the ethnic origin)

Ethnicity - subgroup

 ((if applicable))

Father's ethnicity

Black African
 Mixed ancestry
 White
 Indian/Asian
 Other

Father's ethnicity - other

 (Please describe the paternal ethnic origin)

Father's ethnicity - subgroup

 ((if applicable))

Mother's ethnicity

Black African
 Mixed ancestry
 White
 Indian/Asian
 Other

Mother's ethnicity - other

 (Please describe the maternal ethnic origin)

Mother's ethnicity - subgroup

 ((if applicable))

Known genes in VCF format - please use GRCh38 (e.g. 1 230710048 rs699 A G)

Known gene mutation - VCF

 (1 230710048 rs699 A G)

Known gene mutation - OMIM

 (Optional)

Second known gene mutation - VCF

 (1 230710048 rs699 A G)

Second known gene mutation - OMIM

(Optional)

Third known gene mutation - VCF

(1 230710048 rs699 A G)

Third known gene mutation - OMIM

(Optional)

Fourth known gene mutation - VCF

(1 230710048 rs699 A G)

Fourth known gene mutation - OMIM

(Optional)

Fifth known gene mutation - VCF

(1 230710048 rs699 A G)

Fifth known gene mutation - OMIM

(Optional)

Known mutation(s) - freetext

Family history

Family history of core disease

- Absent
 Present
 Unknown

Family history of core disease - details

Consanguinity

- Absent
 Present
 Unknown

Consanguinity - description

(E.g. 1st, 2nd, 3rd cousin)

Known mutation(s) in family - freetext

(Offline entry)

Upload pedigree

(Online tool for drawing pedigree:
<https://www.progenygenetics.com/online-pedigree/>)

Inheritance

Inheritance

- Autosomal dominant
- Autosomal recessive
- X-linked dominant
- X-linked recessive
- Matrilineal
- Familial (unspecified inheritance)
- Idiopathic/sporadic
- Unknown

Symptoms

First symptom noticed by subject or parents/carers

First symptom noticed by subject or parents/carers -
 freetext

 (Offline entry)

Age of onset symptoms - years

 (If present at birth, enter 0 as value)

Age of onset symptoms - months

 (If present at birth, enter 0 as value)

Disease type

Progression

- Progressive
- Non-progressive
- Other or unspecified
- Unknown

Global pace of progression

- Days
- Months
- Years

Characteristics

- Typical
- Atypical
- Other or unspecified
- Unknown

Persistence

- Chronic
- Episodic/intermittent
- Other or unspecified
- Unknown

Complexity

- Pure (uncomplicated)
- Complicated
- Other or unspecified
- Unknown

Disease type - comments

Present phenotypic features (HPO) - please enter at least five

Present feature - 1

Present feature - 2

Present feature - 3

Present feature - 4

Present feature - 5

Present feature - 6

Present feature - 7

Present feature - 8

Present feature - 9

Present feature - 10

Present feature - 11

Present feature - 12

Present feature - 13

Present feature - 14

Present feature - 15

Present feature - 16

Present feature - 17

Present feature - 18

Present feature - 19

Present features - freetext

(Offline entry)

Absent phenotypic features (HPO) - please enter at least five

Absent feature - 1

Absent feature - 2

Absent feature - 3

Absent feature - 4

Absent feature - 5

Absent feature - 6

Absent feature - 7

Absent feature - 8

Absent feature - 9

Absent feature - 10

Absent feature - 11

Absent feature - 12

Absent feature - 13

Absent feature - 14

Absent feature - 15

Absent feature - 16

Absent feature - 17

Absent feature - 18

Absent feature - 19

Absent features - freetext

(Offline entry)

Comments

Any other comments on core data

Other Medical History

Handedness

Handedness

- Left-handed
- Right-handed
- Both hands/Ambidextrous
- Unknown
(The hand used predominately; not necessarily the hand used for writing with exclusively)

Smoking history

Smoking status

- Current tobacco/cigarette smoker (including non-daily smoker)
- Ex-smoker
- Never smoker (not smoked for more than a year in total)
- Unknown

Frequency of smoking

- Non-daily
- Daily

Age smoking regularly

(At what age (years) did the subject start smoking regularly?)

Cigarette consumption / day

(If the subject smoked a pipe, rolling tobacco, cigar or similar then ** g of tobacco = 1 cigarette)

Age quit smoking

(At what age (years) did the subject quit smoking?)

Smoking - comments

(Any other comments on smoking history. Also insert any comments about (i) chewing tobacco and/or (ii) betel leaf/areca nut use here.)

Alcohol history

Does the participant currently consume alcohol?
(within the past year)

- No
- Yes
- Unknown

Has the participant consumed alcohol in the past?
(prior to the past year)

- No
- Yes
- Unknown

At what age did the participant start consuming alcohol? _____

At what age did the participant stop consuming alcohol (if applicable)? _____

How often does the participant consume alcohol? If the subject no longer consumes alcohol, how often did they previously consume alcohol?

- 4 or more times per week
 2-3 times per week
 2-4 times per month
 Monthly or less
 N/A

How many units does the participant consume on a typical day when drinking? If the participant no longer consumes alcohol, how many units did they previously consume?

- 1-2
 3-4
 5-6
 7-9
 10+
 N/A

How often does the participant have 6 or more alcoholic beverages on one occasion? If the participant no longer consumes alcohol, how often did they previously consume 6 or more alcoholic beverages on one occasion?

- Daily or almost daily
 Weekly
 Monthly
 Less than monthly
 Never

Has the participant ever been hospitalised for any alcohol-related problem? (e.g. oesophageal varices, delirium, tremors, cirrhosis, etc.)

- No
 Yes
 Unknown

Hospitalisation for alcohol - description

(Please describe)

Medication

Medication(s) taken

(Start/end dates. Generic drug name(s) and mean daily dosage(s) in mg.)

Describe other treatment given

Prenatal, perinatal, or early developmental history

Prenatal, perinatal, or early developmental history available

- No
 Yes

Prenatal history

In-utero movements Normal
 Reduced
 Unknown

Polyhydramnios No
 Yes
 Unknown

Maternal risk factors _____

Perinatal history

Gestation period in weeks _____

Birth - delivery Normal
 C-section (elective)
 C-section (emergency)
 Assisted (ventouse/forceps)

APGAR score(s) available? No
 Yes
 Unknown

APGAR - 1 minute - score _____

((0-10))

APGAR - 5 minutes - score _____

((0-10))

APGAR - 10 minutes - score _____

((0-10))

Birth length in centimetres _____

Birth weight in kg _____

Birth head circumference in centimetres _____

Neonatal complications No
 Yes
 Unknown

Neonatal complications - type

- Contractures
- Fractures
- Poor feeding
- Neonatal encephalopathy
- Required ventilatory support
- Other

Neonatal encephalopathy - severity

- Mild
- Moderate
- Severe

Infancy and early childhood developmental history

Motor development normal or abnormal

- Normal
- Abnormal
- Unknown

Age at sitting - months

(If never developed, enter 0)

Age at crawling - months

(If never developed, enter 0)

Age at walking - months

(If never developed, enter 0)

Speech and hearing development

- Normal
- Abnormal
- Unknown

Age at first words - months

(If never developed, enter 0)

Age using two-word phrases - months

(If never developed, enter 0)

Social development

- Normal
- Abnormal
- Unknown

Age overcoming stranger anxiety - months

(If never developed, enter 0)

Age waving bye bye - months

(If never developed, enter 0)

Past medical history

Past medical history

(Including any other medical conditions and details of any environmental toxin exposure)

Past surgical history

Past surgical history

Comments

Any other comments on other medical history

Examination normal or abnormal Normal
 Abnormal
 Unknown

Have any aspects of patient examination been video recorded or photographed? No
 Yes
 Unknown

If yes, which aspects Gait
 Abnormal movements
 Seizures
 Cranial nerve examination
 Limb examination - motor
 Limb examination - sensory
 Other

Please describe other aspect(s) _____

Cardiac dysfunction

Cardiac dysfunction No
 Yes
 Unknown

Cardiac dysfunction - type Conduction defects
 Cardiomyopathy
 Other

Cardiac dysfunction - type - other _____

Cardiomyopathy - type Dilated cardiomyopathy
 Hypertrophic cardiomyopathy
 Other

Cardiomyopathy type - other _____

Age at onset of cardiac dysfunction - years _____
(If present at birth, enter 0 as value)

Age at onset of cardiac dysfunction - months _____
(If present at birth, enter 0 as value)

Cardiac intervention No
 Yes
 Unknown

Cardiac intervention - type

- Pacemaker
 ICD
 Cardiac transplant
 Other

Cardiac intervention - type - other

Age at intervention - years

Age at intervention - months

Respiratory dysfunction

Respiratory dysfunction

- No
 Yes
 Unknown

Respiratory dysfunction - type

- Neuromuscular
 Cardiac
 Pulmonary
 Central
 Other

Respiratory dysfunction - other

Age at onset of respiratory dysfunction - years

(If present at birth, enter 0 as value)

Age at onset of respiratory dysfunction - months

(If present at birth, enter 0 as value)

FVC tested

- No
 Yes
 Unknown

FVC tested - value - 1

(% of predicted value)

FVC tested - age in years - 1

(Years)

FVC tested - position - 1

- Sitting
 Lying

FVC tested - value - 2

(% of predicted value)

FVC tested - age in years - 2

(Years)

FVC tested - position - 2

- Sitting
 Lying

FVC tested - value - 3

(% of predicted value)

FVC tested - age in years - 3

(Years)

FVC tested - position - 3

- Sitting
 Lying

PEFR tested

- No
 Yes
 Unknown

PEFR tested - value - 1

(% of predicted value)

PEFR tested - age in years - 1

(Years)

PEFR tested - position - 1

- Sitting
 Lying

PEFR tested - value - 2

(% of predicted value)

PEFR tested - age in years - 2

(Years)

PEFR tested - position - 2

- Sitting
 Lying

PEFR tested - value - 3

(% of predicted value)

PEFR tested - age in years - 3

(Years)

PEFR tested - position - 3

- Sitting
 Lying

Artificial ventilation No
 Yes
 Unknown
(Ever used)

Daily duration of artificial ventilation All day
 Day only
 Night only
 Only with infections
 Unknown

Artificial ventilation - type NIV
 CPAP
 Tracheostomy
 Other

Artificial ventilation type - other _____

Artificial ventilation started age - years _____

Artificial ventilation started age - months _____

Artificial ventilation stopped age - years _____

(If applicable)

Artificial ventilation stopped age - months _____

(If applicable)

Seizures

Seizures No
 Yes
 Unknown

Seizures - type Focal onset
 Generalised onset
 Unknown onset

Seizures - age at onset - years _____

(If present at birth, enter 0 as value)

