Hoyland Medical
Service and quality to the medical profession

Patients are at the heart of what we do

The amazing new

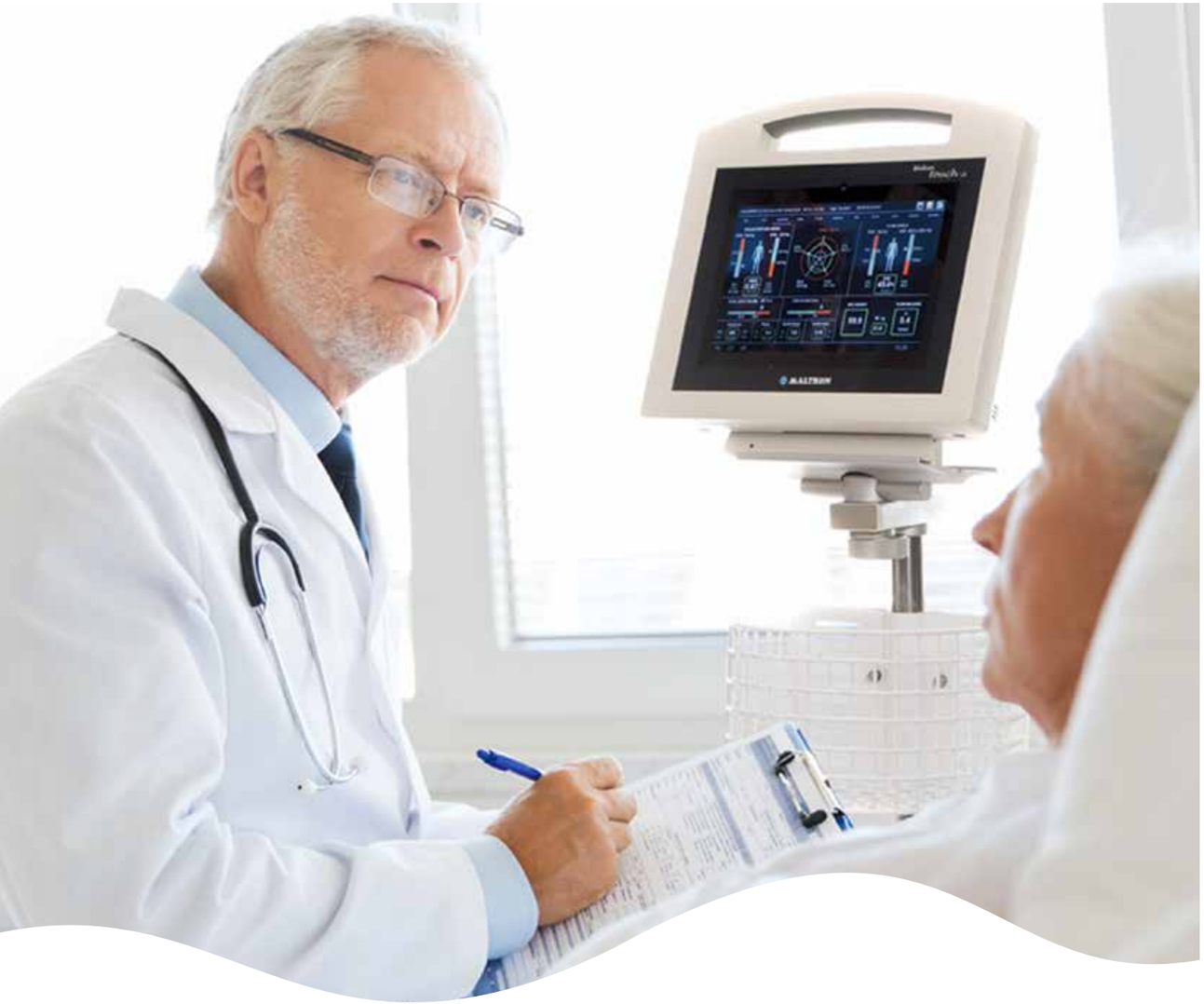
BioScan *touch i8*

Bioelectrical Impedance Body Compostion Monitor

For Hemodialysis & Peritoneal Dialysis Patients

MALTRON
Your health our vision

Dry weight assessment remains a major challenge especially when a number of comorbidity complications are present



The goal in the treatment of dialysis is to achieve and maintain a euvolemic state. Currently euvolemic and “Dry weight” assessments are performed on a trial and error basis.

Volume overload and congestion are serious problems causing morbidity and mortality in HD patients[3–8]

Fluid retention is the main clinical feature in several pathological conditions, including Renal and Cardiovascular Disorders.[1]

- **“Dry Weight,” usually determined clinically, may not necessarily reflect the optimal Edema-Free status of the patient[1]**
- **Fluid overload is usually the main manifestation of kidney failure and decompensated heart[1]**
- **Patients with the lowest interdialytic fluid retention have the greatest survival[1]**
- **Malnutrition, inflammation, and wasting are strong correlates of cardiovascular mortality in dialysis patients[2]**
- **Fluid Retention is associated with Cardiovascular Mortality in patients undergoing Long-Term Hemodialysis[1]**
- **Greater interdialytic weight gain is associated with poor survival and higher risk of cardiovascular mortality[1]**

Accurate assessment to avoid volume overload and maintain correct dry weight in HD patients is vital.

1 Kamyar Kalantar-Zadeh, Deborah L. Regidor, Csaba P. Kovesdy, David Van Wyck,, Suphamai Bunnapradist, Tamara B. Horwich, and Gregg C. Fonarow , et al: Fluid Retention Is Associated With Cardiovascular Mortality in Patients Undergoing Long-Term Hemodialysis. Circulation Volume 119, Issue 5, 10 February 2009;

2 Fouque D, Kalantar-Zadeh K, Kopple J, Cano N, Chauveau P, Cuppari L, Franch H, Guarnieri G, Ikizler TA, Kaysen G, Lindholm B, Massy Z, Mitch W, Pineda E, Stenvinkel P, Trevinho-Becerra A, Wanner C, et al: A proposed nomenclature and diagnostic criteria for protein-energy wasting in acute and chronic kidney disease. Kidney Int. 2008; 73: 391–398.

3 Arikan AA, Zappitelli M, Goldstein SL, Naipaul A, Jefferson LS, Loftis LL: Fluid overload is associated with impaired oxygenation and morbidity in critically ill children. Pediatr Crit Care Med 2012;13:253–258.

4 Hassinger AB, Wald EL, Goodman DM: Early postoperative fluid overload precedes acute kidney injury and is associated with higher morbidity in pediatric cardiac surgery patients. Pediatr Crit Care Med 2014;15:131–138.

