Adimea = Accurate Dialysis Measurement
User Guide

B | BRAUN
SHARING EXPERTISE

Adimea = Accurate Dialysis Measurement

▸ **Option for Dialog+® machine generation**

▸ **Measuring UV–Light Absorbance in spent dialysate**

▸ **Continuous Measurement of change in molar concentration**
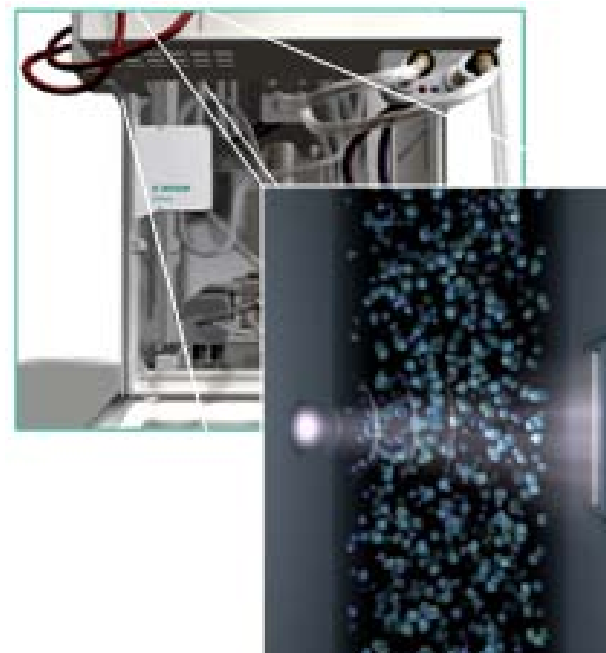
⚠️ **WARNING** ▸ Do not use the Adimea option UV-Kt/V for pediatric patients, since the accuracy of this optional feature has not bee proven or validated in the pediatric population.

B|BRAUN
SHARING EXPERTISE

How Does Adimea Work?

Adimea® | Technology

The Adimea® measurement principle

Uses the principle of spectroscopy for determining the reduction of urinary excreted substances in the dialysate drain
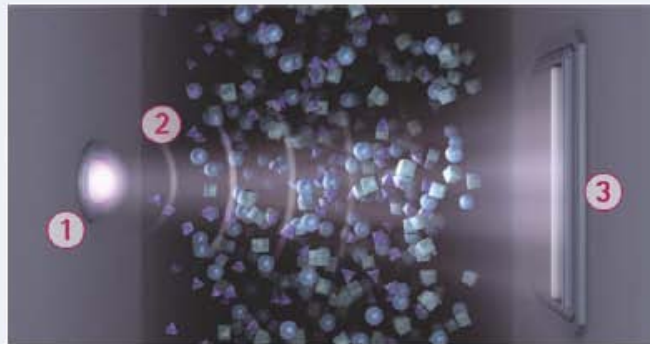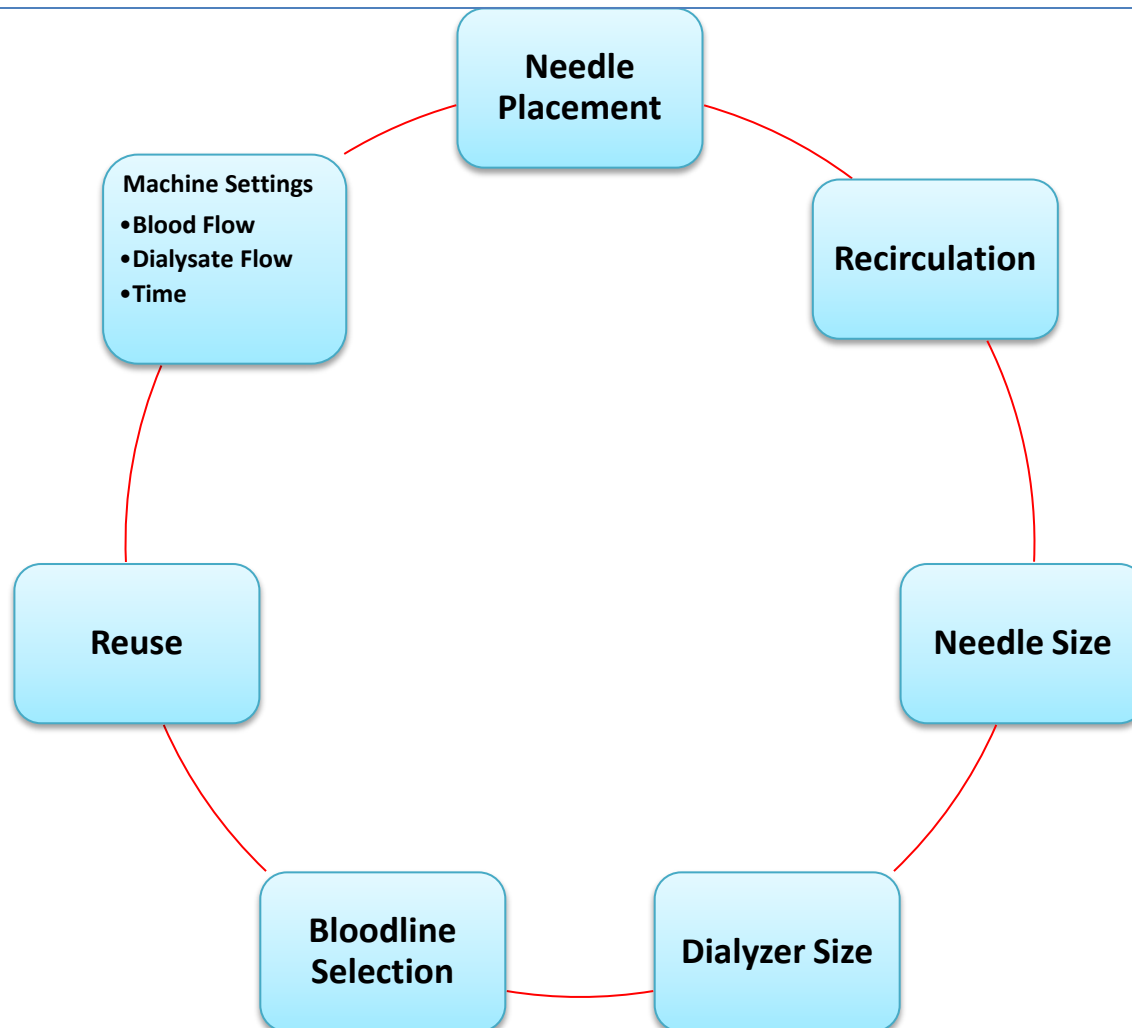

