

## Tabella 1: CardioScreen<sup>®</sup> - Prevenzione arresto cardiaco improvviso.

### Elenco dei geni analizzati e della malattie genetiche investigate

	DISEASE NAME	PhenoMIM	GENE
1	Atrial fibrillation, familial, 12	<u>614050</u>	<b>ABCC9</b>
2	Sitosterolemia	<u>210250</u>	<b>ABCG5</b>
3	Sitosterolemia	<u>210250</u>	<b>ABCG8</b>
4	Myopathy, actin, congenital, with cores	<u>161800</u>	<b>ACTA1</b>
5	Aortic aneurysm, familial thoracic 6	<u>611788</u>	<b>ACTA2</b>
6	Atrial septal defect 5	<u>612794</u>	<b>ACTC1</b>
7	Cardiomyopathy, dilated, 1AA, with or without LVNC	<u>612158</u>	<b>ACTN2</b>
8	Long QT syndrome-11	<u>611820</u>	<b>AKAP9</b>
9	Alstrom syndrome	<u>203800</u>	<b>ALMS1</b>
10	Cardiac arrhythmia, ankyrin-B-related	<u>600919</u>	<b>ANK2</b>
11	Cardiomyopathy, hypertrophic/Cardiomyopathy, dilated	<u>609599</u>	<b>ANKRD1</b>
11	Hyperchylomicronemia, late-onset	<u>144650</u>	<b>APOA5</b>
12	Hypercholesterolemia, due to ligand-defective apo B	<u>144010</u>	<b>APOB</b>
13	Hyperlipoproteinemia, type Ib	<u>207750</u>	<b>APOC2</b>
14	Lipoprotein glomerulopathy	<u>611771</u>	<b>APOE</b>
15	Cardiomyopathy, dilated, 1HH	<u>613881</u>	<b>BAG3</b>
16	Cardiofaciocutaneous syndrome	<u>115150</u>	<b>BRAF</b>
17	Brugada syndrome 3	<u>611875</u>	<b>CACNA1C</b>
18	Brugada syndrome 4	<u>611876</u>	<b>CACNB2</b>
19	Long QT syndrome 14	<u>616247</u>	<b>CALM1</b>
	Ventricular tachycardia, catecholaminergic polymorphic, 4	<u>614916</u>	
20	Cardiomyopathy, hypertrophic, 19	<u>613875</u>	<b>CALR3</b>
21	Ventricular tachycardia, catecholaminergic polymorphic, 2	<u>611938</u>	<b>CASQ2</b>
22	Cardiomyopathy, familial hypertrophic	<u>192600</u>	<b>CAV3</b>
	Long QT syndrome 9	<u>611818</u>	
23	Noonan syndrome-like disorder with or without juvenile myelomonocytic leukemia	<u>613563</u>	<b>CBL</b>
24	Homocystinuria, B6-responsive and nonresponsive types	<u>236200</u>	<b>CBS</b>
25	Hyperalphalipoproteinemia	<u>143470</u>	<b>CETP</b>
26	Ehlers-Danlos syndrome, type III	<u>130020</u>	<b>COL3A1</b>
27	Ehlers-Danlos syndrome, classic type	<u>130000</u>	<b>COL5A1</b>
28	Ehlers-Danlos syndrome, classic type	<u>130000</u>	<b>COL5A2</b>
29	Cardioencephalomyopathy, fatal infantile, due to cytochrome c oxidase deficiency 2	<u>615119</u>	<b>COX15</b>

