

CardioVision®

Featuring

The Arterial Stiffness Index (ASI)

Selected Papers, Letters, and Pertinent Information

CardioVision® is Distributed by:

IMDP

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CardioVision® is an FDA cleared device requiring:

A Personal Computer with a free serial port, Pentium II or higher processor, 64 MB Ram or more, and Windows 98SE, ME or 2000 and a RS-232C serial port.

FDA 510k Clearance Number: K961144 Device Name: MS-2000

Indications for Use: “ The MS-2000 is used by health care professionals to measure blood pressure data (systolic, diastolic and mean pressure) and heart pulse rate. The MS-2000 also generates pulse wave patterns which can be used as an initial screening device to determine if patients have potential underlying cardiovascular disease that might require more specific diagnostic evaluations by physicians or other health care providers.”

CardioVision® Features

- ♥ Store up to 9,999 patients in one data file with up to 100 measurements on each
- ♥ Unique to CardioVision® is the Arterial Stiffness Index (ASI), automatically calculated with each patient scan
- ♥ An ASI History is created on each patient to allow monitoring over time
- ♥ An ASI Baseline can be established for each patient
- ♥ Cholesterol, HDL-Cholesterol, LDL-Cholesterol, Glucose, and Triglycerides can be added to a "Other Test History" for a selected CardioVision® scan and permanently stored in the CardioVision® database
- ♥ Pulse Pressure (Systolic - Diastolic BP) is an added feature displayed and/or printed with each measurement
- ♥ Blood pressure results, Total Cholesterol, HDL-Cholesterol and LDL-Cholesterol, and Triglycerides can be automatically stored to the Framingham Risk Analysis Software.
- ♥ A single patient scan can be printed at the time of measurement or at a later date.
- ♥ The Framingham Risk Analysis also produces an attractive printout listing the ASI, Pulse Pressure, and Framingham Heart Study "Percentage Risk of a Coronary Heart Event in the Next 10 Years"
- ♥ Small, Regular, and Large Cuffs indexed for proper arm size are included with each CardioVision® unit
- ♥ Protecting patient files now simpler with new Back-up and Restore features in the CardioVision® software
- ♥ One year warranty on entire system

Arterial Stiffness Index

By J.R. Greenwood, Ph.D., Senior Vice-President

In addition to blood pressure and pulse information, the CardioVision® also generates information on the stiffness or flexibility of the brachial artery. Called the Arterial Stiffness Index (ASI), the ASI is a number that correlates with arteriosclerosis. Because arteriosclerosis reduces flexibility in arteries, the higher the ASI, the more likely someone is to have hardening of the arteries, the lower the number, the less likely.

Why is it important to know how flexible arteries are? Arteries are responsible for moving the majority of the blood through the vascular tree. Consequently, non-flexible or hardened arteries cause the heart to work much harder when it is forced to push blood through partially occluded vessels. This extra strain on the heart and the resulting blockages are a root cause of cardiovascular disease. Until the invention of CardioVision®, there was no easy, inexpensive or quick way to determine if a person's vessels had lost flexibility. Many people are never aware that they are walking around with this "silent killer" until they experience their first heart attack from occluded vessels. It has been estimated that 60-70 million Americans harbor this silent killer and should make both life-style changes, such as getting more exercise, changing their diet, quitting smoking, and reducing their cholesterol. While everyone needs to adopt these changes, sometimes life-style changes alone are not enough. CardioVision® identifies people who don't even think they have a cardiovascular problem because they are non-smokers and exercise regularly and watch their diet. Consequently, the ASI can be viewed as another cardiovascular "risk factor", just like high blood pressure or a cholesterol level above 200. Additionally, we think that the ASI can be used to follow cholesterol lowering therapy and other "risk factor" changes.

Establishing an Arterial Stiffness Baseline & Using CardioVision® Results

Arterial Stiffness Index (ASI) is a dynamic physiologic quantitative value. It can and should be compared to measuring cardiac output by the invasive thermo dilution technique using a Swan-Ganz catheter. CardioVision® does not measure cardiac output, but the averaging technique is similar. Since the variation in values obtained can change so rapidly the test is run three to five times and then averaged. If any value is more than 50% above or below average it is rejected and the test is run again and averaged. This procedure is repeated until all results fall within accepted range and then the average is the output (The Stiffness Index). The value you receive can now be used to follow specific treatments or life style changes that are intended to produce improved cardiovascular elasticity and health.

Cardiovision® is an extremely sensitive device and when used properly will provide valuable and sensitive information to the physician or other healthcare provider. When used as a screening device it non-invasively indicates whether further testing (evaluation) may be required because of hypertension or dysfunctional arteries. A high to very high ASI value indicates a high to very high risk of coronary artery disease. When added to other risk factors it will help the physician make a decision as to what future tests should be done. When the test indicates moderate hardening of the arteries the individual should be advised to make life style changes to stop further deterioration of the arteries and of course should be followed up at least semi-annually as to results.

