

FRAMINGHAM HEART STUDY - CODING MANUAL

ECG DATA

COHORT: ORIGINAL AND OFFSPRING

DATA COLLECTION TIME FRAME: ORIGINAL: EXAM 16 - 18  
 OFFSPRING: EXAM 2

SAS DATASET NAME: T\_ECGDIG\_1983\_M\_0100D.SAS7BDAT

#RECORDS: 5977

The value ranges and observation number stated in the manual are based on the original data set. In some cases, observation may be deleted due to participant consent form restrictions. If observations have been deleted from this data set, the ranges or observation number may differ from those stated in this manual.

Variable	Information
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IDTYPE	FRAMINGHAM HEART STUDY COHORT IDENTIFIER 0=ORIGINAL 1=OFFSPRING
ID	FRAMINGHAM HEART STUDY PARTICIPANT ID NUMBER **DELETED TO PRESERVE CONFIDENTIALITY, USE RANDOM ID (PID)
PID	RANDOM ID **RANDOM ID REPLACES FRAMINGHAM ID TO PRESERVE CONFIDENTIALITY
DG2	EXAM DATE **DELETED DUE TO REDUNDANCY, REFER TO MOST RECENT "VR_DATES.." FILE
DG4	EXAM 2 - 18
DG5	VENTRICULAR RATE 31 - 136
DG6	P-R INTERVAL 0 - 380
DG7	QRS INTERVAL 63 - 202

DG8 QT INTERVAL  
286 - 562

DG9 T INTERVAL  
78 - 299

DG10 P INTERVAL  
0 - 167

DG11 QRS ANGLE (DEGREES)  
(-133) - 158  
.=UNKNOWN (17)

DG12 P ANGLE  
(-145) - 123  
.=UNKNOWN (335)

DG13 T ANGLE  
(-179) - 179  
.=UNKNOWN (210)

DG14 J ANGLE  
(-179) - 178  
.=UNKNOWN (5887)

DG15 QRST ANGLE  
(-175) - 151  
.=UNKNOWN (58)

