

A Research Paper

Radial artery tonometry to monitor blood pressure and hemodynamics in ambulatory Left Ventricular Assist Device patients in comparison with doppler ultrasound and transthoracic echocardiography : a pilot study, Rashad Zayat, etc.

Artificial Organs. 2019, 43(4) : 247~253

Comparison between radial artery tonometry pulse analyzer and pulsed-doppler echocardiography derived hemodynamic parameters in cardiac surgery patients: a pilot study, Rashad Zayat, etc.

PeerJ, 2017 DOI 10.7717 / peerj.4132

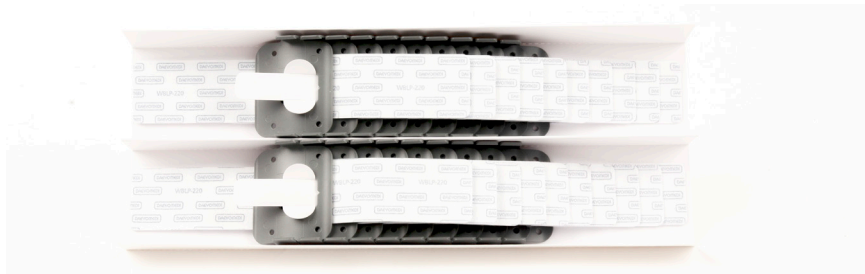
Pulse wave variation during the Menstrual cycle in women with menstrual pain, Soo Hyung Jeon, etc.

BioMed Research International, 2016 DOI 10.1155 / 2016 / 1083208

DAEYOMEDI  
Radial Tonometry Device  
Applied Standards

ISO 18615:2020  
IEC 60601-1/EN 60601-1  
IEC 60601-1-2/EN 60601-1-2  
IEC 60601-1-6/EN 60601-1-6  
IEC 62366-1/EN 62366-1  
IEC 62304/EN 62304  
ISO 10993-1,5,10,12/EN ISO 10993-1,5,10,12  
ISO 14971/EN ISO 14971  
ISO 13485:2016/EN ISO 13485:2016

Disposable Wrist Band to Prevent Cross Infection



Specification	
Model name	DMP-Lifeplus
Product name	Blood Pressure Waveform Analyzer
Measuring Principle	Radial Tonometry Method
Medical Class	Class II-a
Power Supply	DC input: 12V / 2.5A
Pulse Beat (tolerance, resolution)	40~200 bpm (±5% 1bpm, 1bpm)
Applied Pressure (tolerance, resolution)	0~500gf (±10% 1gf, 1gf)
Pulse Pressure (tolerance, resolution)	30~250gf (±10% 1gf, 1gf)
Communication	USB to PC
Principle of measurement	Tonometry
Size(mm)	225 X 210 X 75
Weight	1.8 Kg
Operation Environment	Temperature: 10°C ~ 40°C Humidity: 30 ~ 75% (non-condensing)
Transport & storage Environment	Temperature: -20°C ~ 60°C Humidity: 20% ~ 85% (non-condensing) Atmospheric Pressure: 700 ~ 1060 hPa