Seizures - age at onset - months _____

(If present at birth, enter 0 as value)

Movement disorder

Movement disorder No
 Yes
 Unknown

Movement disorder - type Cerebellar ataxia
 Chorea
 Dystonia
 Tremor
 Other

Movement disorder type - other _____

Movement disorder - distribution UL proximal
 UL distal
 LL proximal
 LL distal
 Ocular
 Facial
 Oromandibular
 Cervical

Movement disorder - age at onset - years _____
 (If present at birth, enter 0 as value)

Movement disorder - age at onset - months _____
 (If present at birth, enter 0 as value)

Autonomic dysfunction

Autonomic dysfunction No
 Yes
 Unknown

Autonomic dysfunction - type Hyperhidrosis
 Constipation
 Cardiac dysfunction
 Bladder dysfunction
 Erectile dysfunction
 Other

Autonomic dysfunction type - other _____

Autonomic dysfunction - age at onset - years _____
 (If present at birth, enter 0 as value)

Autonomic dysfunction - age at onset - months _____
 (If present at birth, enter 0 as value)

Cognitive

Cognitive dysfunction

- No
 Yes
 Unknown

Cognitive dysfunction - type

- Global developmental delay (< 5 years)
 Intellectual disability (> 5 years)
 Learning disabilities
 Dementia
 Behavioural change
 Other

Learning disabilities - type

- Dyscalculia
 Dyspraxia
 Dyslexia

Cognitive dysfunction type - other

Cognitive dysfunction - course

- Static
 Improving
 Regression
 Unknown

Cognitive dysfunction - age at onset - years

(If present at birth, enter 0 as value)

Cognitive dysfunction - age at onset - months

(If present at birth, enter 0 as value)

Neuropsychometry performed

- No
 Yes
 Unknown

Neuropsychometry - report

(Upload/view Neuropsychometry report)

Neuropsychiatric disorders

- No
 Yes
 Unknown

Neuropsychiatric disorders- type

- Autistic spectrum disorder
 ADHD
 Psychosis
 Depression
 Other

Neuropsychiatric disorders - type - other

Neuropsychiatric disorders - age at onset - years

(If present at birth, enter 0 as value)

 Neuropsychiatric disorders - age at onset - months

 (If present at birth, enter 0 as value)

Gait

Motor ability

- Normal for age
 Walks without restrictions, with limitations for running and jumping
 Walks in most settings, may use physical assistance and climb stairs holding onto a railing
 Walks using a hand-held mobility device, use wheeled mobility for long distances
 Use methods of mobility that require physical assistance or powered mobility in most settings
 Transported in a manual wheelchair in all settings (Gross motor function)
-

Diminished motor ability - age at onset - years

 (If present at birth, enter 0 as value)

Diminished motor ability - age at onset - months

 (If present at birth, enter 0 as value)

Lost ambulation - age at onset - years

 (If present at birth, enter 0 as value)

Lost ambulation - age at onset - months

 (If present at birth, enter 0 as value)

6 min walk test - distance in metres

Dysmorphic features

Dysmorphic features

- No
 Yes
 Unknown
-

Dysmorphic features - description

Dysmorphic features - age of onset - years

 (If present at birth, enter 0 as value)

Dysmorphic features - age of onset - months

 (If present at birth, enter 0 as value)

Dysmorphic features - photo

 (Upload/view Photo of dysmorphic features)

Cranial nerves

Visual acuity Normal
 Abnormal
 Unknown

Visual acuity - right eye

_____ (E.g. "6/6" (Snellen), "0.0" (LogMAR) or "20/20")

Visual acuity - left eye

_____ (E.g. "6/6" (Snellen), "0.0" (LogMAR) or "20/20")

Visual impairment No
 Yes
 Unknown

Visual impairment - type Sight impaired
 Severely sight impaired or blind

Ocular signs No
 Yes
 Unknown

Ocular signs - type Ptosis
 Ophthalmoparesis
 INO
 Gaze palsy
 Nystagmus
 Cataracts
 Glaucoma
 Optic atrophy
 Structural eye abnormalities
 Squint
 Other

Ocular signs type - other

Ocular signs - age at onset - years

_____ (If present at birth, enter 0 as value)

Ocular signs - age at onset - months

_____ (If present at birth, enter 0 as value)

Facial weakness No
 Yes
 Unknown

Facial weakness - age at onset - years

_____ (If present at birth, enter 0 as value)

Facial weakness - age at onset - months

(If present at birth, enter 0 as value)

Bulbar signs

- No
 Yes
 Unknown
-

Bulbar signs - type

- Dysarthria
 Dysphagia
 Brisk jaw jerk
 Tongue fasciculations
 Tongue stiff
 Tongue weak
 Tongue large
 Neck weakness
 Other
-

Bulbar signs type - other

Bulbar signs - age at onset - years

(If present at birth, enter 0 as value)

Bulbar signs - age at onset - months

(If present at birth, enter 0 as value)

Percutaneous Endoscopic Gastrostomy (PEG)

- No
 Yes
 Refused
 Unknown
 (Ever used)
-

Feeding orally with PEG?

- No
 Yes
 Unknown
-

Percutaneous Endoscopic Gastrostomy (PEG) - age at insertion - years

Percutaneous Endoscopic Gastrostomy (PEG) - age at insertion - months

Percutaneous Endoscopic Gastrostomy (PEG) - age at removal - years

(If applicable)

Percutaneous Endoscopic Gastrostomy (PEG) - age at removal - months

(If applicable)

Nasogastric (NG) tube

- No
 Yes
 Unknown
 (Ever used)

Nasogastric (NG) tube - age at insertion - years

Nasogastric (NG) tube - age at insertion - months

Nasogastric (NG) tube - age at removal - years

(If applicable)

Nasogastric (NG) tube - age at removal - months

(If applicable)

Hearing loss

- No
 Yes
 Unknown

Hearing loss - type

- Conductive
 Sensorineural
 Unknown

Hearing loss - age of onset - years

(If present at birth, enter 0 as value)

Hearing loss - age of onset - months

(If present at birth, enter 0 as value)

Limbs and trunk

Scapular winging

- No
 Yes
 Unknown

Scapular winging - distribution

- Left
 Right
 Bilateral

Scapular winging - age at onset - years

(If present at birth, enter 0 as value)

Scapular winging - age at onset - months

(If present at birth, enter 0 as value)

Spinal abnormalities

- No
 Yes
 Unknown

Spinal abnormalities - type

- Kyphosis
 Scoliosis
 Hyperlordosis

Spinal abnormalities - age at onset - years

(If present at birth, enter 0 as value)

Spinal abnormalities - age at onset - months

(If present at birth, enter 0 as value)

Contractures

- No
 - Yes
 - Unknown
-

Contractures - distribution

- UL
 - LL
 - Axial/rigid spine
-

Contractures distribution - UL joints

- Left fingers
 - Right fingers
 - Left wrist
 - Right wrist
 - Left elbow
 - Right elbow
 - Left shoulder
 - Right shoulder
-

Contractures distribution - LL joints

- Left toes
 - Right toes
 - Left ankle
 - Right ankle
 - Left knee
 - Right knee
 - Left hip
 - Right hip
-

Contractures - age at onset - years

(If present at birth, enter 0 as value)

Contractures - age at onset - months

(If present at birth, enter 0 as value)

Joint laxity/hypermobility

- No
 - Yes
 - Unknown
-

Joint laxity/hypermobility - distribution

- UL
 - LL
 - Axial
-

Joint laxity/hypermobility distribution - UL joints

- Left fingers
- Right fingers
- Left wrist
- Right wrist
- Left elbow
- Right elbow
- Left shoulder
- Right shoulder

Joint laxity/hypermobility distribution - LL joints

- Left toes
 Right toes
 Left ankle
 Right ankle
 Left knee
 Right knee
 Left hip
 Right hip
-

Joint laxity/hypermobility - age at onset - years

(If present at birth, enter 0 as value)

Joint laxity/hypermobility - age at onset - months

(If present at birth, enter 0 as value)

Webbing/pterygium

- No
 Yes
 Unknown
-

Webbing/pterygium - distribution

- Hands
 Feet
-

Pes cavus

- No
 Yes
 Unknown
-

Pes cavus - age at onset - years

(If present at birth, enter 0 as value)

Pes cavus - age at onset - months

(If present at birth, enter 0 as value)

Pes planus

- No
 Yes
 Unknown
-

Pes planus - age at onset - years

(If present at birth, enter 0 as value)

Pes planus - age at onset - months

(If present at birth, enter 0 as value)

Equinovarus

- No
 Yes
 Unknown
-

Equinovarus - age at onset - years

(If present at birth, enter 0 as value)

Equinovarus - age at onset - months

_____ (If present at birth, enter 0 as value)

Amputation(s)

- No
 Yes
 Unknown

Amputation - which limb(s) or toe(s)

Ulcers

- No
 Yes
 Unknown

Ulcers - distribution

- UL
 LL

Ulcers - age at onset - years

_____ (If present at birth, enter 0 as value)

Ulcers - age at onset - months

_____ (If present at birth, enter 0 as value)

Muscle bulk

- Normal
 Abnormal
 Unknown

Muscle atrophy/wasting

- No
 Yes
 Unknown

Muscle atrophy/wasting - distribution

- UL proximal
 UL distal
 LL proximal
 LL distal
 Axial

Muscle atrophy/wasting - age at onset - years

_____ (If present at birth, enter 0 as value)

Muscle atrophy/wasting - age at onset - months

_____ (If present at birth, enter 0 as value)

Muscle hypertrophy

- No
 Yes
 Unknown

Muscle hypertrophy - distribution

- UL proximal
 UL distal
 LL proximal
 LL distal
 Neck
 Facial
 Paraspinal
 Scapular
-

Muscle hypertrophy - age at onset - years

(If present at birth, enter 0 as value)

Muscle hypertrophy - age at onset - months

(If present at birth, enter 0 as value)

Muscle weakness

- No
 Yes
 Unknown
-

Muscle weakness - distribution

- UL proximal
 UL distal
 LL proximal
 LL distal
 Axial
 Symmetrical
 Asymmetrical
-

Muscle weakness - LL proximal compartment(s)

- Anterior compartment
 Posterior compartment
-

Muscle weakness - LL distal compartment(s)

- Anterior compartment
 Posterior compartment
-

Muscle weakness - age at onset - years

(If present at birth, enter 0 as value)

Muscle weakness - age at onset - months

(If present at birth, enter 0 as value)

Fatigability

- No
 Yes
 Unknown
-

Fatigability - type

- Exertion
 Diurnal
-

Fatigability - distribution

- UL
 LL
 Ptosis
 Extraocular
 Cervical
 Bulbar

Fatigability - age at onset - years

(If present at birth, enter 0 as value)