DG16 LEAD I , Q WAVE VOLTAGE  
(-6) - 0

DG17 LEAD I , R WAVE VOLTAGE  
0 - 28

DG18 LEAD I , S WAVE VOLTAGE  
(-13) - 0

DG19 LEAD I , RP WAVE VOLTAGE  
0 - 15.8

DG20 LEAD I , SP WAVE VOLTAGE  
(-4.8) - 0

DG21 LEAD I , J WAVE VOLTAGE  
(-2.9) - 1.2

DG22 LEAD I , P WAVE VOLTAGE  
(-1.4) - 3.1

DG23 LEAD I , T WAVE VOLTAGE  
(-10.1) - 7.5

DG24 LEAD I , QRS AREA WAVE VOLTAGE  
(-108) - 247

DG25 LEAD I , R WAVE NTCH WAVE VOLTAGE  
0 - 8

DG26 LEAD II , Q WAVE VOLTAGE  
(-13.8) - 0

DG27 LEAD II , R WAVE VOLTAGE  
0 - 28.9

DG28 LEAD II , S WAVE VOLTAGE  
(-21.5) - 0

DG29 LEAD II , RP WAVE VOLTAGE  
0 - 14.3

DG30 LEAD II , SP WAVE VOLTAGE  
(-6.8) - 0

DG31 LEAD II , J WAVE VOLTAGE  
(-1.7) - 1.6

DG32 LEAD II , P WAVE VOLTAGE  
(-4.2) - 4.2

DG33 LEAD II , T WAVE VOLTAGE  
(-4.5) - 6,8

DG34 LEAD II , QRS AREA WAVE VOLTAGE  
(-157) - 278

DG35 LEAD II , R WAVE NTCH WAVE VOLTAGE  
0 - 9

DG36 LEAD III , Q WAVE VOLTAGE  
(-32.8) - 0

DG37 LEAD III , R WAVE VOLTAGE  
0 - 23.4

DG38 LEAD III , S WAVE VOLTAGE  
(-34.9) - 0

DG39 LEAD III , RP WAVE VOLTAGE  
0 - 12.9

DG40 LEAD III , SP WAVE VOLTAGE  
(-11.6) - 0

DG41 LEAD III , J WAVE VOLTAGE  
(-2.7) - 3.5

DG42 LEAD III , P WAVE VOLTAGE  
(-4.2) - 4.3

DG43 LEAD III , T WAVE VOLTAGE  
(-7) - 15.4

DG44 LEAD III , QRS AREA WAVE VOLTAGE  
(-339) - 191

DG45 LEAD III , R WAVE NTCH WAVE VOLTAGE  
0 - 9

DG46 LEAD AVR , Q WAVE VOLTAGE  
(-21.4) - 0

DG47 LEAD AVR , R WAVE VOLTAGE  
0 - 6

DG48 LEAD AVR , S WAVE VOLTAGE  
(-17.2) - 0

DG49 LEAD AVR , RP WAVE VOLTAGE  
0 - 16.9

DG50 LEAD AVR , SP WAVE VOLTAGE  
(-2) - 0

DG51 LEAD AVR , J WAVE VOLTAGE  
(-1.3) - 1.7

DG52 LEAD AVR , P WAVE VOLTAGE  
(-2.7) - 2.1

DG53 LEAD AVR , T WAVE VOLTAGE  
(-5.9) - 4

DG54 LEAD AVR , QRS AREA WAVE VOLTAGE  
(-206) - 136

DG55 LEAD AVR , R WAVE NTCH WAVE VOLTAGE  
0 - 10

DG56 LEAD AVL , Q WAVE VOLTAGE  
(-6.7) - 0

DG57 LEAD AVL , R WAVE VOLTAGE  
0 - 28.2

DG58 LEAD AVL , S WAVE VOLTAGE  
(-12.6) - 0

DG59 LEAD AVL , RP WAVE VOLTAGE  
0 - 15.5

DG60 LEAD AVL , SP WAVE VOLTAGE  
(-3.1) - 0

DG61 LEAD AVL , J WAVE VOLTAGE  
(-2.80 - 2.1

DG62 LEAD AVL , P WAVE VOLTAGE  
(-3.2) - 1.8

DG63 LEAD AVL , T WAVE VOLTAGE  
(-12.8) - 6

DG64 LEAD AVL , QRS AREA WAVE VOLTAGE  
(-94) - 263

DG65 LEAD AVL , R WAVE NTCH WAVE VOLTAGE  
0 - 11

DG66 LEAD AVF , Q WAVE VOLTAGE  
(-17.1) - 0

DG67 LEAD AVF , R WAVE VOLTAGE  
0 - 25.2

DG68 LEAD AVF , S WAVE VOLTAGE  
(-24.3) - 0

DG69 LEAD AVF , RP WAVE VOLTAGE  
0 - 16.9

DG70 LEAD AVF , SP WAVE VOLTAGE  
(-8.8) - 0

DG71 LEAD AVF , J WAVE VOLTAGE  
(-1.9) - 2.2

DG72 LEAD AVF , P WAVE VOLTAGE  
(-1.70 - 3.6

DG73 LEAD AVF , T WAVE VOLTAGE  
(-4.3) - 10.7

DG74 LEAD AVF , QRS AREA WAVE VOLTAGE  
(-219) - 230

DG75 LEAD AVF , R WAVE NTCH WAVE VOLTAGE  
0 - 10

DG76 LEAD V1 , Q WAVE VOLTAGE  
(-34.7) - 0

DG77 LEAD V1 , R WAVE VOLTAGE  
0 - 17.6

DG78 LEAD V1 , S WAVE VOLTAGE  
(-38.1) - 0

DG79 LEAD V1 , RP WAVE VOLTAGE  
0 - 15.8

DG80 LEAD V1 , SP WAVE VOLTAGE  
(-9.3) - 0

DG81 LEAD V1 , J WAVE VOLTAGE  
(-2) - 4.2

DG82 LEAD V1 , P WAVE VOLTAGE  
(-3.1) - 2.8

DG83 LEAD V1 , T WAVE VOLTAGE  
(-6.3) - 12.7  
.=UNKNOWN(1)