30	Atrioventricular septal defect, partial, with heterotaxy syndrome	<u>606217</u>	<b>CRELD1</b>
31	Cardiomyopathy, dilated, 1I1	<u>615184</u>	<b>CRYAB</b>
32	Cardiomyopathy, dilated, 1M	<u>607482</u>	<b>CSRP3</b>
33	Cardiomyopathy, dilated	600435	<b>CTF1</b>
34	Cardiomyopathy, dilated, 1I	<u>604765</u>	<b>DES</b>
35	Cardiomyopathy, dilated, 3B	<u>302045</u>	<b>DMD</b>
36	3-methylglutaconic aciduria, type V	<u>610198</u>	<b>DNAJC19</b>
37	Congenital disorder of glycosylation, type 1m	<u>610768</u>	<b>DOLK</b>
38	Ventricular fibrillation, paroxysmal familial, 2	<u>612956</u>	<b>DPP6</b>
39	Arrhythmogenic right ventricular dysplasia 11	<u>610476</u>	<b>DSC2</b>
40	Arrhythmogenic right ventricular dysplasia 10	<u>610193</u>	<b>DSG2</b>
41	Arrhythmogenic right ventricular dysplasia 8	<u>607450</u>	<b>DSP</b>
42	Left ventricular noncompaction 1, with or without congenital heart defects	<u>604169</u>	<b>DTNA</b>
43	Cutis laxa, autosomal recessive, type 1B	<u>614437</u>	<b>EFEMP2</b>
44	Supravalvar aortic stenosis	<u>185500</u>	<b>ELN</b>
45	Emery-Dreifuss muscular dystrophy 1, X-linked	<u>310300</u>	<b>EMD</b>
46	Cardiomyopathy, dilated, 1J	<u>605362</u>	<b>EYA4</b>
47	Marfan syndrome	<u>154700</u>	<b>FBN1</b>
48	Contractural arachnodactyly, congenital	<u>121050</u>	<b>FBN2</b>
49	Emery-Dreifuss muscular dystrophy 6, X-linked	<u>300696</u>	<b>FHL1</b>
50	Cardiomyopathy, dilated	602633	<b>FHL2</b>
51	Muscular dystrophy-dystroglycanopathy (congenital with brain and eye anomalies), type A, 5	<u>613153</u>	<b>FKRP</b>
52	Cardiomyopathy, dilated, 1X	<u>611615</u>	<b>FKTN</b>
53	Friedreich ataxia	<u>229300</u>	<b>FXN</b>
54	Glycogen storage disease II	<u>232300</u>	<b>GAA</b>
55	Cardiomyopathy, dilated, 2B	<u>614672</u>	<b>GATAD1</b>
56	Fasting plasma glucose level QTL 5	<u>613463</u>	<b>GCKR</b>
57	Atrial fibrillation, familial, 11	<u>614049</u>	<b>GJA5</b>
58	Fabry disease, cardiac variant	<u>301500</u>	<b>GLA</b>
59	Pseudohypoparathyroidism	<u>612463</u>	<b>GNAS</b>
60	Brugada syndrome 2	<u>611777</u>	<b>GPD1L</b>
61	Hyperlipoproteinemia, type 1D	<u>615947</u>	<b>GPIHBP1</b>
62	LCHAD deficiency	<u>609016</u>	<b>HADHA</b>
63	Brugada syndrome 8	<u>613123</u>	<b>HCN4</b>
64	Hemochromatosis	<u>235200</u>	<b>HFE</b>
65	Congenital myopathy with excess of muscle spindles	<u>218040</u>	<b>HRAS</b>