Fatigability - age at onset - months

(If present at birth, enter 0 as value)

Myotonia

- No
 Yes
 Unknown
-

Myotonia - distribution

- UL proximal
 UL distal
 LL proximal
 LL distal
 Eye closure
 Facial
 Cervical
 Paraspinal
-

Myotonia - age at onset - years

(If present at birth, enter 0 as value)

Myotonia - age at onset - months

(If present at birth, enter 0 as value)

Peripheral/lower motor neuron signs

- No
 Yes
 Unknown
-

Peripheral/lower motor neuron signs - type

- Reduced tone
 Reduced/absent reflexes
-

Peripheral/lower motor neuron signs reduced tone - distribution

- RUL
 LUL
 RLL
 LLL
-

Peripheral/lower motor neuron signs reduced/absent reflexes- distribution

- RUL
 LUL
 RLL
 LLL
-

Peripheral/lower motor neuron signs reduced/absent reflexes distribution - RUL

- Bicep
 Supinator
 Tricep
-

Peripheral/lower motor neuron signs reduced/absent reflexes distribution - LUL

- Bicep
 Supinator
 Tricep
-

Peripheral/lower motor neuron signs reduced/absent reflexes distribution - RLL

- Knee
 Ankle
-

Peripheral/lower motor neuron signs reduced/absent
reflexes distribution - LLL

- Knee
 Ankle

Peripheral signs - age at onset - years

(If present at birth, enter 0 as value)

Peripheral signs - age at onset - months

(If present at birth, enter 0 as value)

Pyramidal signs

- No
 Yes
 Unknown

Pyramidal signs - type

- Spasticity
 Hyper-reflexia

Pyramidal signs spasticity - distribution

- RUL
 RLL
 LUL
 LLL
 Clonus

Pyramidal signs hyper-reflexia - distribution

- RUL
 LUL
 RLL
 LLL

Pyramidal signs hyper-reflexia distribution - RUL

- Bicep
 Supinator
 Tricep
 Finger flexors
 Hoffman's response

Pyramidal signs hyper-reflexia distribution - LUL

- Bicep
 Supinator
 Tricep
 Finger flexors
 Hoffman's response

Pyramidal signs hyper-reflexia distribution - RLL

- Knee
 Ankle
 Babinski

Pyramidal signs hyper-reflexia distribution - LLL

- Knee
 Ankle
 Babinski

Pyramidal signs - age at onset - years

(If present at birth, enter 0 as value)

Pyramidal signs - age at onset - months

(If present at birth, enter 0 as value)

Extrapyramidal signs No
 Yes
 Unknown

Extrapyramidal signs - type Rigidity
 Bradykinesia
 Tremor
 Loss of postural reflexes

Extrapyramidal signs - age of onset - years _____
 (If present at birth, enter 0 as value)

Extrapyramidal signs - age of onset - months _____
 (If present at birth, enter 0 as value)

Cerebellar signs No
 Yes
 Unknown

Cerebellar signs - type UL
 LL
 Gait
 Nystagmus
 Saccades
 Speech
 Tremor
 Trunk

Cerebellar signs - age at onset - years _____
 (If present at birth, enter 0 as value)

Cerebellar signs - age at onset - months _____
 (If present at birth, enter 0 as value)

Sensory loss Yes
 No
 Unknown

Sensory loss - age at onset - years _____
 (If present at birth, enter 0 as value)

Sensory loss - age at onset - months _____
 (If present at birth, enter 0 as value)

Pin prick Normal
 Abnormal
 Unknown

Pin prick - level and distribution _____

Temperature Normal
 Abnormal
 Unknown

Temperature - level and distribution

Vibration Normal
 Abnormal
 Unknown

Vibration - level and distribution

Joint position sense Normal
 Abnormal
 Unknown

Joint position sense - level and distribution

Joint position sense - pseudoathetosis No
 Yes
 Unknown

Hammersmith scale test

If the diagnosis is SMA Type 2 or 3, is a Hammersmith Scale result available? No
 Yes
 Unknown

Which Hammersmith Scale test was used? The Revised Hammersmith Scale (RHS) is preferred. Hammersmith Functional Motor Scale (HFMS)
 Modified Hammersmith Functional Motor Scale (MHFMS)
 Hammersmith Functional Motor Scale Expanded (HFMS-E)
 Revised Hammersmith Scale (RHS)
 Modified Hammersmith Functional Motor Scale Extended (MHFMS-Extend)
<http://www.smaeachuk.org/smaoutcomemeasures/the-hammersmith-scale-what-is-it>

Hammersmith Scale test score

Upload/view Hammersmith Scale test form

North Star Ambulatory Assessment (NSAA)

If the diagnosis is DMD and participant is ambulatory and < 18 Years, is North Star Ambulatory Assessment (NSAA) result available? No
 Yes
 Unknown

Total NSAA score

(0-34)

Upload/view NSAA test form

Medical Research Council (MRC) sum score - used with the permission of the Medical Research Council

The total MRC sum score ranges from 0 (total paralysis) to 70 (normal strength). The score is the sum of the MRC score of 7 muscles (4 in the upper limbs and 3 in the lower limbs) on both sides, each muscle graded from 0 to 5.

Grade 5: Normal Strength

Grade 4: Ability to resist against moderate pressure throughout range of motion

Grade 3: Ability to move through full range of motion against gravity. If a subject has a contracture that limits joint movement, the mechanical range will be to the point at which the contracture causes joint restriction

Grade 2: Ability to move through full range of motion with gravity eliminated

Grade 1: A flicker of motion is seen or felt in the muscle

Grade 0: No movement

Upper limbs

	Grade 5	Grade 4	Grade 3	Grade 2	Grade 1	Grade 0
Right shoulder abduction (deltoid)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right elbow flexion (biceps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right wrist extension (wrist extensors)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right 1st DIO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Left shoulder abduction (deltoid)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Left elbow flexion (biceps)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Left wrist extension (wrist extensors)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Left 1st DIO	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Lower limbs

	Grade 5	Grade 4	Grade 3	Grade 2	Grade 1	Grade 0
Right hip flexion (Ileopsoas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right knee extension (quadriceps femoris)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Right dorsiflexion foot (tibialis anterior)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Left hip flexion (Ileopsoas)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Left knee extension (quadriceps femoris)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Left dorsiflexion foot (tibialis anterior)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Total MRC sum score _____

CMTNS

Patient name: [subj_first_name] [subj_surname]

Date:

(YYYY-MM-DD)

Evaluator:

Sensory symptoms¹

- None
- Symptoms below or at ankle bones
- Symptoms up to the distal half of the calf
- Symptoms up to the proximal half of the calf, including knee
- Symptoms above knee (above the top of the patella)

Motor symptoms legs²

- None
- Trips, catches toes, slaps feet. Shoe inserts
- Ankle support or stabilization (AFOs). Foot surgery⁵
- Walking aids (cane, walker)
- Wheelchair

Motor symptoms arms

- None
- Mild difficulty with buttons
- Severe difficulty or unable to do buttons
- Unable to cut most foods
- Proximal weakness (affect movements involving the elbow and above)

Pinprick sensibility^{1,3}

- Normal
- Decreased below or at ankle bones
- Decreased up to the distal half of the calf
- Decreased up to the proximal half of the calf, including knee
- Decreased above knee (above the top of the patella)

Vibration⁴

- Normal
- Reduced at great toe
- Reduced at ankle
- Reduced at knee (tibial tuberosity)
- Absent at knee and ankle

Strength legs

- Normal
- 4+, 4 or 4- on foot dorsiflexion or plantar flexion
- < 3 on foot dorsiflexion or < 3 on foot plantar flexion
- < 3 on foot dorsi and < 3 on plantar flexion
- Proximal weakness

Strength arms

- Normal
- 4+, 4 or 4- on intrinsic hand muscles⁵
- < 3 on intrinsic hand muscles⁶
- < 5 on wrist extensors
- Weak above elbow

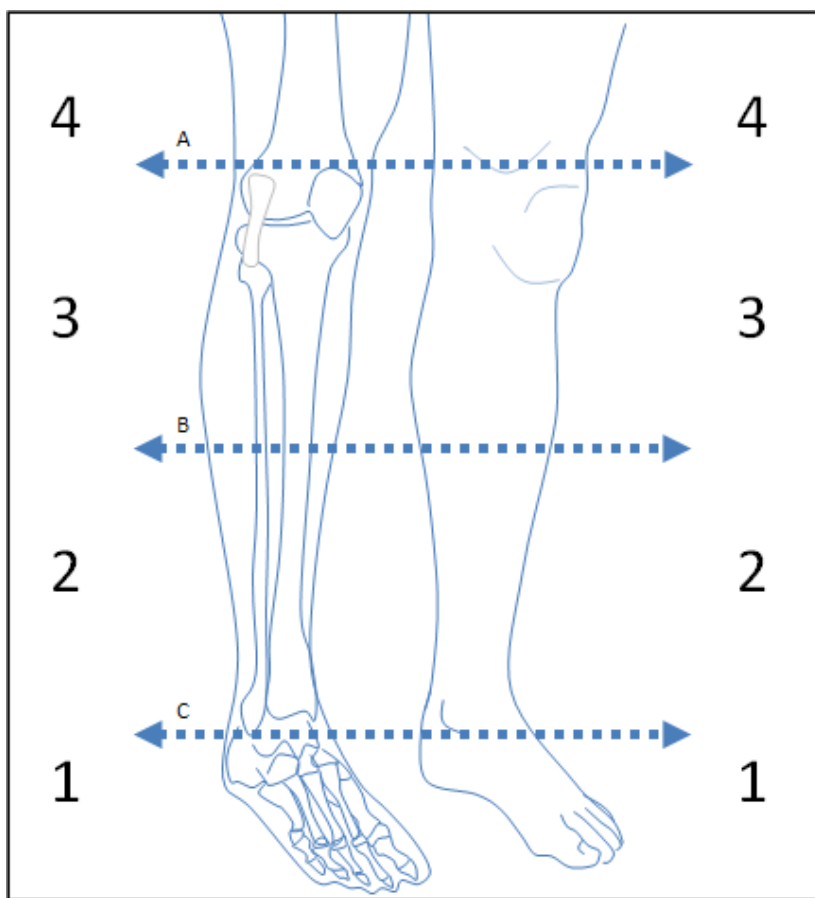
Ulnar CMAP (Median)

- >6mV (>4mV)
- 4-5.9mV (2.8-3.9)
- 2-3.9 mV (1.2-2.7)
- 0.1-1.9 mV (0.1-1.1)
- Absent (Absent)

Radial SAP amplitude, antidromic

- >15 ?V
- 10 - 14.9 ?V
- 5 - 9.9 ?V
- 1 - 4.9 ?V
- < 1 ?V

Notes: 1: Use the picture below to discriminate the level of the symptoms; 2: Uses aid most of the time. The patient was prescribed to wear/use or should be wearing/using the aid in the examiners opinion (see written instructions); 3: Abnormal if patient says it is definitely decreased compared to a normal reference point; 4: Use Rydell Seiffer tuning fork. Definition of Normal: > 5; 5: See written instructions for details of eligible foot surgery; 6: Intrinsic hand muscles strength assessment: Test only Abductor Pollicis Brevis (ABP) and First Dorsal Interosseus (FDI), then choose the stronger to give the score.



