

BBB

COMPANY BRIEF 2018

BBB inc. creates affordable blood testing technologies with mobile enabled tools and data insights.



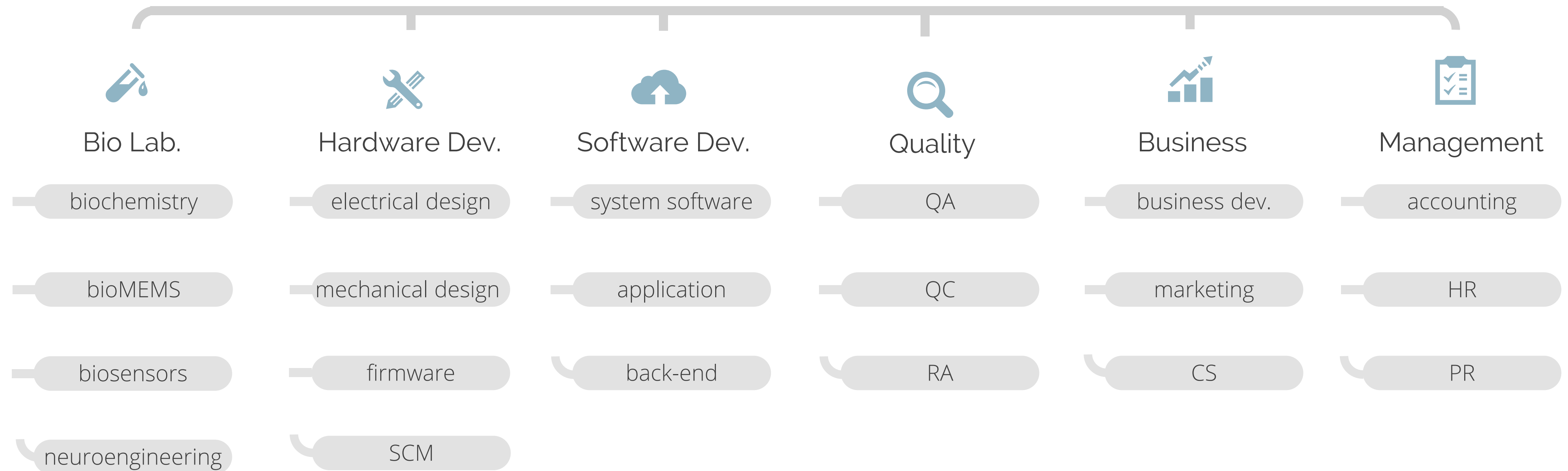


BBB History

- 2018. 03 'markB cancer' Clinical testing and joint research with Seoul National University Bundang Hospital
- 2017. 11 Launched elemark™ dual check in Korea
- 2017. 08 Signed OEM contract with GenBody Inc. for supply of rapid test readers for arboviruses and drugs of abuse
- 2017. 06 Signed MOU with Korea University Guro Hospital to develop next-generation immunodiagnostic kit for cancer, myocardial infarction, and chronic disease
- 2017. 06 Signed MOU with Busan University to commercialize medical research and infrastructure
- 2017. 04 Signed OEM contract with Philosys Inc. for supply of glucometers for hospital use
- 2016. 08 Signed agreement with KT for use of elemark™
- 2016. 08 Raised \$5 million in Series A round
- 2016. 02 Signed strategic MOU with NOOM inc. targeting the mobile healthcare market
- 2015. 10 Winner of Zhongguancun Innoway "2015 Demo The World" in Smart Hardware Sector
- 2015. 08 Established regional office at NASA Ames Research Center, Silicon Valley, U.S.A.
- 2015. 05 Tech-In-Asia Award Winner @beGlobal Seoul 2015
- 2015. 04 Signed OEM contract with GreenCross MS for supply of in-vitro diagnostic devices for hospitals
- 2015. 01 Joined HAX Batch 6 program
(HAX, Hardware startup accelerator based in Silicon Valley and Shenzhen)
- 2014. 10 Founded headquarters in Korea

BBB Structure

Company Structure

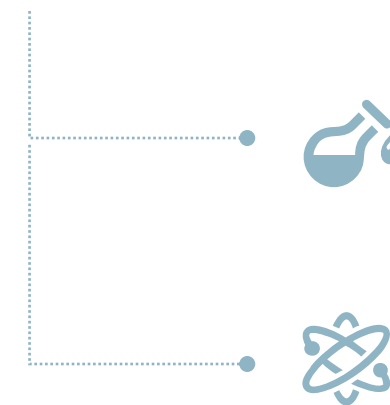


BBB R&D

01.

Lab-on-a-chip Technology

Development of mobile blood testing device for self and point-of-care (POC) diagnosis



Blood cell and plasma separation

Membrane and capillary flow-driven microfluidic blood plasma separation device



Biological sample manipulation and immunological analysis

Electro-kinetic and magnetic force-based electrochemical immunological analysis

02.

