



Age: 47
Gender: Male
Reported Symptom Status: Not stated

A-ECG Report For: **Young, Will B.**

(Date/Time of A-ECG-Test): (10-23-2014 08.03)
Type of Recording: Full Disclosure (5-min) 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:

Will B.

Young

Age: 47
Gender: Male

Date: (10-23-2014 08.03)
Young, Will B.

Young ,Will B.
↓

Normal values for your age & gender
↓[Male40s]

Conventional ECG parameters (secondary automated analyses):

Heart rate (beats/min)	69		
PR interval duration (ms)	152	<	200
P-wave duration (ms)	98	<	120
QRS axis (degrees)	36	>	10
QRS interval (ms)	78	<	105
QTc interval (ms)	410	<	437
12-lead QRS voltage (mV)	18.72	>	11.26
Cornell QRS voltage (mV)	0.98	<	2.01

Conventional 12-lead ECG Findings:

The heart rhythm is normal sinus.

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> (10-23-2014 08.03)	<u>Young ,Will B.</u>	<u>Normal values for your age & gender</u>	
	↓	↓[Male40s]	
<u>3-Dimensional (3D) ECG (via Kors' transform):</u>			
Spatial Mean QRS-T angle (deg.)	28	<	88
Spatial Peaks QRS-T angle (deg.)	13	<	52
Spatial Ventricular Activation Time (ms)	44	<	51
Z-lead QRS integral above 5 Hz (mV*ms)	-6.20	<	12.79
3D QRS magnitude@20 ms (mV)	0.134	<	0.482
Spatial Ventricular Gradient (SVG, mV*ms)	0.102	>	0.056
Elevation angle of SVG, horiz. plane (deg.)	36	>	25
X-lead area of T-wave (mV*ms)	30.5	>	18.2
Sagittal direction of QRS@30 ms (deg.)	139	>	40
<u>Waveform Complexity (by singular value decomposition):</u>			
Complexity ("PCA") Ratio of T wave (%)	14	<	23
Intradipolar Ratio (IDR) of T-wave (%)	0.172	<	0.685
QRS Wave Nondipolar Voltage Sum (mV)	1.80 **	<	1.79
First Eigenvectors QRS-T angle (deg.)	19	<	61
Polar QRS Eigenvector "C" (mV)	0.499 ***	<	0.404
T-wave Dipolar Voltage Sum (mV)	13.84	>	5.72
<u>QT Interval Variability (QTV, via algorithm of Starc and Schlegel):</u>			
QTV Index (QTVI, lead II, units)	-1.69	<	-1.28
Index of unexplained QTV (lead V5, units)	1.50 **	<	1.19
<u>RR interval Variability (RRV) by Lomb periodogram and Detrended Fluctuation Analysis:</u>			
Ln High Frequency Power (Ln ms ² /Hz)	1.76 ***	>	2.97
Ln Low Frequency Power (Ln ms ² /Hz)	3.89 ***	>	4.27
Alpha 2 (fractal units)	1.23 ***	<	1.20

Impression of individual advanced ECG parameters:

One or more parameters of QRS complexity are	mildly increased for age and gender
One or more QT Interval Variability parameters are	mildly increased for age and gender
One or more Heart Rate Variability parameters are	notably decreased for age and gender
One or more Heart Rate Variability parameters are	mildly increased for age and gender

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

Percent Similarity to:

10-s ECG: Healthy Population:	>99%	Diseased Population:	<1%
5-min ECG: Healthy Population:	>92%	Diseased Population:	<8%
		LVSD score:	negative