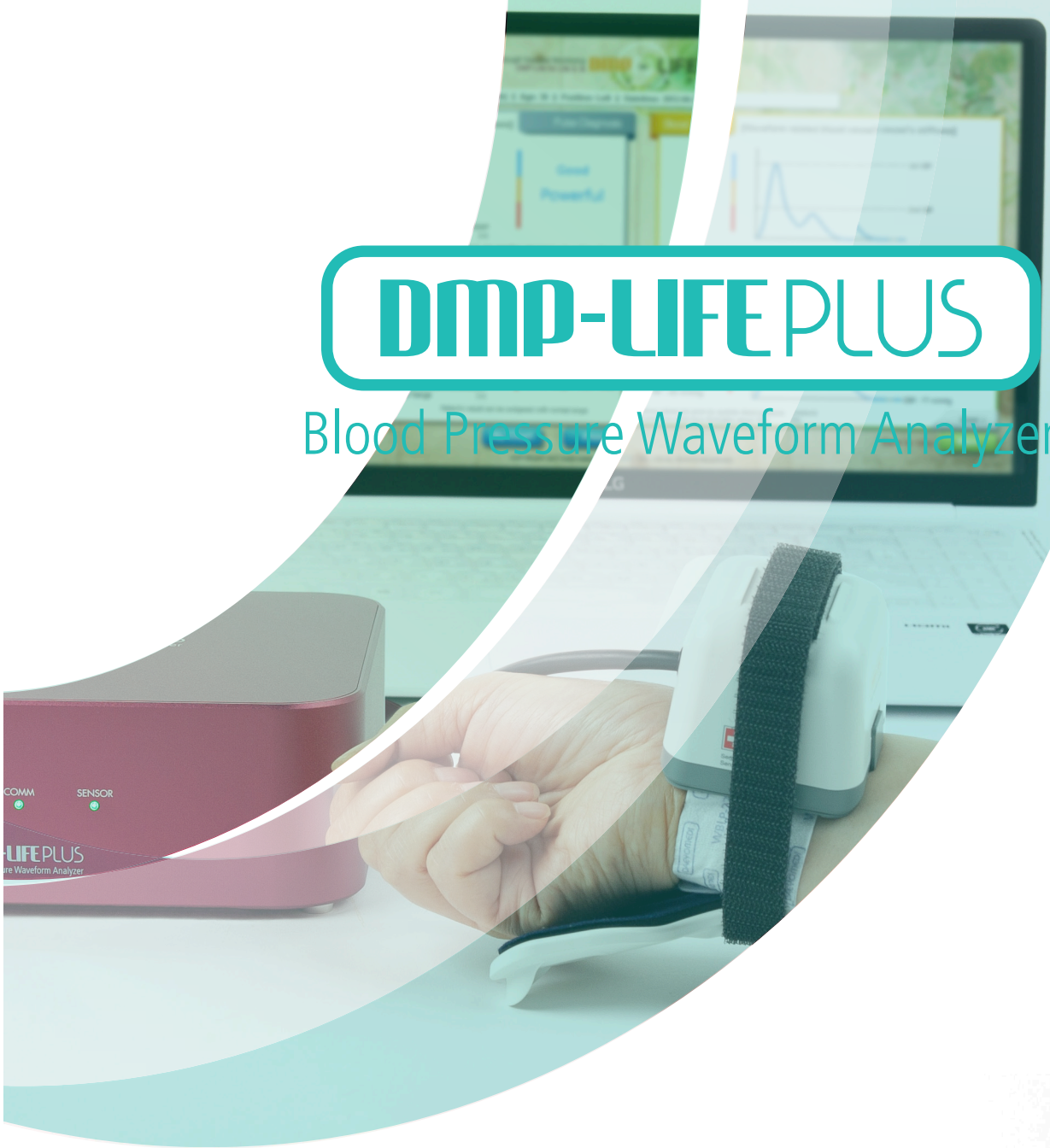
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REF LPC-EN date(01.April.2020) Rev(0)

DMP-LIFE PLUS  
Blood Pressure Waveform Analyzer



# DMP-LIFEPLUS is

## Electric Radial Tonometry Device

- Swiss made precise robot module improves stability of measurement
- Comply with ISO 18615:2020

## Non-Invasive Hemodynamic Monitoring System

- By Radial Tonometry Principle realizes safe and accurate Hemodynamic Monitoring

# DMP-LIFEPLUS Applications

## CVD Screening & Health Care

- Beyond Blood Pressure, Vessel aging and Pulse related symptom
- Screening sub-health condition

## Hemodynamic Monitoring

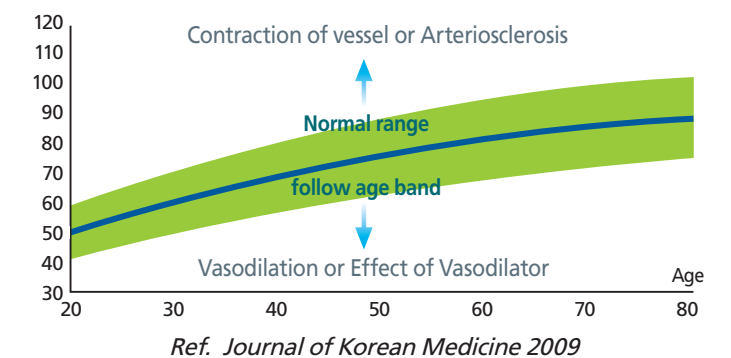
- Complimentary monitoring to ensure safety of patient
- Non-Invasive, no-infection, no-scar and no-complication

## 4 Function in 1 System

### Pulse Diagnosis

- **STRENGTH**  
**Powerful** : Increase of heart load  
**Powerless** : Decrease of heart pumping
- **DEPTH**  
**Floating** : Inflammation, Infection, Fever  
**Sunken** : Sleepless, Chronic Fatigue
- **HEART RATE**  
**Rapid** : Inflammation, Infection, Fever  
**Slow** : Fatigue, Aging
- **SHAPE**  
**Slippery** : Increase of blood plasma  
**Rough** : Anemia, Aging