DG84 LEAD V1 , QRS AREA WAVE VOLTAGE  
(-359) - 152

DG85 LEAD V1 , R WAVE NTCH WAVE VOLTAGE  
0 - 12

DG86 LEAD V2 , Q WAVE VOLTAGE  
(-36.6) - 0

DG87 LEAD V2 , R WAVE VOLTAGE  
0 - 33.5

DG88 LEAD V2 , S WAVE VOLTAGE  
(-44.3) - 0

DG89 LEAD V2 , RP WAVE VOLTAGE  
0 - 16.6

DG90 LEAD V2 , SP WAVE VOLTAGE  
(-14.4) - 0

DG91 LEAD V2 , J WAVE VOLTAGE  
(-3.10 - 6.1

DG92 LEAD V2 , P WAVE VOLTAGE  
(-2.8) - 4.1

DG93 LEAD V2 , T WAVE VOLTAGE  
(-9.6) - 22.7  
.=UNKNOWN(2)

DG94 LEAD V2 , QRS AREA WAVE VOLTAGE  
(-389) - 295

DG95 LEAD V2 , R WAVE NTCH WAVE VOLTAGE  
0 - 12

DG96 LEAD V3 , Q WAVE VOLTAGE  
(-39) - 0

DG97 LEAD V3 , R WAVE VOLTAGE  
0 - 36.4

DG98 LEAD V3 , S WAVE VOLTAGE  
(-51) - 0

DG99 LEAD V3 , RP WAVE VOLTAGE  
0 - 20

DG100 LEAD V3 , SP WAVE VOLTAGE  
(-15.7) - 0

DG101 LEAD V3 , J WAVE VOLTAGE  
(-5.3) - 9.4

DG102 LEAD V3 , P WAVE VOLTAGE  
(-1.6) - 5.6

DG103 LEAD V3 , T WAVE VOLTAGE  
(-12.7) - 24.1  
.=UNKNOWN(1)

