



HEALCERION

Benjamin Ryu, MD  
CEO



# Benjamin Ryu

## CEO



### Academic Background

- Seoul University, B.S. In physics/electronic engineering
- Gachon Medical School, M.S. in medicine
- KAIST, Ph.D. in neuroscience



### Work Experience

- Current member of the Korean Medical Association
- Current regular member of the Korean Association of Clinical Ultrasound
- Digi-gen, CEO/CTO
- IT Magic, CTO
- Fellow at Chung Gu Sung Sim Hospital ER

# Digital Imaging for Primary Healthcare



**SONORA**



Primary health clinics



Pain treatment



Infants/pediatric



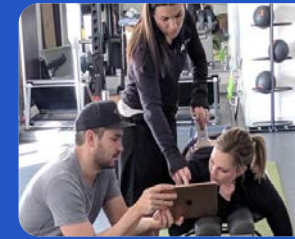
Maternal and child health



Silver care



Sports medicine



Physical therapy



Ultrasound diagnostic training

# Point-of-care Lung Ultrasound for COVID-19

**Minimization of infection**

Smaller area of contact with Patients and easy to sterilize



**Reproducible and fast diagnosis**

Allow a first screening and Discriminate low-risk patients from Higher risk patients

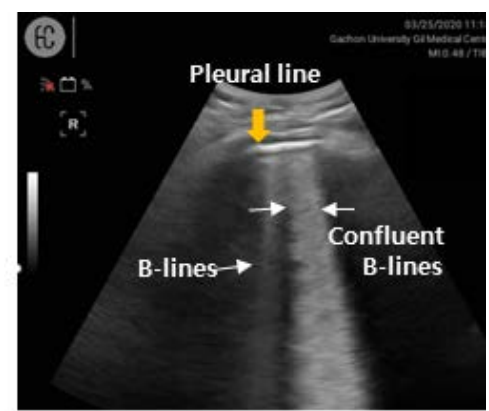


**Bed-side evaluation**

Allow save time and easy to carry arround



Lung ultrasound using SONON



COVID-19 pneumonia



**Good accuracy**

Similar to chest CT and superior to CXR for evaluation of pneumonia and ARDS



**Easy to learn**

Allow doctors with no experience To accurately diagnosis pneumonia



**Widely available**

Suitable for diagnosis and management of complications

# Healcerion Vs. COVID-19



# Public Procurements

Procurement qualifications from 26 international organizations



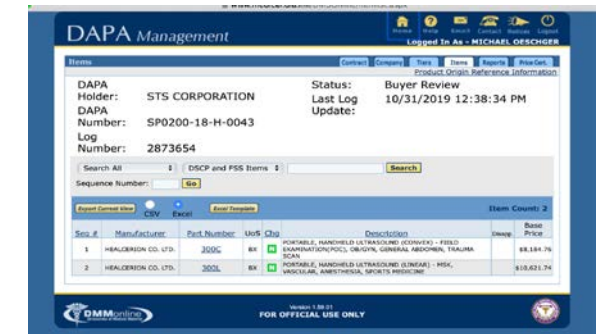
THE WORLD BANK

2020. 4 UNOPS bid for portable ultrasound diagnostic devices for COVID-19

2020. 5 World Bank bid for wireless ultrasound diagnostic devices for COVID-19

## USA Procurements

- GPO Procurements(Intalere)
- Ready for Special Force procuremnts
- DAPA Registration



RFQ Ref No:GTF-EPP-001/042020

Section II: Capability Statement

Founded in 2012, Healerion presents the handheld type wireless ultrasound devices, Sonon 300C/300L, and the mobile app of smartphone. Sonon performs full ultrasound diagnosis with battery power and transmits signal to smartphone directly and wirelessly without any communication infra. The mobile app of smartphone displays the ultrasound image and processes user input by touch interface. The doctor or any other medical worker can diagnose patients with Sonon anytime and anywhere. Now we call it POCUS(point-of-care ultrasound).

