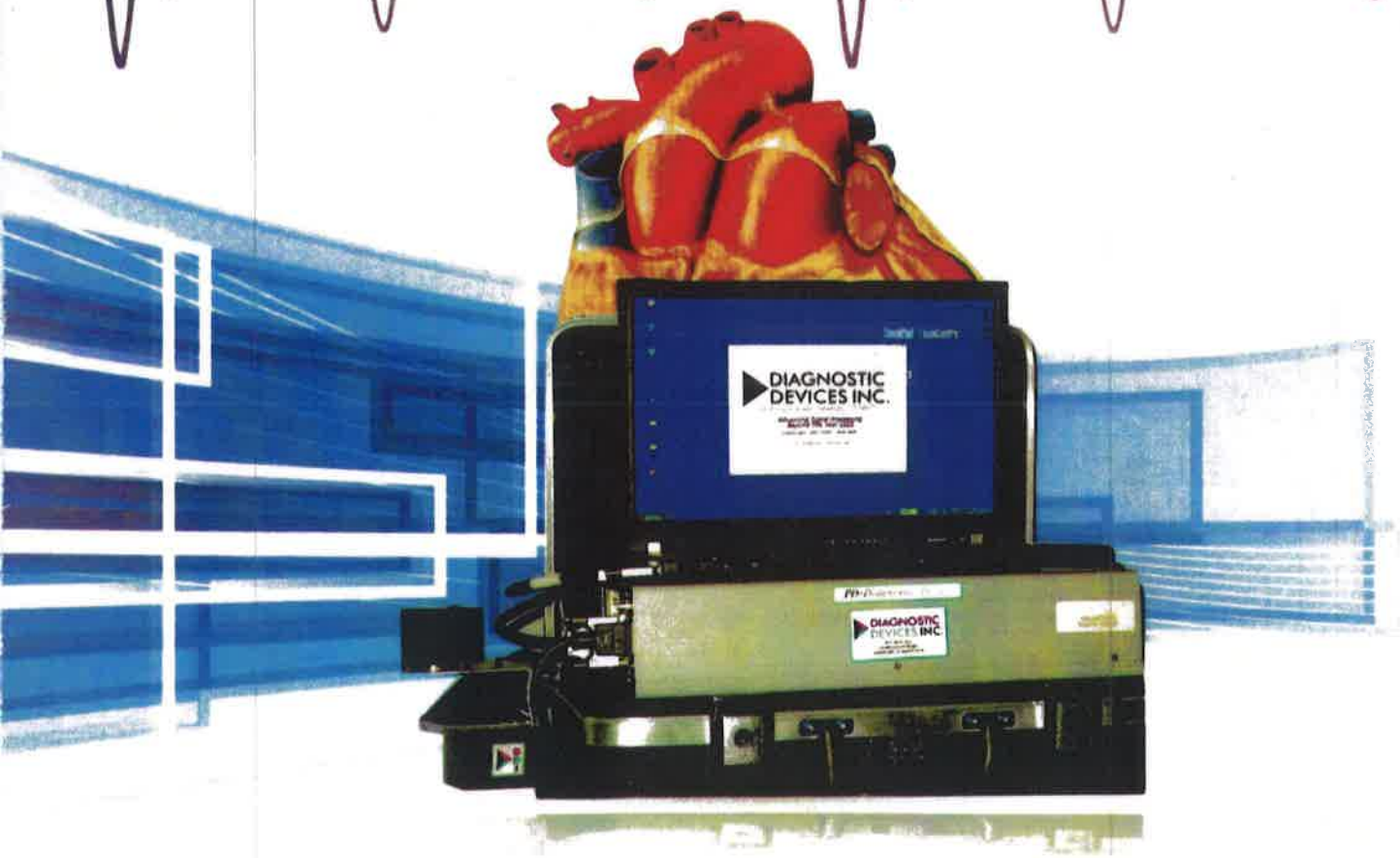
US PATENT # 11,583,194; FEB 21, 2023

Electro Cardiac Acoustic Device

eCAD®



Experience the Transformation with the Leading Edge Non-Invasive Technology For Coronary Scanning

