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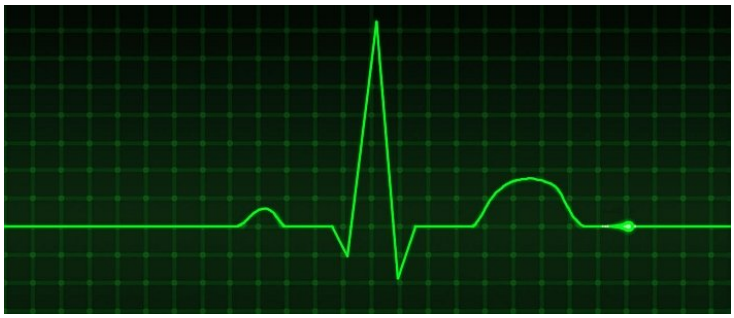

Singapore: Clearbridge VitalSigns, a Singapore-based medical device company, is leveraging its flagship product, CardioLeaf, into a family of three different products, including CardioLeaf FIT, CardioLeaf PRO and CardioLeaf ULTRA. These three products leverage upon the same ultralow power electrocardiogram (ECG)-on-chip technology that allows for fully integrated, wireless, multilead (up to 12-lead), full heart cycle ECG monitoring and recording.

With a thickness of just nine millimeter, CardioLeaf is the world's thinnest fully-integrated three-Lead ECG monitor. CardioLeaf is worn as a simple-to-use, wireless and water-resistant plaster on the chest, providing patients with much freedom of movement and the ability to carry out their normal daily activities. CardioLeaf's patented, ultralow power consumption technology enables full ECG data to be accurately captured for up to seven days.

Its multi-channel architecture means the device is flexible enough to incorporate other monitoring vital sign or sensory recorders such as an electromyogram (EMG measuring electrical activity produced by skeletal muscles) or an electroencephalogram (EEG measuring electrical activity along the scalp). In addition, other components can be added such as accelerometers (activity monitoring), or temperature sensors for more holistic vital signs monitoring.

"We designed CardioLeaf to be an ultra-thin, ultra-lightweight and ultra-comfortable ECG plaster. We quickly realised that it would be able to serve different market segments and that it would be better to develop a range of products, which would allow us to customise each to a specific group users. Moving forward, we hope to partner with research organisations, healthcare institutions and cardiac telemetry service providers, who would be keen to work with us to bring patient monitoring to the next level and improve patient compliance and comfort," said Mr Johnson Chen, MD, Clearbridge VitalSigns.

Unlike commonly-available single-lead ECG devices, the three-Lead CardioLeaf records three times as much ECG data and at an extended operating time, providing a more complete and robust picture of the human heart for analysis. This is especially important for cardiac arrhythmias, which are sporadic and difficult to monitor.