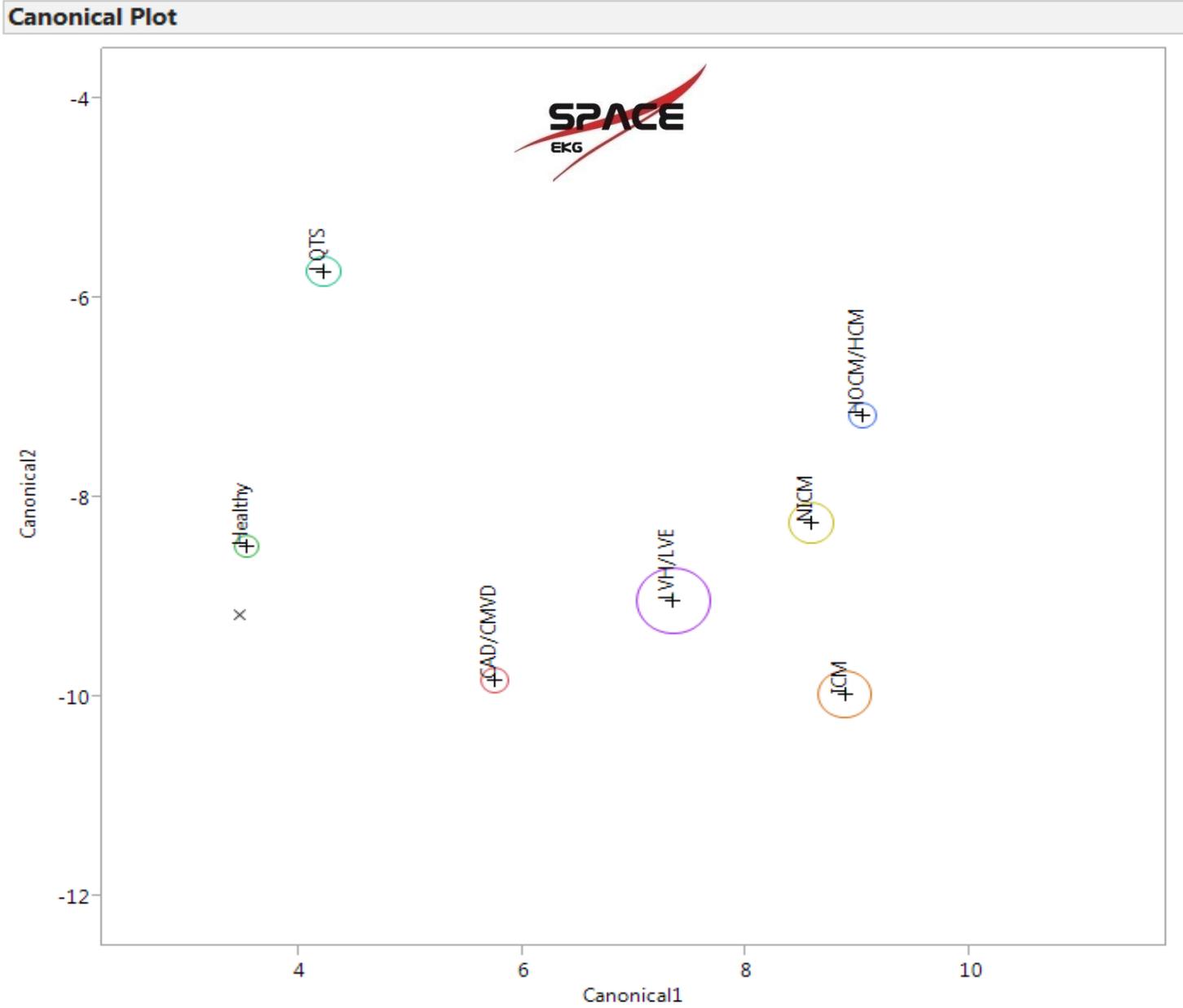
A-ECG SCORE(S) IMPRESSION:

A-ECG result most resembles that of a person with a confirmed or presumed "healthy" heart

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) = Will B. Young (10-23-2014 08.03)

