



Age: 69
Gender: Female
Reported Symptom Status: Not stated

A-ECG Report For: **Maines, Ada**

Date/Time of ECG: (09-16-2014 14.22)
Type of ECG Recording: Full Disclosure (5-min) 12-lead ECG

Requesting Researcher or 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:

Ada

Maines

Age: 69
Gender: Female

Date: (09-16-2014 14.22)
Maines, Ada

Maines, Ada
↓

Normal values for your age & gender
↓[Female60s]

Conventional ECG parameters (secondary automated analyses):

Heart rate (beats/min)	81			
PR interval duration (ms)	152	<	200	>120
P-wave duration (ms)	116	<	127	
QRS axis (degrees)	4	>	-6	
QRS interval (ms)	94	<	105	
QTc interval (ms)	451	<	474	
12-lead QRS voltage (mV)	10.06	>	8.87	
Cornell QRS voltage (mV)	1.21	<	1.71	

Conventional 12-lead ECG Findings:

The heart rhythm is normal sinus
No premature beats are present

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).

<u>Date:</u> (09-16-2014 14.22)	<u>Maines, Ada</u>	<u>Normal values for your age & gender</u>	
	↓	↓ [Female60s]	
<u>3-Dimensional (3D) ECG (via Kors' transform):</u>			
Spatial Mean QRS-T angle (deg.)	39	<	82
Spatial Peaks QRS-T angle (deg.)	30	<	57
Spatial Ventricular Activation Time (ms)	40	<	52
Z-lead QRS integral above 5 Hz (mV*ms)	3.30	<	14.48
3D QRS magnitude@20 ms (mV)	0.093	< **	0.958 >0.10
Spatial Ventricular Gradient (SVG, mV*ms)	0.065	>	0.035
Elevation angle of SVG, horiz. plane (deg.)	40	>	30 <54
X-lead area of T-wave (mV*ms)	34.9	>	10.8
Sagittal direction of QRS@30 ms (deg.)	154	>	40
<u>Waveform Complexity (by singular value decomposition):</u>			
Complexity ("PCA") Ratio of T wave (%)	6	<	30
Intradipolar Ratio (IDR) of T-wave (%)	0.198	<	1.153
QRS Wave Nondipolar Voltage Sum (mV)	0.72	<	1.33
First Eigenvectors QRS-T angle (deg.)	29	<	62
Polar QRS Eigenvector "C" (mV)	0.157	<	0.266
T-wave Dipolar Voltage Sum (mV)	6.02	>	4.04
<u>QT Interval Variability (QTV, via algorithm of Starc and Schlegel):</u>			
QTV Index (QTVI, lead II, units)	-1.50	<	-0.97
Index of unexplained QTV (lead V5, units)	2.29 ***	<	1.39
<u>RR interval Variability (RRV) by Lomb periodogram and Detrended Fluctuation Analysis:</u>			
Ln High Frequency Power (Ln ms ² /Hz)	3.45	>	3.00
Ln Low Frequency Power (Ln ms ² /Hz)	4.47	>	3.26
Alpha 2 (fractal units)	1.46 ***	<	1.36

Impression of individual advanced ECG parameters:

One or more 3-dimensional ECG parameters are	mildly decreased for age and gender
One or more QT Interval Variability parameters are	notably increased for age and gender
One or more Heart Rate Variability parameters are	mildly increased for age and gender

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

Percent Similarity to:

10-s ECG: Healthy Population: <9%	Diseased Population: >91%
5-min ECG: Healthy Population: <19%	Diseased Population: >81%
	LVSD score: negative