Nano/Micro-Processing Technology

Development of nano/microstructure production technology for low-cost mass production.
Production of plastic microfluidic chips and carbon nanoelectrodes

03.

Biosensor Technology

Development of high-performance nano-biosensor materials and elements,
highly sensitive electro-chemicals, and optical sensor technology

04.

Brain Stimulation Treatment Technology

Personalized treatment combining AI and AR that treat depression, obesity, and addiction



BBB Vision

Healthcare data integration & personalization ► Forecasting, Prevention, Early Detection

Data generation

Healthcare data from the hospital, [markB®](#), non-invasive monitoring devices and other products



STEP1

Data consolidation

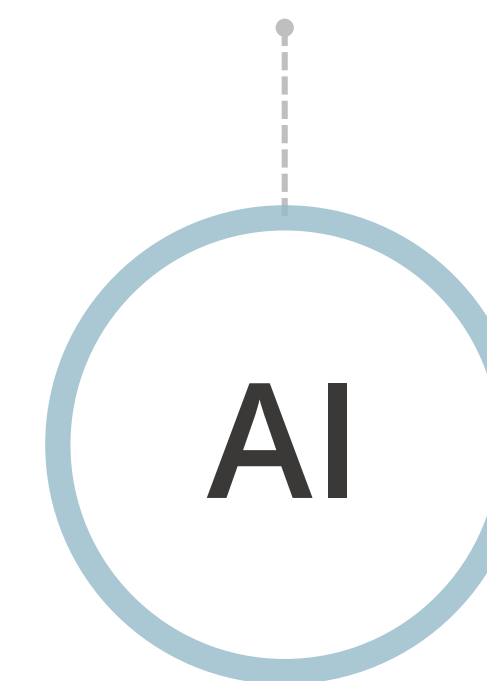
Healthcare data consolidation and personalization within BBB healthcare platform



STEP2

Prediction & prevention

Artificial intelligence for early-stage diagnosis and the prediction and prevention of the most prevalent diseases



STEP3



BBB Product
01

markB



BBB solution : markB

The Future of POCT

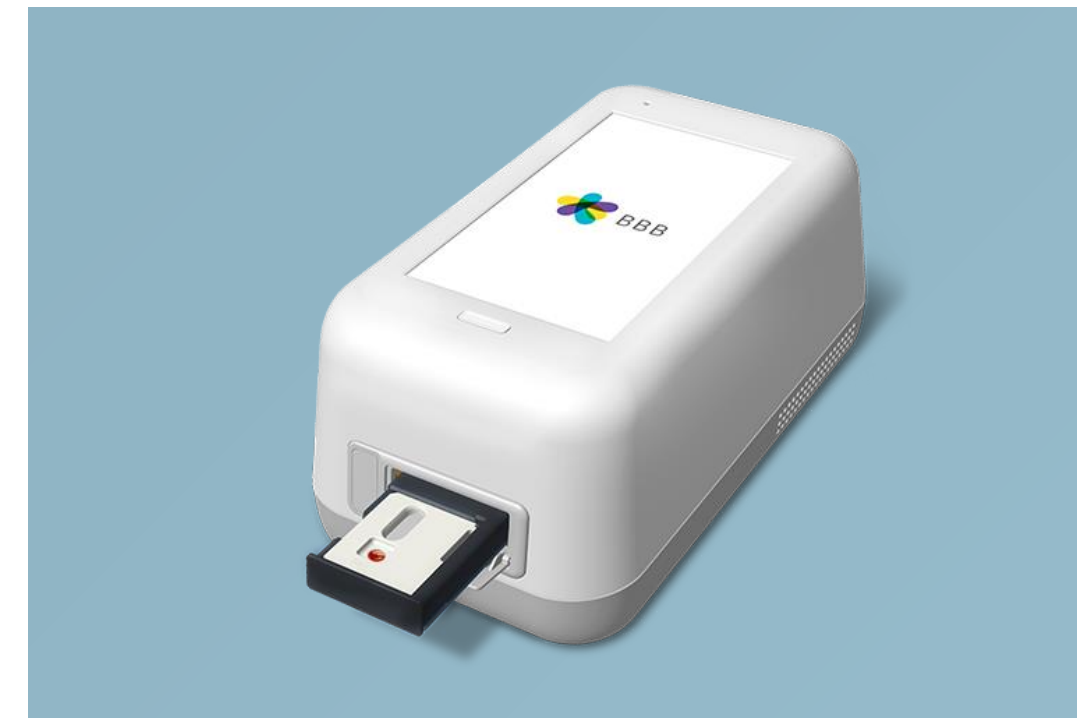
A 10-minute quantitative test that can be used in a doctor's office, the emergency room, and at home.
Can be conducted by anyone - not just medical professionals.