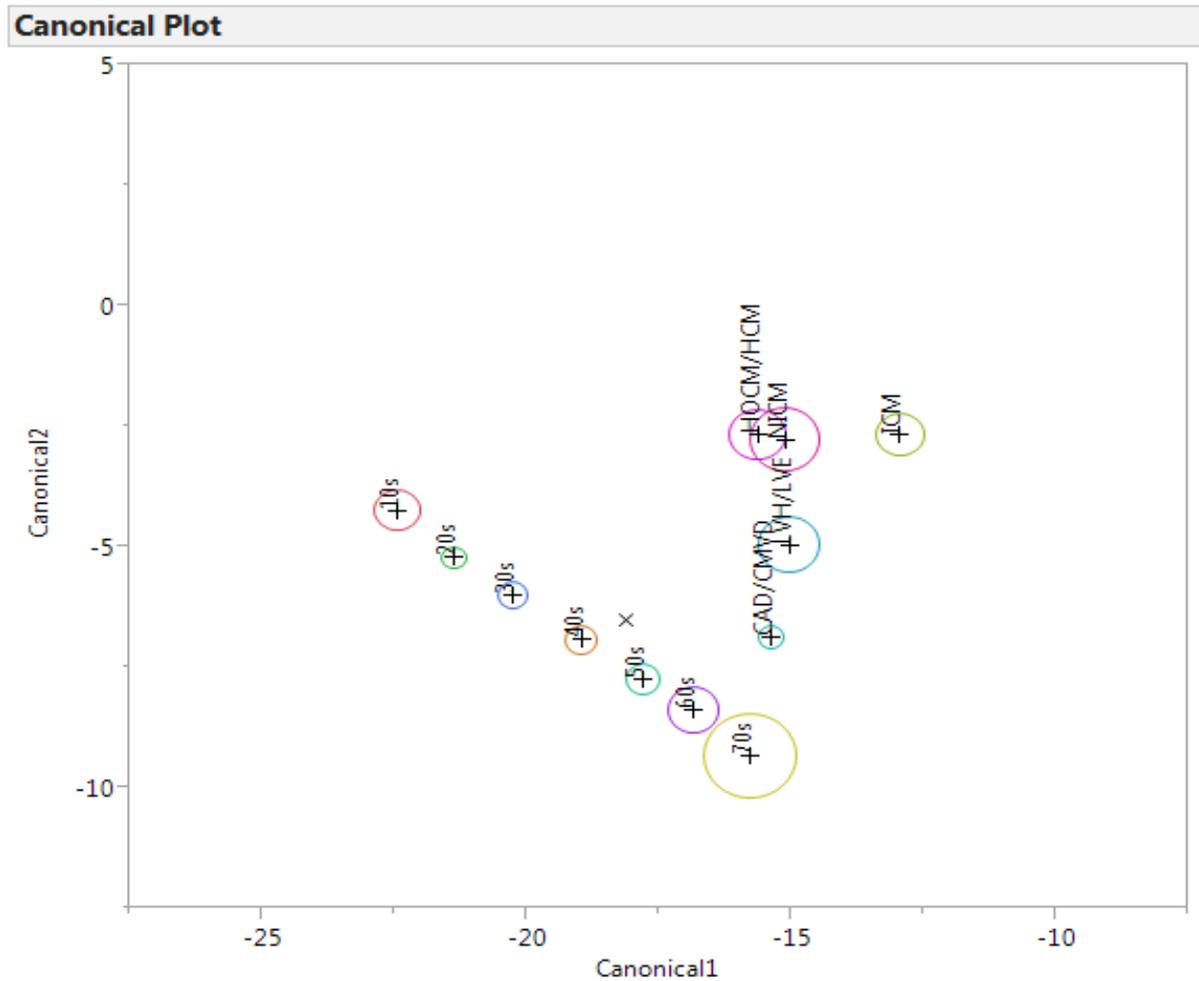
Percent Similarity to: Healthy Population: >99%

IMPRESSION:

Discriminant result most resembles that of a person with a confirmed or presumed healthy heart

A-ECG DISCRIMINANT TEST FOR ELECTROCARDIOGRAPHIC VS. CHRONOLOGICAL AGE

Code: 10s, 20s, 30s, 40s, 50s, 60s, 70s circles represent known healthy populations in that given decade of life. See previous page for the explanations of the other circles.



Detailed Result for Marker X (above) =

Will B.

Young

(10-23-2014 08.03)

True Chronological Age provided at test time =

47 .1 years

Percent Similarity to:

10s Decade	%
20s Decade	%
30s Decade	%
40s Decade	20 %
50s Decade	80 %
60s Decade	%
70s Decade	%
Other:	%

Discriminant results most closely resemble those from a person in their:

50s Decade

Exact predicted heart age from more robust combined Bayesian approach:

56 .2 years

IMPRESSION:

Electrocardiographic Age is greater than Chronological Age

**Impression (Summary):****Overall results are within normal limits for age and gender
Electrocardiographic Age is greater than Chronological Age**

Note that the high electrocardiographic age (i.e., in comparison to true chronological age) is especially driven by relatively low RRV (HRV), plus relatively high QTV. Increased cardiac sympathetic nervous system activity in comparison to cardiac parasympathetic activity can partially account for such findings, and can be driven by conditions such as high blood pressure, insulin resistance, emotional or other stress, sleep difficulties, dietary factors, or certain medications or supplements. Appropriate adjustments in lifestyle can sometimes help attenuate or reverse such findings.

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>