Donald E. Rediker, M.D., F.A.C.C., Medical Advisor, IMDP, Inc., recommends the following ASI /Coronary Artery Disease Risk (CAD) Factor Correlation:

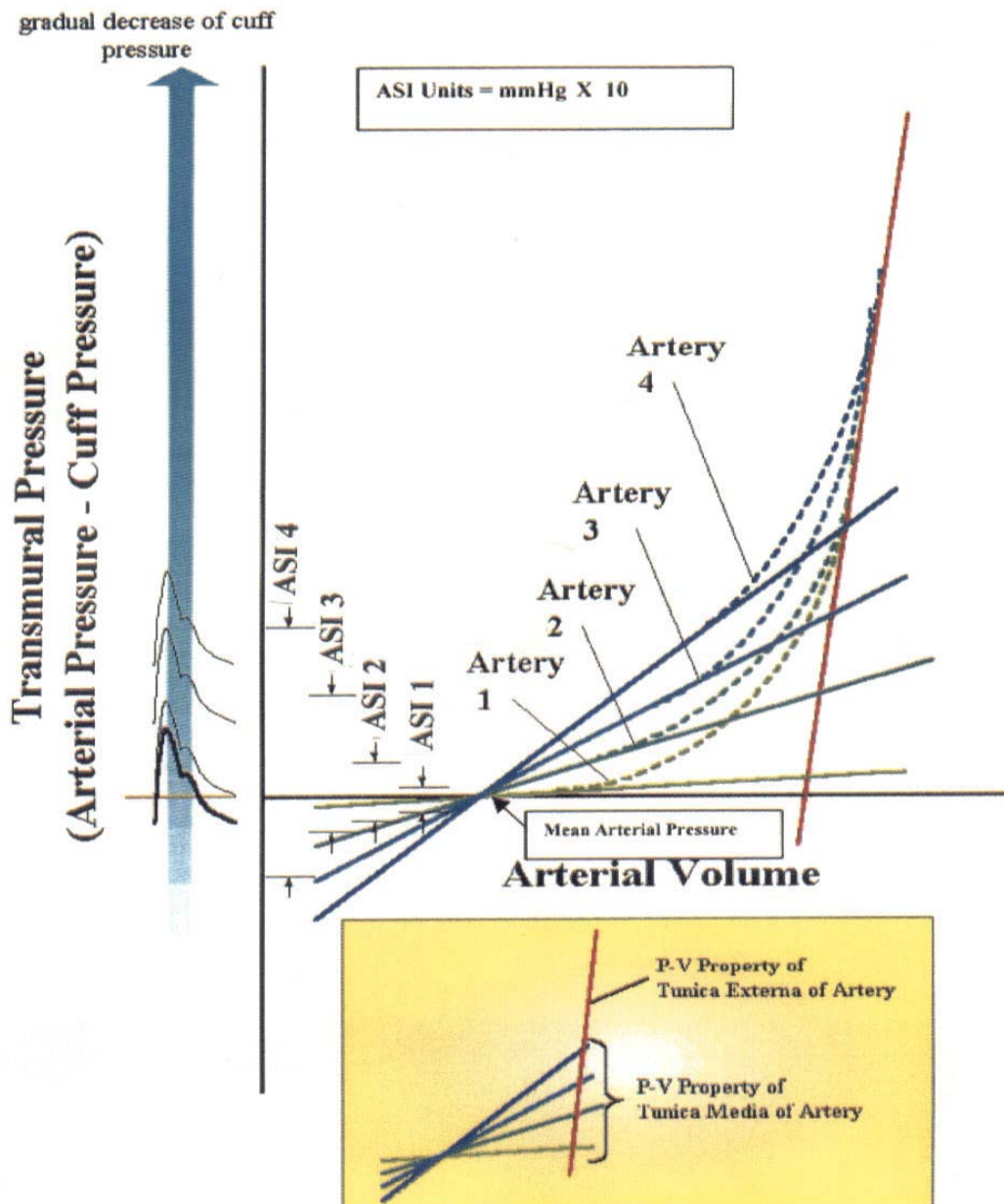
ASI Range	CAD Risk Factor
0 – 80	None
81 – 209	Moderate
210 – 309	High
Above 310	Very High

Page 6 contains an ASI Graph by Dr. Hideaki Shimazu, inventor of the CardioVision®, which shows how the ASI is derived. The ASI on four patients with normal to severely decreased elasticity is displayed. The steeper slope on patient #4 (Artery –4) represents increased stiffness (higher ASI) and the lesser slope on patient #1 (Artery –1) indicates normal stiffness (lower ASI). The ASI, expressed in mmHg X 10, is obtained when the pressure/volume relationship beginning at the mean arterial pressure is no longer linear as the cuff pressure is released.

Selected References

1. Shimazu, H. Kawarada, A., Ito, H., Yamakoshi, K. Electric impedance cuff for the indirect measurement of blood pressure and volume elastic modulus in human limb and finger arteries. *Medical and Biological Engineering and Computing*, pp. 477-483, 1989.
2. National Institutes of Health Consensus Development Conference on lowering blood cholesterol to prevent heart disease. *JAMA*, 252, 2080-2086, 1985.
3. Sorenson, K. E., Kristensen, I. B., Celermajer, D. S.; Atherosclerosis in the Human Brachial Artery. *JACC* 29, pp. 318-22, 1997.
4. Rediker, D., Greenwood, J. R., Shimazu. Evaluation of a Novel Noninvasive Blood Pressure Monitor to Screen for Coronary Artery Disease and Arrhythmia. *Cardiovascular Health: Coming Together for the 21st Century. A National Conference.* 1998.
5. Corretti, M. C., Plotnick, G.D., Vogel, R. A., Technical Aspects of Evaluating Brachial Artery Vasodilation Using High-Frequency Ultrasound. *American Journal of Physiology.* 268 (Heart Circ. Physiol. 37): H1397 – H1404, 1995

CardioVision® Produces an Arterial Stiffness Index (ASI) as Graphed Below
by Hideaki Shimazu, Ph.D., Kyorin Univ. School of Health Sciences, Tokyo,
Japan





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July, 1998

Dear Fellow Healthcare Providers,

Recently I have had the opportunity to both evaluate and integrate into my cardiology practice, a new *FDA Approved screening device* for early detection of heart disease and arrhythmia as well as *objective* measurement of blood pressure. We know that the definitive test for establishing the extent of disease in patients is an expensive, invasive procedure with some risk involved. No cardiologist would initiate these methods to *routinely* evaluate patients unless some symptoms, family history, lifestyle risk analysis, or screening test indicate possible heart disease. The problem is that in silent heart disease the first cardiac event is often fatal. In many communities the effective clot dissolving therapy and cardioprotective drugs are not routinely available for quick response. Thus, early detection through the routine use of CardioVision as an inexpensive screening device, *coupled* with a physician's examination and interpretation could be life saving.

