charder®

Utilize body composition to assess risk

Designed to be straightforward and easy to operate, the MA801 is suitable for all your medical staff, whether assistants, nurses, or doctors. In less than a minute, subjects will receive clinically validated results for body water, fat, muscle, cellular quality, and more!

www.chardermedical.com

Improve Patient Assessment

Easy-to-operate. Non-invasive and safe.

The MA801 features an intuitive touchscreen interface and voice guidance throughout the measurement process, requiring minimal training to operate safely and properly. Completing an advanced scan in less than a minute, the MA801 uses segmental multi-frequency measurement technology to provide clinically validated results you can trust.

Key Health Indicators

Body Fat Analysis

Compare subject's body fat with their respective gender, age, and ethnic group. Evaluate visceral and subcutaneous fat area in the abdominal area, as well as segmental fat calculations.

Comparison of Cellular Status

BIA results have traditionally been less accurate for subjects with illnesses affecting body water. Bioelectrical Impedance Vector Analysis allows practitioners to monitor fluid and cellular status even for patients with "abnormal" hydration, increasing BIA reliability in clinical use.

Cellular Health Indicator

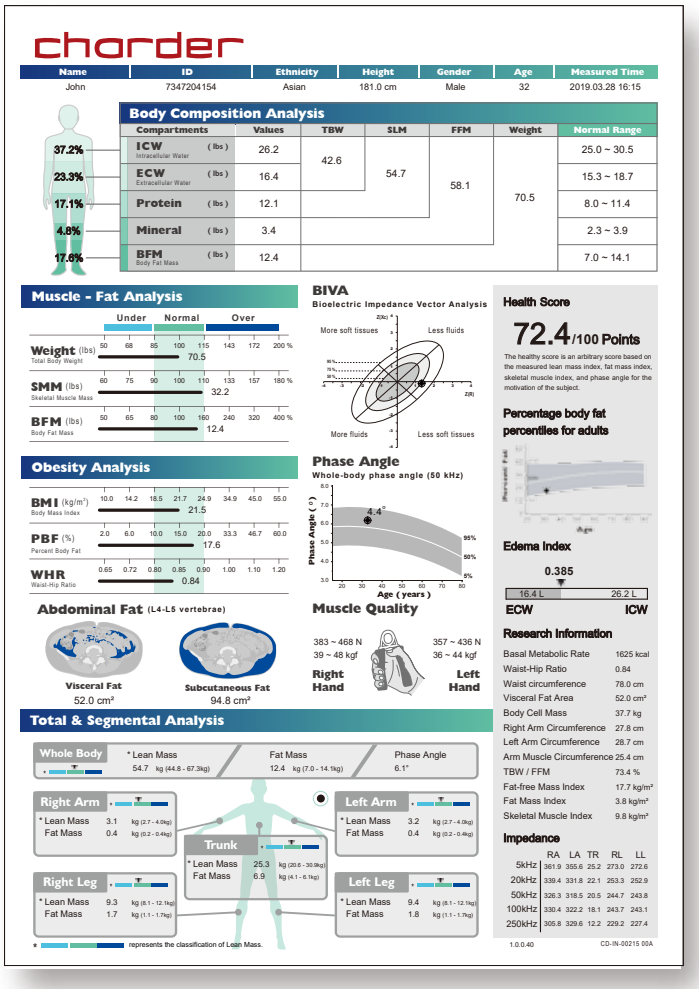
Phase Angle is a critical screening tool for assessing cellular health, offering an important indicator for identifying subjects that may be outwardly healthy with potential health complications.