5 Magee G, Zbrozek A: Fluid overload is associated with increases in length of stay and hospital costs: pooled analysis of data from more than 600 US hospitals. Clinicoecon Outcomes Res 2013;5:289–296.

6 Vaara ST, Korhonen AM, Kaukonen KM, Nisula S, Inkinen O, Hoppu S, et al: Fluid overload is associated with an increased risk for 90-day mortality in critically ill patients with renal replacement therapy: data from the prospective FINNAKI study. Crit Care 2012; 16:R197.

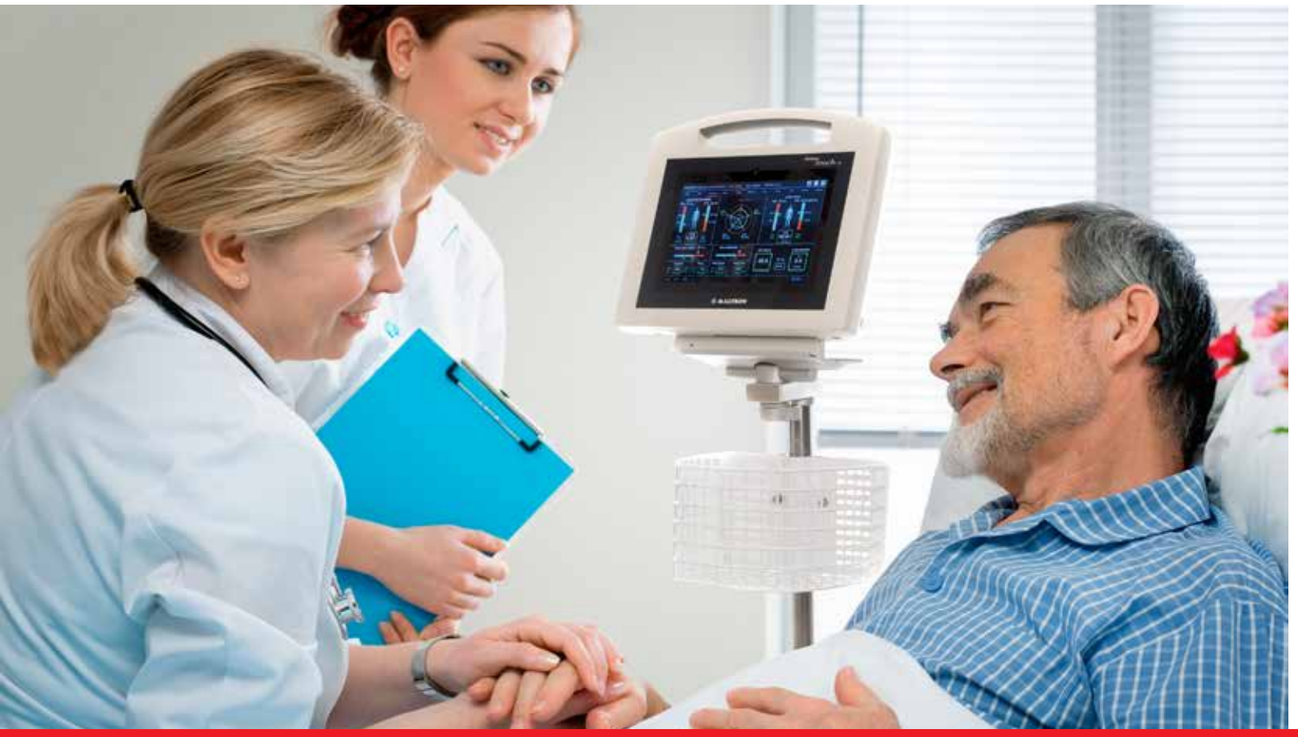
7 Mees EJ: Volaemia and blood pressure in renal failure: have old truths been forgotten? Nephrol Dial Transplant 1995;10:1297–1298.

8 Zoccali C, Torino C, Tripepi R, Tripepi G, D’Arrigo G, Postorino M, et al: Pulmonary congestion predicts cardiac events and mortality in ESRD. J Am Soc Nephrol 2013;24: 639–646.

Hypervolemia is the cause of hypertension in patients undergoing hemodialysis

Benefits for the patient

- ☑ Help establish and reduce variation in determining dry weight targets
- ☑ Assessing correct fluid overload and help control blood pressure
- ☑ Better management in use of antihypertensive medication
- ☑ Reduce the risk of possible cardiovascular complications and death
- ☑ Hypertensive episodes can be reduced and managed with better patient outcome
- ☑ Reduced systematic dehydration
- ☑ Reduce both hyper and hypotensive episodes
- ☑ Minimise (KC1) Cramps and post-dialysis fatigue reduction
- ☑ Preserve patient's renal function
- ☑ Provide individual Min and Max targets of all measured parameters
- ☑ Detect Malnutrition
- ☑ Early indication of Loss of Muscle Mass
- ☑ Fewer dialysis sessions for HD patients
- ☑ Improve quality of life in dialysis patients



Benefits for the healthcare provider

An assessment with the BioScan *touch i8* is seamless and can be performed in supine and semi recumbent patients.

- ☑ Quick and accurate assessment of HD and PD patients
- ☑ Easy Assessment for overweight and underweight patients
- ☑ Reduction in hospital admissions due to fluid overload or dehydration
- ☑ Reduction in frequency of HD due to refractory fluid overload and hypertension
- ☑ More stable and consistent HD sessions for patients
- ☑ Allowing better use of resources
- ☑ Accurate assessment of Kt/v
- ☑ Pre, Mid and Post assessments can be performed at any stage during dialysis
- ☑ Correct Ultrafiltration Rate (UFR)

The flexibility of BioScan touch i8 allows clinicians for the first time to conduct tests on patients at every stage of dialysis.

The BioScan *touch i8* offers full flexibility for the operator to configure as per desired measurements.