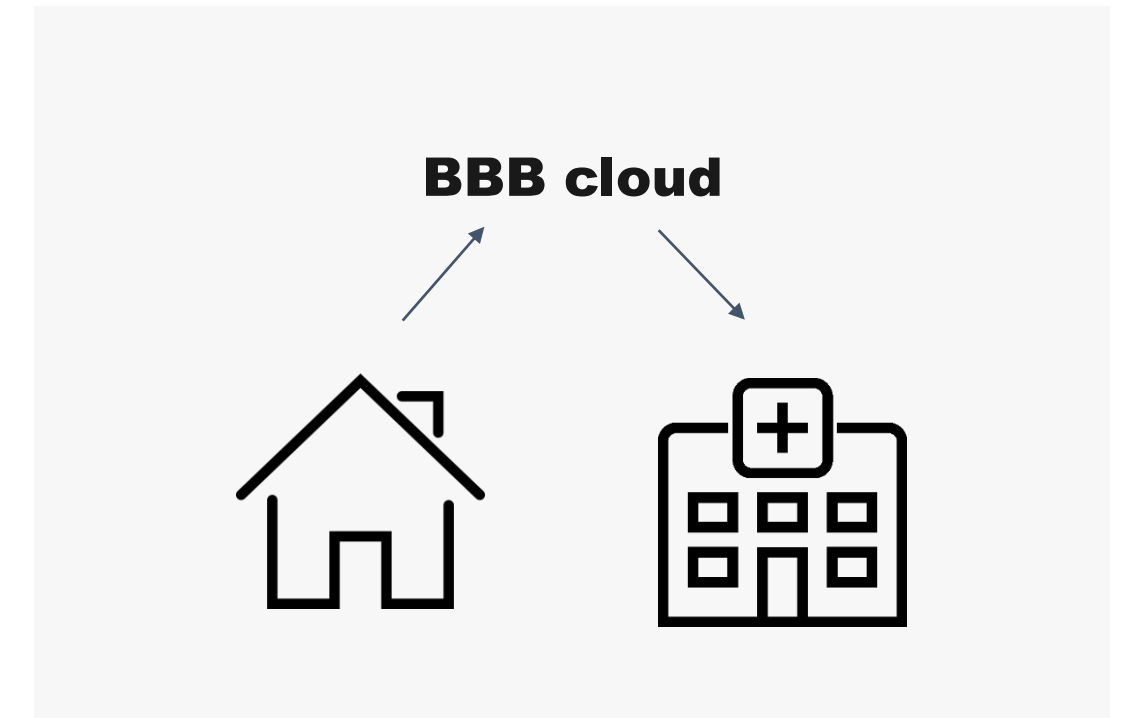
35 μ L of capillary whole blood drawn from a finger-prick



Passive plasma separation, automated reaction and measurement



See results in 10-minutes



Automated data synchronization with the hospital

BBB solution : markB

Key Features

- ✓ A portable device that guarantees the accuracy of a laboratory equipment using magnetic fields and electrochemistry
- ✓ Works with whole blood drawn from a finger prick pioneering analyzer for home and emergency situation use (CLIA waiver)
- ✓ No pre-processing, buffers, or reagents required power-free plasma separation
- ✓ Reduce test times, test fees, and equipment maintenance fees affordable, one-time-use chips
- ✓ A multi-parameter platform an antigen-antibody reaction that is compatible with all biomarkers



markB

Roadmap

STEP 1 Cancer diagnostics and after-care

Point-of-care testing in the convenience of one's home

Share real-time results with personal health care providers for personalized after-care and treatment

*Biomarker : AFP, CEA, PSA, CA-125, CA-19-9 etc.

STEP 2 Screening infectious diseases with high accuracy

High accuracy with low detection limits in Point-of-care testing

Revolutionary screening method for infectious diseases

*Biomarker : Dengue, Malaria, Zika, Yellow fever, Chikungunya etc.