For many years we have been looking for that *inexpensive, rapid, non-invasive device* to assist in identifying those patients who are at significant risk for CVD. CardioVision fulfills this criteria as a screening test by using state-of-the-art electronics to take thousands of readings of the compliance (elasticity) of the brachial artery in seconds, studies have shown a correlation of the brachial artery with the coronary arteries as to the extent of atherosclerotic lesions.*

Many of our elderly patients cannot withstand the physical demands of stressing their heart on a treadmill. The cost of having a nurse and physician in attendance, plus the equipment necessary for any emergency during this test preclude its routine use as a screening procedure. CardioVision is reimbursable by private insurers, billed under CPT code 99090 as recommended by the AMA coding center. Medicare allows incorporation of CardioVision analysis in the standard E/M codes. My office is being reimbursed.

To date, I have used CardioVision as a routine non-invasive screening device on over 200 patients in a busy 40 physician clinic. The results as to sensitivity and specificity are very encouraging as a routine screening device, and we have therefore *incorporated CardioVision in all workups for routine screening and evaluation of CHD patients*. Clinical data suggest that it compares very favorably to standard treadmill testing. We are currently completing the write-up of our studies which will be submitted for presentation to leading cardiology *scientific sessions and journals recommending the routine use of this screening device*. With over 45 million Americans, many unknowingly, suffering from hypertension, *CardioVision is highly recommended* as a screening device to aid the physician in identifying and managing these people. From personal communications, I know that this device is being used in a positive manner, and in the same screening capacity at other major medical centers across the United States, such as Harvard-Massachusetts General Hospital, Scripps Clinic and Hospitals, Sharp-Grossmont in San Diego, and many others.

I recommend that you too evaluate this *state-of-the-art* screening device for routine use in your health and fitness club, rehabilitation center, athletic department, dental practice or community screening organization.

Sincerely,

Donald E. Rediker, M.D., F.A.C.C.

* JACC Vol. 29, No.2, February 1997 : 318-22

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CARDIOVISION® MS-2000 CLINICAL DATA

Coronary Artery Disease (CAD) (MS-2000 "C" Pattern)

Causes

- Atherosclerosis
- Infectious vasculitis
- Congenital defects

What if the MS-2000 Shows a "C" in any Pattern?

<u>Sensitivity</u>	= 70% (finding diagnosed CAD)
<u>Specificity</u>	= 78% (true negatives labeled negative)

What if the MS-2000 Shows a "C" only Pattern?

<u>Sensitivity</u>	= 92% (finding diagnosed CAD)
--------------------	-------------------------------

Detection of CAD by stress treadmill

<u>Sensitivity</u>	= 65%
<u>Specificity</u>	= 65%

Premature Ventricular Contraction (PVC)

Causes

- Heart Failure
- Old or acute myocardial infarction
- Myocardial irritation
- Drug toxicity (digitalis, aminophylline, tricyclic antidepressants)
- Electrolyte imbalances
- Psychological stress

MS-2000 Detection (Pattern D - Arrhythmia)

<u>Sensitivity</u>	= 87.5 (7 of 8 true positives found)
<u>Specificity</u>	= 100% (No false positives)

Donald E. Rediker, M.D., F.A.C.C. performed clinical trials on more than 200 patients utilizing the CardioVision to produce the above results which were put in summary form by Rick Greenwood, Ph.D. on February 15, 1997. All patients were referred to Dr. Rediker's cardiology practice and represented a mostly unhealthy cardiovascular population.

A Comparison of Brachial Artery Stiffness and Flow-Mediated Vasodilation as Markers of Cardiovascular Disease

Robert A. Vogel, Charles Mangano, University of Maryland School of Medicine, Baltimore, Maryland

Background: Both peripheral artery stiffness and flow-mediated vasodilation (index of endothelial function) have been proposed as non-invasive means for assessing the presence of cardiovascular disease (CVD). To evaluate their ability to predict the presence of CVD, we assessed brachial artery stiffness and flow-mediated vasodilation in subjects with and without CVD. **Methods:** We measured brachial artery stiffness by computerized blood pressure cuff oscillometry and flow-mediated vasodilation by high-frequency ultrasound in 22 subjects: 11 without CVD [7 without and four with coronary risk factors RF's] and 11 with CVD (2 coronary, 4 cerebral, 5 peripheral).

Results:

	No CVD (-) RF's	No CVD (+) RF's	CVD
Mean Age (years):	51±19	64± 6	65±6*
Arterial Stiffness Index:	41±16	63±17	168±80**
Flow-Mediated Vasodilation:	12±3%	11±5%	9±6%

* p<0.01 c/w No CVD, (-) RF's

** p<0.001 c/w both No CVD groups

An arterial stiffness index cutpoint of 80 correctly predicted the presence of CVD in 20 of 22 subjects, whereas a flow-mediated vasodilation cutpoint of 10% (lab normal) correctly predicted CVD in only 14 of 22 subjects. **Conclusions:** Our observations suggest that brachial artery stiffness, as measured by computerized oscillometry may be a more effective means for identifying the presence of CVD noninvasively than is flow-mediated vasodilation.