CMTSS Subtotal

CMTES Subtotal

CMTNS result

CMTNS Total

Patient details

Patient name: [subj_first_name] [subj_surname]

Age: [subj_age_yrs]

Gender: [subj_sex]

Raw scores

1. Functional Dexterity

(seconds)

2. 9 Hole Peg

(seconds)

3. Grip

(Newtons)

4. Plantarflexion

(Newtons)

5. Dorsiflexion

(Newtons)

6. Pinprick

- Normal
- Decreased below or at ankle bones
- Decreased at or below midline of calf
- Decreased above calf midline up to and including knee
- Decreased above knee (above top of patella)

7. Vibration

- Normal
- Reduced at first metatarsal bone
- Reduced at ankle
- Reduced at knee (tibial tuberosity)
- Absent at knee and ankle

8. Balance

(Bruininks Oseretsky (0-37))

9. Gait

Foot drop

- No
- Some
- Yes

Difficulty heel walking

- No
 Some
 Yes

Difficulty toe walking

- No
 Some
 Yes

10. Long Jump

(centimetres)

11. 6 Minute Walk

(metres)

CMPedS result

Total CMPedS Score

(CMPedS calculator: <https://www.cmpeds.org/>)

Report

Participant CMPedS report

(Upload/view CMPedS report)

Comments

Any other comments on clinical assessment

Follow-up comments

Comments from follow-up visits

(For utility; not expected as part of the ICGNMD study (cross-sectional))

Investigations

EMG

EMG Normal
 Abnormal
 Not done

EMG - abnormality Myopathic
 Neurogenic
 Neuromuscular transmission disorder
 Other

EMG abnormality - other _____

EMG spontaneous activity No
 Yes
 Not done

EMG spontaneous activity - type Myotonic/pseudomyotonic
 Fibrillation
 Positive sharp waves
 Fasciculations

EMG - report (Upload/view EMG report)

EMG images available No
 Yes
 Unknown

Nerve conduction studies

Motor nerve conduction studies Normal
 Abnormal
 Not done

Motor nerve conduction studies - abnormality Axonal
 Demyelinating
 Mixed

Sensory nerve conduction studies Normal
 Abnormal
 Not done

Sensory nerve conduction studies - abnormality Axonal
 Demyelinating
 Mixed

Nerve conduction studies - report (Upload/view Nerve conduction study report)

Echocardiogram

Echocardiogram

- Normal
 Abnormal
 Not done

Echocardiogram - report

(Upload/view Echocardiogram report)

MRI

Brain MRI

- Normal
 Abnormal
 Not done

Brain MRI - findings

- White matter abnormalities
 Lissencephaly
 Polymicrogyria
 Brainstem abnormalities
 Cerebral atrophy
 Basal ganglia atrophy
 Cerebellar atrophy
 Cerebellar dysplasia
 Cerebellar cysts
 Optic nerve abnormalities
 Other

Brain MRI - findings - other

Brain MRI - report

(Upload/view Brain MRI report)

Spine MRI

- Normal
 Abnormal
 Not done

Spine MRI - report

(Upload/view Spine MRI report)

Limbs MRI

- Normal
 Abnormal
 Not done

Limbs MRI - report

(Upload/view Limbs MRI report)

MRI images available

- No
 Yes
 Unknown

Muscle ultrasound

Muscle ultrasound Normal
 Abnormal
 Not done

Muscle ultrasound - report (Upload/view Muscle ultrasound report)

Nerve ultrasound

Nerve ultrasound Normal
 Abnormal
 Not done

Nerve ultrasound - report (Upload/view Nerve ultrasound report)

Muscle biopsy

Muscle biopsy Normal
 Abnormal
 Not done

Suggestive of muscular dystrophy No
 Yes
 Unknown
 (Internalized nuclei, fibrosis, fibre size variation, rounded fibers.)

Muscular dystrophy - findings Alpha dystroglycanopathy
 Merosin (laminin 2) deficiency
 Collagen VI related myopathy
 Myofibrillar myopathy (desmin, myotilin, VCP abnormal staining)
 Caveolin deficiency
 Emerin deficiency
 Calpain deficiency
 Dystrophin deficiency
 Sarcoglycan deficiency
 Dysferlin deficiency
 Other

Muscular dystrophy - merosin deficiency Partial
 Complete
 Unknown

Muscular dystrophy findings - other _____

Suggestive of congenital myopathy No
 Yes
 Unknown

Congenital myopathy - findings

- Central core disease
 Centronuclear/Myotubular myopathy
 Congenital fibre type disproportion
 Multiminicore myopathy
 Nemaline myopathy
 Other
-

Congenital myopathy findings - other

Suggestive of mitochondrial disease

- No
 Yes
 Unknown
-

Mitochondrial disease - findings

- Ragged red fibres
 COX negative fibres
 COX/SDH positive fibres
 Other
-

Mitochondrial disease findings - other

Mitochondrial disease - respiratory chain enzyme analysis

- No
 Yes
 Unknown
-

Mitochondrial disease respiratory chain enzyme analysis - findings

Mitochondrial disease - respiratory chain enzyme analysis - report

(Upload/view Respiratory chain enzyme analysis report)

Additional histological findings

- Inflammatory infiltrates
 Myofibrillar changes
 Mitochondrial changes
 Rimmed vacuoles
 Protein aggregates
 Neurogenic change
-

Muscle biopsy - report

(Upload/view Muscle biopsy report)

Muscle biopsy slides available

- No
 Yes
 Unknown

Nerve biopsy

Nerve biopsy Normal
 Abnormal
 Not done

Nerve biopsy - report
 (Upload/view Nerve biopsy report)

Nerve biopsy slides available No
 Yes
 Unknown

Other tissue studies

Other tissue studies No
 Yes
 Unknown

Other tissue studies done

Other tissue studies - report
 (Upload/view Other tissue studies report)

Creatine phosphokinase (CPK)

CPK tested No
 Yes
 Unknown

CPK result - 1

CPK unit - 1

CPK tested - age - years - 1

CPK tested - age - months - 1

CPK result - 2

CPK unit - 2

CPK tested - age - years - 2

CPK tested - age - months - 2

CPK result - 3

CPK unit - 3

CPK tested - age - years - 3

CPK tested - age - months - 3

Additional laboratory tests

Additional laboratory tests available

- No
- Yes
- Unknown

Additional laboratory tests available - type

- Alb
- ALP
- ALT
- Ammonia (plasma)
- Blood lactate
- Cr
- CrCl
- CSF lactate
- Fasting glucose level
- GGT
- Glu (random)
- Hb
- HbA1c
- K
- MCV
- Na
- Plt
- T4
- TSH
- Urea
- WCC
- Other

Alb

Alb - unit

ALP

ALP - unit

ALT

ALT - unit

Ammonia (plasma)

Ammonia (plasma) - unit

Blood lactate

Blood lactate - unit

Cr

Cr - unit

CrCl

CrCl - unit

CSF lactate

CSF lactate - unit

Fasting glucose level

Fasting glucose level - unit

GGT

GGT - unit

Glu (random)

Glu (random) - unit

Hb

Hb - unit

HbA1c

HbA1c - unit

K

K - unit

MCV

MCV - unit

Na

Na - unit

Plt

Plt - unit

T4

T4 - unit

TSH

TSH - unit

Urea

Urea - unit

WCC

WCC - unit

Lab test - other(s)

HIV and hepatitis status

HIV status Negative
 Positive
 Unknown

HIV status - CD4 count

HIV status - viral load

Hep A status Negative
 Positive
 Unknown

Hep B status Negative
 Positive
 Unknown

Hep C status Negative
 Positive
 Unknown

Other known infectious diseases

List any other known infectious diseases

Comments

Any other comments on investigations

Non Icgnmd Genetic Testing

Have any of the following genetic tests been performed? (or are they currently being performed?)

	No	Yes, abnormal result (confirms diagnosis)	Yes, normal result	In progress	Unknown
SMA (SMN1) MLPA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DMD MLPA	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DMD Sequencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CMT1A MLPA (17p duplication analysis)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Myotonic dystrophy Type 1 testing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Myotonic dystrophy Type 2 testing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
FSHD testing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Familial ALS (C9ORF72)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
RYR-1 Screening for South African founder mutations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CANVAS	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please give details of result(s)

Optional: Pseudonymised reports can be uploaded here (Zip if more than one)

Record details of other local testing and local testing limitations here

You can upload de-identified copies of non-ICGNMD genetic reports here (.pdf, .jpg, .png)

- Are any of the following diagnostic tests required, but not available locally, for this participant?
- SMA (SMN1) MLPA
 - DMD MLPA
 - DMD Sequencing
 - CMT1A MLPA (17p duplication analysis)
 - Myotonic dystrophy Type 1 testing
 - Myotonic dystrophy Type 2 testing
 - FSHD testing
 - Familial ALS (C9ORF72)
 - RYR-1 Screening for South African founder mutations
 - CANVAS

Has mitochondrial DNA testing been performed?

	No	Yes, abnormal result (confirms diagnosis)	Yes, normal result	In progress	Unknown
Common mitochondrial point mutations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole mitochondrial genome sequencing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
mtDNA rearrangement analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
mtDNA depletion analysis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other - please specify test

Please give details of result(s)

Has any exome sequencing been performed (targeted exome/ gene panel, or whole exome sequencing)?

	No	Yes	In progress	Unknown
Whole Exome Sequencing as singleton	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole Exome Sequencing duo	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Whole Exome Sequencing trio or larger	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Gene Panel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Targeted Exome	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Please give details e.g. positive results or family members included. Panel content may also be listed here.

Are any other diagnostic genetic tests outstanding?

