We believe every person suffering from kidney disease deserves the right therapy, at the right time, in the right clinical environment.

What's more, as a global provider, we understand that every patient, and clinic, is different and has different needs.

One of the main challenges healthcare professionals face is achieving balance between clinical targets and operational requirements. Attaining these two objectives can be challenging.

It is for this reason that we have designed **a wide range of treatment options, that help enable healthcare professionals overcome their challenges, their way.**

OPERATIONAL EFFICIENCY

Controlling and minimizing operational costs

HDx-HC

HDx-HC is the integration of expanded hemodialysis (HDx) targeting removal of large middle molecules, and the HEMOCONTROL modality (HC) aiming at reducing the occurrence of intradialytic hypotension.

1. Caplin B, et al. Patients' perspective of haemodialysis-associated symptoms. *Nephrol Dial Transplant* 2011; 26(8): 2656-2663
2. Belmouaz M, et al. Comparison of hemodialysis with medium cut-off dialyzer and on-line hemodiafiltration on the removal of small and middle size molecules. *Clinical Nephro* 2018; 89(1): 50-56
3. Schepers E, et al. Assessment of the association between increasing membrane pore size and endotoxin permeability using a novel experimental dialysis simulation set-up. *BMC Nephrology* 2018; 19:1
4. National Kidney Foundation Kidney Disease Outcomes Quality Initiative. Clinical practice guidelines for cardiovascular disease in dialysis patients. *Available at: http://www2.kidney.org/professionals/KDOQI/guidelines_cvd/intradialytic.htm*. Accessed: April 207
5. Hutchison CA, et al. The Rationale for Expanded Hemodialysis Therapy (HDx). *Contrib Nephrol* 2017; 191: 142-152
6. Ronco C. The rise of Expanded Hemodialysis. *Blood Purif* 2017; 44: I–VIII
7. Chapdelaine I, et al. Optimization of the convection volume in online post-dilution haemodialfiltration: practical and technical issues. *Clinical Kidney Journal* 2015; 8: 191-198
8. Kirsch AH, et al. Performance of hemodialysis with novel medium cut-off dialyzers. *Nephrol Dial Transplant* 2017; 32: 165-172
9. Gayrard N, et al. Consequences of increasing convection onto patient care and protein removal in hemodialysis. *PLoS ONE* 2017; 12(2): e0171179
10. Nesrallah GE, et al. Biofeedback dialysis for hypotension and hypervolemia: a systematic review and meta-analysis. *Nephrol Dial Transplant*. 2013; 28: 182–191.
11. Basile C, et al. Efficacy and safety of haemodialysis treatment with the Hemocontrol biofeedback system: a prospective medium-term study. *Nephrol Dial Transplant*. 2001; 16(2): 328-34
12. Gil HW, et al. Efficacy of hemocontrol biofeedback system in intradialytic hypotension-prone hemodialysis patients. *J Korean Med Sci*. 2014; 29: 805–810.
13. Selby N, et al. Occurrence of Regional Left Ventricular Dysfunction in Patients Undergoing Standard and Biofeedback Dialysis. *Am J Kidney Dis* 2006; 47: 830-841.
14. Doria M, et al. The dialysis staff workload and the blood volume tracking system during the hemodialysis sessions of hypotension-prone patients. *Int J Artif Organs*. 2014; 37(4): 292–298.
15. Winkler RE, et al. Blood Volume Regulation. In: *Technical Problems in Patients on Hemodialysis. Rijeka. Croatia*. 2011: 235-250.
16. Deziel C, et al. Impact of hemocontrol on hypertension, nursing interventions, and quality of life: A randomised, controlled trial. *Clin J Am Soc Nephrol*. 2007; 2: 661–668.
17. Selby N, et al. Acute cardiac effect of dialysis. *Seminars in Dialysis* 2007; 20(3): 220–228

For further information visit
hdxtheranova.com:

Do not use THERANOVA dialyzers in HDF or HF
For safe and proper use of the device, please refer to the Instructions for Use

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Baxter

THE HDx-HC TREATMENT OPTION. YOUR WAY.

An integrated approach to renal care

Making possible personal.

BAXTER IN-CENTER TREATMENT OPTIONS CARE FOR YOUR PATIENTS, YOUR WAY.

Our integrated treatment options have been created to reach two objectives:

PATIENT OUTCOMES

Improving the quality of treatment for the patients

THE TREATMENT OPTION INTEGRATING EXPANDED HEMODIALYSIS (HDx) AND THE HEMOCONTROL (HC) MODALITY

By combining monitors and features, consumables, systems and services into one integrated treatment option, we aim to help healthcare professionals with improving outcomes for their patients, all while controlling their operational efficiency.

The HDx-HC treatment option considers everything from patient's clinical needs to the governmental and economic factors at work in a particular environment.