CardioVision is the Computerized Oscillometer in this Study

Corretti, MC; Plotnick, GD; Vogel, RA. **Technical aspects of evaluating brachial artery vasodilatation using high-frequency ultrasound.**

American Journal of Physiology, 1995 Apr, 268(4 Pt 2):H1397-404. (UI: 95251035)

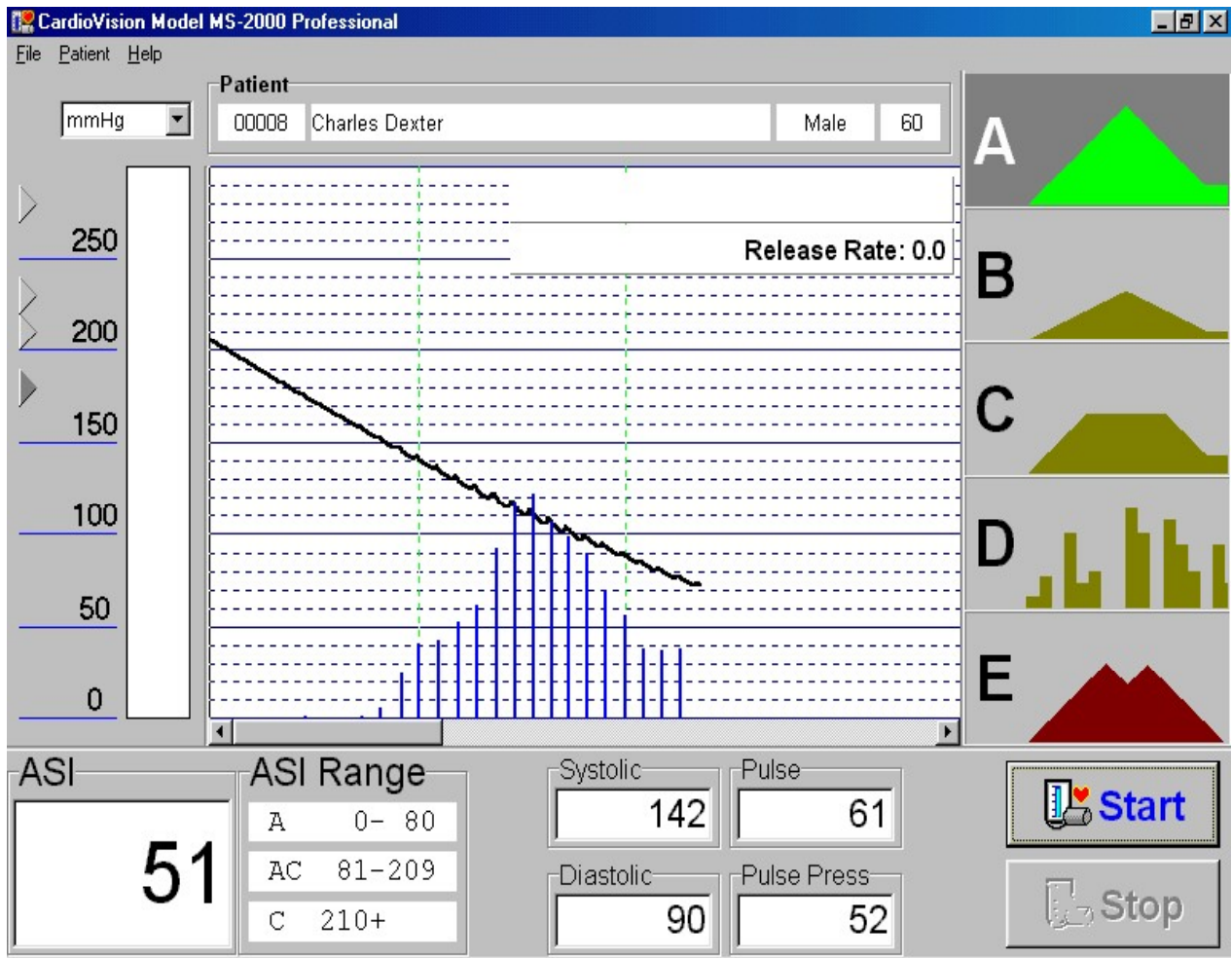
Language: English; Pub type: JOURNAL ARTICLE

Abstract: Flow-mediated brachial artery vasoactivity has been recently proposed as a noninvasive means for assessing endothelial function. To better characterize this technique, we measured brachial artery diameter and flow using 7.5-MHz ultrasound following 1, 3, and 5 min of upper arm blood pressure cuff occlusion in 19 normal volunteers and 13 patients with coronary artery disease (CAD). Although similar flow increases were observed with each protocol, statistically significant vasodilatation (12.6 +/- 5.7%) was observed in the normals only after 5 min of occlusion. With the use of this protocol, postocclusion blood flow increased 528 +/- 271 and 481 +/- 247% in the normals and CAD patients, respectively (P = NS). More vasodilatation was observed in the normals compared with the CAD patients (11.3 +/- 5.4 vs. 1.6 +/- 5.2%, P < 0.001). Interestingly, vasodilatation persisted for 20 min despite return of blood flow to baseline in 2 min. With the use of lower arm occlusion, arterial diameter was found to decrease 4.4 +/- 3.9% in response to a 85 +/- 7% decrease in flow. We conclude that 1) longer brachial artery occlusion results in more vasodilatation despite similar hyperemic responses, 2) vasodilatation persists substantially beyond hyperemia, and 3) CAD patients have impaired flow-mediated vasodilatation using this noninvasive technique.