- No
 Yes
 Unknown

Please give details

Personal Details

Personal details

Clinic/lab/local study subject ID

(Primary identifier at host)

Initials

Year of birth

Sample Tracking

SENDER TO COMPLETE

Samples shipped for genetic analysis

- No
- Yes

Sample type(s) shipped

DNA

- No
- Yes

Number of DNA sample tubes sent

- 1
- 2
- 3
- 4

Blood

- No
- Yes

Number of blood sample tubes sent

- 1
- 2
- 3
- 4

Skin tissue/fibroblast

- No
- Yes

Number of skin tissue sample tubes sent

- 1
- 2
- 3
- 4

Muscle tissue

- No
- Yes

Number of muscle tissue sample tubes sent

- 1
- 2
- 3
- 4

Buccal

- No
- Yes

Number of buccal sample tubes sent

- 1
- 2
- 3
- 4

Saliva

- No
- Yes

Number of saliva sample tubes sent

- 1
 2
 3
 4
-

Urine

- No
 Yes
-

Number of urine sample tubes sent

- 1
 2
 3
 4
-

Date samples sent

(YYYY-MM-DD)

Courier tracking ID

Upload/view photo of sample

(Photo of 1 x sample tube showing ICGNMD Study ID on tube to be shipped)

Upload/view sample manifest

Sender comments

RECIPIENT TO COMPLETE

UCL OR IN-COUNTRY GENETIC ANALYSIS PROVIDER (TURKEY, INDIA)

Sample received

- No
 Yes
-

Date samples received

(YYYY-MM-DD)

Samples received ok?

- No
 Yes
-

Issue with samples received

- Sample damage/loss
 Sample ID unclear
 Sample absent from box
 Other
-

Issue with samples received - other

Sample quality

- Acceptable
 Re-send existing sample
 Collect fresh sample
-

Upload/view photo of received sample

(Photo of 1 x sample tube showing ICGNMD Study ID on tube to be shipped)

Date samples processed

(YYYY-MM-DD)

Processed sample information

Recipient comments

RETURNS

Will some or all of the processed samples be returned to sender?

No
 Yes

Date samples returned to sender

(YYYY-MM-DD)

Sample return comments

(Person shipping can add notes here)

Sample return complete comments

(Person at destination can add notes here)

THIRD PARTY PROCESSING

Will some or all of the processed samples be shipped to third party?

No
 Yes

Date samples sent to third Party

(YYYY-MM-DD)

Third party processing comments

(Person shipping can add notes for third party recipient here)

Cohort Management

Participant update

Is the participant dead? Yes

Age at death - years

Age at death - months

Cause of death - type

- NMD-disease related
 Non-NMD-disease related

Cause of death - description

Full consent for entry/continued data use post-mortem
by the participant or parent/guardian?

- No
 Yes
 Undetermined

Any other comments on participant

Monitoring And Analysis

RELATIVE: ICGNMD genetic testing

Relative affected or unaffected?

- Affected
 Unaffected

Relative Test #1

ICGNMD Test #1 done on this relative's sample

- Reanalyse non-ICGNMD WES/WGS data
 Single gene test
 Sanger
 Array
 WES
 WGS
(Always record relative's results separate from proband results)

Date of test

(YYYY-MM-DD)

Summary of this relative's test result

Upload this relative's report here

Optional: upload additional ICGNMD report for this relative

Add another ICGNMD test result for this relative?

- yes
 no

Relative Test #2

ICGNMD Test #2 done on this relative's sample

- Single gene test
 Sanger
 Array
 WES
 WGS
(Always record relative's results separate from proband results)

Date of test #2

(YYYY-MM-DD)

Summary of relative's test result

Upload relative report here

Optional: upload additional ICGNMD report for this relative

Add another ICGNMD test result for this relative?

- yes
 no

Relative Test #2

ICGNMD Test #3 done on this relative's sample

- Single gene test
 Sanger
 Array
 WES
 WGS
(Always record relative's results separate from proband results)

Date of test #3

(YYYY-MM-DD)

Summary of relative's test result

Upload relative report here

Optional: upload additional ICGNMD report for this relative

UNRELATED CONTROL PARTICIPANT: ICGNMD Genetic testing

ICGNMD Test done on this unrelated control sample

- Single gene test
 Sanger
 Array
 WES
 WGS

Date of test

(YYYY-MM-DD)

Any notes for control test data

Upload unrelated control report here

Genetic Test Planning

Test Planning Note #1

Date of Discussion

(YYYY-MM-DD)

Add another discussion note?

 Yes

Test Planning Note #2

Date of Discussion

(YYYY-MM-DD)

Add another discussion note?

 Yes

Test Planning Note #3

Date of Discussion

(YYYY-MM-DD)

Add another discussion note?

 Yes

Test Planning Note #4

(If >4 test discussions, add here)

Date of Discussion

(YYYY-MM-DD)

Participant already genetically "solved", no ICGNMD test needed?

- yes
 yes but want to discuss local results with ICGNMD
 no
 (No ICGNMD report generated if solved locally)

Local tests/checks needed OUTSIDE ICGNMD project (Not funded by ICGNMD)

Any local tests/checks to do outside ICGNMD Project?

- yes
 no
 (May be BEFORE or AT SAME TIME as ICGNMD testing.
 List any tests NOT FUNDED by ICGNMD award.)

Local tests/checks to do BEFORE ICGNMD test can start

- yes
 no

Summary of local tests/checks to do BEFORE ICGNMD testing

(Most recent notes at top, with date & initials)

Local tests/checks completed now? (Local team to complete)

- Yes, local tests complete: start ICGNMD test
 Yes, local tests complete: review & decide next steps
 Yes, local tests complete: ICGNMD test NO LONGER NEEDED
 No, local work in progress: ICGNMD testing can't start yet
 (REMEMBER! Update "Non-ICGNMD Genetic Testing" section with local test results)

Local tests/checks to do AT SAME TIME as ICGNMD testing

- yes
 no

Summary of local tests/checks to do AT SAME TIME AS ICGNMD testing

(Most recent notes at top, with date & initials)

Local checks/test results - summary by local team

(REMEMBER! Update other REDCap sections with local test results)

ICGNMD reanalyse Non-ICGNMD data

Reanalyse existing WES/WGS data with ICGNMD pipeline?

- Yes
 No

Date of Joint Decision

(YYYY-MM-DD)

Reason for re-analysis of non-ICGNMD data

File format

- fastq (Best format)
 vcf (OK)
 Other (Check first)

File name (must contain ICGNMD Study ID)

(Transferring site must complete)

File(s) transferred to UCL?

- Yes
 No
 (Transferring site must complete)

Date file transferred to UCL

(YYYY-MM-DD)

PanelApp filters

Select 1-5 PanelApp Panels to filter PDF report?

- Yes
 Not yet
 (SELECT 1 to 5 PANELS)

Channelopathies

- Brain channelopathy
 Skeletal muscle channelopathy

Inherited Epilepsy Syndromes

- Genetic epilepsy syndromes

Mitochondrial

- Mitochondrial Disorders

Motor and Sensory Disorders of the PNS

- Hereditary neuropathy
 Paediatric motor neuronopathies

Motor Disorders of the CNS

- Cerebellar hypoplasia
 Early onset dystonia
 Hereditary spastic paraplegia
 Neurotransmitter disorders
 Structural basal ganglia disorders

Neurodegenerative Disorders

- Amyotrophic lateral sclerosis/motor neuron disease
 Hereditary ataxia - adult onset

Neurodevelopmental disorders

- Intellectual disability
 Malformations of cortical development
 Hereditary ataxia and cerebellar anomalies - childhood onset

Neuromuscular disorders

- Arthrogryposis
 Congenital muscular dystrophy
 Congenital myaesthenic syndrome
 Congenital myopathy
 Distal myopathies
 Limb girdle muscular dystrophy
 Rhabdomyolysis and metabolic muscle disorders

Parenchymal brain disorders

- Intracerebral calcification disorders

Peroxisomal disorders

- Peroxisomal disorders

Connective tissues disorders

- Ehlers Danlos syndromes

Specific metabolic abnormalities

- Undiagnosed metabolic disorders

List other PanelApp panels here

(Use EXACT panel names as listed at <https://panelapp.genomicsengland.co.uk/panels/>)

Additional analysis notes, e.g. specific genes to check

(Note: Checking specific genes NOT part of standard pipeline)

Request bespoke ICGNMD analysis?

Select bespoke ICGNMD analyses (in addition to Panels)

- Yes
 Not yet
 (Please only select if essential: bespoke analyses use a lot of ICGNMD time.)

Bespoke ICGNMD analyses

- mtDNA analysis
 CNV or SV detection
 notinuse1
 notinuse2
 (Please only select if essential: bespoke analyses use a lot of ICGNMD time.)

ICGNMD Report for Reanalysed Non-ICGNMD Data

UCL research report uploaded

 (YYYY-MM-DD)

ICGNMD research report (summary PDF with filters)

ICGNMD .csv file (no panel filters)

(If requested) ICGNMD bespoke analysis report

ICGNMD Review of Reanalysis

Date of joint review of result

 (YYYY-MM-DD)

Has ICGNMD reanalysis provisionally solved?

- Yes: provisionally solved
 Yes, confirms other test result
 No, has not supported a research finding

Causative variant #1

Condition #1 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #1 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 1 - VCF

 (Use format (CHR POS ID REF ALT): 1 230710048 rs699 A G)

Variant results #1 - freetext notes

Variant #1 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Add another variant?

- yes
 no

Causative variant #2

Condition #2 [Orphanet]

Free text box if Orphanet not suitable

Caustive gene & variant #2 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 2 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699 A G)

Variant #2 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Variant #2 results - freetext notes

Add another variant?

- yes
 no

Causative variant #3

Condition #3 [Orphanet]

Free text box if Orphanet not suitable

Caustive gene & variant #3 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 3 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699 A G)

Variant #3 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Variant #3 results - freetext notes

Add another variant?

- yes
 no

Causative variant #4

Condition #4 [Orphanet]

Free text box if Orphanet not suitable

Caustive gene & variant #4 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 4 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699 A G)

Variant #4 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Variant #4 results - freetext notes

ICGNMD Next steps

ICGNMD testing needed after reanalysis?

- Yes
 No

Which additional test?

- WES
 WGS
 Sanger seq
 Array
 Single Gene Test
 Reanalyse WES data
 (If you select a new test, complete that section)

ICGNMD Single Gene Test #1

Go to ICGNMD single gene test #1?

- Yes
 No

Date of Joint Decision

 (YYYY-MM-DD)

Notes (e.g. justification, test conditions)

Which country will test take place in?

- UK (or Leiden for some FSHD)
 India
 Brazil
 Other

Single Gene Test #1 Agreed

At UCL or Leiden

- DM1
 CMT1a MLPA
 c9orf72
 SMA MLPA
 FSHD1
 FSHD2
 OPMD
 CANVAS
 Friedreich's Ataxia
 SCAS
 Other

Other test or extra detail

In India

- DM1
 CMT1a MLPA
 c9orf72
 SMA MLPA
 FSHD1
 FSHD2
 OPMD
 CANVAS
 Friedreich's Ataxia
 SCAS
 DMD MLPA
 DMD gene seq
 Other

Other test or extra detail

In Brazil

- pmp22
 MPZ
 GJB1
 Other

Other test or extra detail

Other (enter single gene test & country)

Same single gene test for relatives AT SAME TIME as proband?