66	Neuropathy, distal hereditary motor, type IIA	<u>158590</u>	<b>HSPB8</b>
67	Alagille syndrome	<u>118450</u>	<b>JAG1</b>
68	Cardiomyopathy, hypertrophic, 17	<u>613873</u>	<b>JPH2</b>
69	Arrhythmogenic right ventricular dysplasia 12	<u>611528</u>	<b>JUP</b>
70	Atrial fibrillation, familial, 7	<u>612240</u>	<b>KCNA5</b>
71	Brugada syndrome 9	<u>616399</u>	<b>KCND3</b>
72	Long QT syndrome 5	<u>613695</u>	<b>KCNE1</b>
73	Long QT syndrome 6	<u>613693</u>	<b>KCNE2</b>
74	Brugada syndrome 6	<u>613119</u>	<b>KCNE3</b>
75	Long QT syndrome 2	<u>613688</u>	<b>KCNH2</b>
	Short QT syndrome 1	<u>609620</u>	
	Long QT syndrome 2, acquired, susceptibility to	<u>613688</u>	
76	Atrial fibrillation, familial, 9	<u>613980</u>	<b>KCNJ2</b>
77	Long QT syndrome 13	<u>613485</u>	<b>KCNJ5</b>
78	Atrial fibrillation, familial, 3	<u>607554</u>	<b>KCNQ1</b>
	Long QT syndrome 1	<u>609621</u>	
	Short QT syndrome 2	<u>192500</u>	
79	Cardiofaciocutaneous syndrome 2	<u>615278</u>	<b>KRAS</b>
80	Muscular dystrophy, congenital merosin-deficient	<u>607855</u>	<b>LAMA2</b>
81	Cardiomyopathy, dilated, 1JJ	<u>615235</u>	<b>LAMA4</b>
82	Danon disease	<u>300257</u>	<b>LAMP2</b>
83	Cardiomyopathy, dilated, 1C, with or without LVNC	<u>601493</u>	<b>LDB3</b>
	Cardiomyopathy, hypertrophic, 24	<u>601493</u>	
	Left ventricular noncompaction 3	<u>601493</u>	
84	Hypercholesterolemia, familial	<u>143890</u>	<b>LDLR</b>
85	Hypercholesterolemia, familial, autosomal recessive	<u>603813</u>	<b>LDLRAP1</b>
86	Lipase deficiency, combined	<u>246650</u>	<b>LMF1</b>
87	Cardiomyopathy, dilated, 1A	<u>115200</u>	<b>LMNA</b>
88	Combined hyperlipidemia, familial	<u>144250</u>	<b>LPL</b>
89	Weill-Marchesani syndrome 3, recessive	<u>614819</u>	<b>LTBP2</b>
90	Cardiofaciocutaneous syndrome 3	<u>615279</u>	<b>MAP2K1</b>
91	Cardiofaciocutaneous syndrome 4	<u>615280</u>	<b>MAP2K2</b>
92	Left ventricular noncompaction 7	<u>615092</u>	<b>MIB1</b>
93	Cardiomyopathy, dilated, 1MM	<u>615396</u>	<b>MYBPC3</b>
94	Aortic aneurysm, familial thoracic 4	<u>132900</u>	<b>MYH11</b>
95	Atrial septal defect 3	<u>614089</u>	<b>MYH6</b>
96	Cardiomyopathy, dilated, 1S	<u>613426</u>	<b>MYH7</b>
97	Cardiomyopathy, hypertrophic, 10	<u>608758</u>	<b>MYL2</b>
98	Cardiomyopathy, hypertrophic, 8	<u>608751</u>	<b>MYL3</b>

99	Aortic aneurysm, familial thoracic 7	<u>613780</u>	<b>MYLK</b>
100	Cardiomyopathy, hypertrophic, 1, digenic	<u>192600</u>	<b>MYLK2</b>
101	Deafness, autosomal dominant 22, with hypertrophic cardiomyopathy	<u>606346</u>	<b>MYO6</b>
102	Cardiomyopathy, hypertrophic, 16	<u>613838</u>	<b>MYOZ2</b>
103	Cardiomyopathy, dilated, 1KK	<u>615248</u>	<b>MYPN</b>
104	Cardiomyopathy, dilated, 1CC	<u>613122</u>	<b>NEXN</b>
105	Atrial septal defect 7, with or without AV conduction defects	<u>108900</u>	<b>NKX2-5</b>
106	Heterotaxy, visceral, 5	<u>270100</u>	<b>NODAL</b>
107	Aortic valve disease 1	<u>109730</u>	<b>NOTCH1</b>
108	Atrial fibrillation, familial, 6	<u>612201</u>	<b>NPPA</b>
109	Autoimmune lymphoproliferative syndrome type IV	<u>614470</u>	<b>NRAS</b>
110	Hypercholesterolemia, familial, 3	<u>603776</u>	<b>PCSK9</b>
111	Arrhythmogenic right ventricular dysplasia 9	<u>609040</u>	<b>PKP2</b>
112	Cardiomyopathy, dilated, 1P	<u>609909</u>	<b>PLN</b>
113	Cardiomyopathy, dilated, 1LL	<u>615373</u>	<b>PRDM16</b>
114	Cardiomyopathy, hypertrophic 6	<u>600858</u>	<b>PRKAG2</b>
115	Myxoma, intracardiac	<u>255960</u>	<b>PRKAR1A</b>
116	LEOPARD syndrome 1	<u>151100</u>	<b>PTPN11</b>
117	Cardiomyopathy, dilated, 1NN	<u>615916</u>	<b>RAF1</b>
118	Cardiomyopathy, dilated, 1DD	<u>613172</u>	<b>RBM20</b>
119	Central core disease	<u>117000</u>	<b>RYR1</b>
120	Arrhythmogenic right ventricular dysplasia 2	<u>600996</u>	<b>RYR2</b>
121	IVIC syndrome	<u>147750</u>	<b>SALL4</b>
122	Atrial fibrillation, familial, 13	<u>615377</u>	<b>SCN1B</b>
	Brugada syndrome 5	<u>612838</u>	
	Cardiac conduction defect, nonspecific	<u>612838</u>	
123	Atrial fibrillation, familial, 14	<u>615378</u>	<b>SCN2B</b>
124	Atrial fibrillation, familial, 16	<u>613120</u>	<b>SCN3B</b>
125	Atrial fibrillation, familial, 17	<u>611819</u>	<b>SCN4B</b>
126	Atrial fibrillation, familial, 10	<u>614022</u>	<b>SCN5A</b>
127	Cardioencephalomyopathy, fatal infantile, due to cytochrome c oxidase deficiency 1	<u>604377</u>	<b>SCO2</b>
128	Cardiomyopathy, dilated, 1GG	<u>613642</u>	<b>SDHA</b>
129	Myopathy, congenital, with fiber-type disproportion	<u>255310</u>	<b>SEPN1</b>
130	Muscular dystrophy, limb-girdle, type 2E	<u>604286</u>	<b>SGCB</b>
131	Cardiomyopathy, dilated, 1L	<u>606685</u>	<b>SGCD</b>
132	Muscular dystrophy, limb-girdle, type 2C	<u>253700</u>	<b>SGCG</b>
133	Noonan-like syndrome with loose anagen hair	<u>607721</u>	<b>SHOC2</b>
134	Mitochondrial DNA depletion syndrome 12 (cardiomyopathic type)	<u>615418</u>	<b>SLC25A4</b>