- . Vogel, RA; Corretti, MC; Plotnick, GD. **Changes in flow-mediated brachial artery vasoactivity with lowering of desirable cholesterol levels in healthy middle-aged men.**
American Journal of Cardiology, 1996 Jan 1, 77(1):37-40. (UI: 96132344)
Language: English; Pub type: JOURNAL ARTICLE

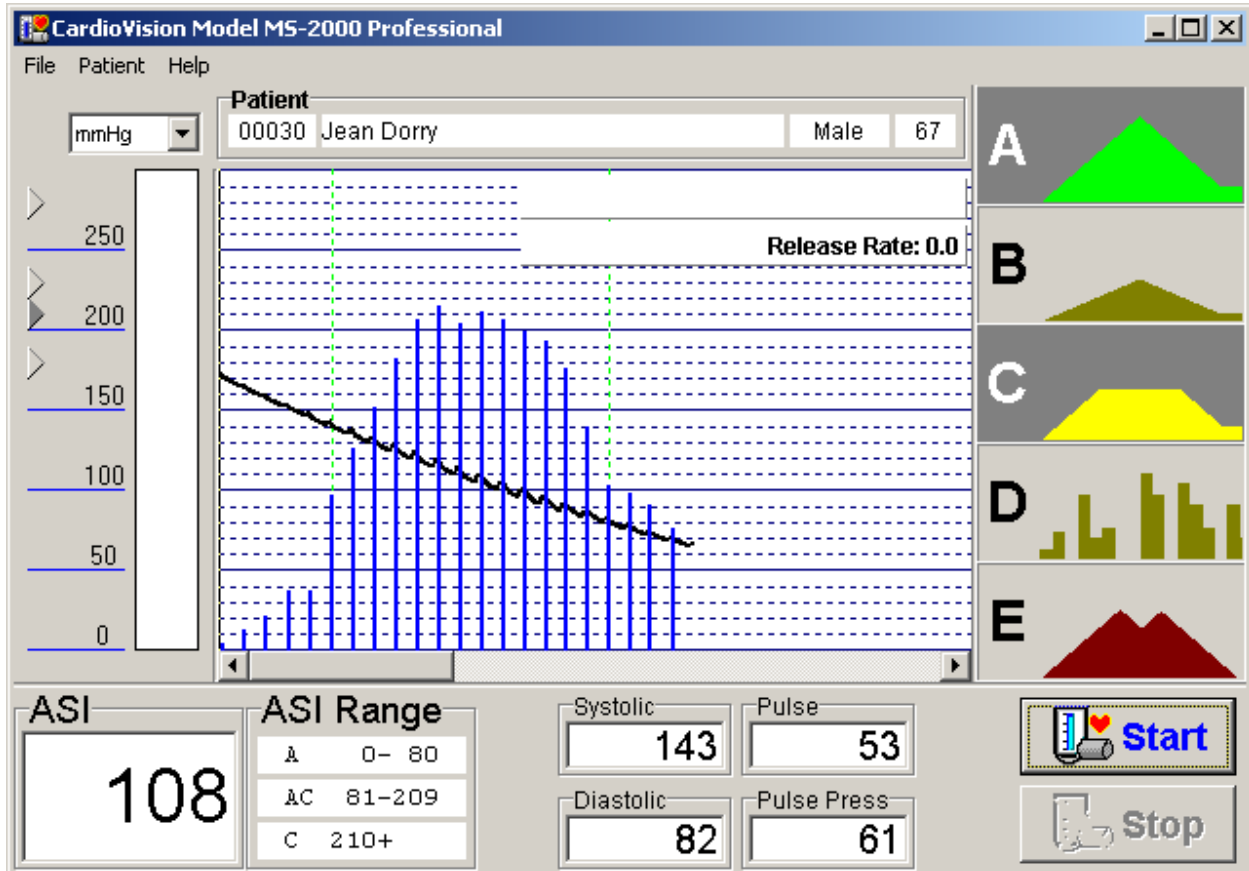
Abstract: Current National Cholesterol Education Program guidelines consider desirable total and low-density lipoprotein cholesterol levels to be < 200 and < 160 mg/dl, respectively, for healthy individuals without multiple coronary risk factors. To determine the extent to which these levels affect vascular function, we assessed flow-mediated (endothelium-dependent) brachial artery vasoactivity noninvasively before, during, and after cholesterol lowering (simvastatin 10 mg/day) in 7 healthy middle-aged men with cholesterol levels meeting current recommendations. Flow-mediated brachial artery vasoactivity was measured using 7.5 MHz ultrasound and expressed as percent diameter change from baseline to hyperemic conditions (1 minute following 5 minutes of blood pressure cuff arterial occlusion). Flow-mediated vasoactivity rose from 5.0 +/- 3.6% at baseline to 10.5 +/- 5.6%, 13.3 +/- 4.3%, and 15.7 +/- 4.9% (all p < 0.05) as cholesterol fell from 200 +/- 12 to 161 +/- 18, 169 +/- 16, and 153 +/- 11 mg/dl after 2, 4, and 12 weeks, respectively, of cholesterol-lowering therapy. Vasoactivity and cholesterol returned to baseline levels 12 weeks after simvastatin discontinuation. Overall, vasoactivity was found to correlate inversely with cholesterol levels ($r = -0.47$, $p = 0.004$). These data suggest that flow-mediated brachial artery vasoactivity responds rapidly to changes in cholesterol levels and that endothelial function improves by lowering cholesterol levels below recommendations of current guidelines.