Test relatives as well?

- Yes
 No

Optional: Relative #1

Relative #1: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #2

Relative #2: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #3

Relative #3: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #4

Relative #4: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) single gene tests complete and their REDCap records updated?

family single gene test 1 complete
 (Record relative's results in own REDCap record - not in proband record)

Sample tracking

Samples available at test site (or test co-ordinating site)?

yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

(Optional) Samples sent to approved 3rd party test lab?

yes
 no
 (MTA & Terms of Service must be in place prior to sending to 3rd party)

(Optional) Date samples sent to approved 3rd party

(YYYY-MM-DD)

After-test reporting

Result Quality Satisfactory? yes
 no

Testing site to repeat test on same sample? yes
 no

New sample needed to repeat? yes
 no

Decision = do not repeat test yes
 no

Reason for single gene test failure?

Data file for failed test

(OPTIONAL: upload file to show failed test or low quality outputs)

Single Gene Test Results file (research only)

(Upload/View Single Gene Test report)

Single gene: test provisional results

- Supports diagnosis
 Partially supports diagnosis
 Does not support diagnosis
 Inconclusive result

UCL ICGNMD Report for Single Gene Test#1

UCL research report uploaded

(YYYY-MM-DD)

ICGNMD research report

ICGNMD Review of Single Gene Test #1

Date of joint review of result

(YYYY-MM-DD)

Condition [Orphanet]

Free text box if Orphanet not suitable

Caustive gene & variant [OMIM]

Free text box if OMIM not suitable

Known gene mutation 1 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Single gene test #1 results - freetext notes

Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Has Single Gene Test #1 provisionally solved?

- Yes: provisionally solved with this test
 Yes, this test confirms other test result
 No, this test has not supported a research finding

ICGNMD Next steps

More ICGNMD testing needed after Single Gene Test #1?

- Yes
 No

Which additional test?

- Same test on relatives
 WES
 WGS
 Sanger seq
 Array
 Different Single Gene Test
 (If you select a new test, complete that section)

Sample tracking

Relative samples at test site (or test co-ordinating site)?

- yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

Optional: Relative #1

Relative #1: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #2

Relative #2: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #3

Relative #3: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #4

Relative #4: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) single gene test1 family REDCap records updated?

family single gene test 1 records completed (Record relative's results in own REDCap record - not in proband record)

ICGNMD Review of later relative tests

Date of joint review of additional family single gene tests

(YYYY-MM-DD)

(Proband record only) What has single gene testing of relatives added to proband's ICGNMD research findings?

ICGNMD Single Gene Test #2

Go to ICGNMD single gene test #2?

Yes
 No

Date of Joint Decision

(YYYY-MM-DD)

Notes (e.g. justification, test conditions)

Which country will test take place in?

UK (or Leiden for some FSHD)
 India
 Brazil
 Other

Single Gene Test #2 Agreed

At UCL or Leiden

DM1
 CMT1a MLPA
 c9orf72
 SMA MLPA
 FSHD1
 FSHD2
 OPMD
 CANVAS
 Friedreich's Ataxia
 SCAS
 Other

Other test or extra detail

In India

- DM1
 - CMT1a MLPA
 - c9orf72
 - SMA MLPA
 - FSHD1
 - FSHD2
 - OPMD
 - CANVAS
 - Friedreich's Ataxia
 - SCAS
 - DMD MLPA
 - DMD gene seq
 - Other
-

Other test or extra detail

In Brazil

- pmp22
 - MPZ
 - GJB1
 - Other
-

Other test or extra detail

Other (enter single gene test & country)

Same single gene test for relatives AT SAME TIME as proband?

Test relatives as well?

- Yes
- No

Optional: Relative #1

Relative #1: Relation to proband

- mother
 - father
 - brother
 - sister
 - other
-

Is this Relative also affected?

- yes
 - no
-

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #2

Relative #2: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #3

Relative #3: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #4

Relative #4: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Sample tracking

Samples available at test site (or test co-ordinating site)?

yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

Relatives: summary

Tick box when relative(s) testing complete and their REDCap records updated

family single gene test 2 complete (Record relative's results in own REDCap record - not in proband record)

(Optional) Samples sent to approved 3rd party test lab?

yes
 no
(MTA & Terms of Service must be in place prior to sending to 3rd party)

(Optional) Date samples sent to approved 3rd party

(YYYY-MM-DD)

After-test reporting

Result Quality Satisfactory?

yes
 no

Testing site to repeat test on same sample?

yes
 no

New sample needed to repeat?

yes
 no

Decision = do not repeat test

yes
 no

Reason for single gene test failure?

Data file for failed test

(OPTIONAL: upload file to show failed test or low quality outputs)

Single Gene Test Results file (research only)

(Upload/View Single Gene Test report)

Single gene: test provisional results

- Supports diagnosis
 Partially supports diagnosis
 Does not support diagnosis
 Inconclusive result

UCL ICGNMD Report for Single Gene Test#2

UCL research report uploaded

(YYYY-MM-DD)

ICGNMD research report

ICGNMD Review of Single Gene Test #2

Date of joint review of result

(YYYY-MM-DD)

Condition [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant [OMIM]

Free text box if OMIM not suitable

Known gene mutation 1 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Single gene test #2 results - freetext notes

Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Has Single Gene Test #2 provisionally solved?

- Yes: provisionally solved with this test
 Yes, this test confirms other test result
 No, this test has not supported a research finding

ICGNMD Next steps

More ICGNMD testing needed after Single Gene Test #2?

- Yes
 No

Which additional test?

- Same test on relatives
 WES
 WGS
 Sanger seq
 Array
 Different Single Gene Test
 (If you select a new test, complete that section)

Sample tracking

Relative samples at test site (or test co-ordinating site)?

yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

Optional: Relative #1

Relative #1: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #2

Relative #2: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #3

Relative #3: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #4

Relative #4: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) single gene tests complete and their REDCap records updated?

- family single gene test 2 records completed
 (Record relative's results in own REDCap record - not in proband record)

ICGNMD Review of later relative tests

Date of joint review of additional family single gene tests

 (YYYY-MM-DD)

(Proband record only) What has single gene testing of relatives added to proband's ICGNMD research findings?

ICGNMD Whole EXOME Sequencing

Go to ICGNMD WES

- Yes
 No

Date of Joint Decision

 (YYYY-MM-DD)

Notes (e.g. justification)

Which country will test take place in?

- UK
 India
 Turkey
 Other
 (UK includes Macrogen (EU))

Details if "Other" (Country & Testing Site)

WES PanelApp filters

Select 1-5 PanelApp Panels to filter PDF report?

- Yes
 Not yet
 (SELECT 1 to 5 PANELS)

Channelopathies

- Brain channelopathy
 Skeletal muscle channelopathy

Inherited Epilepsy Syndromes

- Genetic epilepsy syndromes

Mitochondrial

- Mitochondrial Disorders

Motor and Sensory Disorders of the PNS

- Hereditary neuropathy
 Paediatric motor neuronopathies

Motor Disorders of the CNS

- Cerebellar hypoplasia
 Early onset dystonia
 Hereditary spastic paraplegia
 Neurotransmitter disorders
 Structural basal ganglia disorders

Neurodegenerative Disorders

- Amyotrophic lateral sclerosis/motor neuron disease
 Hereditary ataxia - adult onset

Neurodevelopmental disorders

- Intellectual disability
 Malformations of cortical development
 Hereditary ataxia and cerebellar anomalies - childhood onset

Neuromuscular disorders

- Arthrogryposis
 Congenital muscular dystrophy
 Congenital myaesthetic syndrome
 Congenital myopathy
 Distal myopathies
 Limb girdle muscular dystrophy
 Rhabdomyolysis and metabolic muscle disorders

Parenchymal brain disorders

- Intracerebral calcification disorders

Peroxisomal disorders

- Peroxisomal disorders

Connective tissues disorders

- Ehlers Danlos syndromes

Specific metabolic abnormalities

- Undiagnosed metabolic disorders

List other PanelApp panels here

(Use EXACT panel names as listed at <https://panelapp.genomicsengland.co.uk/panels/>)

Analysis notes, e.g. specific genes to check

(Note: Checking specific genes NOT part of standard pipeline)

Request bespoke ICGNMD analysis?

Select bespoke ICGNMD analyses (in addition to Panels)

- Yes
 Not yet
 (Please only select if essential: bespoke analyses use a lot of ICGNMD time.)

Bespoke ICGNMD analyses

- mtDNA analysis
 CNV or SV detection
 notinuse1
 notinuse2
 (Please only select if essential: bespoke analyses use a lot of ICGNMD time.)

WES for relatives AT SAME TIME as proband?

Test relatives at same time?

- Yes
 No
 (Proband normally has WES first, relatives later)

Justification for testing relatives at same time as proband?

Optional: Relative #1

Relative #1: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #2

Relative #2: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #3

Relative #3: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #4

Relative #4: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) WES complete and their REDCap records updated

family WES complete
(Record relative's results in own REDCap record - not in proband record)

Sample tracking

Samples available at test site (or test co-ordinating site)?

yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

(Optional) Samples sent to approved 3rd party? E.g. UCL to Macrogen

yes
 no
(MTA & Terms of Service must be in place prior to sending to 3rd party)

(Optional) Date samples sent to approved 3rd party

(YYYY-MM-DD)

Samples sent to Macrogen? (UCL only)

yes
 no

WES reporting

Raw WES data received by UCL?

yes
 no

Date WES data received

(YYYY-MM-DD)

UCL record: Data Quality Satisfactory?

yes
 no

Testing site to repeat test on same sample?

yes
 no

New sample needed to repeat?

yes
 no

Decision = do not repeat test

yes
 no

Reason for WES failure?

Data file for failed test

(OPTIONAL: upload file to show failed test or low quality outputs)

UCL ICGNMD Report for WES

UCL research report uploaded

(YYYY-MM-DD)

ICGNMD research report (summary PDF with filters)

ICGNMD .csv file (no panel filters)

(If requested) ICGNMD bespoke analysis report

ICGNMD Review of WES

Date of joint review of result

(YYYY-MM-DD)

Has WES provisionally solved?

- Yes: provisionally solved with WES
 Yes, WES confirms other test result
 No, WES has not supported a research finding

Causative variant #1

Condition #1 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #1 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 1 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

WES variant results #1 - freetext notes

Variant #1 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Add another variant?