➢ A light source ① transmits ultraviolet light through the dialysate flowing to the drain.

➢ The particles contained in the dialysate absorb the light depending on the concentration ②.

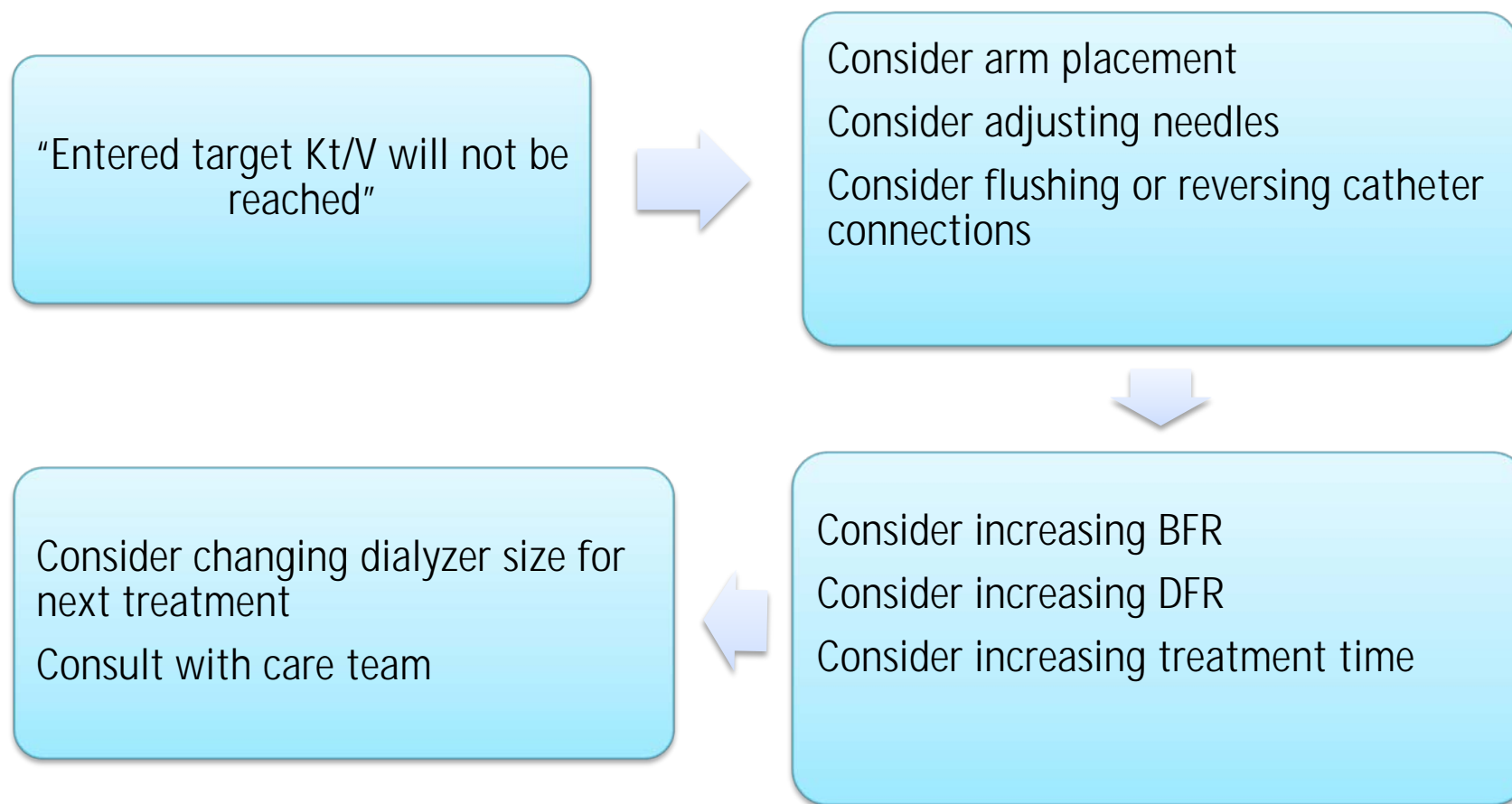➢ This absorbtion is detected by a sensor ③.