A Normal CardioVision® Pattern with an ASI of 51 – Notice the Highlighted Pattern A in the Upper Right Hand Corner



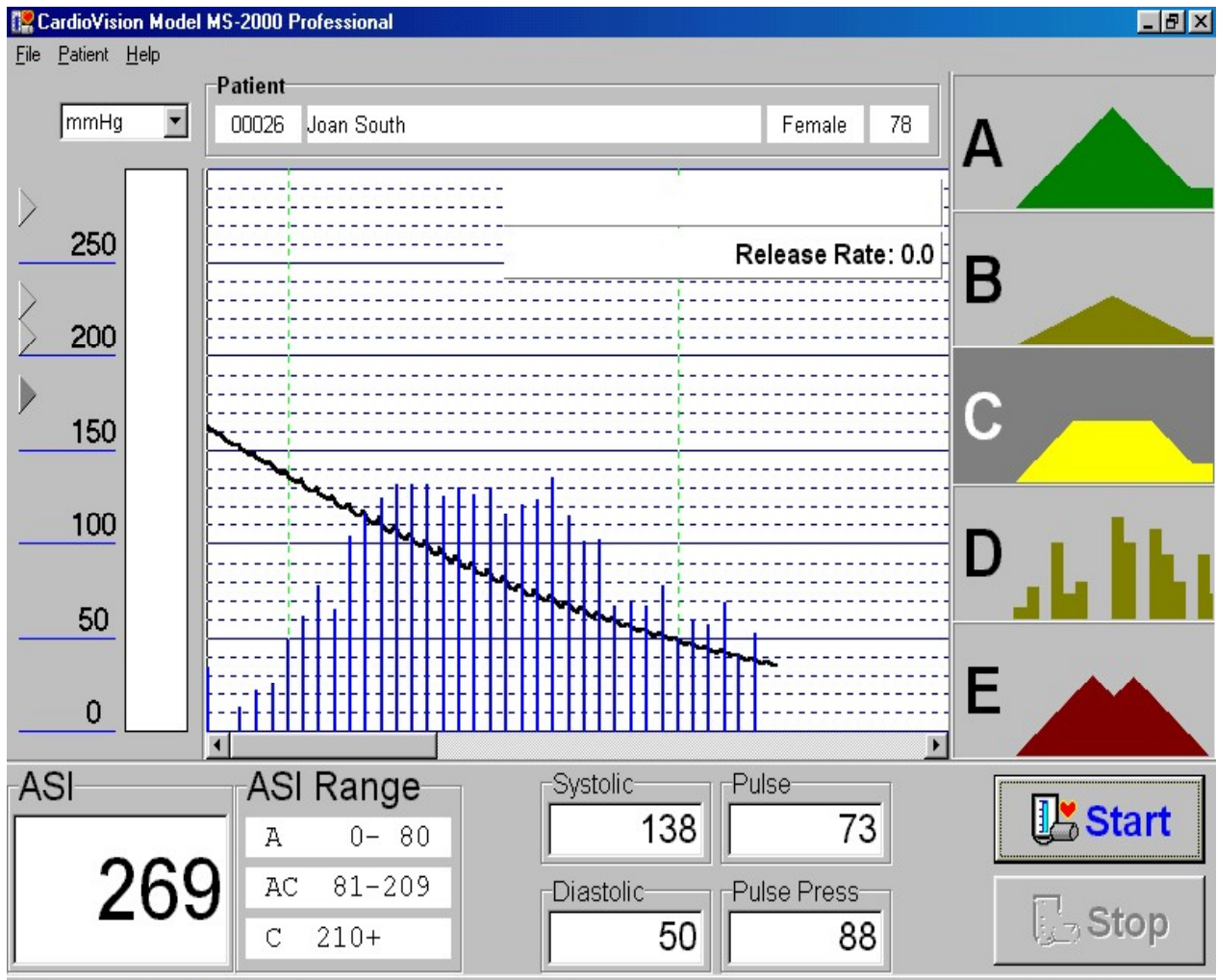
The blue pulse wave amplitude spikes comprise a shape like the highlighted “green mountain”.

An Abnormal CardioVision® Pattern A-C Yielding an ASI of 108. This Pattern Indicates Mildly Increased Brachial Artery Stiffness



The blue pulse wave amplitude spikes comprise a shape in between the Pattern A and C. Note the highlighted A and C.

An Abnormal CardioVision® Pattern C Yielding an ASI of 269. This Pattern Indicates Severely Increased Brachial Artery Stiffness



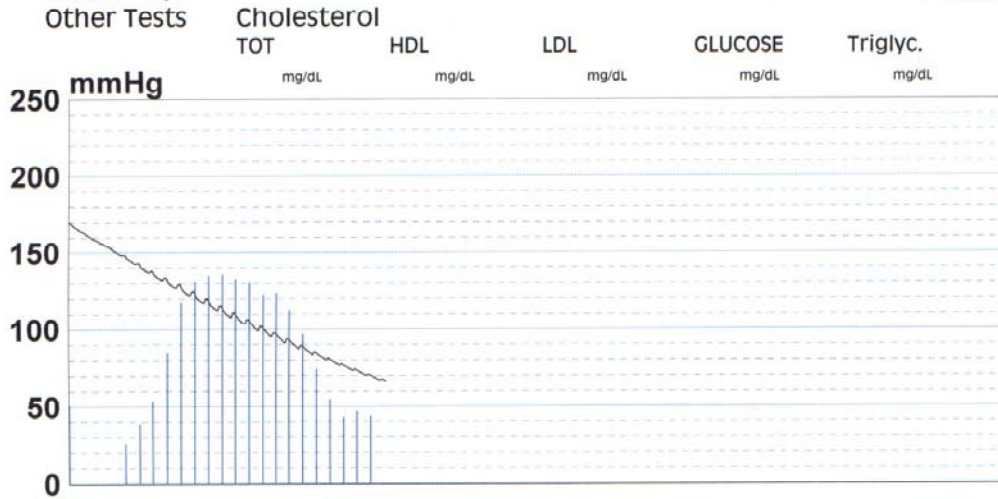
The blue pulse wave amplitude spikes comprise a shape resembling the highlighted Pattern C.