Maltron's 3 Steps to Fluid Stewardship

PFP assessment

Don't overcomplicate - Keep it quick and simple

PERSONALISED

Step 1:
Pre Assessment

Assess patients Fluid Status and Dry Weight with **BioScan** *touch i8* on arrival of patients before any treatment

FLUID

Step 2:
Mid Assessment

On initiating Hemodialysis & Peritoneal Dialysis continuously monitor patients Fluid Status and Dry Weight with **BioScan** *touch i8*

Adjust Dry Weight by assessing Extracellular, Intracellular, Interstitial, Extravascular and Intravascular volume

PLAN

Step 3:
Post Assessment

On completion of Hemodialysis or Peritoneal Dialysis using the Maltron **BioScan** *touch i8*

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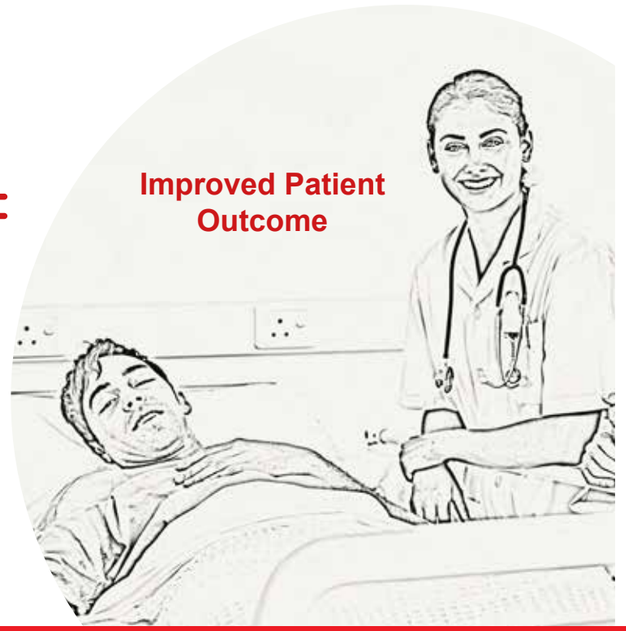


Assess CKD, Pediatric, HD & PD patients with the BioScan *touch i8*

Over estimation of Dry weight with subsequent poor blood pressure control impairs the survival and quality of life of patients.

Take control now

- BioScan touch i8 fast, easy and accurate early assessment which can help prevent cardiovascular morbidity in dialysis patients.
- Monitor euvolemia status in order to normalize blood pressure preventing cardiovascular events.
- Detect and understand changes in body composition, particularly malnutrition which is common in patients receiving long-term hemodialysis.

Ages 5 - 99

Average Body Composition / Obese / Anorexic / Malnourished

Test can be performed in Supine and Semi recumbent patients

How does it work?

The use of multiple innovative technologies of BIA, FDSA and AI allows the **BioScan** *touch i8* to perform combinations of unique assessments.

A total of four or eight electrodes are applied (on hands and feet).

Cables are attached to the electrodes and connected to the **BioScan** *touch i8*. Subject data for example Height, Weight, Age, and Ethnicity is entered into the input screen of the BioScan.

Once the input of the data is completed, commence the test.

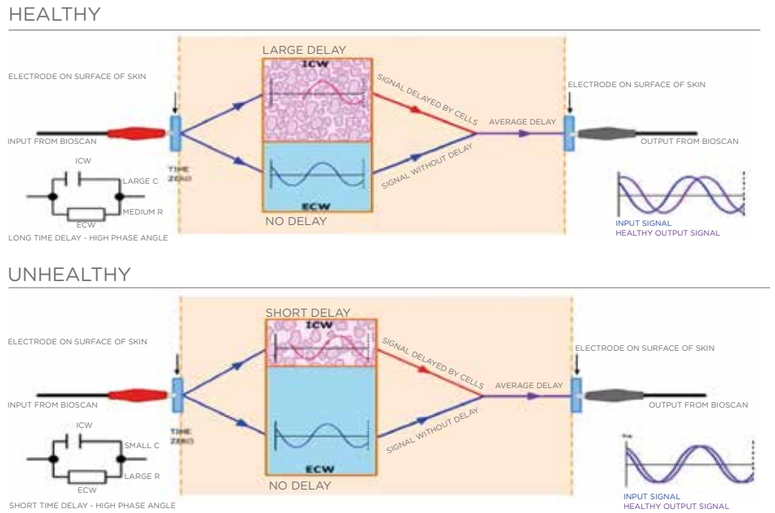
Impedance

The Impedance (Resistance) and Phase Angle (Reactance) of the body is measured.

A very tiny safe amount of electrical current at different frequencies are applied through the electrodes and transmitted into the body. The voltage is measured via the receiving electrodes. At low frequencies the current passes around the cells and at high frequencies the current will go through the cells.

The total testing process is completed in seconds with full analysis of the body.

Phase Shift



Phase Shift is an indicator of good health. The Phase Angle has been found to be an important indicator of mortality and the overall condition of the patient.

The Phase Angle is the ratio of resistance, i.e. resistance, to reactance, the delay of which is caused by healthy cell membranes. Zero (0) degrees indicate that there are no cell membranes at all, 90 degrees is a capacitive circuit consisting of all membranes without liquid.

The Phase Angle of a healthy person is about 6 to 11 degrees. A low Phase Angle indicates cell death or selective permeability of the cell membrane. A high Phase Angle indicates a high reactance and a correspondingly higher amount of Body Cell Mass (BCM), i.e. a good nutritional status.

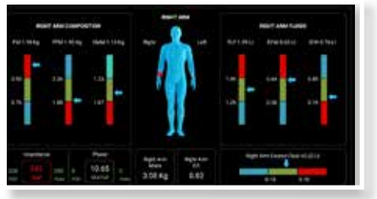
Eight Electrodes Segmental Assessments of all Limbs and Trunk

Assessment of fluid accumulation in the trunk

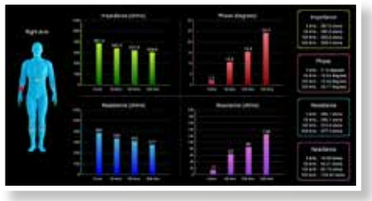
Fluid accumulation is one of the significant and early-stage manifestations of fatal diseases, such as CKD, lung-cancer, liver-failure and congestive heart-failure

Early stage assessment or monitoring of the Trunk is a key to timely medical intervention in order to help prevent complication and worsening of patients which could lead to mortality.

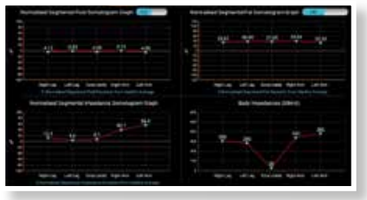
Total body water in the right and left limbs



