Arrhythmia Syndromes

Selection Criteria – Arrhythmia Syndromes
Exclusion criteria:
- *Deceased individuals*
- *NGS-based test performed from 2013 onwards*
- *Individuals from families with a known disease-causing variant*
- *Unascertained sudden death*
For BrS, MUST meet diagnostic criteria for dx AND must be able to tick at least 1 box from at least 2 of the following categories: Age criteria, FHx criteria, Clinical criteria. PLEASE NOTE: FHx can be considered standalone if confirmed, i.e. if diagnostic criteria AND family history criteria are met, the patient is eligible.
For LQTS, MUST meet diagnostic criteria for dx:
- *LQTS risk score ≥ 3.5 in the absence of a secondary cause for QT prolongation and/or a QTc interval ≥ 500 ms in repeated 12-lead ECG and in the absence of a secondary cause for QT prolongation.*
For CPVT, MUST meet diagnostic criteria and dx ≤ 40yo:
- *Structurally normal heart, normal ECG & unexplained catecholamine-induced bidirectional VT or polymorphic ventricular beats or VT in an individual < 40 or relative of a CPVT case with normal heart who manifests exercise induced PVCs or bidirectional polymorphic VT.*

Diagnosis

☐ BrS (go to i.)
☐ LQTS (go to ii.)
☐ CPVT (go to iii.)

i. BrS

Diagnostic criteria:

(MUST meet diagnostic criteria for dx)

☐ HRS/EHRA/APHRS Expert Consensus Statement at any age

Family history criteria:

(If family history AND diagnostic criteria are met, the patient is eligible)

☐ ≥ 1 first or second degree relative with documented BrS
☐ ≥ 1 first or second degree relative with sudden death before 50 (must attempt to obtain PM report, death certificate and/or medical records to exclude other causes of death)

Clinical criteria:

☐ Spontaneous type 1 pattern
☐ Previous OHCA
☐ Induced type 1 pattern
(OHCA = out-of-hospital cardiac arrest)

ii. LQTS

Diagnostic criteria:

(MUST meet diagnostic criteria for dx)

☐ LQTS risk score ≥ 3.5 in the absence of a secondary cause for QT prolongation
☐ QTc interval ≥ 500ms in repeated 12-lead ECG and in the absence of a secondary cause for QT prolongation

iii. CPVT

Diagnostic criteria:

(MUST meet diagnostic criteria for dx)

☐ Structurally normal heart, normal ECG and unexplained exercise or catecholamine-induced bidirectional VT or polymorphic ventricular premature beats or VT in an individual ≤ 40 yo, OR ☐ Relative of a CPVT case with normal heart who manifests exercise induced PVCs or bidirectional polymorphic VT

Age criteria:
☐ Must be dx ≤ 40yo

Clinical History

Height _____ (cm)	Weight _____ (kg)
Calculated total Body Surface Area (m2)	_____
Date of diagnosis: _____ (If unsure of the exact date please set to January 1 of the year the event took place and set the "Exact date" option to "No".)	Is this an exact date? ☐ Yes ☐ No

Symptoms at diagnosis: ☐ Yes ☐ No

☐ Shortness of breath	☐ Heart failure
☐ Chest pain	☐ OHCA
☐ Pre-syncope	☐ Seizure(s)
☐ Syncope	☐ Epilepsy
☐ Palpitations	☐ Other
Number of other additional symptoms:	☐ 1 ☐ 2
First additional symptom: *SNOMED CT Capture Field*	_____ _____
First additional symptom description (if code not found):	_____ _____
Second additional symptom: *SNOMED CT Capture Field*	_____ _____
Second additional symptom description (if code not found):	_____ _____
Asymptomatic list	☐ Diagnosed on family screening ☐ Incidental diagnosis; details: _____ _____

Other Conditions

☐ HTN	☐ AF
☐ Diabetes	☐ Previous VT
☐ CAD	☐ Conduction system abnormalities
☐ Cancer	☐ Ventricular arrhythmias
☐ Syndrome diagnosis	☐ OHCA (other than at presentation)
☐ Metabolic conditions	☐ Other
☐ Neuromuscular conditions	(Do not include the principal diagnosis)

HTN

First HTN date of diagnosis	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known

Diabetes

Date Diabetes diagnosed	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known

CAD

Number of coronary artery disease (CAD) conditions:	☐ 1 ☐ 2
First CAD type: *SNOMED CT Capture Field*	_____ _____
First CAD type description (if code not found):	_____
First CAD date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Second CAD type: *SNOMED CT Capture Field*	_____ _____
Second CAD type description (if code not found):	_____
Second CAD date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Cancer	
Number of cancers:	☐ 1 ☐ 2
First cancer type: *SNOMED CT Capture Field*	_____ _____
First cancer type description (if code not found):	_____
First cancer date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Second cancer type: *SNOMED CT Capture Field*	_____ _____
Second cancer type description (if code not found):	_____
Second cancer date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Chemotherapy drugs:	☐ Yes ☐ No
Syndrome Diagnosis	
Syndrome diagnosis: *OMIM Capture Field*	_____ _____
Syndrome diagnosis (if code not found):	_____
Syndrome diagnosis date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Metabolic Conditions	
Metabolic conditions: *OMIM Capture Field*	_____ _____
Metabolic conditions (if code not found):	_____
Metabolic conditions date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Neuromuscular Conditions	
Neuromuscular conditions: *OMIM Capture Field*	_____ _____
Neuromuscular conditions (if code not found):	_____