➡ This provides the system with information about the curve of molar reduction in the urea.

B | BRAUN
SHARING EXPERTISE

Factors That Influence Adequate Dialysis

Needle Placement

Recirculation

Needle Size

Dialyzer Size

Bloodline Selection

Reuse

Machine Settings
- Blood Flow
- Dialysate Flow
- Time

B | BRAUN
SHARING EXPERTISE

Example of Adimea Algorithm to Improve Outcomes

"Entered target Kt/V will not be reached"

→

Consider arm placement

Consider adjusting needles

Consider flushing or reversing catheter connections

↓

Consider increasing BFR

Consider increasing DFR

Consider increasing treatment time

←

Consider changing dialyzer size for next treatment

Consult with care team

B | BRAUN
SHARING EXPERTISE

What are your opinions of a single monthly blood sample as an adequate measurement of dialysis dose?

B | BRAUN
SHARING EXPERTISE

Observational Data (B. Braun) shows:
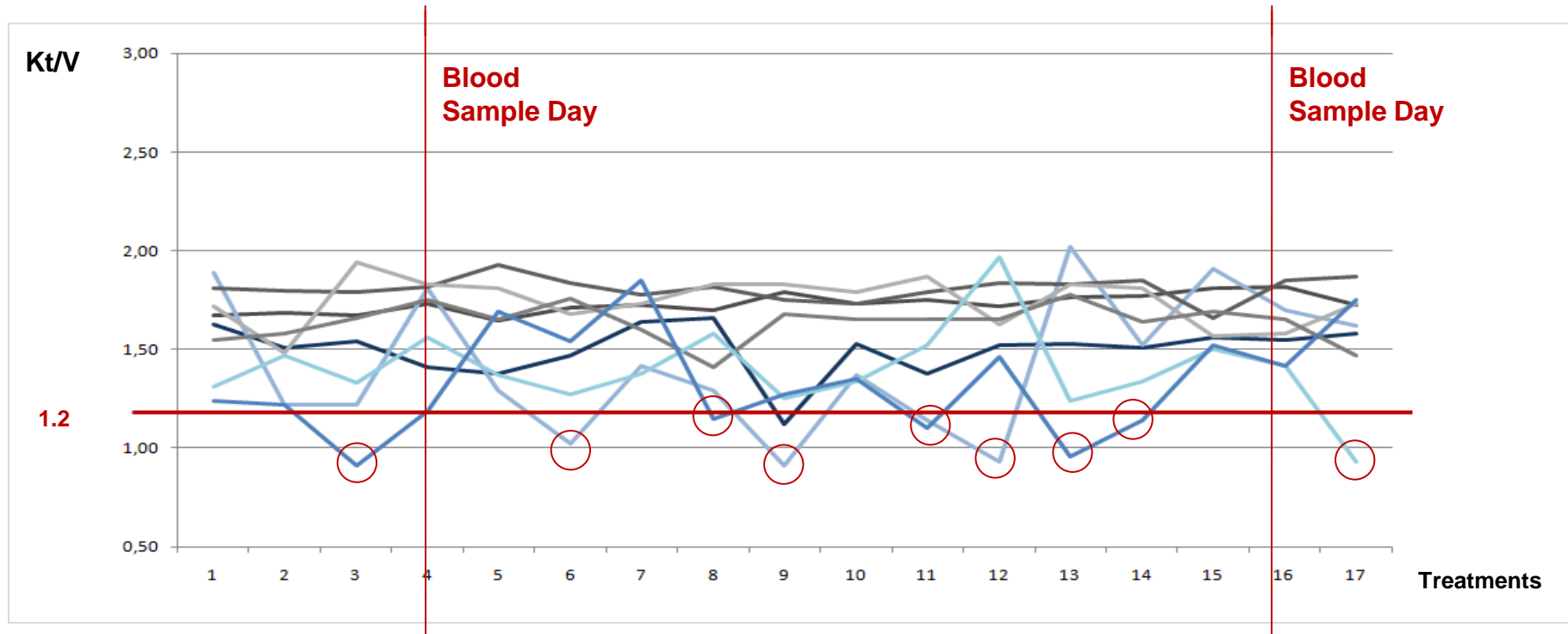
► **A single Kt/V value does not tell the whole story!**