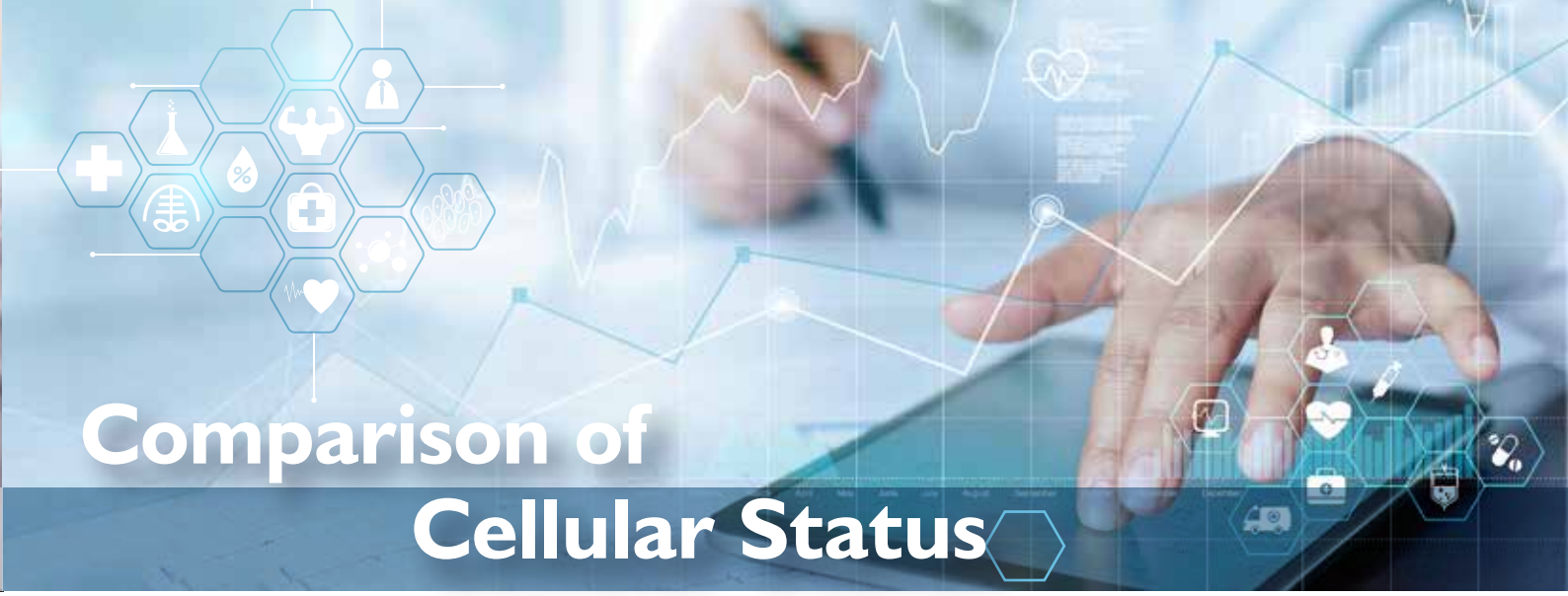
Muscle Analysis

Through measurement of cellular quality, the MA801 can provide estimates of potential handgrip strength, used as a clinical marker for poor mobility, and a better predictor of sarcopenia than muscle mass. Comparison between dynamometer and estimate places subject's strength level in context.

Hydration Status

Abnormal body water is an important early warning sign for a variety of health complications. Utilize the Edema Index as an easily interpreted risk indicator.