eCAD® Non invasive Screening

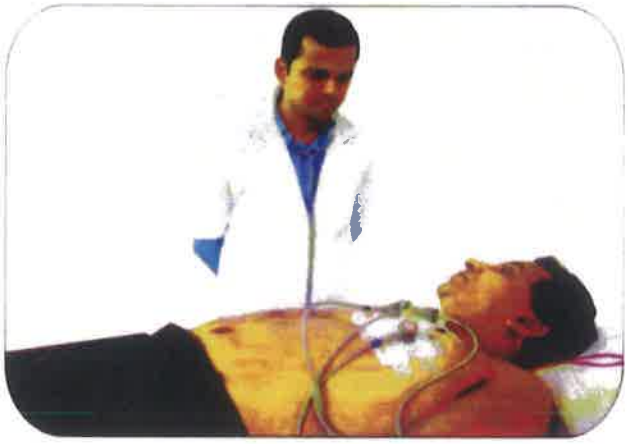
NON INVASIVE DIAGNOSTICS TOOL FOR CORONARY ARTERY DIESEASE

eCads brings together cutting-ege technologies to the field of Coronary Artery Dieseas (CAD) detection. The simplicity of its operation and the short time taken for the diagnosis, makes its operation easy and the time taken for the diagnosis is minutes that makes it one of the most advanced & user-friendly product today to detect CAD. Its is easy to operate , provides optimal results and can be used for mass testing. In other words the device provides a Safer-Faster-Cheaper diagnostic method.

What is eCAD®

eCAD is a state-of-the-art Non-Invasive Cardiovascular Scanning device that detects the Location and Severity of a Stenoses in coronary arteries of the human heart. It is a scientific breakthrough in cardiovascular medical technology.

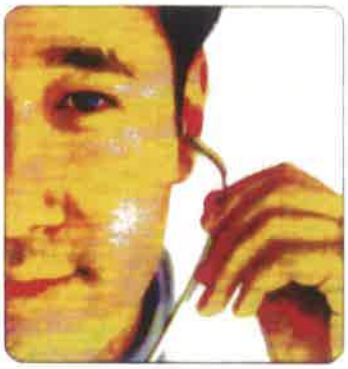
eCAD compliments & works with existing invasive dianostic devices & procedures like Angiogram , semi no-invasive diagnostic devices like CT Angiogram and MRI , etc to provide the cardiologist with information that he can need to make an assessment of the condition of the heart.

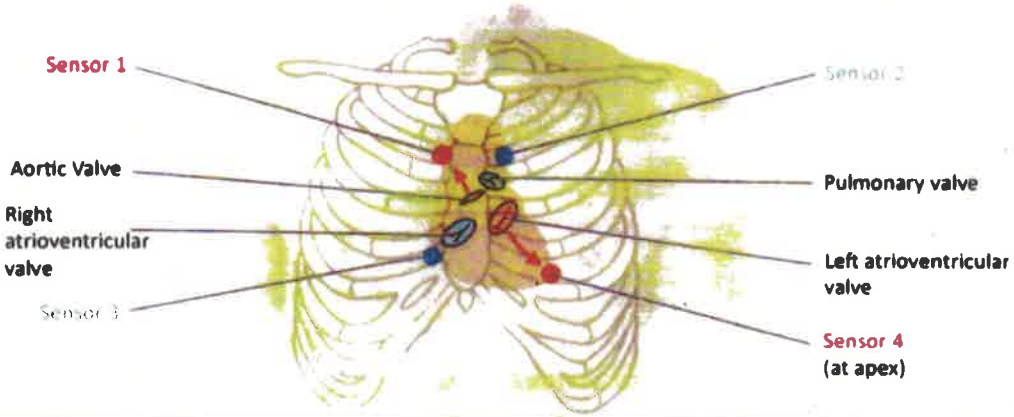


Non - Invasive, quick and easy

eCAD innovative features enable the practitioner to correctly locate and measure the stenosis in coronary arteries and monitor patient's responses to the treatments, without any side effects or risks.

eCAD uses advanced DSP technologies like Continuous Wavelet Transform and Flow Turbulence Accelerometry to measure, record , & analyze with in minutes changes taking place in the cardiovascular system every millisecond.