B BRAUN
SHARING EXPERTISE

Adjusting Treatment Parameters

Adimea offers direct control of 3 important clearance influencing factors

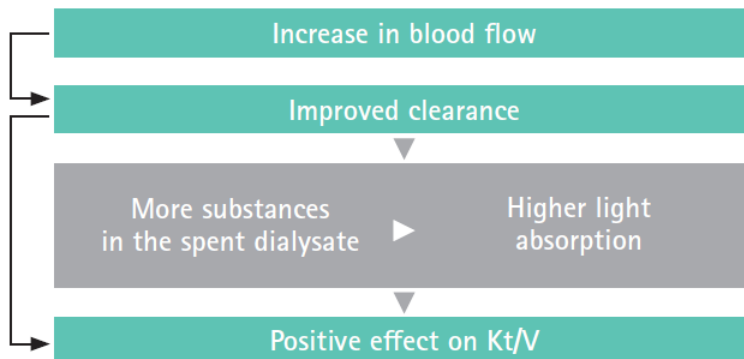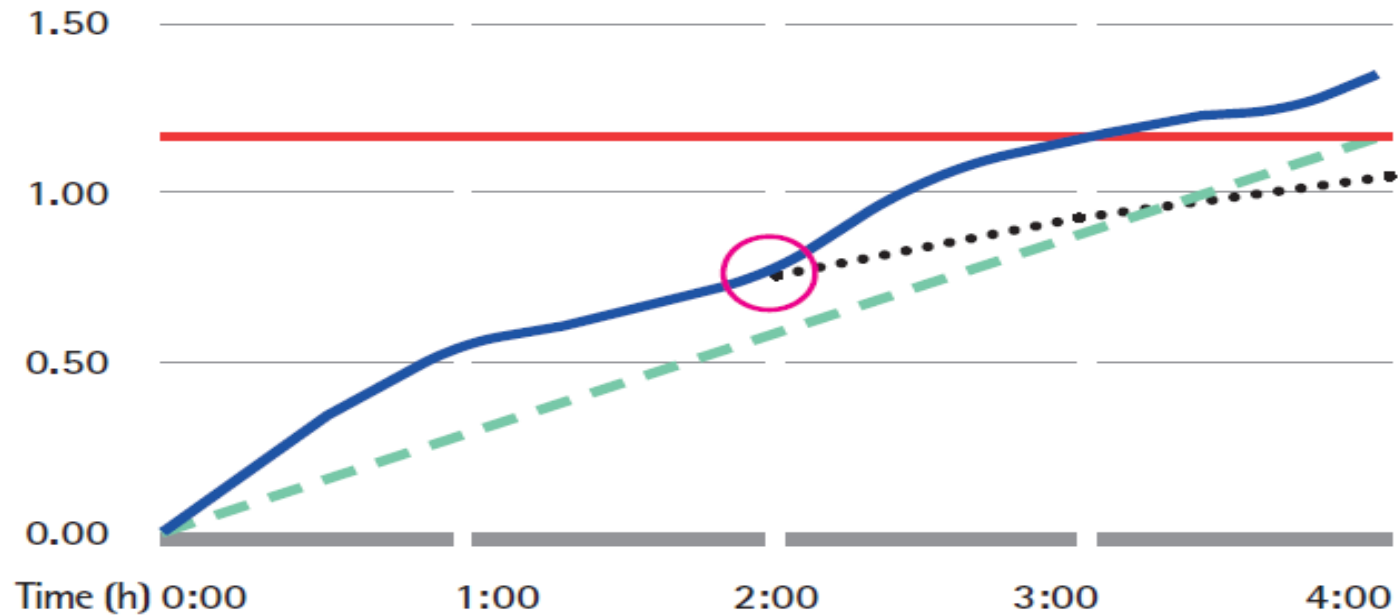**Blood flow rate**