Somatogram plots of segments



Tracking impedance changes in each segment



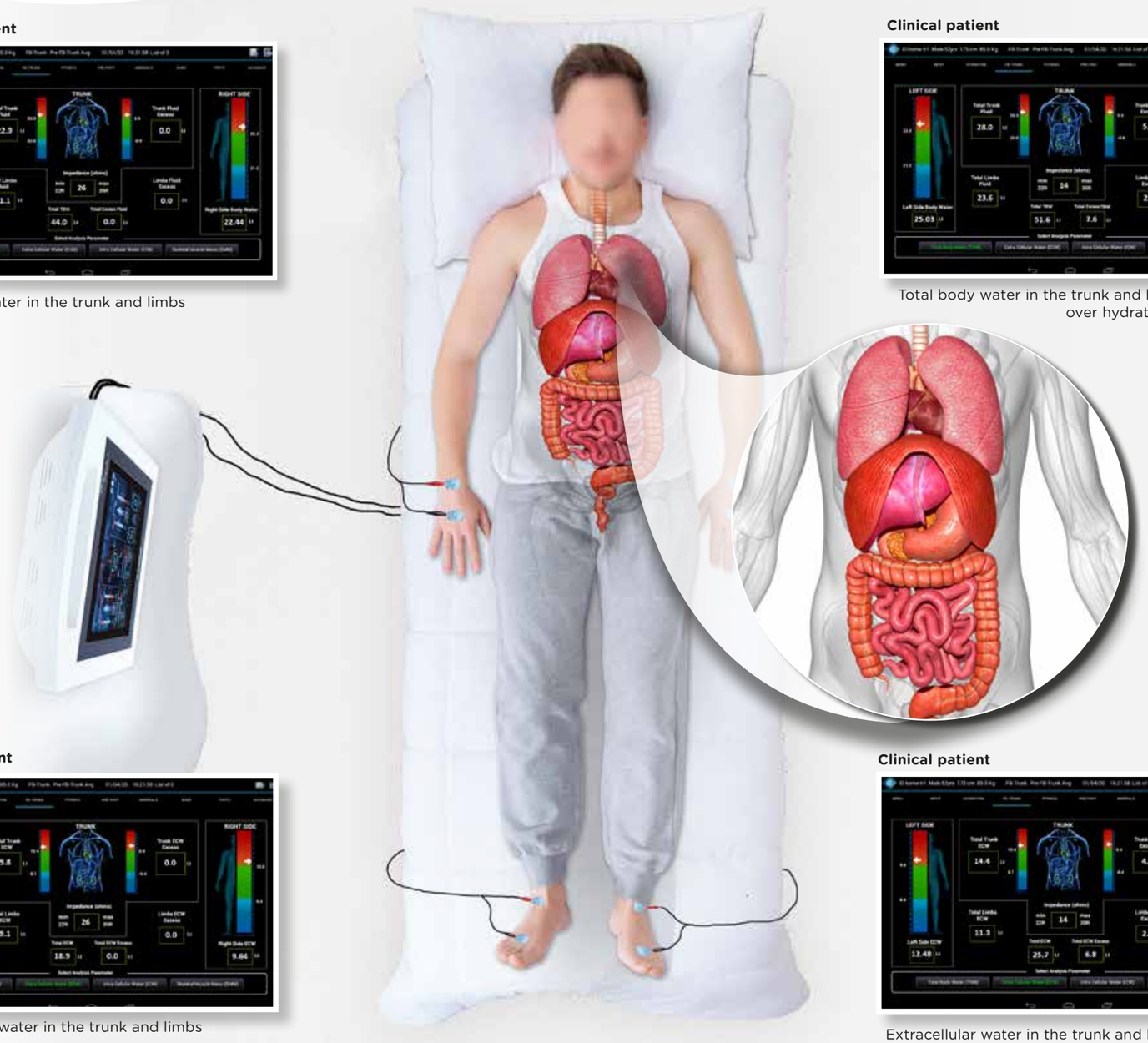
Results show data of Normal Patient vs Clinical patient

Healthy patient

Total body water in the trunk and limbs

Clinical patient

Total body water in the trunk and limbs - showing over hydration in the trunk



Healthy patient

Extracellular water in the trunk and limbs

Clinical patient

Extracellular water in the trunk and limbs - showing over hydration in the trunk

BioScan *touch i8*
tailored to suit the patient's needs.

Quick | Easy | Accurate | Input data and perform a test

BioScan is an accurate and sensitive method for screening and monitoring the effectivness of treatment in patients before its clinical manifestation

Malnutrition Index

Malnutrition is a strong predictor of mortality. It is a serious condition in adults and children commonly unrecognised and under treated.

Routine assessment should be performed in all patients admitted to hospital.

Intracellular Water and Extracellular Water

Knowing accurate volume status and volume responsiveness is critical.

Monitoring changes in the intracellular water and extracellular water is vital.

Body Cell Mass (BCM)

BCM is the metabolically active component of the body. Depletion of the body cell mass is associated with wasting.

It is an important measure of nutritional status in patients to help determine recovery from malnutrition.

Total Body Water (TBW)

The assessment of total body water provides vital information which can help to the diagnosis, and management of fluid and electrolyte imbalance.

Fat Free Mass Hydration

A challenging and difficult assessment, especially when a number of comorbidity complications are present. **BioScan *touch i8*** provides a fast and accurate assessment of the FFM hydration status of a dialysis patient.

Dry Weight

Important but often difficult to establish using clinical criteria. **BioScan *touch i8*** provides fast, accurate and easy assessment. Resulting in better patient outcomes.

Fluid Status

Excess fluid is associated with an increase morbidity and mortality.

The assessment of volume status is crucial in early management of patients.

Over Hydration can lead to long-term cardiovascular (CV) complications affecting patient outcome.

Accurate, assessment of Over Hydration can be performed with the **BioScan *touch i8***.

Dehydration Status - Early detection for better patient outcome with BioScan touch i8 can help detect excessive fluid removal. Dehydration of the patients can be symptomatic or lead to hypovolemic shock.

The only Intravascular and Extravascular monitor

Accurate assessments of Intra and Extravascular fluid status is an important part of perioperative care and necessary for the management of the hemodynamically unstable patient.

Insufficient intravascular volume could lead to decreased oxygen delivery to tissues and organ dysfunction. On the other hand fluid overload can contribute to the development of edema and organ dysfunction, including respiratory failure. The injudicious use of vasopressors and inotropes in the hypovolemic patient can increase the risk of a poor outcome.

Monitor fluid changes in the Intravascular and Extravascular volume status

Patient trajectory tracking complex changes with every intervention.

Dynamic trajectory shows the volume and directions of changes during clinical intervention

It is a challenging task to monitor and better understand the long-term effects of a treatment. The Dynamic trajectory can help show the effectiveness of the intervention and progress of the disease which provides an essential insight helping to develop new treatments and therapies.

Is important in tracking changes, perform analysis and examine the effectiveness of interventions. BioScan touch i8 results can help identify significant changes.

Get your optimal Kt/V “efficiency”

Your tools, your choice!

Accurate assessment of Volume distribution is essential for the evaluation of dialysis adequacy (Kt/V).

Clinicians who are managing hemodialysis, peritoneal dialysis and acute Kidney Injury patients need to ensure treatment adequacy. As each patient’s requirements are different clinicians must tailor each therapy to the individual patient’s needs, making adjustments in the timing, frequency, duration, flow rates and other parameters.

BioScan *touch i8* - Kt/V allows you to accurately optimise the “Efficiency” for each patient with ease.