Neuromuscular conditions date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
AF	
AF condition *SNOMED CT Capture Field*	_____ _____
AF conditions (if code not found):	_____
AF date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Previous VT	
Previous VT: *SNOMED CT Capture Field*	_____ _____
Previous VT (if code not found):	_____
Previous VT date of diagnosis:	_____
Is than an exact date?	☐ Yes ☐ No ☐ Date not known
Conduction System Abnormalities	
Conduction system abnormalities type: *SNOMED CT Capture Field*	_____ _____
Conduction system abnormality type description (if code not found):	_____ _____
Conduction system abnormalities diagnosis date	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Ventricular Arrhythmias	
Ventricular arrhythmia type: *SNOMED CT Capture Field*	_____ _____
Ventricular arrhythmia type description (if code not found):	_____ _____
Ventricular arrhythmia date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Out of hospital cardiac arrest (OHCA)	
OHCA	☐ Yes ☐ No
OHCA date:	_____
Other	
Number of other additional conditions:	☐ 1 ☐ 2
First additional condition: *SNOMED CT Capture Field*	_____ _____
First additional condition description (if code not found):	_____ _____
First additional condition date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Second additional condition: *SNOMED CT Capture Field*	_____ _____

Second additional condition description (if code not found):	_____ _____
Second additional condition date of diagnosis:	_____
Is this an exact date?	☐ Yes ☐ No ☐ Date not known
Echo Parameters at Diagnosis	
Echo performed?	☐ Not performed ☐ Normal ☐ Abnormal ☐ Unknown
Describe abnormalities	_____ _____
Electrophysiological Parameters	
Resting QTc at diagnosis: NB: ensure this measurement is off QT prolonging drugs and not immediately post arrest.	_____ (msec)
Exercise stress test (EST) performed?	☐ Yes ☐ No ☐ Unknown
EST type	☐ Bruce ☐ Sprint
EST result	☐ Normal ☐ Abnormal QTc in recovery ☐ Blood pressure drop during exercise ☐ VT ☐ Ventricular ectopic beats ☐ Other arrhythmia
Longest QTc in recovery:	_____ (msec)
VT:	☐ Monomorphic ☐ Polymorphic ☐ Bidirectional
Ventricular ectopic beats morphology:	☐ Monomorphic ☐ Polymorphic
Ventricular ectopic beats distributional pattern:	☐ Single ☐ Couplets ☐ Triplets
Ventricular ectopic beats, when?	☐ At rest ☐ During exercise ☐ During max exercise ☐ In recovery
Other arrhythmia:	_____
Holter monitor:	

☐ Normal ☐ Unknown ☐ Atrial tachycardia ☐ Afib ☐ Torsades ☐ AV Block II - intermittent ☐ AV Block II - persistent ☐ AV Block III - intermittent ☐ AV Block III - persistent ☐ Brugada pattern	☐ Ventricular ectopic beats - monomorphic ☐ Ventricular ectopic beats - polymorphic ☐ Ventricular ectopic beats - couplets ☐ Ventricular ectopic beats - triplets ☐ Sustained VT ☐ Non sustained VT ☐ AVRT/AVNRT ☐ Abnormal pauses for age ☐ Significant Bradycardia ☐ Other; please specify _____
Ajmaline challenge performed?	☐ Not performed ☐ Positive ☐ Negative ☐ Unknown
Brugada pattern type:	☐ Type 1 ☐ Type 2 ☐ Type 3
Flecainide challenge performed?	☐ Not performed ☐ Positive ☐ Negative ☐ Unknown
Brugada pattern type:	☐ Type 1 ☐ Type 2 ☐ Type 3
Adrenaline challenge performed?	☐ Not performed ☐ Positive ☐ Negative ☐ Unknown
Longest QTc:	_____
Intervention Procedures	
PPM:	☐ Yes ☐ No
Date implanted:	_____ (If unsure of the exact date please set to January 1 of the year the event took place and set the "Exact date" option to "No".)
Is this an exact date?	☐ Yes ☐ No
ICD:	☐ Yes ☐ No (If the patient has had multiple ICDs, this refers to the first one)
Date implanted:	_____ (If unsure of the exact date please set to January 1 of the year the event took place and set the "Exact date" option to "No".)
Is this an exact date?	☐ Yes ☐ No
Primary or secondary prevention	☐ Primary ☐ Secondary
Cardiac transplant:	☐ Yes ☐ Listed ☐ No

Date inserted:	_____
	(If unsure of the exact date please set to January 1 of the year the event took place and set the "Exact date" option to "No".)
Is this an exact date?	☐ Yes ☐ No
Date listed:	_____
	(If unsure of the exact date please set to January 1 of the year the event took place and set the "Exact date" option to "No".)
Is this an exact date?	☐ Yes ☐ No
LVAD:	☐ Yes ☐ No ☐ N/A
Date inserted:	_____
	(If unsure of the exact date please set to January 1 of the year the event took place and set the "Exact date" option to "No".)
Is this an exact date?	☐ Yes ☐ No
Uploads	
Echo at diagnosis or representative echo	
Number of ECGs at diagnosis or representative ECGs	
First ECG	
First ECG lead placement	☐ Standard ☐ Elevated
Second ECG	
Second ECG lead placement	☐ Standard ☐ Elevated
Third ECG	
Third ECG lead placement	☐ Standard ☐ Elevated
Fourth ECG	
Fourth ECG lead placement	☐ Standard ☐ Elevated
Fifth ECG	
Fifth ECG lead placement	☐ Standard ☐ Elevated
CMRI at diagnosis or representative CMRI	
Ajmaline challenge report	
Flecainide challenge report	
Adrenaline challenge report	
Operation report	