### Blood Vessel

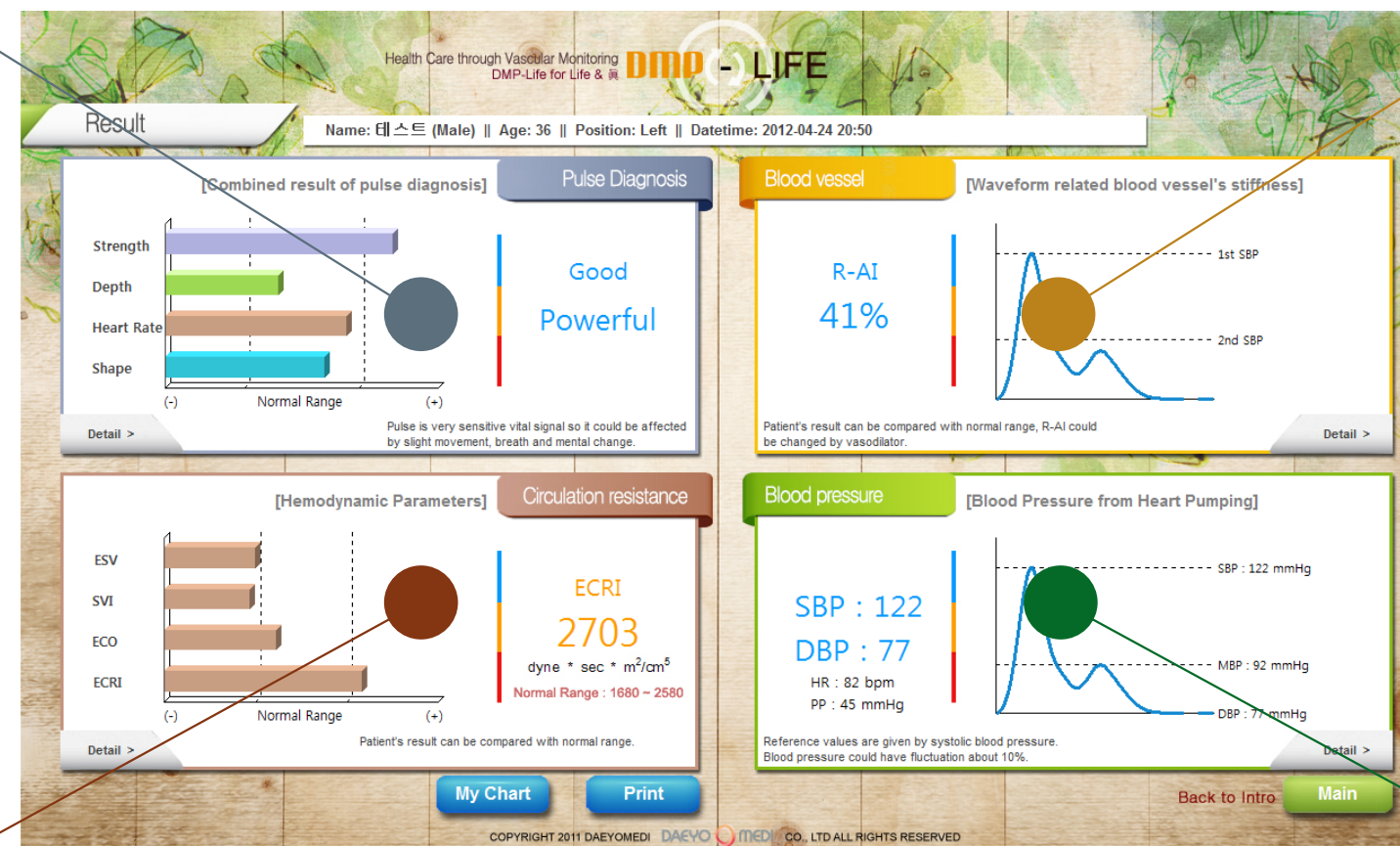


- **R-AI(Radial-Augmentation Index)**  
is useful parameter to evaluation Blood vessel Elasticity or Vessel Aging
- Stress, mental pressure, sleepless, smoking and aging can affect to **Blood Vessel Elasticity**

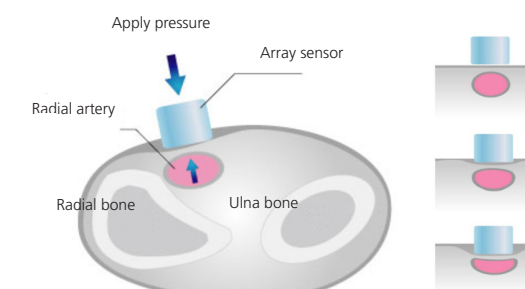
### SVRI Systemic Vascular Resistance Index

- **Hemodynamic monitoring** is crucial, not only during anesthesia and in intensive care units(ICU) but also in the normal ward and in the follow-up during outpatient visits.
- **Systemic Vascular Resistance(SVR)** is the resistance that must be overcome to push Blood through the Circulation System.

Item	Description	Unit	Normal Range
SV	Stroke Volume	ml/beat	60~100
SVI	Stroke Volume Index	ml/m <sup>2</sup> /beat	33~47
CO	Cardiac Output	L/min	4~8
SVRI	Systemic Vascular Resistance index	dyneXsec/cm <sup>5</sup> /m <sup>2</sup>	1970~2390



### Blood Pressure



Tonometry method to measure Blood Pressure

- **DMP-LIFEPLUS**  
Realizes Radial Tonometry based Precise Blood Pressure Measurement