Novel Device and Method to Measure Ventricular Arterial Coupling and Vascular Performance

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Technology description

C12893 Non-Invasive, Simple Diagnostic Tool for Ventricular Performance
Invention Novelty: This invention is a non-invasive medical device that provides real-time, continuous measurements of an individual’s “cardiovascular tree”, the system of veins and arteries and the flow of blood through these vessicles. Output of this device is a single number which indicates the relative health of an individual's vasculature and provides feedback for the best parameters to increase vascular health.
Categories: Diagnostics, Cardiovascular
Keywords: Pulse Wave Velocity, Ventricular Coupling, Pulse Wave Form
Technical Details:
Johns Hopkins researchers have developed a non-invasive medical device measuring pulse wave velocity using routine clinical tools in order to identify a disturbed pattern of the pulse wave front of a patient. Information gathered provides data to determine the parameters to provide optimal coupling.
Data Availability: Under CDA/NDA
Publication(s)/Asociated Cases: Not at this time.

Advantages

Approximately 30% of deaths worldwide are due to cardiovascular sources. Currently, determining arterial and vascular health requires techniques that are not available in the operating room or intensive care unit, where accurate and current information is critical. This technology offers the following benefits as a commercial technology:
- Real-time, continuous monitoring of vascular health
- Accurate characterization of global and regional flow
- Analysis of vascular size and intrinsic stiffness to suit different stroke volumes and ejection times
- Portable

Institution

Johns Hopkins University

Inventors

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