DG104 LEAD V3 , QRS AREA WAVE VOLTAGE  
(-426) - 265

DG105 LEAD V3 , R WAVE NTCH WV VOLTAGE  
0 - 12

DG106 LEAD V4 , Q WAVE VOLTAGE  
(-37.1) - 0

DG107 LEAD V4 , R WAVE VOLTAGE  
0 - 45.1

DG108 LEAD V4 , S WAVE VOLTAGE  
(-41.90 - 0

DG109 LEAD V4 , RP WAVE VOLTAGE  
0 - 29.2

DG110 LEAD V4 , SP WAVE VOLTAGE  
(-17) - 0

DG111 LEAD V4 , J WAVE VOLTAGE  
(-3.2) - 4.4

DG112 LEAD V4 , P WAVE VOLTAGE  
(-2.7) - 2.8

DG113 LEAD V4 , T WAVE VOLTAGE  
(-12.7) - 18.7

DG114 LEAD V4 , QRS AREA WAVE VOLTAGE  
(-360) - 452

DG115 LEAD V4 , R WAVE NTCH WV VOLTAGE  
0 - 9

DG116 LEAD V5 , Q WAVE VOLTAGE  
(-16.9) - 0

DG117 LEAD V5 , R WAVE VOLTAGE  
0 - 46.3

DG118 LEAD V5 , S WAVE VOLTAGE  
(-40.4) - 0

DG119 LEAD V5 , RP WAVE VOLTAGE  
0 - 32.2

DG120 LEAD V5 , SP WAVE VOLTAGE  
(-14.9) - 0

DG121 LEAD V5 , J WAVE VOLTAGE  
(-4.4) - 4.3

DG122 LEAD V5 , P WAVE VOLTAGE  
(-3) - 2.5

DG123 LEAD V5 , T WAVE VOLTAGE  
(-16.9) - 19.7

DG124 LEAD V5 , QRS AREA WAVE VOLTAGE  
(-298) - 452

DG125 LEAD V5 , R WAVE NTCH WV VOLTAGE  
0 - 7



DG126 LEAD V6 , Q WAVE VOLTAGE  
(-5.6) - 0

DG127 LEAD V6 , R WAVE VOLTAGE  
0 - 52.6

DG128 LEAD V6 , S WAVE VOLTAGE  
(-31.3) - 0

DG129 LEAD V6 , RP WAVE VOLTAGE  
0 - 25.1

DG130 LEAD V6 , SP WAVE VOLTAGE  
(-3.6) - 0

DG131 LEAD V6 , J WAVE VOLTAGE  
(-5.1) - 3.7

DG132 LEAD V6 , P WAVE VOLTAGE  
(-2.5) - 3.4

DG133 LEAD V6 , T WAVE VOLTAGE  
(-13.1) - 16.8

DG134 LEAD V6 , QRS AREA WAVE VOLTAGE  
(-272) - 478

DG135 LEAD V6 , R WAVE NTCH WV VOLTAGE  
0 - 9

DG136 LEAD I , Q WAVE DURATION  
0 - 101

DG137 LEAD I , R WAVE DURATION  
0 - 2-6

DG138 LEAD I , S WAVE DURATION  
0 - 141

DG139 LEAD I , RP WAVE DURATION  
0 - 119

DG140 LEAD I , SP WAVE DURATION  
0 - 54

DG141 LEAD I , INT DEF  
0 - 0

DG142 LEAD I , WPW IND  
0 - 3

DG143	LEAD I , S-T IND 0 - 8
DG144	LEAD I , T IND 0 - 4
DG145	LEAD II , Q WAVE DURATION 0 - 142
DG146	LEAD II , R WAVE DURATION 0 - 208
DG147	LEAD II , S WAVE DURATION 0 - 175
DG148	LEAD II , RP WAVE DURATION 0 - 99
DG149	LEAD II , SP WAVE DURATION 0 - 99
DG150	LEAD II , INT DEF 0 - 0
DG151	LEAD II , WPW IND 0 - 2
DG152	LEAD II , S-T IND 0 - 7
DG153	LEAD II , T IND 0 - 4
DG154	LEAD III , Q WAVE DURATION 0 - 185
DG155	LEAD III , R WAVE DURATION 0 - 160
DG156	LEAD III , S WAVE DURATION 0 - 170;
DG157	LEAD III , RP WAVE DURATION 0 - 107
DG158	LEAD III , SP WAVE DURATION 0 - 121
DG159	LEAD III , INT DEF 0 - 0

DG160	LEAD III , WPW IND 0 - 1
DG161	LEAD III , S-T IND 0 - 8
DG162	LEAD III , T IND 0 - 4
DG163	LEAD AVR , Q WAVE DURATION 0 - 186
DG164	LEAD AVR , R WAVE DURATION 0 - 149
DG165	LEAD AVR , S WAVE DURATION 0 - 165
DG166	LEAD AVR , RP WAVE DURATION 0 - 108
DG167	LEAD AVR , SP WAVE DURATION 0 - 63
DG168	LEAD AVR , INT DEF 0 - 0
DG169	LEAD AVR , WPW IND 0 - 0
DG170	LEAD AVR , S-T IND 0 - 8
DG171	LEAD AVR , T IND 0 - 4
DG172	LEAD AVL , Q WAVE DURATION 0 - 138
DG173	LEAD AVL , R WAVE DURATION 0 - 183
DG174	LEAD AVL , S WAVE DURATION 0 - 159
DG175	LEAD AVL , RP WAVE DURATION 0 - 126
DG176	LEAD AVL , SP WAVE DURATION 0 - 98