Ensuring better treatment and with better outcome

Having accurate volume distribution is essential in order to estimate dialysis adequacy

Currently the formulas used for calculation of volume distribution are derived from mostly healthy volunteers and are based on height & weight which does not differentiate between fat and muscle.

A study by Nazanin Noori el.al showed the formulas provide a gross overestimation of volume distribution in chronic hemodialysis recipients.

The standard way to measure the effectiveness of hemodialysis is to compare the amount of fluid that is processed during each dialysis session with the amount of fluid that exists in the body. This is called the Kt/V.

It was often found in patients with unhealthy hydration levels and nutrition status that standard formulas over or underestimate dialysis adequacy.

- **K** dialyzer clearance of urea, in millilitres per minute (mL/min).
- **t** dialysis time, represents time in minutes from the start to the end of session.
- **V** represents the volume of distribution of urea.

Monitor the effectiveness of dialysis treatment with the BioScan touch i8. Maltron’s proprietary methods to estimate the “V” provides accurate Kt/v efficiency.

Reliance on formulas for assessing Volume distribution may lead to incorrect assessment of Kt/V

- **For Obese patients, formulas often overstimate the “V” which leads to an underestimation of Kt/V, resulting to an over dosing of dialysis.**
- **Kt/V overestimates dialysis adequacy in thin, malnourished patients and elderly females due to low muscle mass and low Volume distribution. This may lead to under-dosing of dialysis.**

Now find optimal “Efficiency” accurately before starting dialysis

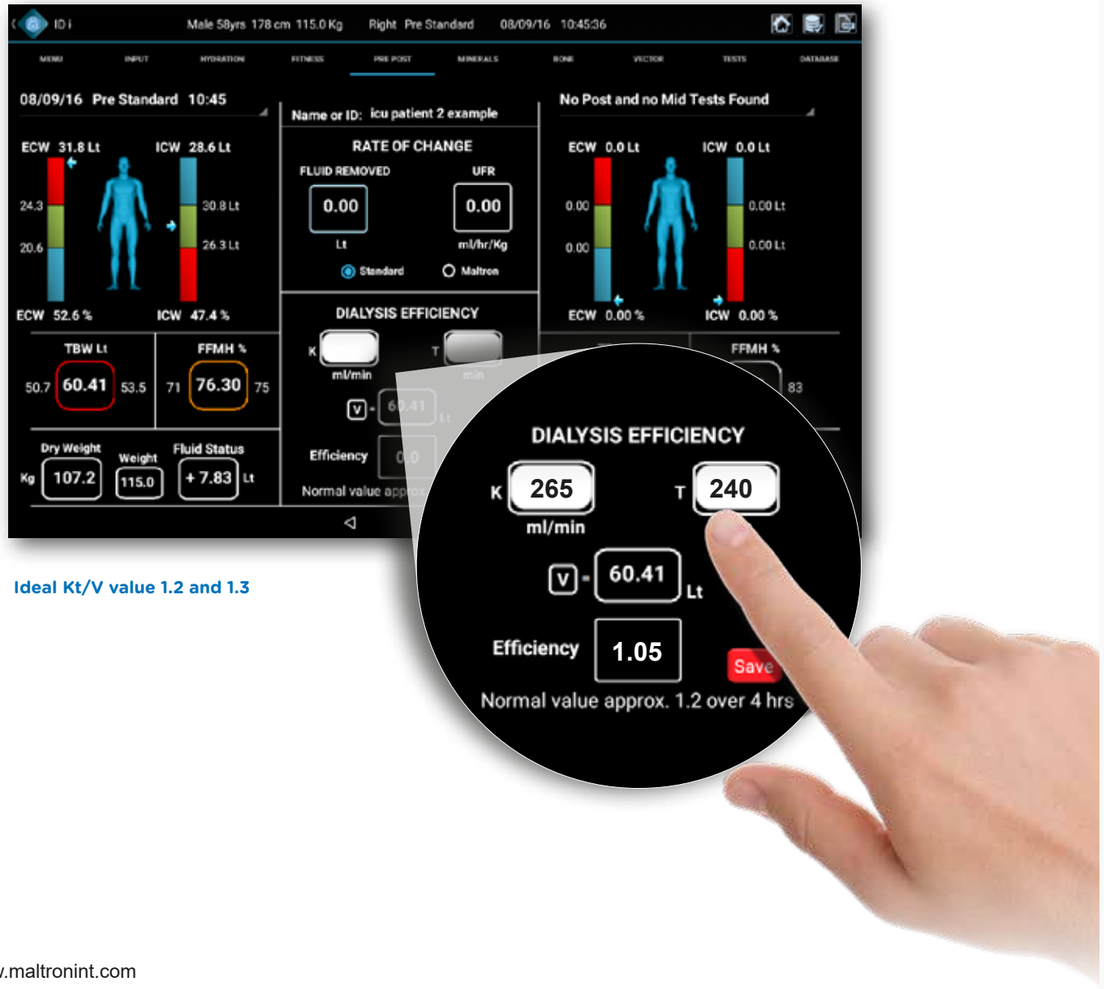
BioScan *touch i8* provides you with an accurate distribution of Water Volume.

Use the *touch i8* and perform a “Pre” assessment. Within seconds an accurate measured “Volume” of distribution will be provided automatically allowing you to optimise Kt/V.

Experiment with the “K” and “t”

Enter the K value in ml per minute and the “t” in minutes.

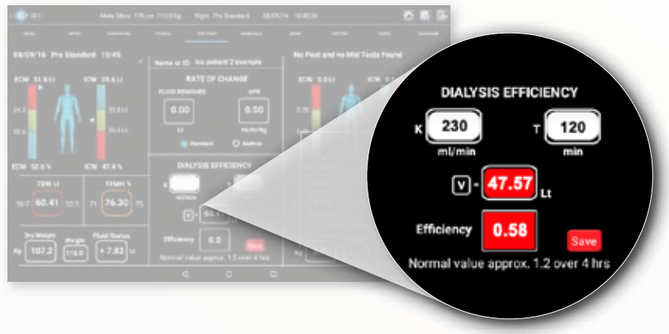
By fine adjustments of “K” and “t” you can view the optimal “Efficiency” for each patient before the start of dialysis



Ideal Kt/V value 1.2 and 1.3

Without checking the optimal Efficiency

Examples of case studies

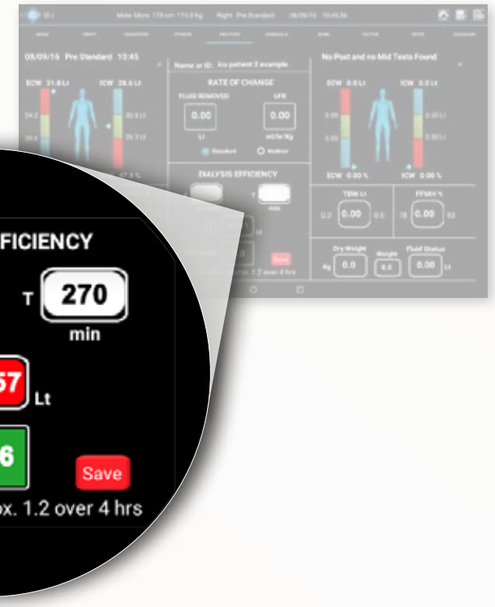


ICU patient with 2.6 litres excess underwent 2 hours dialysis. Excess reduced to 1.3 litres but the dialysis Efficiency was only 0.57.