STEP 3 Convenient & affordable chronic disease diagnostics

Convenient as a rapid test

Affordable as diabetes monitoring

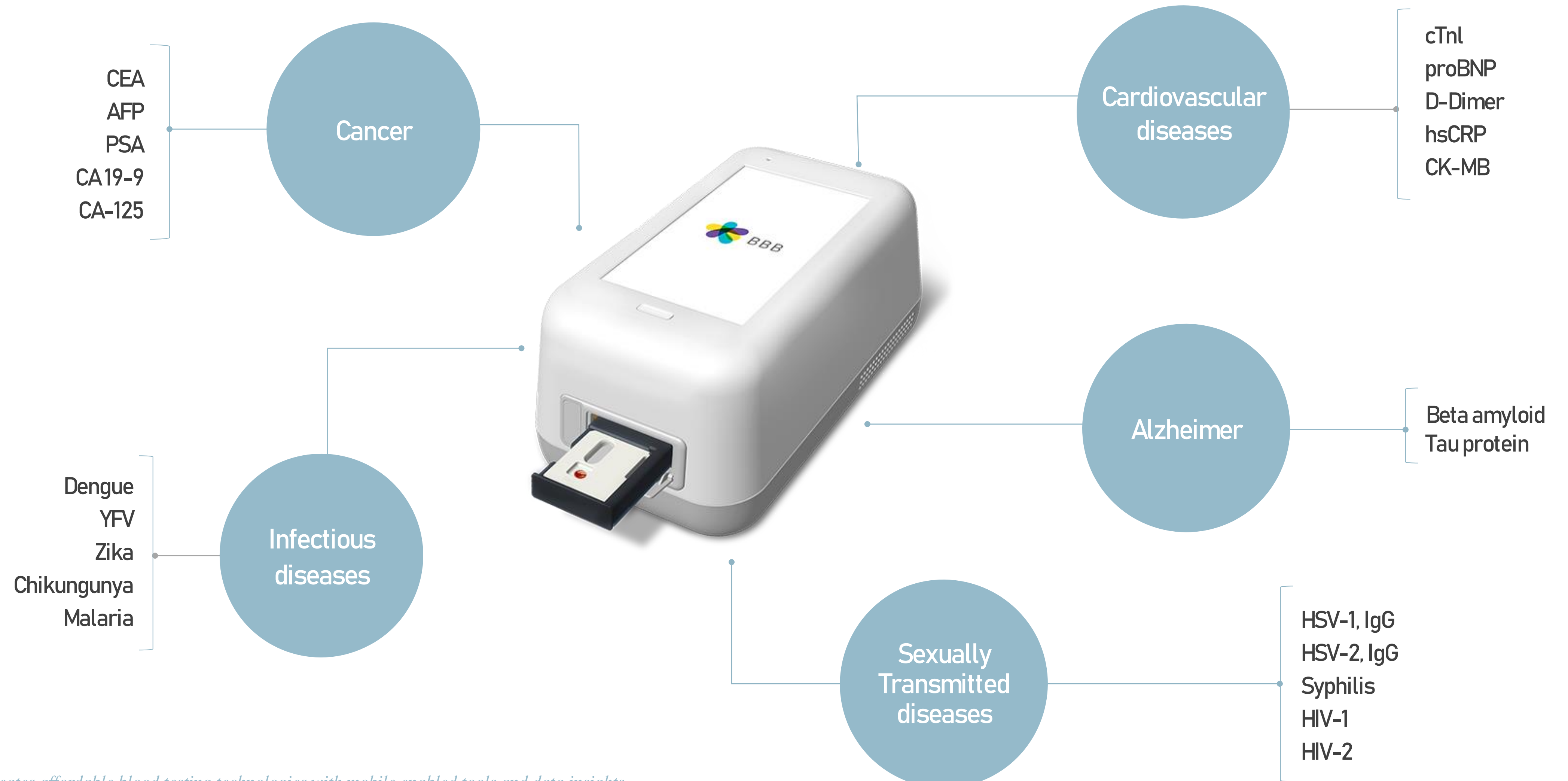
*Cardiovascular Biomarker : TnI, proBNP, D-dimer, hsCRP, CK-MB etc.

*Alzheimer Biomarker : Amyloid beta, Tau protein etc.



markB

Multi-Parameter Platform



BBB Product
02

porta-qGB



porta-qGB

Quantitative rapid test reader

The porta-qGB, a quantitative RDT reader, is a co-developed mobile device with Genbody Inc.

- Genbody supplies DoA test kits and readers as combined monitoring system for Indonesian DEA.
- Genbody supplies arboviral test kits and readers for Brazilian MoH.

 DOA	MET	THC	MOR	AMP	BZO	COC	KET	BAR
 Arboviral Diseases	Zika	Dengue	Yellow Fever	Malaria	Chikungunya			