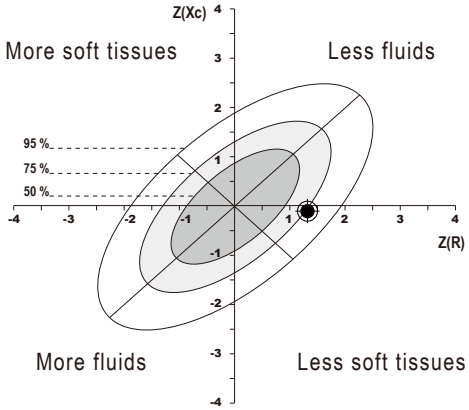


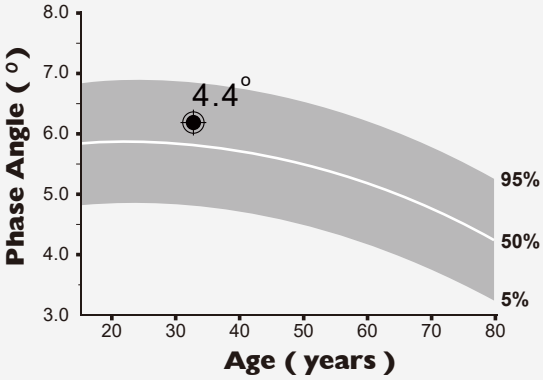
Comparison of Cellular Status

Designed for patients with abnormal hydration
Bioelectrical Impedance Vector Analysis (BIVA)

The BIVA module uses direct measurements of reactance and resistance to evaluate a subject's hydration and cellular status. Why is this so important?

Abnormal body water can cause measurement error in traditional predictive equations, a crucial flaw in traditional BIA devices. Because BIVA doesn't rely on regression equations, health professionals can use the easily interpreted chart to reliably conduct critical preliminary screening, even for individuals with abnormal hydration, by comparing their results with the general population.





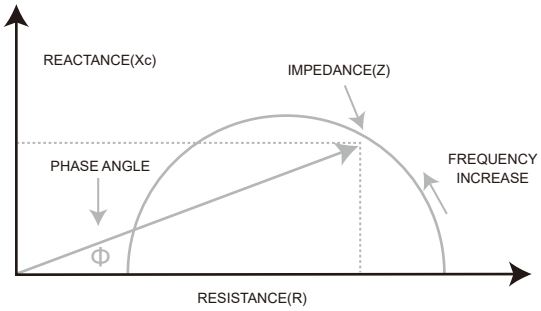
How healthy are the cells in my body?
Phase Angle

Quantity doesn't tell the whole story. Because two people with identical muscle and fat percentages or mass aren't necessarily equally healthy, health professionals can utilize phase angle, which decreases with illness and aging - as a way to measure cellular quality. Compare the subject's phase angle with normal range for their age and gender group using the MA801's percentile chart

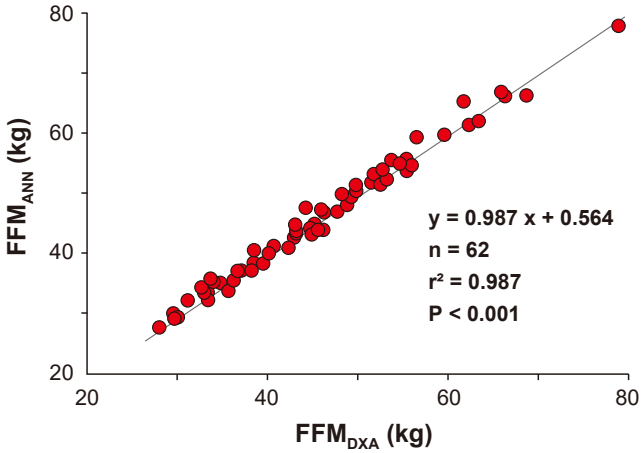
KEY INDICATOR

Malnutrition and other illnesses weaken body cells, which correlates with a decrease in phase angle. Conversely, a higher phase angle is commonly seen in subjects with stronger cell membrane integrity.

In clinical practice, phase angle has been used as a prognostic indicator of morbidity in various population groups.



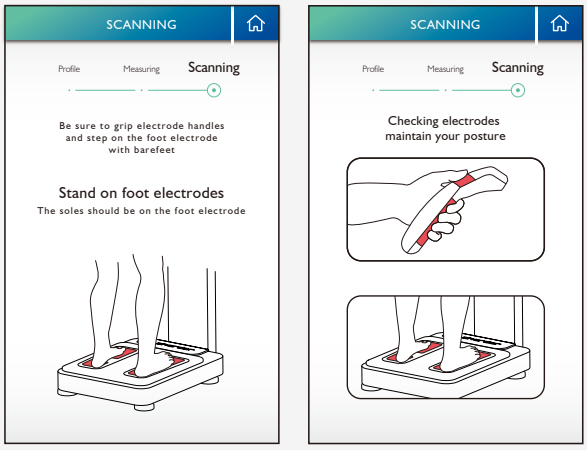
Results you can trust



Relationship between FFM values predicted by Charder's Back Propagation-Artificial Neural Network model, and FFM values measured by DXA