**Company Snapshot**

- **DUNS #** 688732988
- **Age code** 856FF
- **NAICS** 334510, 423450, 532490, 621999, 811219
- **Office(US)** No 1401, 12, Digital-ro 33gil, Guro-gu, Seoul 08376, South Korea  
Tel: +82 2.6347.6326
- **POC** Brandon Lee

**Core Competencies**

**Compact Ultrasound Device System(Sonon)**

- Handheld type(370g)
- Battery-operated
- Wireless connection
- Diagnosis mobile app
- IOS/Android support
- PACS support

**Medical Device Certificate**

- MFDS(Korea)
- FDA(USA)
- CFDA(China)
- CE MDD(Europe)
- PMDA(Japan)
- GOST(Russia)

**Differentiators**

- **Wireless Connection** – Make doctors and health workers diagnose more freely
- **Network** – Able to send ultrasound image to others
- **Image Quality** – Meet/exceed the field requirement
- **Usability** – Very high by using touch interface
- **Portability** – Very light and battery-operation
- **Using Time** – 3 hours of continuous usage
- **Price** – Very affordable (\$8,000)

Brandon Lee(contact point) +82-2-6347-63

**Past Performances**

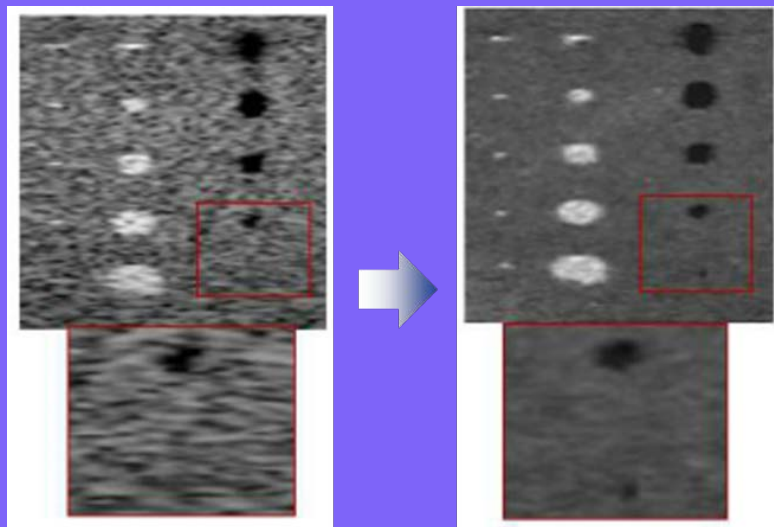
**Public Health Enhancement with Handheld Ultrasound**

IBRD • IDA | WORLD BANK GROUP

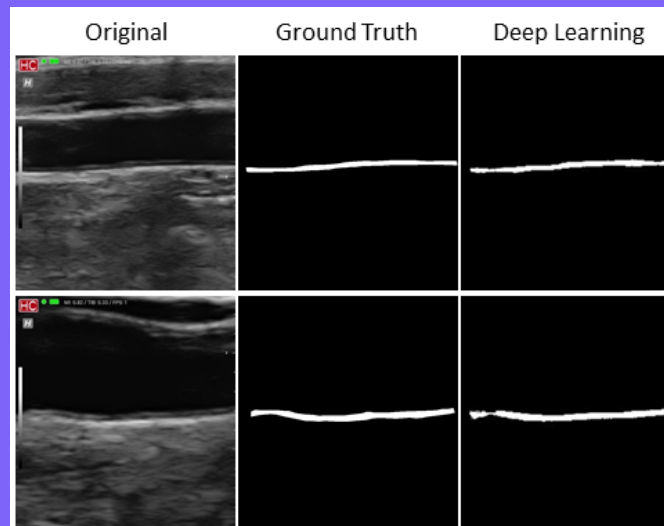
The World Bank seeks to procure diagnostic ultrasound devices that meet the following technical specifications below. The scanner types are listed in order of priority (i.e., portable handheld systems are desired over cart-based systems).