135	Arterial tortuosity syndrome	<u>208050</u>	<b>SLC2A10</b>
136	Loeys-Dietz syndrome, type 3	<u>613795</u>	<b>SMAD3</b>
137	Myhre syndrome	<u>139210</u>	<b>SMAD4</b>
138	Long QT syndrome 12	<u>612955</u>	<b>SNTA1</b>
139	Noonan syndrome 4	<u>610733</u>	<b>SOS1</b>
140	Barth syndrome	<u>302060</u>	<b>TAZ</b>
141	Atrial septal defect 4	<u>611363</u>	<b>TBX20</b>
142	Ulnar-mammary syndrome	<u>181450</u>	<b>TBX3</b>
143	Holt-Oram syndrome	<u>142900</u>	<b>TBX5</b>
144	Cardiomyopathy, hypertrophic, 25	<u>607487</u>	<b>TCAP</b>
145	Loeys-Dietz syndrome, type 4	<u>614816</u>	<b>TGFB2</b>
146	Arrhythmogenic right ventricular dysplasia 1	<u>107970</u>	<b>TGFB3</b>
147	Loeys-Dietz syndrome, type 1	<u>609192</u>	<b>TGFBR1</b>
148	Loeys-Dietz syndrome, type 2	<u>610168</u>	<b>TGFBR2</b>
149	Arrhythmogenic right ventricular dysplasia 5	<u>604400</u>	<b>TMEM43</b>
150	Cardiomyopathy, dilated, 1T	<u>613740</u>	<b>TMPO</b>
151	Cardiomyopathy, dilated, 1Z	<u>611879</u>	<b>TNNC1</b>
152	Cardiomyopathy, dilated, 1FF	<u>613286</u>	<b>TNNI3</b>
153	Cardiomyopathy, dilated, 1D	<u>601494</u>	<b>TNNT2</b>
154	Cardiomyopathy, dilated, 1Y	<u>611878</u>	<b>TPM1</b>
155	Ventricular tachycardia, catecholaminergic polymorphic, 5, with or without muscle weakness	<u>615441</u>	<b>TRDN</b>
156	Progressive familial heart block, type IB	<u>604559</u>	<b>TRPM4</b>
157	Cardiomyopathy, dilated, 1G	<u>604145</u>	<b>TTN</b>
158	Amyloidosis, hereditary, transthyretin-related	<u>105210</u>	<b>TTR</b>
159	Cardiomyopathy, dilated, 1W	<u>611407</u>	<b>VCL</b>
	Cardiomyopathy, hypertrophic, 15	<u>613255</u>	
160	Congenital heart defects, nonsyndromic, 1, X-linked	<u>306955</u>	<b>ZIC3</b>