Clinically validated results
High correlation with DXA

Charder's years of research in the field of Bioelectrical Impedance Analysis include utilization of Artificial Neural Networks, with algorithms formulated and validated using "gold standards" such as CT and DXA for results you can trust.



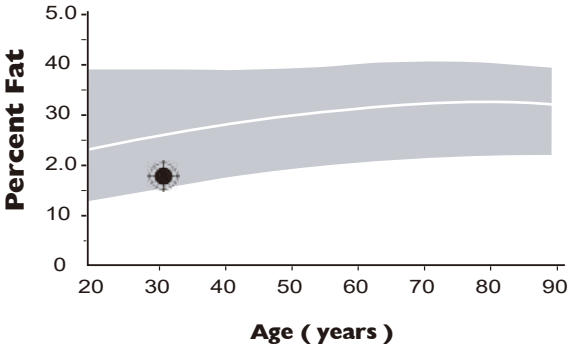
Intuitive and user-friendly interface
Voice-guided measurement procedure

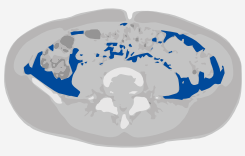
10.1-inch color touchscreen combined with voice guidance throughout measurement procedure makes the MA801 easy-to-operate, improving reliability and reproducibility of results. Measurement results are organized clearly on a professional result sheet, and can be transferred to a PC for advanced analysis and data management.

Body fat analysis

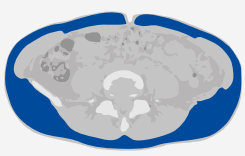
Body fat results in context
Body Fat Percentiles

"Normal range" for body fat is affected by age, gender, and ethnicity. The MA801 makes it easy for health professionals to compare a subject's body fat percentage with their population group, for a more effective evaluation of obesity risk.





Visceral Fat
52.0 cm²



Subcutaneous Fat
94.8 cm²

Evaluate body fat by location
Abdominal visceral and subcutaneous fat

It isn't just about the amount of fat, but where it's located. In addition to fat mass in different body segments, the MA801 provides a calculation of visceral fat area, which has a higher correlation with obesity-related diseases than whole-body fat percentage

Muscle Analysis

Increase accuracy of fall screening

Identify patients at higher risk for falls

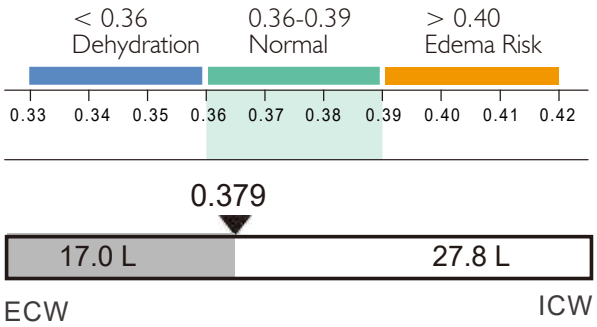
Muscular strength is affected by both mass and quality. Because muscle quality can deteriorate more rapidly than mass with age, evaluation of muscular strength in addition to mass is particularly crucial in senior populations, to screen for fall risk. If subject's actual grip strength is lower than predicted through cellular analysis, we recommend a more detailed health check.