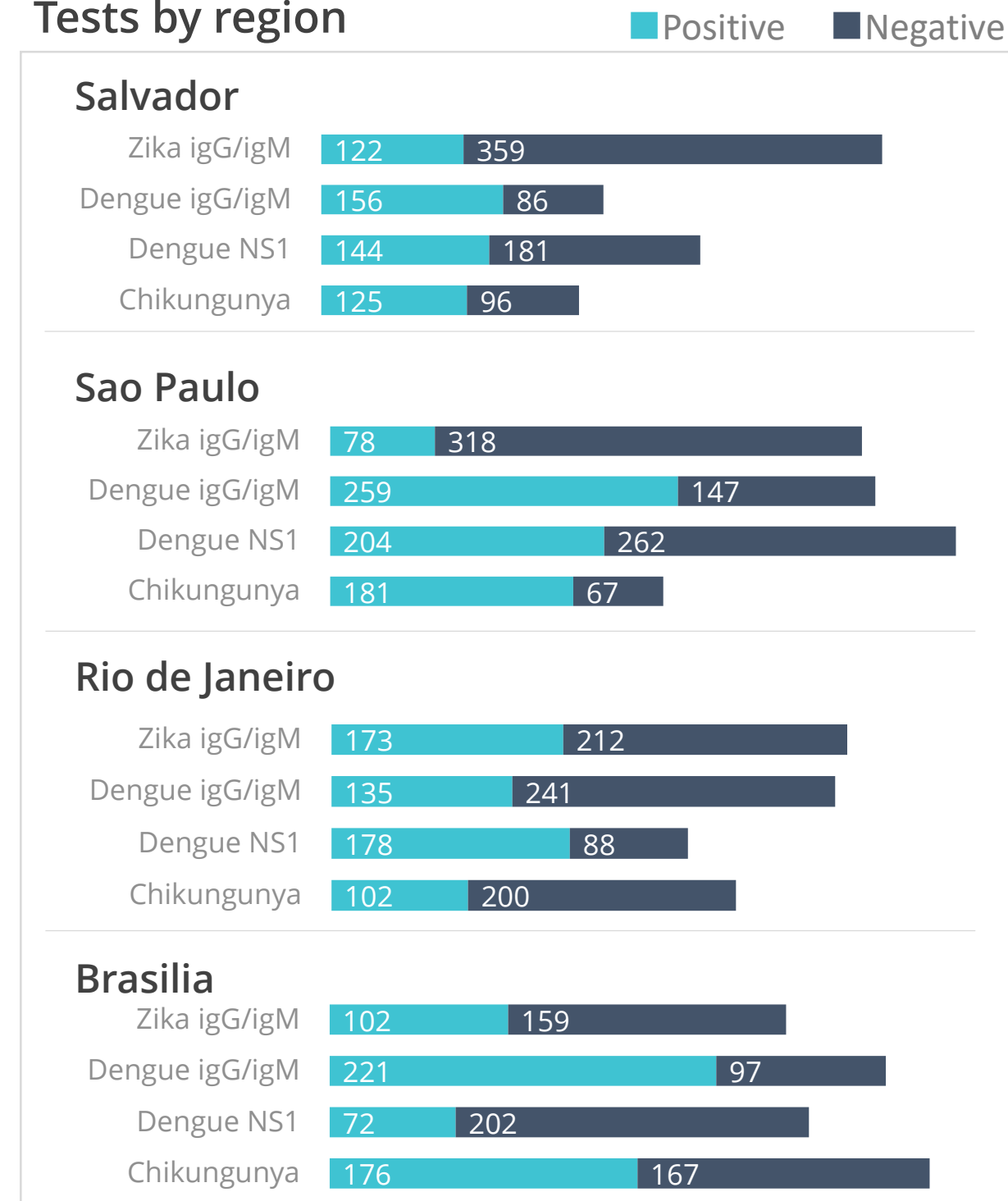
porta-qGB

Key Features

Incidence by region



Tests by region



- ✓ Quantitative reader
- ✓ Wireless data synchronization
- ✓ Result monitoring system



BBB Product
03





Healthcare on a smart device
A premium device for healthy blood biomarkers

elemark™

elemark is

a smart medical device that empowers users to read and track their own blood biomarkers.

With elemark™, users can directly monitor major blood biomarkers (blood glucose, ketone-bodies, full lipid profile, etc.) to manage diabetes and chronic diseases.

It also features *elemark™ care*, a data-sharing function that enables your family members to manage your health together, and your doctor to provide a more accurate diagnosis through deeper and enhanced insights.

* elemark dual check: Measures blood glucose and ketone bodies for diabetic patients [Released in Korea, Nov. 2017]