- yes
 no

Causative variant #2

Condition #2 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #2 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 2 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #2 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WES variant #2 results - freetext notes

Add another variant?

- yes
 no

Causative variant #3

Condition #3 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #3 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 3 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #3 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WES variant #3 results - freetext notes

Add another variant? yes
 no

Causative variant #4

Condition #4 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #4 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 4 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699 A G)

Variant #4 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WES variant #4 results - freetext notes

ICGNMD Next steps

More ICGNMD testing needed after WES review? Yes
 No

Which additional test?

- WES on relatives
 WGS
 Sanger seq
 Array
 Single Gene Test
 Reanalyse WES data
 (If you select a new test, complete that section)

Sample tracking

Relative samples at test site (or test co-ordinating site)? yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

Optional: Relative #1

Relative #1: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #2

Relative #2: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #3

Relative #3: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #4

Relative #4: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) WES complete and their REDCap records updated

- family WES complete & REDCap updated
 (Record relative's results in own REDCap record - not in proband record)

ICGNMD Review of later relative tests

Date of joint review of additional family single gene tests

(YYYY-MM-DD)

(Proband record only) What has later WES of relatives added to proband's ICGNMD research findings?

ICGNMD repeat WES analysis

Reason for repeating WES analysis?

- Long time since 1st analysis, check for new variants
 New bespoke analysis available
 Other

Expand with further details here, e.g specific genes to check

(Note: Checking specific genes NOT part of standard pipeline)**UCL ICGNMD WES Re-analysis**

New research report created

(YYYY-MM-DD)

ICGNMD new research report (summary PDF with filters)

ICGNMD new .csv file (no panel filters)

(If requested) new ICGNMD bespoke analysis report

ICGNMD Review of WES Re-analysis

Date of joint review of re-analysis

(YYYY-MM-DD)

Has WES provisionally solved?

- Yes: provisionally solved with WES
 Yes, WES confirms other test result
 No, WES has not supported a research finding

Causative variant #1

Condition #1 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #1 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 1 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

WES variant results #1 - freetext notes

Variant #1 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Add another variant?

- yes
 no

Causative variant #2

Condition #2 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #2 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 2 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #2 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WES variant #2 results - freetext notes

Add another variant?

- yes
 no

Causative variant #3

Condition #3 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #3 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 3 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #3 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WES variant #3 results - freetext notes

Add another variant?

- yes
 no

Causative variant #4

Condition #4 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #4 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 4 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #4 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WES variant #4 results - freetext notes

ICGNMD Whole GENOME sequencing

Go to ICGNMD WGS

- Yes
 No

Date of Joint Decision

(YYYY-MM-DD)

Notes (e.g. justification)

Which country will test take place in?

- UK MacroGen
 UK Illumina
 India
 Turkey
 Other

Details if "Other" (Country & Testing Site)

WGS PanelApp filters

Select 1-5 PanelApp Panels to filter PDF report?

- Yes
 Not yet
 (SELECT 1 to 5 PANELS)

Channelopathies

- Brain channelopathy
 Skeletal muscle channelopathy

Inherited Epilepsy Syndromes

- Genetic epilepsy syndromes

Mitochondrial

- Mitochondrial Disorders

Motor and Sensory Disorders of the PNS

- Hereditary neuropathy
 Paediatric motor neuronopathies

Motor Disorders of the CNS

- Cerebellar hypoplasia
 Early onset dystonia
 Hereditary spastic paraplegia
 Neurotransmitter disorders
 Structural basal ganglia disorders

Neurodegenerative Disorders

- Amyotrophic lateral sclerosis/motor neuron disease
 Hereditary ataxia - adult onset

Neurodevelopmental disorders

- Intellectual disability
 Malformations of cortical development
 Hereditary ataxia and cerebellar anomalies - childhood onset

Neuromuscular disorders

- Arthrogryposis
 Congenital muscular dystrophy
 Congenital myaesthenic syndrome
 Congenital myopathy
 Distal myopathies
 Limb girdle muscular dystrophy
 Rhabdomyolysis and metabolic muscle disorders

Parenchymal brain disorders

- Intracerebral calcification disorders

Peroxisomal disorders

- Peroxisomal disorders

Connective tissues disorders

- Ehlers Danlos syndromes

Specific metabolic abnormalities

- Undiagnosed metabolic disorders

List other PanelApp panels here

(Use EXACT panel names as listed at <https://panelapp.genomicsengland.co.uk/panels/>)

Additional WGS notes, e.g. specific genes to check

(Note: Checking specific genes NOT part of standard pipeline)

Request bespoke ICGNMD analysis?

Select bespoke ICGNMD analyses (in addition to Panels)

- Yes
 Not yet
 (Please only select if essential: bespoke analyses use a lot of ICGNMD time.)

Bespoke ICGNMD analyses

- mtDNA analysis
 CNV or SV detection
 notinuse1
 notinuse2
 (Please only select if essential: bespoke analyses use a lot of ICGNMD time.)

WGS for relatives AT SAME TIME as proband?

Test relatives at same time?

- Yes
 No
 (Proband normally has wgs first, relatives later)

Justification for testing relatives at same time as proband?

Optional: Relative #1

Relative #1: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #2

Relative #2: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative? yes
 no

Optional: Relative #3

Relative #3: Relation to proband mother
 father
 brother
 sister
 other

Is this Relative also affected? yes
 no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative? yes
 no

Optional: Relative #4

Relative #4: Relation to proband mother
 father
 brother
 sister
 other

Is this Relative also affected? yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) WGS complete and their REDCap records updated

family WGS complete
(Record relative's results in own REDCap record - not in proband record)

Sample tracking

Samples available at test site (or test co-ordinating site)? yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

(Optional) Samples sent to approved 3rd party? E.g. UCL to Macrogen/Illumina

yes
 no
(MTA & Terms of Service must be in place prior to sending to 3rd party)

(Optional) Date samples sent to approved 3rd party

(YYYY-MM-DD)

Samples sent to Macrogen/Illumina? (UCL only)

yes
 no

WGS reporting

Raw WGS data received by UCL?

yes
 no

Date WGS data received

(YYYY-MM-DD)

UCL record: Data Quality Satisfactory?

yes
 no

Testing site to repeat test on same sample?

yes
 no

New sample needed to repeat?

yes
 no

Decision = do not repeat test

yes
 no

Reason for WGS failure?

Data file for failed test

(OPTIONAL: upload file to show failed test or low quality outputs)

UCL ICGNMD Report for WGS

UCL research report uploaded

(YYYY-MM-DD)

ICGNMD research report (summary PDF with filters)

ICGNMD .csv file (no panel filters)

(If requested) ICGNMD bespoke analysis report

ICGNMD Review of WGS

Date of joint review of result

(YYYY-MM-DD)

Has WGS provisionally solved?

- Yes: provisionally solved with WGS
 Yes, WGS confirms other test result
 No, WGS has not supported a research finding

Causative variant #1

Condition #1 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #1 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 1 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

WGS variant results #1 - freetext notes

Variant #1 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Add another variant?

- yes
 no

Causative variant #2

Condition #2 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #2 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 2 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #2 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WGS variant #2 results - freetext notes

Add another variant?

- yes
 no

Causative variant #3

Condition #3 [Orphanet]

Free text box if Orphanet not suitable

Caustive gene & variant #3 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 3 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #3 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WGS variant #3 results - freetext notes

Add another variant?

- yes
 no

Causative variant #4

Condition #4 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #4 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 4 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #4 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WGS variant #4 results - freetext notes

ICGNMD Next steps

More ICGNMD testing needed after WGS review?

- Yes
 No

Which additional test?

- WGS on relatives
 WGS
 Sanger seq
 Array
 Single Gene Test
 Reanalyse WGS data
 (If you select a new test, complete that section)

Sample tracking

Relative samples at test site (or test co-ordinating site)?

- yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

Optional: Relative #1

Relative #1: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #2

Relative #2: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #3

Relative #3: Relation to proband

- mother
- father
- brother
- sister
- other

Is this Relative also affected?

- yes
- no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
- no

Optional: Relative #4

Relative #4: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) WGS complete and their REDCap records updated

- family WGS complete & REDCap records updated
 (Record relative's results in own REDCap record - not in proband record)

ICGNMD Review of later relative tests

Date of joint review of additional family single gene tests

(YYYY-MM-DD)

(Proband record only) What has later WGS of relatives added to proband's ICGNMD research findings?

ICGNMD repeat WGS analysis

Reason for repeating WGS analysis?

- Long time since 1st analysis, check for new variants
 New bespoke analysis available
 Other

Expand with further details here

UCL ICGNMD WGS Re-analysis

New research report created

(YYYY-MM-DD)

ICGNMD new research report (summary PDF with filters)

ICGNMD new .csv file (no panel filters)

(If requested) new ICGNMD bespoke analysis report

ICGNMD Review of WGS Re-analysis

Date of joint review of re-analysis

(YYYY-MM-DD)

Has WGS provisionally solved?

- Yes: provisionally solved with WGS
 Yes, WGS confirms other test result
 No, WGS has not supported a research finding

Causative variant #1

Condition #1 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #1 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 1 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

WGS variant results #1 - freetext notes

Variant #1 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Add another variant?

- yes
 no

Causative variant #2

Condition #2 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #2 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 2 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #2 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WGS variant #2 results - freetext notes

Add another variant?

- yes
 no

Causative variant #3

Condition #3 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #3 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 3 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #3 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WGS variant #3 results - freetext notes

Add another variant?

- yes
 no

Causative variant #4

Condition #4 [Orphanet]

Free text box if Orphanet not suitable

Causative gene & variant #4 [OMIM]

Free text box if OMIM not suitable

Known gene mutation 4 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #4 Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

WGS variant #4 results - freetext notes

ICGNMD Sanger Sequencing

Go to ICGNMD Sanger Sequencing?

- Yes
 No
 (Complete ONLY if ICGNMD to fund Sanger)

Date of Joint Decision

(YYYY-MM-DD)

Discussion notes

(Most recent at top, include date & initials)

Which country will test take place in?

- UK (or Leiden for some FSHD)
 India
 Brazil
 Other

Gene & variant to be tested by Sanger Seq (provide VCF and OMIM terms)

Variant to test in VCF format

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant to test [OMIM]

Free text box if OMIM not suitable

Testing notes (e.g. justification, conditions,
protocol refs)**Same Sanger seq for relatives AT SAME TIME as proband?**

Test relatives at same time as proband?

- Yes
 No

Optional: Relative #1

Relative #1: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #2

Relative #2: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #3

Relative #3: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #4

Relative #4: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) Sanger complete and their REDCap records updated

- family Sanger test 1 complete
 (Record relative's results in own REDCap record - not in proband record)

Sample tracking

Samples available at test site (or test co-ordinating site)?