Muscle Quality

Right Hand		Left Hand
383 ~ 468 N		357 ~ 436 N
39 ~ 48 kgf		36 ~ 44 kgf

Whole Body	* Lean Mass 54.7 kg (44.8 - 67.3kg)	Fat Mass 12.4 kg (7.0 - 14.1kg)	Phase Angle 6.1°
Right Arm	* Lean Mass 3.1 kg (2.7 - 4.0kg)	Fat Mass 0.4 kg (0.2 - 0.4kg)	
Left Arm	* Lean Mass 3.2 kg (2.7 - 4.0kg)	Fat Mass 0.4 kg (0.2 - 0.4kg)	
Trunk	* Lean Mass 25.3 kg (20.6 - 30.9kg)	Fat Mass 6.9 kg (4.1 - 6.1kg)	
Right Leg	* Lean Mass 9.3 kg (8.1 - 12.1kg)	Fat Mass 1.7 kg (1.1 - 1.7kg)	
Left Leg	* Lean Mass 9.4 kg (8.1 - 12.1kg)	Fat Mass 1.8 kg (1.1 - 1.7kg)	

* represents the classification of Lean Mass.



Hydration Status

Evaluate body water balance

Edema Index

Extracellular Water Proportion is a major risk indicator for all-cause mortality, kidney deficiency, and cardiovascular disease, providing potential early warning for health complications requiring preventative action.

MA801 Body Composition Analyzer

Key Specifications

Bioelectrical Impedance Analysis (BIA)	25 Impedance Measurements: 5 frequencies (5kHz, 20kHz, 50kHz, 100kHz, 250kHz) for 5 segments (Right Arm, Left Arm, Trunk, Right Leg, Left Leg)
Electrodes	8-point Tactile Electrode Design
Display	1280 x 800 pixels, 10.1-inch color touchscreen LCD
Capacity / Graduation	Max Capacity 300kg (0.1kg graduation)
Applicable Age	6-85 years old
Output / Transmission	USB 2.0 x3, RS232 x1, Bluetooth, Wi-Fi, RJ45 Ethernet
Data Storage	100,000 Measurements (data transfer available via USB, Bluetooth, or Wi-Fi)
Measurement Duration	Less than 50 seconds
Device Dimensions	875 (L) x 463 (W) x 1205 (H): mm 33.4 (L) x 18.2 (W) x 47.4 (H): inches
Device Weight	About 31kg (68lbs)

Result Sheet Output

Body Composition Analysis	Intracellular Water, Extracellular Water, Total Body Water, Protein, Mineral, Body Fat Mass, Soft Lean Mass, Fat-Free Mass, Weight
Muscle-Weight Analysis	Weight, Skeletal Muscle Mass, Body Fat Mass
Obesity Analysis	Body Mass Index, Percent Body Fat, Waist-Hip Ratio
Abdominal Fat (L4-L5)	Visceral Fat, Subcutaneous Fat
Total & Segmental Analysis	Lean Mass (Whole Body, Right Arm, Left Arm, Trunk, Right Leg, Left Leg) Fat Mass (Whole Body, Right Arm, Left Arm, Trunk, Right Leg, Left Leg)
BIVA	Bioelectrical Impedance Vector Analysis
Phase Angle	50kHz whole-body phase angle percentiles for adults
Muscle Quality	Estimated grip strength (N, kg)
Health Score	Combined evaluation of body composition results
Percentage Body Fat Percentiles for Adults	Comparison of Percent Body Fat with comparable gender, age, ethnicity
Edema Index	Extracellular Water/Total Body Water Ratio
Research Information	Basal Metabolic Rate, Waist-Hip Ratio, Waist Circumference, Visceral Fat Area, Body Cell Mass, Right Arm Circumference, Left Arm Circumference, Arm Muscle Circumference, Total Body Water/Fat-Free Mass, Fat-Free Mass Index, Fat Mass Index, Skeletal Muscle Index
Impedance	5kHz, 20kHz, 50kHz, 100kHz, 250 kHz

charder®

Charder Electronic Co., Ltd.
No.103, Guozhong Rd., Dali Dist., Taichung City 41262 Taiwan
TEL: +886 4 2406 3766 FAX: +886 4 2406 5612
Email: info_cec@charder.com.tw www.chardermedical.com

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