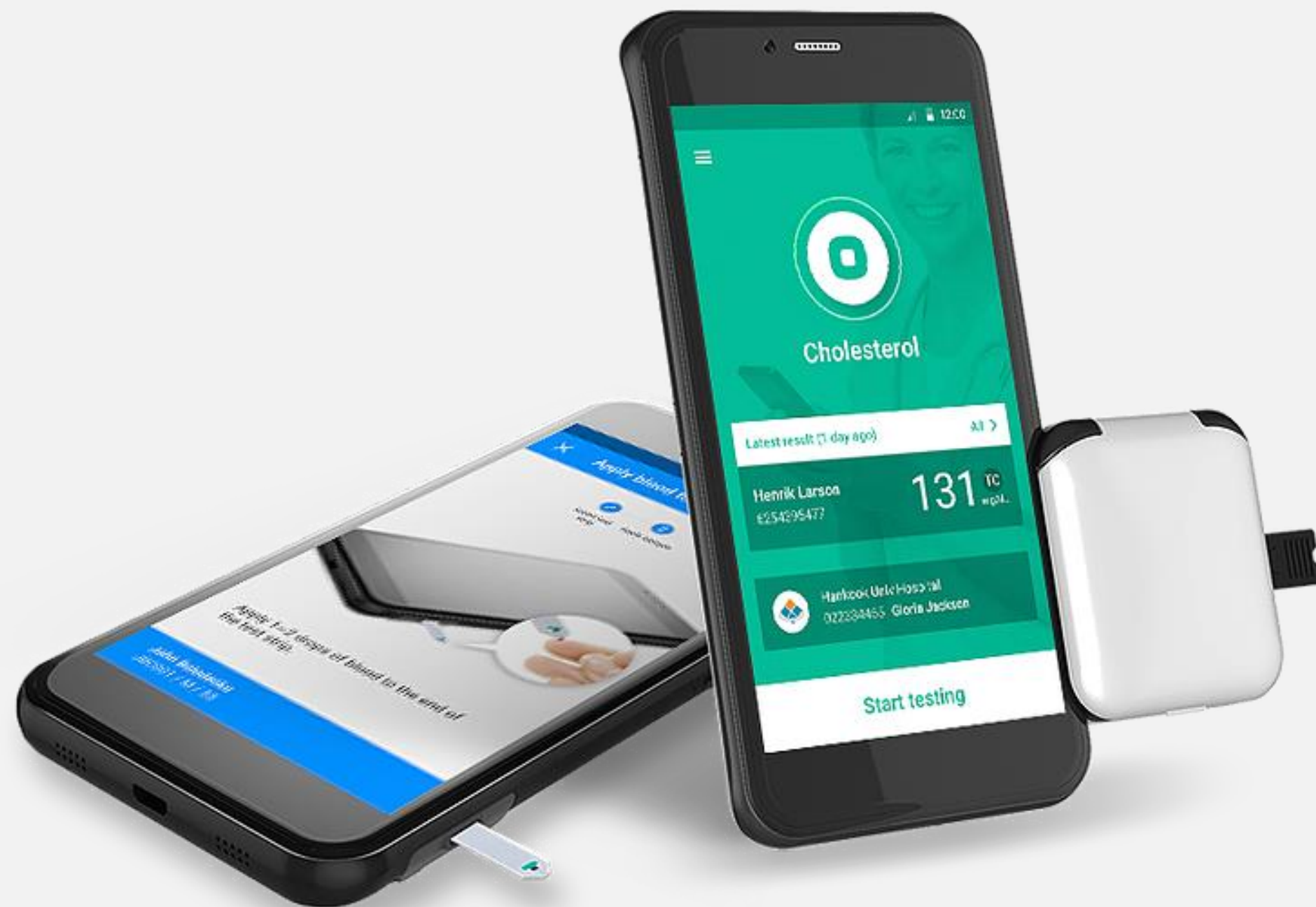
* elemark lipid check: Measures full lipid profile (including triglycerides and LDL) [Coming soon, H2 2018]



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Multi-Platform **elemark™**

various blood biomarkers can be monitored using attachable modules (medical devices)



elemark dual check

elemark™ + dual check module
Diabetes Care



elemark lipid check

elemark™ + lipid check module
Cardiovascular Disease Care



elemark dual check

Manage diabetes in a more systematic manner with the medical device, *dual check*, an attachable module exclusive to elemark™, that monitors glucose and ketone levels in the blood.



Measure blood glucose and ketones



Test time: Glucose 5 sec / Ketones 7 sec



Automatically upload results to the cloud



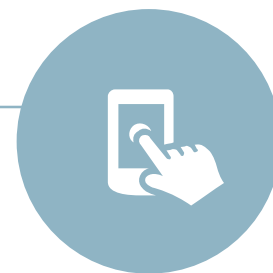
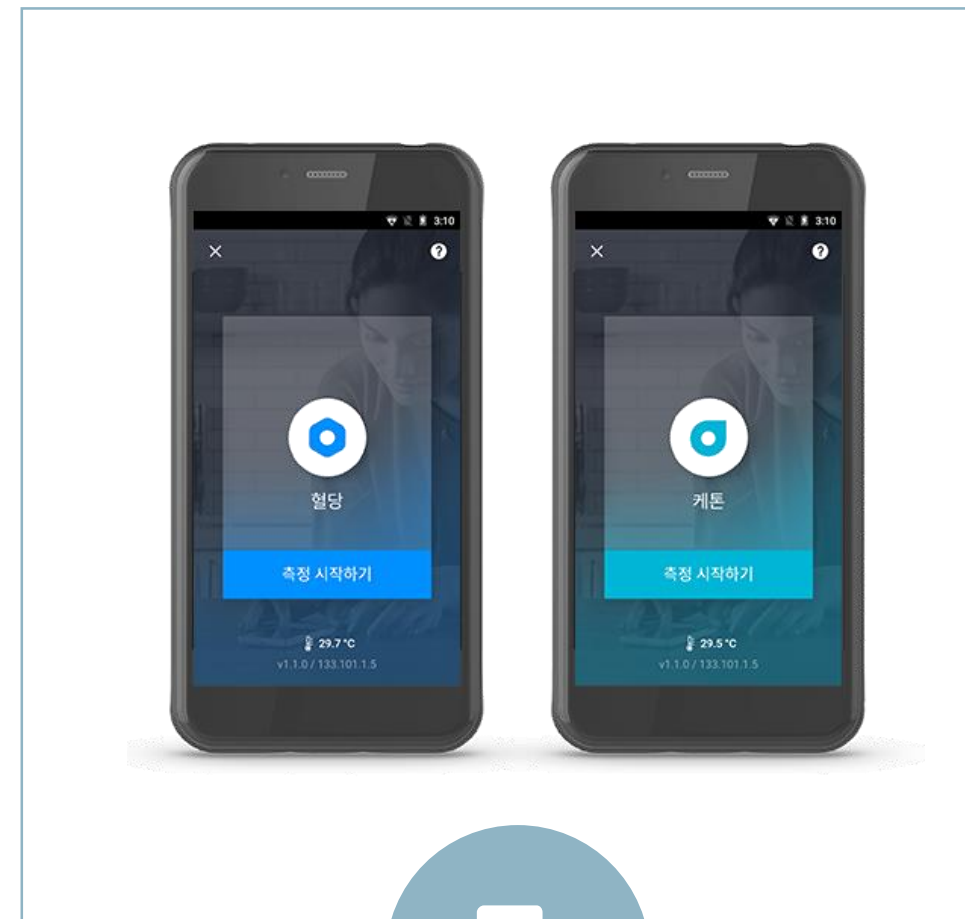
Creates data analysis charts



