

Press Release

CardioSecur: 22-lead mobile ECG enables 360-degree view of the heart

London (28.08.2015). Personal MedSystems introduces the first and only 22-lead mobile ECG system, CardioSecur, at the European Society of Cardiology Congress 2015. The next generation of ECG solutions can be run with a smartphone or tablet PC, 4 electrodes and the CardioSecur App enabling the diagnosis and localization of cardiac ischemia, rhythm disorders and posterior wall infarctions. Clinical grade quality readings allow a 360-degree view of the heart and therefore new diagnostic possibilities. CardioSecur's technology has been validated in several clinical studies¹ and is available in two versions: CardioSecur PRO for professional use and CardioSecur ACTIVE for home use by patients.

The conventional 12-lead ECG has surely proven its worth in the diagnosis of cardiac disease. Nevertheless the display possibilities of a 12-lead ECG are limited to only 65 degrees in the transverse plane. This might be one of the reasons up to half of people who suffer from angina or silent ischemia, have normal ECG readings². In Europe alone, Coronary Artery Disease still accounts for 4 million deaths every year.³ Symptoms for myocardial infarction are often indistinct while about one out of three heart attacks occurs symptom free⁴ which makes precise diagnosis even more difficult. Next to modern therapy options the need for enhanced diagnosis tools supporting physicians is crucial.

Quality and accuracy of the mobile ECG solution CardioSecur has been validated in a clinical study against standard of care 10 electrode, 12-lead ECG systems and shows 99.5% accuracy.⁵ Using only 4 electrodes mitigates artifacts to a bare minimum ensuring maximum signal quality and exceptionally stable lead depiction. As the 4 electrodes are placed on very marked positions of the thorax, lead misplacement, often consequential to highly diverse anatomies, is eradicated.

Professional and Patient Version based on identical smart technology

CardioSecur has been developed by cardiologists in two versions: The professional 22-lead version CardioSecur PRO enables use in house calls, bed-ridden or reduced mobility patients as well as emergency situations. The lightweight 50g cable is accompanied by the PRO app which allows 10.000 minutes of ECG recording per 1GB via smartphone or tablet PC. The full ECG report can be sent directly to electronic patient records or colleagues and can be air printed. An automatic interpretation function is also available.

CardioSecur ACTIVE is the convenient 15-lead patients' version of the mobile ECG enabling doctors to get data from the very moment patients suffer from cardiac

¹ Drew, B.J. and B. Ide, Diagnosing ischemia from the bedside monitor. Prognostic Cardiovascular Nursing, 1996. 11(1): p. 45-6.; Bonaventura K, Wellnhofer E, Fleck E. Comparison of standard and derived 12-lead electrocardiograms registered by a simplified 3-lead setting with four electrodes for diagnosis of coronary angioplasty-induced myocardial ischemia. European Cardiology. 2012 Jul;8(3):179.

² <http://umm.edu/health/medical/reports/articles/coronary-artery-disease>

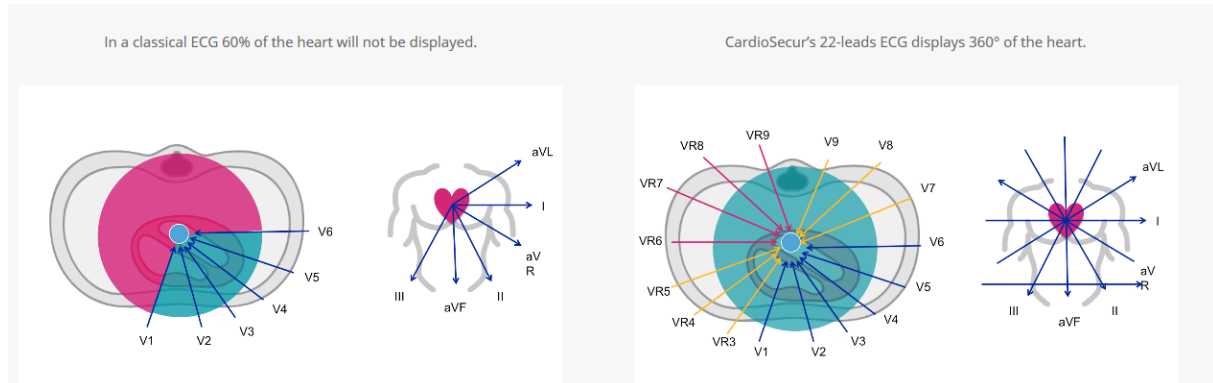
³ European Heart Network and European Society of Cardiology: European Cardiovascular Disease Statistics, Sept. 2012, 14

⁴ Sheifer SE, Manollo TA, Gersh BJ. Unrecognized myocardial infarction. Ann Intern Med 2001;135:801-811

⁵ Bonaventura K, Wellnhofer E, Fleck E. Comparison of standard and derived 12-lead electrocardiograms registered by a simplified 3-lead setting with four electrodes for diagnosis of coronary angioplasty-induced myocardial ischemia. European Cardiology. 2012 Jul;8(3):179.

symptoms. CardioSecur ACTIVE can be used in patients with undiagnosed symptoms, high risk patients as well as those who have had a cardiac event. While patients get simple instructions to act and – if necessary – contact their physician, the ECG is sent via email to the medical specialist for further use. Shared via a secure database helpful information for diagnosis and patient management is generated.

Graphic material:



About Personal MedSystems and CardioSecur:

CardioSecur is a mobile ECG device of clinical grade quality for smartphones and tablets. The 22-lead mobile ECG system using only 4 electrodes enables diagnosis of ischemia and rhythm disorders. CardioSecur comes in two versions: PRO for physicians, ACTIVE for patients. The product is an innovation of Personal MedSystems GmbH, based in Frankfurt am Main, Germany. The high tech start-up company is financed by venture capital firms Seventure Partners and High Tech Gründerfonds. Personal MedSystems received the ISO 13485 certification from TÜV SÜD in 2011.

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