This is how we are **Making Possible Personal.**

GROWING CONCERNS FOR HD PATIENTS
CARDIOVASCULAR STRESS AND ACCUMULATION OF LARGE MIDDLE MOLECULES

1

Intradialytic hypotension is the second most common patient-reported symptom during HD[1]
Too fast or excessive fluid removal by HD can induce myocardial ischemia, a risk factor for cardio-vascular events.[17]

2

Many large middle molecules are not cleared effectively using current HD technologies[6]
Current dialyzer design, limited by membrane permeability, does not provide effective reduction of middle molecules, and their concentration increases in body fluids as renal function deteriorates.[5]

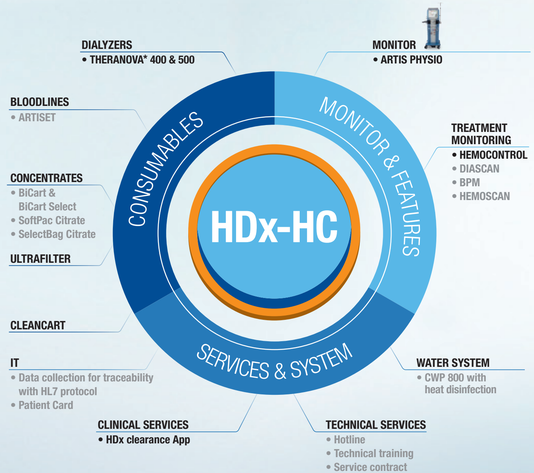
3

Consistent delivery of high volume post dilution HDF may be challenging[7]
HDF requires well-performing vascular access with large needle size to allow high blood flow.[7] Hemoconcentration or pressure alarms may require nurse intervention, and may not allow the targeted convective volume to be reached[9]

4

Intradialytic hypotension may impair the delivery of treatment targets
Repeated Intradialytic hypotension can preclude delivery of prescribed dialysis dose, and may lead to chronic fluid overload due to suboptimal ultrafiltration and fluid boluses.[4]

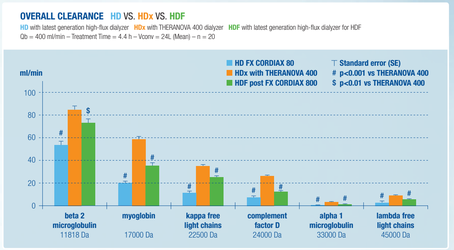
THE TREATMENT OPTION INTEGRATING
EXPANDED HEMODIALYSIS (HDx) AND THE HEMOCONTROL (HC) MODALITY



*** Do not use Theranova dialyzers in HDF or HF**

MEMBRANE INNOVATION
DESIGNED TO TARGET LARGE MIDDLE MOLECULES EFFECTIVELY

Thanks to the unique permeability and selectivity properties of the THERANOVA membrane, the clearance of large middle molecules is significantly higher than with conventional high-flux membranes.[8]



Adapted from 8) Kirsch et al. *Nephrol Dial Transplant* 2017.

HEMOCONTROL MODALITY ON THE ARTIS PHYSIO SYSTEM

Compared to conventional HD, The HEMOCONTROL HD provides benefits on session tolerance and treatment delivery:
- Fewer muscle cramps and intradialytic hypotension[11]
- Lower burden of kidney disease[16]
- Reduction of cardiac stunning observed during HD[13]
- Less nurse intervention[14]
- More achievable fluid removal[15]
- Shorter recovery time[12]

The ARTIS PHYSIO systems puts you in control on treatment delivery with innovative technologies:
- The simple five-button NAVPAD controller
- The help-on-screen feature providing step-by-step instructions
- ARTISET blood circuit with one-button priming reducing waiting times

OUR HDx-HC TREATMENT OPTION MAY HELP
REDUCE CARDIOVASCULAR STRESS AND INCREASE REMOVAL OF LARGE MIDDLE MOLECULES

1

Biofeedback dialysis reduces the appearance of intradialytic hypotension by 39% according to a systematic review[10] of controlled studies
HEMOCONTROL modality can help to reduce symptoms[11], recovery time[12] and cardiac stunning observed during HD[13]

2

The HDx therapy provides HDF performance and beyond in the removal of large middle molecules
Despite its higher permeability, the membrane of the THERANOVA* dialyzer retains essential proteins to ensure albumin removal in the range of data observed in HDF treatment[8,2]; it also remains an effective barrier to potential dialysis fluid contaminants[3]

3

The HDx treatment is simple and can be delivered effectively to all patients
HDx therapy does not induce high hemoconcentration often observed in HDF[9], and the high clearances for the large middle molecules are also achieved with a blood flow rate of 300 ml/min[8]

4

HEMOCONTROL modality can reduce nurse intervention and minimize disruption of treatment scheduling[14]
Fluid removal is also more achievable[15] allowing to reach post-dialysis target weight.

*** Do not use Theranova dialyzers in HDF or HF**