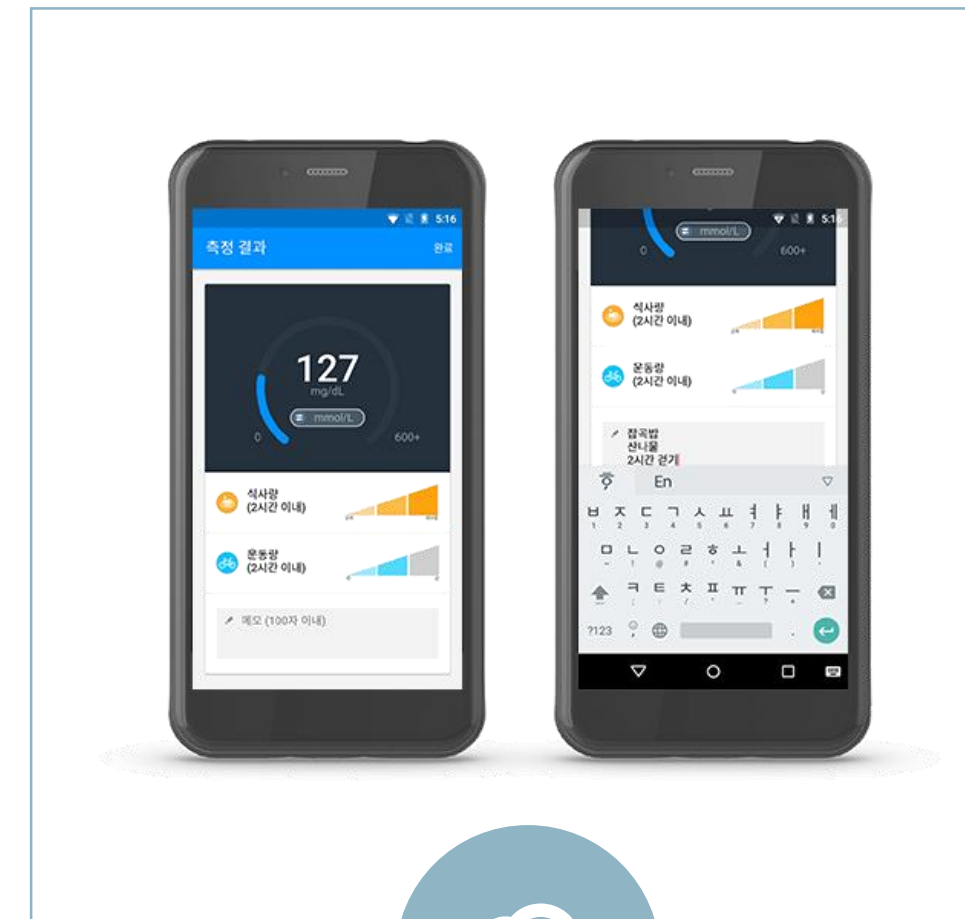
Share your data with family and doctors



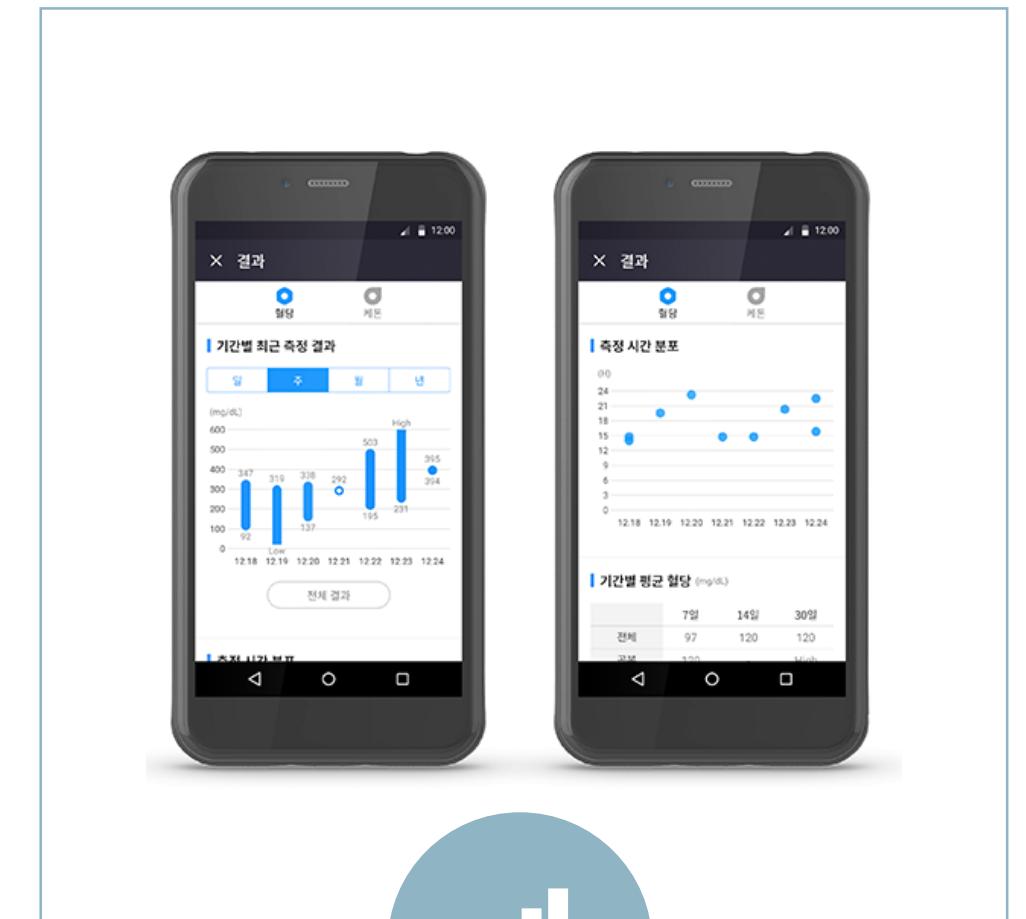
elemark dual check



Monitor blood glucose and ketones with a single device
-Glucose: results in 5 sec
-Ketones: results 7 sec



Measure & upload results in real-time
Just tap to record exercise and meal size.
Record any additional information



Automatically create cumulative data charts. Recent results by biomarker
Time of test. Mean value. Minimum and maximum values.



Monitor full lipid profile



TC. TG. HDL. LDL



Reflectance Photometry



Results in 3 mins



Automatically save results

elemark lipid check