Incorrect Kt/V is associated with greater mortality

Further 2.5 hours dialysis was provided, reducing the excess to 0.10 litres and dialysis Efficiency showed marked improvement of 1.36.

In this case the “Pre” and “Post” was assessed.

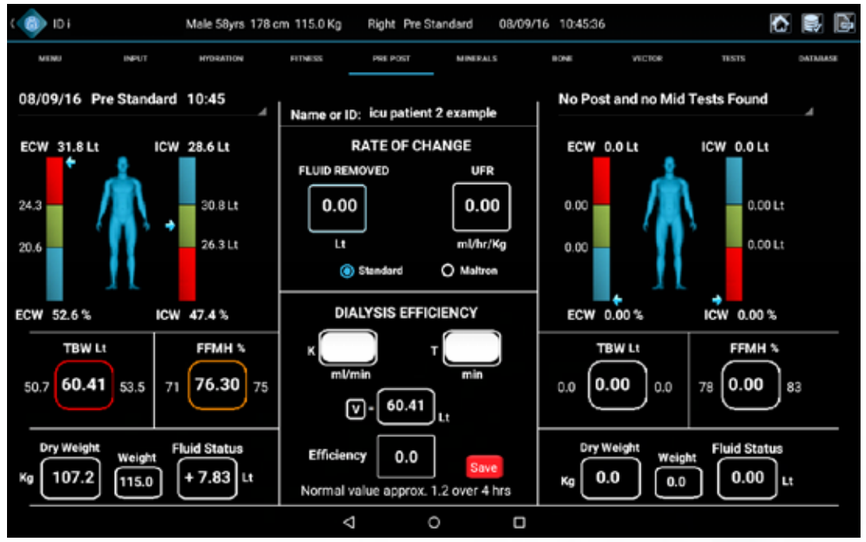


Take control and optimise dialysis dosage

www.maltronint.com

Pre, Mid, Post Assessment

Comparing Pre – Mid – Post assessment allows physicians to monitor and track patient's progress from day-to-day. This allows early intervention and optimal achievement of target.



Ultrafiltration Rate (UFR)

Maltron Ultra-Filtration Rate, uses Maltron's proprietary method to calculate UFR. This is more consistent across both underweight and overweight groups of patients. Pre and Post fluid levels show the rate of change achieved.

Phase Angle (Cellular Bio-marker)

Has been shown to be related to health status and is an important indicator of cell integrity. Healthy cellular membrane will lead to higher phase angle whilst decrease in cell integrity will lead to low phase angle.

Malnutrition Index

Highly prevalent in dialysis patients and associated with increased morbidity and mortality. Reduce time consuming assessment. BioScan touch i8 provides early detection of Muscle Mass loss for early intervention and better patient outcome.

Early diagnosis of which patients are at risk is vitally important.

Body Fat

Obesity and excess weight has significant health issues for children and their families. There can be serious implications for a child's physical and mental health.

Excessive weight gain affects children of all ages and careful consideration of the changes in body composition during growth and development is essential.

Muscle

Skeletal Muscle Mass (SMM) in children is an important component of nutritional assessment and plays an important role in maintenance of normal growth. It is an independent marker of metabolic health. Low muscle mass is associated with metabolic risk.

Glomerular Filtration Rates (GFR)

Obtaining accurate estimates of GFR in both adults and children is challenging

GFR is the best indicator of renal function and is critical for diagnosing acute and chronic kidney impairment. Early intervention could prevent end-stage renal failure.

Accurate assessment of GFR is vital for optimal dosage of medications and assessing progression of renal disease.

Early intervention offers the best chance of preventing ESRD.

Minerals

Minerals composition is essential for optimal health. They play an important role, supporting everything from the healthy development of your bones, teeth and eyes, to the creation of new cells. Regular assessment is vital.

Electrolytes

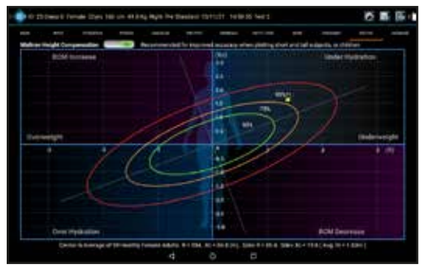
Management of fluid and electrolytes is important and challenging. It is different in both adults and children specially in the critically ill patients. Monitoring the changes is the key to successful fluid and electrolyte therapy.

Body Composition screen showing the changes in different parameters

GFR, Minerals and Electrolytes

Total Body Bone Mineral Density and Mineral contents

Vector plot



The BioScan *touch i8* provides full analysis of both full body and segmental assessments. More than 60 parameters with individualised min/max targets

Some key dialysis parameters

- Dry Weight
- Pre, Mid & Post assessments
- Kt/v
- Ultrafiltration Rate (UFR)
- Malnutrition Index

Cellular Hydration
- Over hydration (OH) (Excess Fluid)
- Dehydration
- Extracellular Water
- Intracellular Water
- Total Body Water
- Fat Free Mass Hydration
- Hydration targets
- E/I Ratio
- Extracellular Mass
- Extracellular Solids

Vascular Hydration
- Plasma (IVF version)
- Red Cells (IVF version)
- Hematocrit (IVF version)
- Intravascular (IVF version)
- Extravascular (IVF version)
- Interstitial Fluid (IVF version)
- Historical Data Tracking (IVF version)

Kidney Function
- Glomerular Filtration Rate (GFR)
- Creatinine Clearance

Body Composition
- Body Fat
- Muscle Mass
- Fat Free Mass
- Skeletal Muscle
- Body Cell Mass
- Cellular Biomarker (Phase Angle)
- Height
- Body Weight
- Resting Metabolic Rate
- BMI
- Bone Density
- Bone Mineral Content
- Fitness Score
- Strength Index
- Resting Metabolic Rate

Minerals and Electrolytes
- Protein
- Potassium
- Calcium
- Glycogen
- Total Body Mineral Levels

Raw Data
- Impedance
- Phase Angle
- Resistance
- Reactance
- Capacitance

Detailed Health Report of Patient Assessment

The BioScan *touch i8*, the right monitor.

