Age:	14
Gender:	Male
Reported Symptom Status:	Not stated

A-ECG Report For:	**Long, Kent C.**

(Date/Time of ECG):	(11-25-2014 15.30)
Type of Test:	Snapshot (10 sec) 12-lead ECG

Study / Physician:	Dr. Marcus Welby
ECG Research Consultant:	T.T. Schlegel

Disclaimer: Advanced ECG (A-ECG) Reports contain results from state-of-the-art research tests that apply advanced software algorithms to pre-existing 12-lead ECG data. The Reports are currently produced remotely by one or more ECG research experts located in Switzerland. The Reports should not be used for the treatment, cure, prevention or diagnosis of any medical condition. Although A-ECG results are generated completely noninvasively, their specific combination of software-based analyses has not been reviewed by your home country's medical regulatory agency. Therefore no claims are put forward with respect to the Reports' or the results' clinical accuracy. A-ECG Reports and results should never be substituted for the care of a locally licensed physician.

CONVENTIONAL 12-LEAD ECG RESULTS AND REPORT

(Note: a copy of the conventional 12-lead ECG may accompany this report as a separate document)

Detailed Result For: **Kent C.** **Long**

Age: 14
Gender: Male

Date: (11-25-2014 15.30)

Conventional ECG parameters (secondary automated analyses):	Long, Kent C. ↓	Normal values for your age & gender ↓[Male10s]		
Heart rate (beats/min)	58			
PR interval duration (ms)	152	<	200	>120
P-wave duration (ms)	92	<	123	
QRS axis (degrees)	54	>	3	
QRS interval (ms)	78	<	105	
QTc interval (ms)	435	<	438	
12-lead QRS voltage (mV)	14.07 **	>	14.98	
Cornell QRS voltage (mV)	0.86	<	3.24	

Conventional 12-lead ECG Findings:

The heart rhythm is sinus bradycardia

12-lead QRS voltage is slightly low for age and gender

Conventional ECG Impression:

The resting conventional 12-lead ECG is within normal or acceptable limits

ADVANCED ECG (A-ECG) RESULTS AND SCORE REPORT

Note: the A-ECG test analyzes hundreds of advanced ECG parameters, but only those parameters proven to work as the "best diagnostic teams" in our databases and studies are actually incorporated into A-ECG Scores. While the results of some individual parameters of interest are shown below, the more crucial results are those of the final Score(s).

Date: (11-25-2014 15.30)	Long ,Kent C. ↓		Normal values for your age & gender ↓[Male10s]		
3-Dimensional (3D) ECG (via Kors' transform):					
Spatial Mean QRS-T angle (deg.)	66		<	78	
Spatial Peaks QRS-T angle (deg.)	71	***	<	44	
Spatial Ventricular Activation Time (ms)	40		<	54	
Z-lead QRS integral above 5 Hz (mV*ms)	8.40		<	15.23	
3D QRS magnitude@20 ms (mV)	0.262		<	0.592	>0.10
Spatial Ventricular Gradient (SVG, mV*ms)	0.102		>	0.056	
Elevation angle of SVG, horiz. plane (deg.)	31		>	27	<54
X-lead area of T-wave (mV*ms)	39.8		>	22.7	
Sagittal direction of QRS@30 ms (deg.)	77		>	40	
Azimuth Angle of 3D T-wave peak (deg.)	161	**	<	149	
Spatial JTpeak interval, corrected (ms)	271	**	<	240	
Waveform Complexity (by singular value decomposition):					
Complexity ("PCA") Ratio of T wave (%)	7		<	47	
Intradipolar Ratio (IDR) of T-wave (%)	0.291		<	1.146	
QRS Wave Nondipolar Voltage Sum (mV)	0.87		<	3.10	
First Eigenvectors QRS-T angle (deg.)	69		<	76	
Polar QRS Eigenvector "C" (mV)	0.368		<	0.594	
T-wave Dipolar Voltage Sum (mV)	9.92		>	9.15	

QT Variability: not performed (10-sec snapshot ECG file)

Heart Rate Variability: not performed (10-sec snapshot ECG file)

Impression of individual advanced ECG parameters:

One or more 3-dimensional ECG parameters are notably increased for age and gender

A-ECG SCORE(S) RESULTS (MULTIVARIABLE LOGISTIC):

Percent Similarity to:

10-s ECG: Healthy Population: **<15%** Diseased Population: **>85%**

LQTS score: **positive**

HCM score: **negative**

LVSD score: **negative**

A-ECG SCORE(S) IMPRESSION:

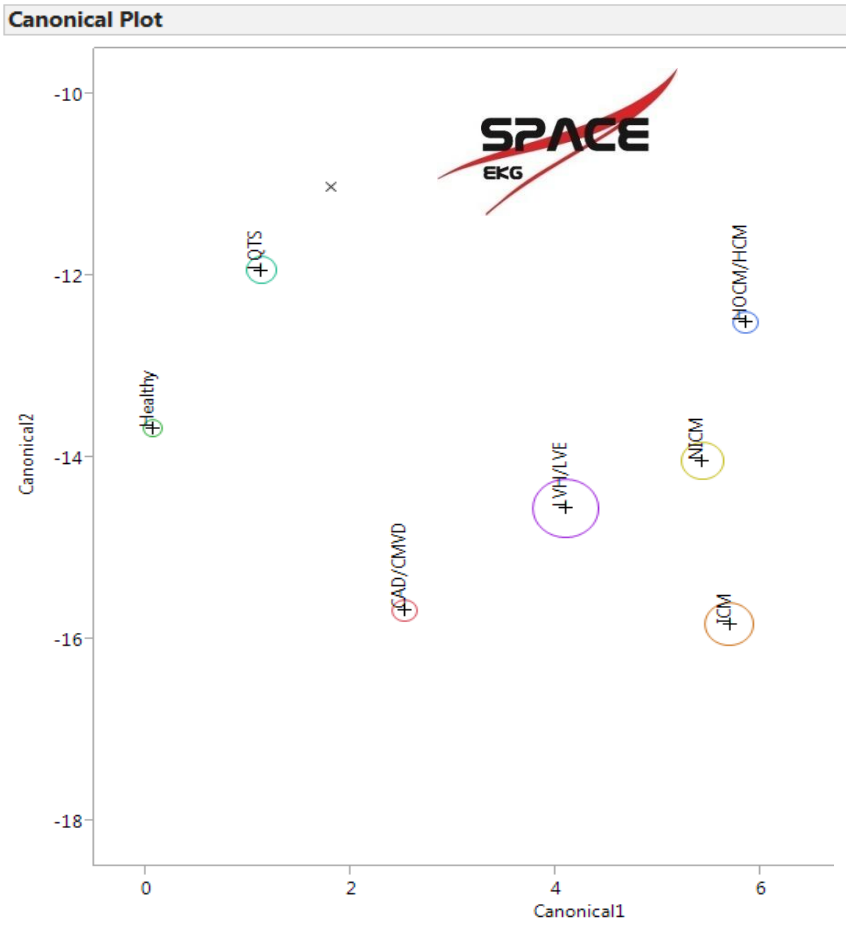
Some form of heart disease is likely present

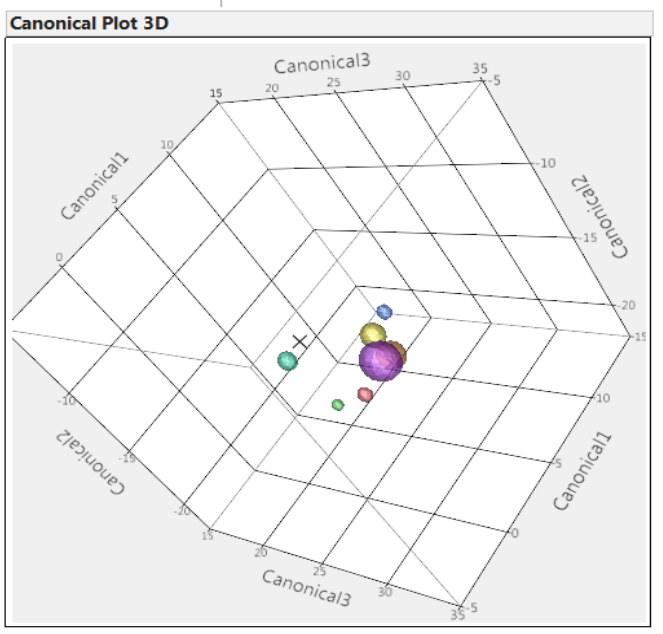
Cannot exclude a long QT syndrome (LQTS)

However, left ventricular systolic function is likely within normal limits

A-ECG DISCRIMINANT TEST FOR HEART DISEASES

Color Code: Small Green Circle = Healthy Population; Red Circle = Coronary Artery Disease (CAD) and/or Coronary Microvascular Disease Population; Purple Circle = Left Ventricular Hypertrophy (LVH) or Enlargement (LVE) Population; Blue Circle = Hypertrophic Cardiomyopathy (HCM) Population; Other Circles = Non-Ischemic Cardiomyopathy (NICM), Ischemic Cardiomyopathy (ICM), and Long QT Syndrome (LQTS) Populations, respectively.





Detailed Result for Marker ✕ (above) = **Kent C.** **Long** (11-25-2014 15.30)

Percent Similarity to: Long QT Syndrome Population: **>99%**

IMPRESSION:

Discriminant result most resembles that of a person with a confirmed long QT syndrome

Impression (Summary):

Overall results are outside of normal limits for age and gender
Cannot exclude a long QT syndrome or other ion channelopathy

Comments:

For Researcher or Physician
A-ECG tests are for research purposes only, not for the treatment, prevention or diagnosis of any medical condition.

For Patient:
If you are experiencing signs or symptoms that your doctor believes may relate to your coronary arteries or heart, then he/she may recommend clinical testing to rule out one or more types of heart disease.
Note that insurers may not cover expenses for clinical testing if you have no symptoms. Consult your personal health insurer for further information.

General suggestions to patients regarding repeat testing:
If you have no symptoms, consider obtaining A-ECG analyses at most annually only if ≥ 1 of the following apply:
- You are age>45 (men) or >50 (women); and/or
- You work in a hazardous profession (police/fireman, pilot, etc) and are age>35 (men) or >40 (women); and/or
- You have diabetes or high blood pressure or smoke cigarettes or are obese; and/or
- You have a strong family history of premature coronary artery disease or sudden cardiac death; and/or
- You have a strong family history of a genetic cardiomyopathy or cardiac ion channelopathy, and/or
- Your doctor believes that following your A-ECG annually is advised for some other reason.

If you're an adult and none of the above apply, consider obtaining A-ECG results at most every five years.

If you have or develop symptoms, consult your personal physician first, before pursuing any A-ECG results.

For further scientific information on A-ECG tests, see: http://www.biomedcentral.com/1471-2261/10/28
For further information on A-ECG age scores, see: http://www.mdpi.com/2075-4426/4/1/65