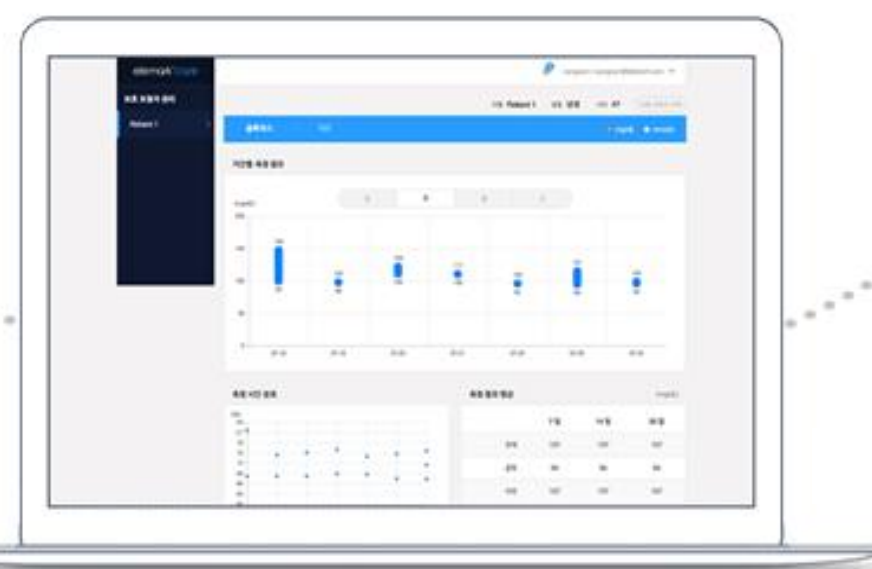
Manage chronic diseases, such as high blood pressure, hyperlipidemia, and arteriosclerosis at all times by measuring your lipid profile using the medical device, *lipid check*, an attachable module exclusive to elemark™.



elemark™



elemark™ care (App)



elemark™ care (web)

elemark care

Reliable Family Care
Accurate Diagnosis & Swift Response



Health monitoring platform
for long-distance family and elderly parents
Transmit data to the doctor for accurate diagnosis



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BBB
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