DG177	LEAD AVL , INT DEF 0 - 0
DG178	LEAD AVL , WPW IND 0 - 4
DG179	LEAD AVL , S-T IND 0 - 7
DG180	LEAD AVL , T IND 0 - 4
DG181	LEAD AVF , Q WAVE DURATION 0 - 158
DG182	LEAD AVF , R WAVE DURATION 0 - 150
DG183	LEAD AVF , S WAVE DURATION 0 - 174
DG184	LEAD AVF , RP WAVE DURATION 0 - 92
DG185	LEAD AVF , SP WAVE DURATION 0 - 97
DG186	LEAD AVF , INT DEF 0 - 0
DG187	LEAD AVF , WPW IND 0 - 1
DG188	LEAD AVF , S-T IND 0 - 6
DG189	LEAD AVF , T IND 0 - 4
DG190	LEAD V1 , Q WAVE DURATION 0 - 188
DG191	LEAD V1 , R WAVE DURATION 0 - 173
DG192	LEAD V1 , S WAVE DURATION 0 - 183
DG193	LEAD V1 , RP WAVE DURATION 0 - 123

DG194	LEAD V1 , SP WAVE DURATION 0 - 52
DG195	LEAD V1 , INT DEF 0 - 126
DG196	LEAD V1 , WPW IND 0 - 2
DG197	LEAD V1 , S-T IND 0 - 8
DG198	LEAD V1 , T IND 0 - 4
DG199	LEAD V2 , Q WAVE DURATION 0 - 165
DG200	LEAD V2 , R WAVE DURATION 0 - 196
DG201	LEAD V2 , S WAVE DURATION 0 - 180
DG202	LEAD V2 , RP WAVE DURATION 0 - 109
DG203	LEAD V2 , SP WAVE DURATION 0 - 118
DG204	LEAD V2 , INT DEF 0 - 114
DG205	LEAD V2 , WPW IND 0 - 2
DG206	LEAD V2 , S-T IND 0 - 8
DG207	LEAD V2 , T IND 0 - 4
DG208	LEAD V3 , Q WAVE DURATION 0 - 156
DG209	LEAD V3 , R WAVE DURATION 0 - 177
DG210	LEAD V3 , S WAVE DURATION 0 - 181

DG211	LEAD V3 , RP WAVE DURATION 0 - 114
DG212	LEAD V3 , SP WAVE DURATION 0 - 80
DG213	LEAD V3 , INT DEF 0 - 106
DG214	LEAD V3 , WPW IND 0 - 4
DG215	LEAD V3 , S-T IND 0 - 8
DG216	LEAD V3 , T IND 0 - 4
DG217	LEAD V4 , Q WAVE DURATION 0 - 151
DG218	LEAD V4 , R WAVE DURATION 0 - 170
DG219	LEAD V4 , S WAVE DURATION 0 - 172
DG220	LEAD V4 , RP WAVE DURATION 0 - 96
DG221	LEAD V4 , SP WAVE DURATION 0 - 76
DG222	LEAD V4 , INT DEF 0 - 109
DG223	LEAD V4 , WPW IND 0 - 9
DG224	LEAD V4 , S-T IND 0 - 9
DG225	LEAD V4 , T IND 0 - 9
DG226	LEAD V5 , Q WAVE DURATION 0 - 133
DG227	LEAD V5 , R WAVE DURATION 0 - 185

DG228	LEAD V5 , S WAVE DURATION 0 - 147
DG229	LEAD V5 , RP WAVE DURATION 0 - 96
DG230	LEAD V5 , SP WAVE DURATION 0 - 102
DG231	LEAD V5 , INT DEF 0 - 116
DG232	LEAD V5 , WPW IND 0 - 3
DG233	LEAD V5 , S-T IND 0 - 7
DG234	LEAD V5 , T IND 0 - 4
DG235	LEAD V6 , Q WAVE DURATION 0 - 93
DG236	LEAD V6 , R WAVE DURATION 0 - 186
DG237	LEAD V6 , S WAVE DURATION 0 -172
DG238	LEAD V6 , RP WAVE DURATION 0 - 95
DG239	LEAD V6 , SP WAVE DURATION 0 - 59
DG240	LEAD V6 , INT DEF 0 - 112
DG241	LEAD V6 , WPW IND 0 - 3
DG242	LEAD V6 , S-T IND 0 - 7
DG243	LEAD V6 , T IND 0 - 4

\*NOTE: 10 RECORDS WERE DELETED FROM THE DATASET DUE TO INCORRECT ID NUMBERS

MW 5/27/14