A positive health outcome for better life choices

Early diagnosis plays an important role in patient care and research. BioScan touch i8 provides advance, accurate diagnosis which can lead to decision making tailored to the correct understanding of patient's health problems before clinically apparent.

BioScan touch i8 assessment provide healthcare professionals with an objective measure of a patient, providing targets for interventions which could improve patient experience and outcomes.

Early screening & identify patients at risk

With the **BioScan** *touch i8* can establish baseline needs and track the changes over time. This ultimately improve patient outcome and discharge timing, while simultaneously decreasing long term complications.

- **Avoid subjective, empirical and time consuming evaluations**
- **Early screening of fluid status**
- **Monitoring overhydration and dehydration**
- **Pre, Mid and Post Assessments**
- **Ultrafiltration Rates (UFR) and Kt/V**

The most challenging target of dialysis treatment is to achieve and maintain an euvolemic state. Currently, euvolemic and dry weight assessments are preformed on a trail and error basis

Optimal Dialysis

Inadequate haemodialysis leads complications and frequent hospitalisations increasing healthcare costs.

Accurate Assessment

BioScan touch i8 provides a non-invasive, simple, reliable, inexpensive way to assess many dialysis patients

Tracking fluid shifts

BioScan touch i8 assessment along with blood pressure control could lead to better patient outcome.

Take Control Before, During and After Treatment

www.maltronint.com

Smart technology that is seamless, quick and easy

Security enabled
High security patient data protected
Data storage over 500,000 tests

10.1" touch screen
Analysis in crystal clear HD
Multi touch/Multi screen

Stand alone software
Seamless flow/Quick & Easy
No PC required

Visual data & Individual min/max targets
Calibrated for a range of ethnicities
A graphical vector graph of data

WIFI / Bluetooth / Ethernet / USB
Wireless data communications
Data transfer to PC via .csv and Excel

1 Channel - 4 electrode test
2 Channel - 8 electrode test (Segmental)
Auto-calibration maintains optimum accuracy

Light & Portable
Multi-language
No technical knowledge required

Over 12 hours continuous use
Smart rechargeable battery
High capacity & Long lasting

Challenges Faced by Clinicians

Monitoring patients undergoing changes in Total Body Fluids, Electrolyte Balance and Body Composition is a major challenge. Current assessment protocol of measuring the height and weight of patients does not provide vital information necessary to monitor changes.

Whilst some information can be gathered from invasive methods these tests are intrusive, distressing and can cause discomfort with added risk of complications for the patient.

Multilevel assessments and interventions are time consuming, more expensive and complicated to implement.

Early intervention and support can lead to an improved outcome. Regular assessment with the **BioScan *touch i8*** allows a baseline to be established to monitor the effectiveness of the treatments and changes. This is especially important when assessing fluid status, malnutrition and metabolic risk in patients with chronic disease.

The BioScan *touch i8* can support clinicians in the assessment of:

- Renal function
- Cardiovascular Disease
- Edema
- Body fluid balance over and under hydration - a key concern in healthy and diseased patients
- Sepsis or Post-surgery capillary leak, which leads to fluid accumulation
- Fluid management is often a challenge - it is not clear if the fluid is Intravascular or Extravascular
- Effectiveness of correct Nutritional support
- Understanding changes in Fat, Muscle, and Bone tissue with obesity and osteopenia that occur in later periods of growth and development
- Understanding the causes of Malnutrition, Kidney disease, Diabetes and much more
- It is important to understand body composition in cases of obesity and those diseases that cause malnutrition, kidney disease, diabetes and much more.
- Monitoring patients with infectious or inflammatory diseases to predict outcome
- Dengue fever countries – monitoring infants can help guide effective treatments.