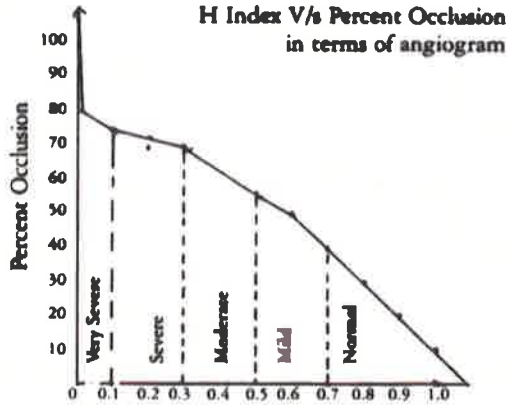


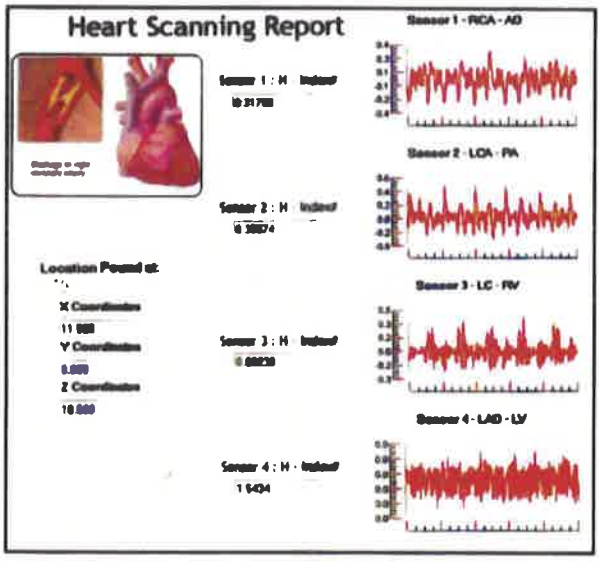


How eCAD® works ?

The eCAD basic principal is based on "If the heart valves functionality is impaired because of some disease (i.e., stenosis), the blood flow in the cardiac valves becomes turbulent. This turbulent blood flow produces audible sounds that are different than the soundd of a healthy heart valve. These sound or murmurs of the valves are created during the occlusion in the arteries and are transmitted via the blood stream."

The minute acoustic signals of the heart valve murmurs are picked up from four specific valves auscultation positions on the heart analysis. The self generated report provides the exact location of the stenosis and the severity of it in the coronary arteries to evaluate cardiac and cardiovasuclar disorder.





Who can benefit from eCAD®

Over the last few decades, Scientists and Engineers have developed various techniques for 'looking' inside the heart to diagnose diseases related to the coronary arteries. Examples include CT Angiogram, Invasive angiogram, MRI, & Ultrasound etc. eCAD is Non-invasive acoustic signal processing through continuous wavelet transform analysis that is breakthrough DIAGNOSTIC modality to enable the practitioner to detect and measure the stenosis in CAD, non-invasively, safely, efficiently , cost effectively and in a short time.

eCAD IS TOOL for diagnosing the heart condition of patients with

- **Diabetics**
- **Hyper-tension**
- **Heart Screening before onset of CAD**
- **Any other health discorder that put them at hight risk for a invasive procedure**

Heart Screening Device's Technical Specifications;

1) Device must be portable with in-built color display having a net weight not more than 50 kg.

2) It must be a device that should measure CADHOC (H-Index) in real time with respect to X, Y and Z coordinates having some co-relation with ALDS% (as in Angiogram) .

3) Device must measure H-Index for at least 04 or more coronary Arteries namely RCA (Right Coronary Artery), LCA (Left Coronary Artery), LCX (Left Circumflex Artery) & LAD (Left Anterior Descending Artery) using only Proprietary non-invasive DSP AND MATLAB window (NELOC type) Technology.

4) The Device System may use either reusable OR disposable 04 ISOMAC (ISO-SURFACE OPTIMAL MEMBRANE ADHERENT COMPLIANT SENSORS OR similar acoustic sensor devices (Patented & Proprietary) only to get optimal results.

5) It must measure the CADHOC (H-Index) within a time span less than 1 (one) minutes -maximum time duration for which a patient can be asked to hold breathing during measurements.

6) The Device should have a color display screen with integrated key board or Touch Screen facility.

7) It preferably should have a facility to measure Patient Torso dimensions with suitable template and chest inter-costal And Apex sensors PMIs (Positions of Maximum Intensity) showing 3D sensors posi -tions diagram that scales accurate patient chest recordings.

8) The Device must be based on Acoustic Sensor Technology and shall display and generate 04 separate wavelet Transform fractural analysis against each of four measured coronary Arteries. Non-Invasive Device must use proprietary Wavelet Transform algorithms with fast DSP (Digital Signal Processing) core hardware capable to quickly detect and locate coronary arterial stenoses with sufficient and reliable accuracy in real time.

9) The device may prove a useful tool for Mass screening, better suitable for diabetics & Health camps, Cardiac OPD, Non-Invasive Cardiac Labs etc. to detect early onset of CAD for asymptomatic and later symptomatic patients.

10) Preference & priority shall be given to the Device that has an Acoustic Intensity Controller In-built or with a separate attachment facility.

11) The device must have an external Printer interface facility for patient reports.

12) The Technology and Device must have Patented and Proprietary rights Certificates

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