An Actual CardioVision® Printout is shown below:

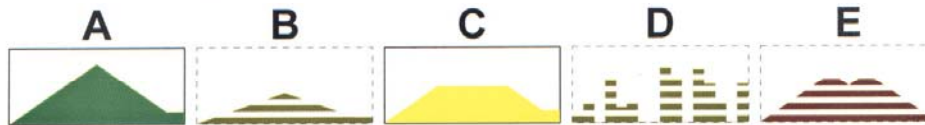
MS-2000

Patient **0026** Date: 1998/02/19 14:45
 Name **Joan South**
 Sex **Female**
 Age **74**
 Memo cp
 Other Tests

ASI Range	
A	0- 70
AC	71-179
C	180+



ASI	Systolic	Diastolic	Pulse	PulsePress
108	138	81	64	57



PATTERN A-C

This pulse wave pattern demonstrates mildly increased stiffness of the brachial artery. Repeat the test for confirmation. As the CardioVision measures blood pressure and pulse rate it also measures and calculates the stiffness of the brachial artery as the pressure is released from the blood pressure cuff. The Arterial Stiffness Index (ASI) ranges from 0-750+. It produces the pattern classification according to measured arterial stiffness or flexibility (lower ASI=flexible and higher ASI=inflexible). This information is graphically displayed as pulse waves on the computer screen. Since the stiffness of the brachial artery has been shown to correlate with the stiffness of the other arteries, it can be assumed that this patient is presently experiencing stress or is at a mildly increased risk for artery disease. However, this correlation is not absolute and can only be interpreted in light of other risk factors for artery disease. Since artery disease is progressive, a pulse wave pattern saved in the CardioVision database, or a printout, can be used for future reference.

CardioVision® Arterial Stiffness Index History Printout is Displayed Below

MS-2000 Arterial Stiffness Index History

Patient **0010**
Name **Akemi Rice**
Sex **Female**
Age **40**

	ASI	Sys	Dias	Pulse Press	Pulse	Pattern
001 1999/12/17 18:10	41	126-	92	34	71	A
002 1999/12/17 18:11	38	126-	87	39	70	A
003 1999/12/17 18:12	33	124-	86	38	70	A
004 1999/12/17 18:29	35	130-	83	47	66	A
005 1999/12/20 09:34	38	170-	97	73	82	A
006 1999/12/20 09:38	54	163-	92	71	80	A
007 1999/12/20 09:40	24	153-	101	52	81	A
008 2000/01/26 09:33	14	155-	94	61	92	A
009 2000/01/26 09:35	56	154-	86	68	87	A
010 2000/02/01 15:44	35	149-	92	57	87	A
011 2000/02/01 16:10	54	178-	112	66	90	A
012 2000/02/02 17:25	51	173-	101	72	90	A
013 2000/02/06 15:22	44	158-	101	57	99	A

Actual Medical Clinic Reimbursement Special Charge Detail Report

CardioVision® is FDA cleared for marketing and may be billed under CPT codes 99090, 99201, 99215, and 99233. Listed below is an actual reimbursement table for a physician using CardioVision® and using code 99090. The following page is an actual EOB from a physician practice.

CODE	Description	Party Billed	Amount Paid	Amount Charged
99090	CardioVision®	Mutual of Omaha	\$90.00	\$100.00
99090	CardioVision®	Patient	\$100.00	\$100.00
99090	CardioVision®	Work Comp	\$79.79	\$100.00
99090	CardioVision®	Southern California Life	\$31.56	\$100.00
99090	CardioVision®	Health Net	\$75.00	\$100.00
99090	CardioVision®	GreatWest California	\$90.00	\$100.00
99090	CardioVision®	Cigna Health	\$100.00	\$100.00
99090	CardioVision®	not recorded	\$10.00	\$100.00
99090	CardioVision®	Principal Mutual	\$48.00	\$100.00
99090	CardioVision®	Motorola	\$100.00	\$100.00
99090	CardioVision®	Patient	\$100.00	\$100.00
99090	CardioVision®	Aetna	\$72.00	\$100.00
99090	CardioVision®	Houghes/Aetna	\$100.00	\$100.00
99090	CardioVision®	Mutual of Omaha	\$80.00	\$100.00
99090	CardioVision®	Foundation Health	\$9.81	\$100.00
99090	CardioVision®	Foundation Health	\$9.81	\$100.00
99090	CardioVision®	Prudential	\$75.00	\$100.00
99090	CardioVision®	Cigna	\$80.00	\$100.00
99090	CardioVision®	GreatWest Lakes	\$100.00	\$100.00
99090	CardioVision®	Patient	\$100.00	\$100.00
99090	CardioVision®	Aetna	\$100.00	\$100.00
99090	CardioVision®	Patient	\$100.00	\$100.00
99090	CardioVision®	Aetna	\$66.00	\$100.00
99090	CardioVision®	not recorded	\$30.00	\$100.00
99090	CardioVision®	Patient	\$54.50	\$100.00
99090	CardioVision®	Beach Street	\$90.00	\$100.00
99090	CardioVision®	Aetna	\$64.00	\$100.00
99090	CardioVision®	DHCS	\$100.00	\$100.00
99090	CardioVision®	Patient	\$100.00	\$100.00
99090	CardioVision®	Patient	\$20.00	\$100.00
99090	CardioVision®	Patient	\$5.00	\$100.00
99090	CardioVision®	Patient	\$100.00	\$100.00
99090	CardioVision®	Principal Mutual	\$56.00	\$100.00
99090	CardioVision®	Patient	\$100.00	\$100.00

A Sample Explanation of Benefits (EOB) Form Listing Payment For CardioVision®

US Healthcare

EXPLANATION OF PROVIDER PAYMENT

PAGE 1
10/30/98
E-95-2794408-00004

A DRAFT WAS ISSUED TO THE BENEFITS LISTED BELOW REFLECT YOUR PORTION OF THIS PAYMENT. IN THE AMOUNT OF \$7,471.16. IF YOU HAVE ANY QUESTIONS ABOUT THE INDIVIDUAL PAYMENTS LISTED BELOW, PLEASE CONTACT THE APPROPRIATE ISSUING SERVICE CENTER.

