

### MINICARE ACUTE CARE

## On-the-spot information for when you're on the spot

Minicare is ready where you are. In the emergency room, it helps you to make quick decisions when your patients are potentially suffering from acute cardiac distress. Our Minicare Cardiac Troponin-I (cTnI) blood test\* will give lab-quality results on the spot and within minutes.

\* In development. Not currently available for sale



Waiting on conclusive blood test results can cause anxiety for patients and delay physicians' decision for treatment. Most of the diagnostic decisions are based on information provided by blood tests, but it often takes an hour or more to get the results from a hospital central laboratory. In threatening conditions like acute myocardial infarction, every moment counts. Philips is developing a Minicare Cardiac Troponin-I (cTnI) blood test that will give doctors lab-equivalent results for on-the-spot patient diagnosis and treatment decision making. The Minicare devices are easy to use. A drop of blood is all that's required to get accurate and quick results - within minutes - at the point of care, such as emergency departments, critical care centers and ambulances.

### What is it?

In threatening conditions like acute myocardial infarction every second counts. Troponin testing is the gold standard test for diagnosis of myocardial infarction, but current laboratory test results take often over an hour. Because of this, Philips is developing a quick finger-prick test that gives results within minutes. The Minicare cTnI test helps you to quickly identify or rule out NSTEMI<sup>2</sup>. Accurate, portable, robust and reliable, Minicare is designed for use right at the bedside or in pre-hospital paramedic settings. This latest Philips innovative solution in cardiology gives you the results you need fast, enabling on-the-spot decisions when the pressure is on. Physicians could now directly identify patients with life-threatening STEMI<sup>1</sup> using Philips ECG systems, and NSTEMI<sup>2</sup> by additionally using the Minicare Acute Care blood test.

<sup>1</sup>STEMI (ST elevated segment myocardial infarction) <sup>2</sup>NSTEMI (non ST elevated myocardial infarction)

Minicare Acute Care is a fully-automated handheld rapid diagnostic testing solution that can measure target molecules in very low concentrations (picomolar) in blood in a matter of minutes. Based on its proprietary Magnotech biosensor technology, the Minicare handheld diagnostic test can perform a wide variety of assays including hormones, drugs and proteins. The platform allows multiplexing capabilities making it possible to test for multiple markers from the same droplet of blood at the same time. The first application for acute care is cTnI (cardiac Troponin I). Philips aims to offer a full range of markers for the acute care setting. We develop new markers and work with partners to expand the test menu in the Acute Care setting as well as other clinical applications.

### What is innovative about it?

- **Breakthrough innovation in biosensor nanotechnology Magnotech invented by Philips:** All assay reagents are located in the disposable cartridge. The entire assay process within the cartridge is executed by controlled movement of the magnetic nanoparticles within the cartridge using magnetic fields. After a short incubation stage the amount of bound nanoparticles are detected optically.
- **Smart technology, at the point of care:** results within minutes, lab-equivalent accuracy, small sample volume, easy to use, requires minimal training only. High robustness and reliability is ensured by the absence of moving parts in the system.
- **State-of-the art connectivity:** integration of test results with clinical patient information available in the

electronic patient file.

- **Open platform model** enables partners to expand test menu in healthcare. Moreover, the technology is not limited to healthcare and opens opportunities in pharma, food analysis, and veterinary care.
- **Member of the Minicare family:** Minicare comprises a range of in-vitro diagnostics systems that can be applied throughout the continuum of care in home setting, GP offices or hospitals.

### What is the benefit of this innovation to 'you'?

Waiting at least an hour for results can cause fear and anxiety for the patient. And when a patient's condition becomes critical, this is time they just may not have. Point-of-care testing can change this. With a simple finger prick test, handheld devices give the doctor results within minutes. So wherever the patient is, healthcare professionals have the ability to test and monitor and always know their status. Point-of-care blood testing helps physicians to make decisions on-the-spot and quickly get the right treatment to patients when their need is greatest and rapidly rule out NSTEMI<sup>2</sup>, thereby reducing time to discharge and preventing overcrowding of the emergency department

### How did we do it?

Philips has invented and developed Magnotech in Philips Research. The technology was then brought into Handheld Diagnostics, a venture within the Philips Healthcare incubator. Here a team was formed by experienced entrepreneurs in in-vitro diagnostics, combining expertise in (immunoassay) technology, marketing and business development to grow the business. Partnerships leveraged internal and external expertise to create the first prototype in 2013. Commercial launch of Minicare is planned for the end of 2015 in Europe.

### Did you know?

- More than 65% of clinical diagnosis is supported with a blood test.
- Acute myocardial infarction is a major cause of death and disability. 67% of myocardial infarctions are NSTEMI (while 33% is STEMI), demanding additional diagnostic tests of the Troponin I biomarker.
- Magnotech is based on Philips competencies in magnetics (compact cassette), optics (DVD), and nanotechnology.

### Points to note

- Philips is performing various field trails in cooperation with Catharina Hospital in the Netherlands in 2014 and a consortium of several key hospitals in Europe.
- At EUSEM 2014, the European Congress on Emergency Medicine, Philips will demonstrate its Minicare cTnI product.
- Commercial launch is planned for Q4 2015 in Benelux, shortly followed by the rest of Europe in 2016

### Find out more

- Philips Minicare Acute Care website: [www.philips.com/minicare](http://www.philips.com/minicare)

### Contacts

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