Clinical Areas

Nephrology

ICU & CCU - Surgery

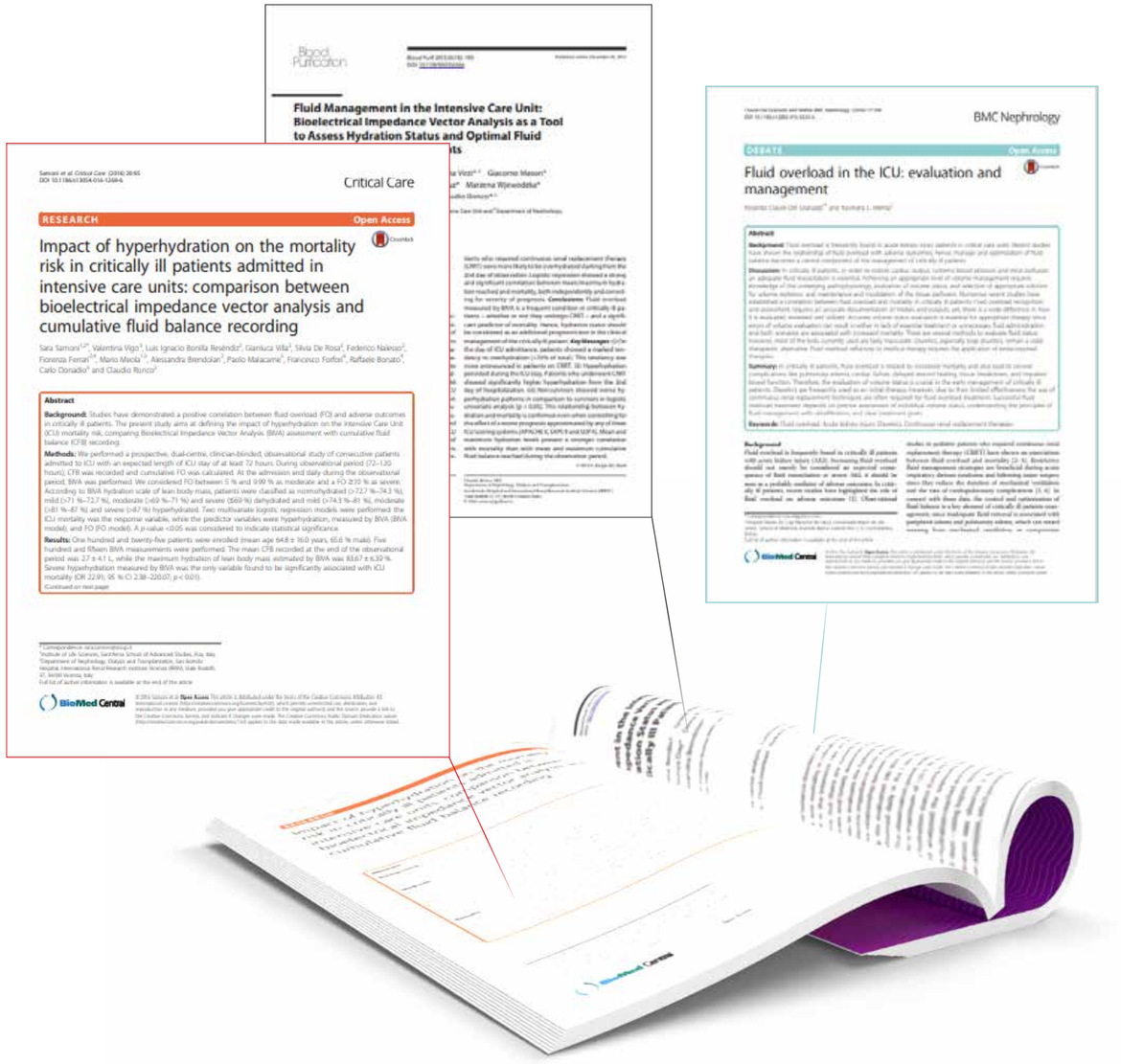
Clinical Nutrition - Diabetes - Obesi

Cardiology

Cancer

Noninvasive, Accurate, Safe & Validated

Maltron Bioelectrical Impedance Body Composition Monitor. Validated and evidence based technology.



References: Comparing the urea reduction ratio and the urea product as outcome-based measures of hemodialysis dose. AU Li Z, Lew NL, Lazarus JM, Lowrie EG SOAm J Kidney Dis. 2000;35(4):598.

Volume Estimates in Chronic Hemodialysis Patients by the Watson Equation and Bioimpedance Spectroscopy and the Impact on the Kt/Vurea calculation -Nazanin Noori, Ron Wald, Arti Sharma Parpia, and Marc B. Goldstein Can J Kidney Health Dis. 2018;5: 2054

Effect of dialysis dose and membrane flux in maintenance hemodialysis Eknoyan G, Beck, GJ Cheung AK, et al. N Eng J Med 2002; 347:2010.

Meyer TW,Sirich TL,Fong KD et al. Kt/V urea and non urea small solute levels in the hemodialysis study. JASN 2016;27:3469

Urea Kinetics, Efficiency, and Adequacy of Hemodialysis and Other Intermittent Treatments - Niti Madan, Thomas A. Depner, in Critical Care Nephrology, Limitations of Kt/V.

Solute and Water Transport in Hemodialysis - Francesco Garzotto, William R. Clark, in Critical Care Nephrology - Concept of Kt/V.

Quantification of Acute Renal Replacement Therapy - Francesco G. Casino, in Critical Care Nephrology. Calculation of Fractional Clearance for Intermittent Hemodialysis

Peritoneal Dialysis - In Pocket Companion to Brenner and Rector's - The Kidney - Clearance Targets

Peritoneal Dialysis Solutions, Prescription and Adequacy - Angela Yee-Moon Wang MD, PhD, in Chronic Kidney Disease, Dialysis, and Transplantation.

Hemodialysis Adequacy - Scott D. Bieber DO, in Chronic Kidney Disease, Dialysis, and Transplantation – Single-Pool Kt/v.

Other Blood and Immune Disorders in Chronic Kidney Disease - Walter H. Hörl, in Comprehensive Clinical Nephrology Correction by Dialysis

Simplified Formulas and Nomograms for Monitoring Hemodialysis Adequacy – Richard A. Sherman MD, Robert Hootkins MD, in Handbook of Dialysis Therapy - Kt/V

Determination of Continuous Ambulatory Peritoneal Dialysis and Automated Peritoneal Dialysis Prescriptions - Scott G. Satko MD, John M. Burkart MD, in Handbook of Dialysis Therapy - Discrepancy between Kt/V and Creatinine Clearance.

Technical Specifications

Technique	Multi-frequency Bio-Electrical Impedance Analysis & FDSA+ using tetra-polar method
Display Languages	Multi-language configured
Display	10.1" Touchscreen
Frequencies	Multi-frequency 5.0kHz, 50.0kHz, 100KHz, 200KHz
Test Current	600uA RMS approx. at
Impedance Range	1 to 1200 ohms (full scale deflection (FSD) is 1200R)
Impedence Resolution	1 - 100R range: 0.1R 100 - 1100R range: 1R
Impedance Accuracy	Impedance to within 1% of full scale deflection (FSD), +5R across 100 - 1100R range and +5R across 1-100R range
Phase Range	1° - 35°
Phase Resolution	0.05°
Phase Accuracy	2% of FSD, +0.5° (where FSD is 35°), across 1° - 30°
Resistance Range	1 - 1200R
Resistance Resolution	1 - 100R range: 0.1R 100-1100R range: 1R
Reactance Range	0 - 580R
Reactance Resolution	0.1R
MT950 BioScan Touch i8	DATA OUTPUT RESOLUTION
Estimation of	TBW - ECW - ICW in increments of 0.1 litres FFM - FM in increments of 0.1kg BCM - 01.kg
User Memory	Internal storage approx. 100,000.
Relative Humidity	Storage: +5°C to_ 40°C Use: +15°C to+ 35°C
Atmospheric Pressure	30% to 65% non-condensing (Environmental)
Main Power	115 to 250v AC via charger
Power	10.SVDC Li-ion battery pack (99Wh)
Charger	15VDC external input power source (4 Amps max) Smart Battery Charging System built into power PCB
Weight	3.5kg approx. (with base unit)
Dimensions	Length: 350mm, Height: 325mm, Width: 155mm (with base)
Service	No serviceable parts
Guarantee	12 months parts and labour (excluding disposable items, cables & electrodes)

For many years Maltron devices have been widely used for monitoring of Body Composition in diverse settings.

Maltron is the world's leading manufacturer in the field of Bioelectrical Impedance Analysis (BIA) offering a complete range of portable, bedside, diagnostic and monitoring instruments. Maltron analysers have become indispensable measuring tools in the assessment of Body Composition, hydration and for evaluating the nutritional status in both fitness and medical market sectors.

At Maltron we don't just offer Body Composition Monitors, we offer solutions. Developed for a simple and easy integration into your current practices. We provide all aspects of comprehensive training to give your staff the skills they need.

We have over three decades of expertise fuelling our clinical innovations. Our cutting-edge Body Composition Monitor solutions are specifically designed to be an effective tool in hospitals, clinics, fitness and healthcare settings.

Together, we can create better healthcare.

Contact us to explore our range of Body Composition Monitors.

Also Available: BioScan *touch i8* - nano

The world's first noninvasive monitor calibrated for gestational age 23 weeks to 18 years

MALTRON
Your health our vision

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