NOTE: ALL INQUIRIES AND CLAIMS SHOULD REFERENCE THE INSURED ID NUMBER FOR PROMPT RESPONSE

SERVICE DATES	SERVICE PL CODE NO.	SUBMITTED EXPENSES	NEGOTIATED ADJUSTMENT	COPAY AMOUNT	PENDING OR NOT PAYABLE	SEE RMTS	DEDUCTIBLE	COINSURANCE	PATIENT RESP	PAYABLE AMOUNT
ISSUING SERVICE CENTER - P.O. BOX 2295 FORT WAYNE, IN 46801, - TEL. (219) 496-5400										
PAYOR ID 60054 SUB-ID 100 GRP NO - 657158 GRP NAME - LINCOLN NATIONAL CORPORATION										
INSURED:		INSURED ID:		PATIENT NO:		DIAG: 78659 DRG:		TCH: 85982		
PATIENT:		RELATION: SELF								
12098	OF 78465 1	514.55					182.91	182.91	411.62	
12098	OF 78478 1	67.90					15.60	15.60	54.30	
12098	OF 78480 1	67.90					15.60	15.60	54.30	
12098	OF	89.95					17.99	17.99	71.94	
12098	OF 93015 1	133.51					26.68	26.68	106.73	
CLAIM TOTALS:		873.85					174.78	174.78	699.05	
								PORTION PAID BY OTHER CARRIER		\$699.05
								ISSUED AMOUNT		NO PAY
12098	OF 78455 1	82.43					16.49	16.49	65.94	
12098	OF 78478 1	35.11					7.02	7.02	28.09	
12098	OF 78480 1	35.11					7.02	7.02	28.09	
12098	OF						30.55	30.55	122.12	
CLAIM TOTALS:		152.65					30.55	30.55	122.12	
								PORTION PAID BY OTHER CARRIER		\$122.12
								ISSUED AMOUNT		NO PAY

NETWORK 00101 LOS ANGELES - AHP

ISSUING SERVICE CENTER - P.O. BOX 7812 DOVER, DE 19903-1511, - TEL. (302) 674-7600

PAYOR ID 60054 SUB-ID 008 GRP NO - GRP NAME - & COMPANY, INC.

INSURED:	INSURED ID:	PATIENT NO:	DIAG:	DRG:	TCH:	
PATIENT:		RELATION: SELF				
192598	OF 99204 1	140.00	52.33	15.00	15.00	
192598	OF 93000 1	75.00	35.12			
192598	OF 99899 1	198.25				
CLAIM TOTALS:		395.00	67.45	15.00	15.00	
					ISSUED AMOUNT	\$252.55
					** TOTAL **	\$252.55
					** TOTAL PAID **	\$252.55

CardioVision

NOV 06 1998

SEE REVERSE SIDE FOR CHANGE IN ADDRESS OR BILLING INFORMATION/PENDING OR NOT PAYABLE EXPLANATIONS

Comments from Satisfied CardioVision® Users:

“I have been using your CardioVision machine in my practice to screen prospective patients for arteriosclerosis.....

The CardioVision device is simple to operate and gives solid quantitative data, which we can use to track progress with therapy, need for additional treatment, etc. “

Terry Grossman, M.D.
Lakewood, Colorado

“I have been using the CardioVision equipment to test for brachial artery Stiffness for almost a year. I find it an extremely sensitive and inexpensive tool to screen for early plaque development.....

“The test appears to correlate well with coronary artery disease, and it may turn out to be the ideal non-invasive test to measure objective improvement in patients...

“Training is simple and the test only takes a few minutes to perform. Patients love the easy-to-read printouts, and frankly so do I.”

“I have incorporated the CardioVision test for two major research efforts, partly because it is incredibly cost effective and also because it is rapidly becoming accepted by cardiologists. “

L. Terry Chappell, M.D.
Bluffton, Ohio

“As a physician in a busy Internal Medicine practice at Scripps Clinic in La Jolla, California, I have been fortunate to have the use of a CardioVision monitor to assist me in my daily practice. I have found this device to be a helpful and accurate non-invasive tool in identifying early hardening of the arteries and in motivating my patients to make the necessary lifestyle changes to prevent further progression of cardiovascular disease. It is quick and very user friendly and takes up very little physical space. The software incorporates a numerical arterial Stiffness index (ASI), which allows both physician and patient to monitor their progress with the implementation of both medical and lifestyle alteration modalities.

I think that any physician who wishes they had another tool available to help with early detection of possible cardiovascular disease should consider use of the CardioVision. It has been a most helpful adjunct for the delivery of optimal healthcare to my patients.”

Michael F. Maywood, M.D.
La Jolla, California

“Incorporating CARDIOVISION into the assessment and follow-up process has enabled us to increase our consultation fee by \$75. We find the results highly consistent and in keeping with the severity of the clinical picture. Interested physicians may contact me and I confirm that I am in no way associated with IMDP or Cardiovision. Let me thank you for your prompt technical support when we recently had a minor problem.”

D. Wittel, M.D., Ph.D.
Penticton, British Columbia, Canada