- yes
 no

Notes on sample availability at testing/test co-ordinating site

(Optional) Samples sent to approved 3rd party test lab?

- yes
 no
 (MTA & Terms of Service must be in place prior to sending to 3rd party)

(Optional) Date samples sent to approved 3rd party

_____ (YYYY-MM-DD)

After-test reporting

Result Quality Satisfactory? yes
 no

Testing site to repeat test on same sample? yes
 no

New sample needed to repeat? yes
 no

Decision = do not repeat test yes
 no

Reason for Sanger failure?

Data file for failed test (OPTIONAL: upload file to show failed test or low quality outputs)

Sanger seq Results file (research only) (Upload/View Single Gene Test report)

Sanger seq test: results from test site Supports diagnosis
 Partially supports diagnosis
 Does not support diagnosis
 Inconclusive result

UCL ICGNMD Report for Sanger Sequencing

UCL research report uploaded _____
(YYYY-MM-DD)

ICGNMD research report

ICGNMD Review of Sanger sequencing result

Date of joint review of result _____
(YYYY-MM-DD)

Known gene mutation - VCF _____
(Use format (CHR POS ID REF ALT): 1 230710048 rs699 A G)

Condition [Orphanet] _____

Free text box if Orphanet not suitable _____

Caustive gene & variant [OMIM] _____

Free text box if OMIM not suitable

Sanger seq results - freetext notes

Provisional classification by ICGNMD/ACMG

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Has Sanger seq provisionally solved?

- Yes: provisionally solved with this test
 Yes, this test confirms other test result
 No, this test has not supported a research finding

ICGNMD Next steps

More ICGNMD testing needed after Sanger seq?

- Yes
 No

Which additional test?

- Same test on relatives
 WES
 WGS
 Array
 Single Gene Test
 (If you select a new test, complete that section)

Sample tracking

Relative samples at test site (or test co-ordinating site)?

- yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

Optional: Relative #1

Relative #1: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #2

Relative #2: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #3

Relative #3: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #4

Relative #4: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relative Sanger complete and relatives' REDCap records updated?

yes
 no
(Record relative's results in own REDCap record - not in proband record)

ICGNMD Review of later relative tests

Date of joint review of additional family Sanger seq

(YYYY-MM-DD)

(Proband record only) What has Sanger seq of relatives added to proband's ICGNMD research findings?

ICGNMD Array

Go to ICGNMD Array?

- Yes
 No
 (Complete ONLY if ICGNMD to fund array)

Date of Joint Decision

(YYYY-MM-DD)

Reason for Array

- CNV analysis
 Multigenerational testing/linkage
 Other

If "Other", enter reasons here

Which country will test take place in?

- UK
 India
 Other

If Other, enter details here (country & name of test provider)

Array product details (e.g. manufacturer, product code, batch #)

Array for relatives AT SAME TIME as proband?

Test relatives as well?

- Yes
 No

Optional: Relative #1

Relative #1: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #2

Relative #2: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #3

Relative #3: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #4

Relative #4: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relatives: summary

Tick box when relative(s) array complete and their REDCap records updated?

family array complete
(Record relative's results in own REDCap record - not in proband record)

Sample tracking

Samples available at test site (or test co-ordinating site)?

yes
 no

Notes on sample availability at testing/test co-ordinating site

(Optional) Samples sent to approved 3rd party test lab?

yes
 no
(MTA & Terms of Service must be in place prior to sending to 3rd party)

(Optional) Date samples sent to approved 3rd party

(YYYY-MM-DD)

After-test reporting

Result Quality Satisfactory?

yes
 no

Testing site to repeat test on same sample?

yes
 no

New sample needed to repeat?

yes
 no

Decision = do not repeat test

yes
 no

Reason for Array failure?

Data file for failed test

(OPTIONAL: upload file to show failed test or low quality outputs)

Array Results file (research only)

(Upload/View Single Gene Test report)

Array: results from test site

- Supports diagnosis
 Partially supports diagnosis
 Does not support diagnosis
 Inconclusive result

UCL ICGNMD Report for Array

UCL research report uploaded

(YYYY-MM-DD)

ICGNMD research report

ICGNMD Review of Array

Date of joint review of result

(YYYY-MM-DD)

Has Array provisionally solved or helped to solve?

- Yes: provisionally solved with this test
 Yes, this test confirms other test result
 No, this test has not supported a research finding

Causative variant #1

Known gene mutation - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699 A G)

Condition #1 [Orphanet]

Caustive gene & variant #1 [OMIM]

Array variant #1 results - freetext notes

Provisional classification by ICGNMD

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Add another variant?

- yes
 no

Causative variant #2

Known gene mutation 2 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Condition #2 [Orphanet]

Causative gene & variant #2 [OMIM]

Variant #2 Provisional classification by ICGNMD

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Array variant #2 results - freetext notes

Add another variant?

- yes
 no

Causative variant #3

Condition #3 [Orphanet]

Causative gene & variant #3 [OMIM]

Known gene mutation 3 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Variant #3 Provisional classification by ICGNMD

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic
 VUS

Array variant #3 results - freetext notes

ICGNMD Next steps

More ICGNMD testing needed after Array?

- Yes
 No

Which additional test?

- Array on relatives
 WES
 WGS
 Sanger seq
 Single Gene Test
 (If you select a new test, complete that section)

Sample tracking

Relative samples at test site (or test co-ordinating site)?

yes
 no
 not all samples

Notes on sample availability at testing/test co-ordinating site

Optional: Relative #1

Relative #1: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #1 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #2

Relative #2: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #2 Study ID (IC_ABC_NNNNN)

Add another relative?

yes
 no

Optional: Relative #3

Relative #3: Relation to proband

mother
 father
 brother
 sister
 other

Is this Relative also affected?

yes
 no

Relative #3 Study ID (IC_ABC_NNNNN)

Add another relative?

- yes
 no

Optional: Relative #4

Relative #4: Relation to proband

- mother
 father
 brother
 sister
 other

Is this Relative also affected?

- yes
 no

Relative #4 Study ID (IC_ABC_NNNNN)

Relative(s) arrays complete and their REDCap records updated?

- yes
 no
 (Record relative's results in own REDCap record - not in proband record)

ICGNMD Review of later relative tests

Date of joint review of additional family Arrays

 (YYYY-MM-DD)

(Proband record only) What has Array of relatives added to proband's ICGNMD research findings?

Final ICGNMD Research Summary (UCL: complete at end of pathway)

Reason for issuing final report now

- No further testing required
 Further testing desirable, but not possible under current project
 No ICGNMD report, recruited as "solved" participant

Participant ICGNMD outcome (research only) - Select any that apply

- Genetically solved with no ICGNMD input
 Outcome supported with ICGNMD intellectual input
 Outcome supported by ICGNMD genetic testing
 Local AND ICGNMD genetic tests supported outcome
 No causative/likely causative variants identified
 Most suitable test not available locally or via ICGNMD
 Study ended before testing

Which ICGNMD genetic test(s) gave positive research result? (Select any that apply)

- WGS - proband
 WES - proband
 Array - proband
 Single Gene Test - proband
 Sanger seq - proband
 WGS - relatives
 WES - relatives
 Array - relatives
 Single gene test - relatives
 Sanger seq - relatives
 Other
 None

Further details

Final ICGNMD diagnosis (research only)

Final diagnostic category

- Genetic motor neuron disease
 Spinal muscular atrophy
 Genetic peripheral neuropathy
 Congenital myasthenic syndrome
 Congenital muscular dystrophy or myopathy
 Duchenne or Becker muscular dystrophy
 Facioscapulohumeral muscular dystrophy
 Myotonic dystrophy type I
 Limb girdle muscular dystrophy
 Distal myopathy
 Adult onset myopathy
 Metabolic myopathy
 Mitochondrial disease
 Skeletal muscle channelopathy
 Undetermined genetic neuromuscular or neurological disorder
 (Diagnosis most likely, after ICGNMD pathway complete. DO NOT COMPLETE FOR PARTICIPANTS RECRUITED AS SOLVED CASES)

Condition #1

 ((Orphanet) You can add extra diagnoses below if complex (e.g. "double trouble"))

Other Condition #2

 (Orphanet)

Other Condition #3

 (Orphanet)

Confirmed diagnoses - freetext

Has original "best guess" diagnosis changed with ICGNMD?

- yes
 no
 not clear

Final Causative variant #1

Variant #1 ICGNMD Classification

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic

Causative variant #1 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Condition #1 [Orphanet]

Causative gene & variant #1 [OMIM]

Variant #1 - freetext notes

Add another variant?

- yes
 no

Final Causative variant #2

Variant #2 ICGNMD Classification

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic

Causative variant #2 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Condition #2 [Orphanet]

Causative gene & variant #2 [OMIM]

Variant #2 - freetext notes

Add another variant?

- yes
 no

Final Causative variant #3

Variant #3 ICGNMD Classification

- Pathogenic
 Likely Pathogenic
 VUS - Suspected Pathogenic

Causative variant #3 - VCF

(Use format (CHR POS ID REF ALT): 1 230710048 rs699
A G)

Condition #3 [Orphanet]

Caustive gene & variant #3 [OMIM]

Variant #3 - freetext notes

Final ICGNMD Report (Research only, not diagnostic)

Upload final ICGNMD report

ICGNMD comments for follow-on research

Select one option

- Variant(s) already well-known & good fit to phenotype
- Novel, suspected pathogenic variant in established disease gene
- Variant(s) known pathogenic but phenotype novel features
- Novel suspected variant in gene not linked to this disease
- Other

Details

Participant's data despoited in archive?

- yes
- no

Date deposited in EMBL-EBI EGA

(YYYY-MM-DD)

Specify which archive (all that apply)

- EMBL-EBI EGA
- RD-Connect
- Other

If "Other", add details here (location & date archived)

ICGNMD Data Use

Participant's data used in ICGNMD publication?

- yes
 no

Enter DOI for publication(s) here

Participant links to other studies

Is participant also recruited to another study (e.g. SOLVE-RD)?

- yes
 no
 don't know

Details of other studies participant enrolled in

Non-ICGNMD publications

Has participant been included in publications outside of ICGNMD (using non-ICGNMD data)?

- yes
 no

Enter DOI for non-ICGNMD-related publication(s) here

Final summary: relatives of proband

Has ICGNMD also provided findings for affected relatives?

- yes
 no
 (Do NOT put details about relatives findings here - use relatives' own records)

How many affected relatives received their own ICGNMD research findings? (1-10)

List ICGNMD Study IDs of affected relatives with ICGNMD findings here

 (Format IC_ABC_NNNNN, IC_ABC_NNNNN etc)