1. **Portable scanners:** Battery-powered, laptop- or tablet-style(touch-screen) ultrasound scanners that support transducers (probes) that are suitable for adult and pediatric lung imaging assessments, such as a 3 MHz to 6 MHz convex linear array (CLA) or sector probe for adult applications, and a 4 MHz to 8MHz CLA or sector probe for pediatric applications. The scanner should have a lung exam preset. A fully charged battery should power the device for 30 minutes of continuous scanning. Battery chargers must be provided and the end user must be able to fully charge a depleted battery in less than three-hours. The power requirements for battery chargers are on a per-country basis. The vendor should review the provided country list to identify any issues with the countries' power requirements. The scanner and probes shall be compatible with at least one disinfecting solution that is capable of killing the COVID-19 virus as indicated on the [current list of EPA-approved cleaning/disinfecting agents](#). Vendor should indicate if the scanner supports wireless internet connectivity.
2. **Probes that communicate with a smart-device:** The probe shall communicate wirelessly or via a cable (e.g., USB-C, IOS lightning) with a smartphone or tablet computer, which is used to display ultrasound data and serve as the user-interface. It is preferred that the vendor's application software (app) be available for both Android and Apple (IOS) operating systems. A list of compatible operating systems and smart device models shall be provided. Probes shall be suitable for adult and pediatric lung imaging assessments, and support a lung exam preset. If battery-powered, a fully charged battery should power the probe for 30 minutes of continuous scanning. Battery chargers must be provided and the end user must be able to fully charge a depleted battery in less than three-hours. The power requirements for battery chargers are on a per-country basis. The vendor should review the provided country list to identify any issues with the countries' power requirements. The probe shall be compatible with at least one disinfecting solution that is capable of killing the COVID-19 virus as indicated on the [current list of EPA-approved cleaning/disinfecting agents](#). It is preferred that the probe vendor also provide one compatible smart device with each probe.

# Medical AI



Resolution Improvement



IMT thickness Measurement



Best Reference Guide


# Joint Development of AI Technology




**Center for Systems Biology**





Hyungsoon Im  
PhD (PI)



Ralph Weissleder  
MD, PhD



Cesar M. Castro  
MD, MMSC



Hakho Lee  
PhD

**Awarded in Advanced Technology Center Plus Project in Korea 2020  
and conducting joint research for four years**



# Business Growth Plan

## Stage 1: Healthcare devices



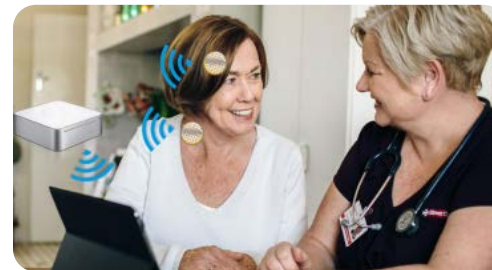
- Portable ultrasound diagnostic units
- Free distribution, use-based business
- Smart hemocele patch system

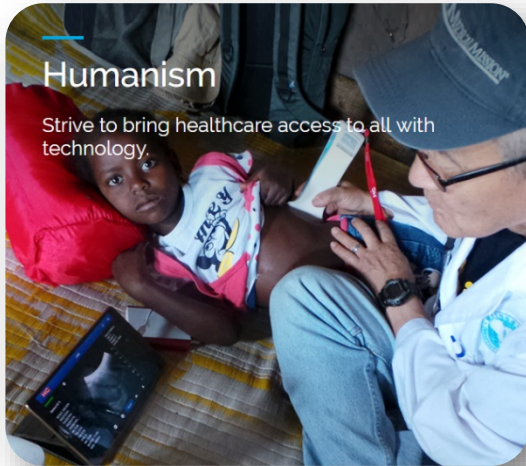


## Stage 2: Cloud platform & solution integrated with AI and big data



- ICT-based; fourth industrial revolution and 5G
- Data-based business
- Ultrasound imaging AI
- Digital Healthcare cloud platform business





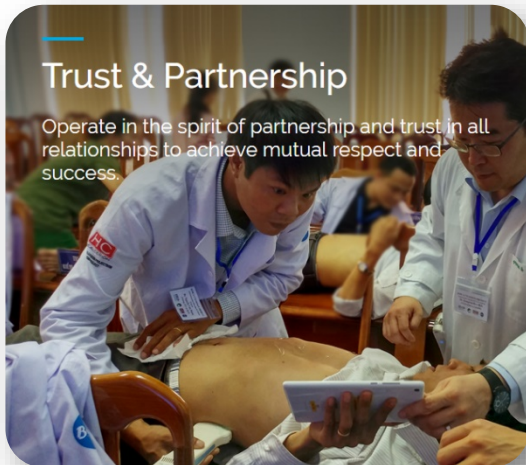
### Humanism

Strive to bring healthcare access to all with technology.



### Innovation

Discover, challenge and implement creative ideas with passion.



### Trust & Partnership

Operate in the spirit of partnership and trust in all relationships to achieve mutual respect and success.

# THANK YOU.

Contact us.

[www.healcerion.com](http://www.healcerion.com)

[info@healcerion.com](mailto:info@healcerion.com)