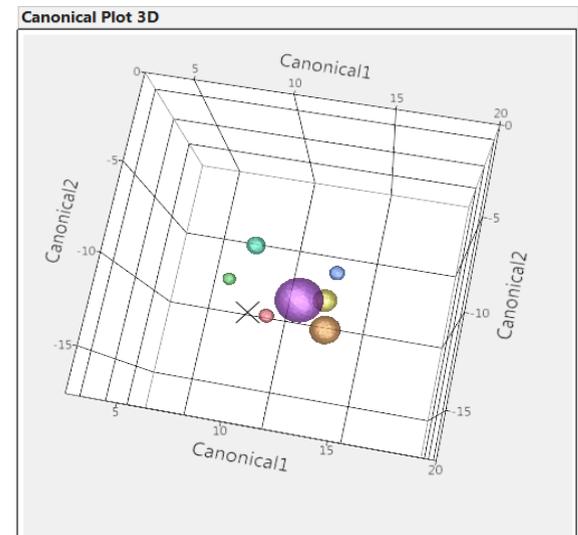
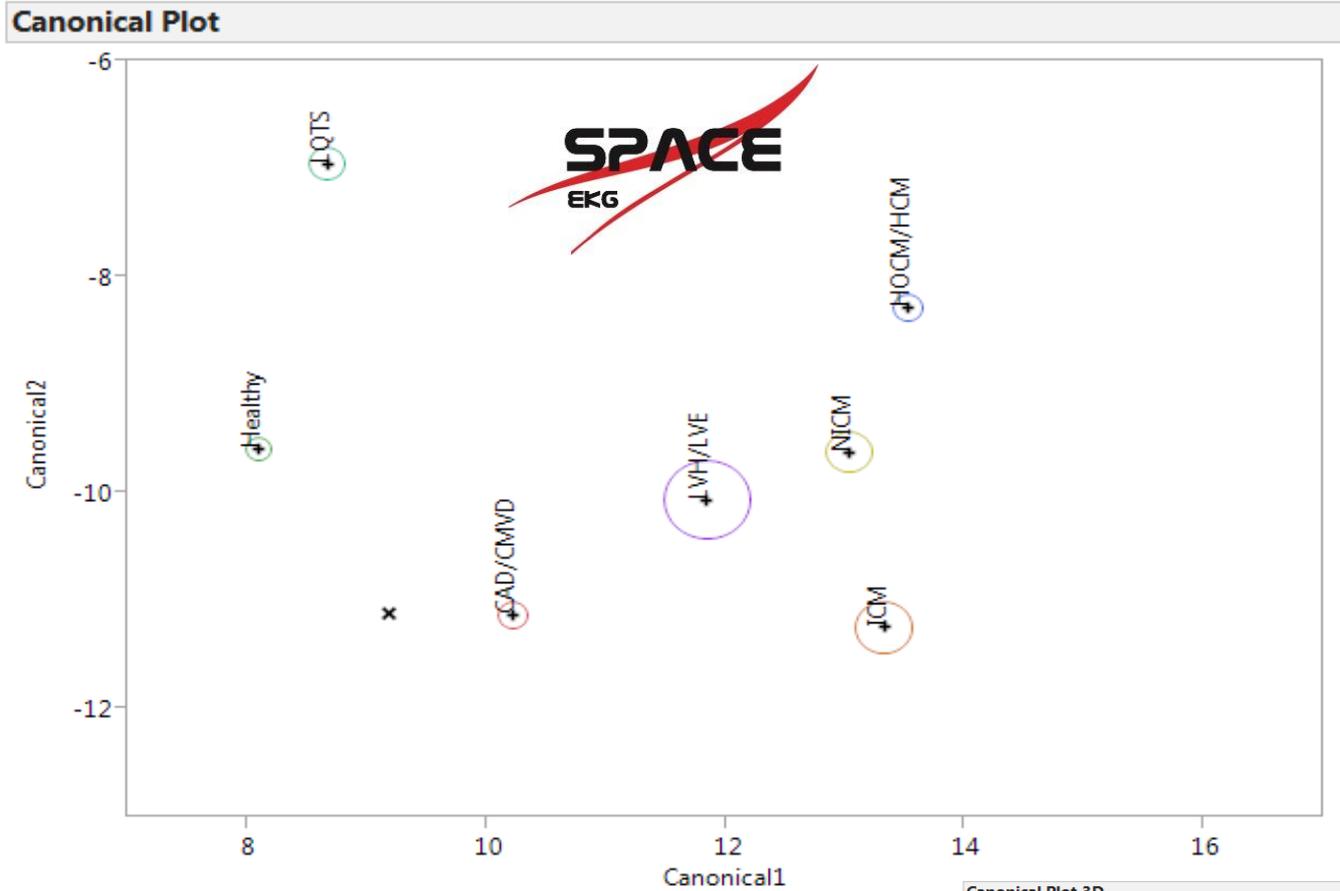
A-ECG SCORE(S) IMPRESSION:

Some form of heart disease is likely present
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 X (above) =

Ada

Maines

(09-16-2014 14.22)

Percent Similarity to:

CAD/CMVD Population:

>99%

IMPRESSION:

Discriminant result most resembles that of persons with some degree of coronary or coronary microvascular disease



Impression (Summary):

Overall results are outside of normal limits for age and gender

Cannot exclude coronary artery disease or coronary microvascular disease

Note: 3D ECG results may also suggest an old inferior infarction "missed" by conventional ECG. See e.g., the patient's frontal plane QRS loop in her attached derived VCG, showing relatively superior displacement (< +20 degrees) of the maximum QRS loop vector in that plane.

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>