Dialysate flow rate

Effective dialysis time

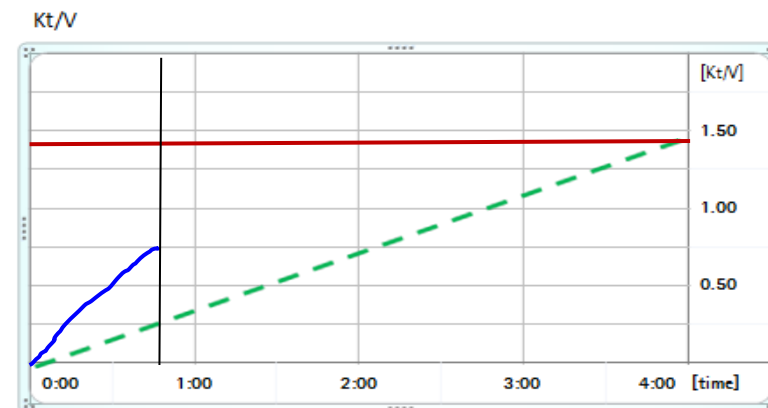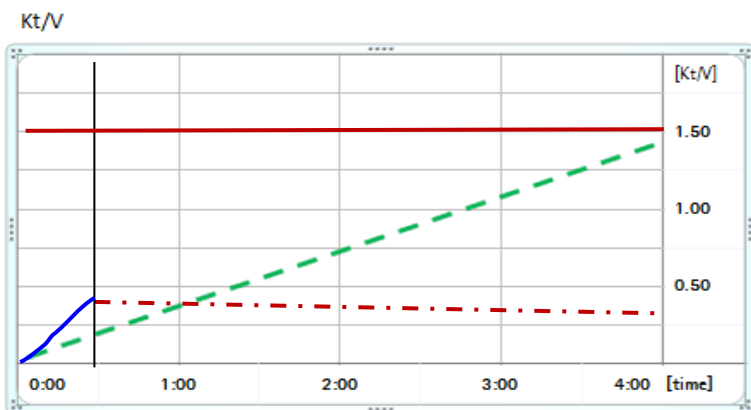> ⚠ Adjustments to treatment parameters during dialysis sessions must be approved by the physician.

B | BRAUN
SHARING EXPERTISE
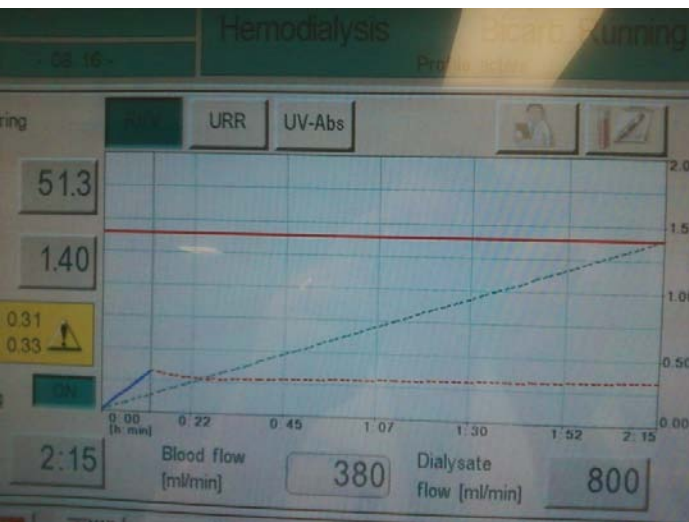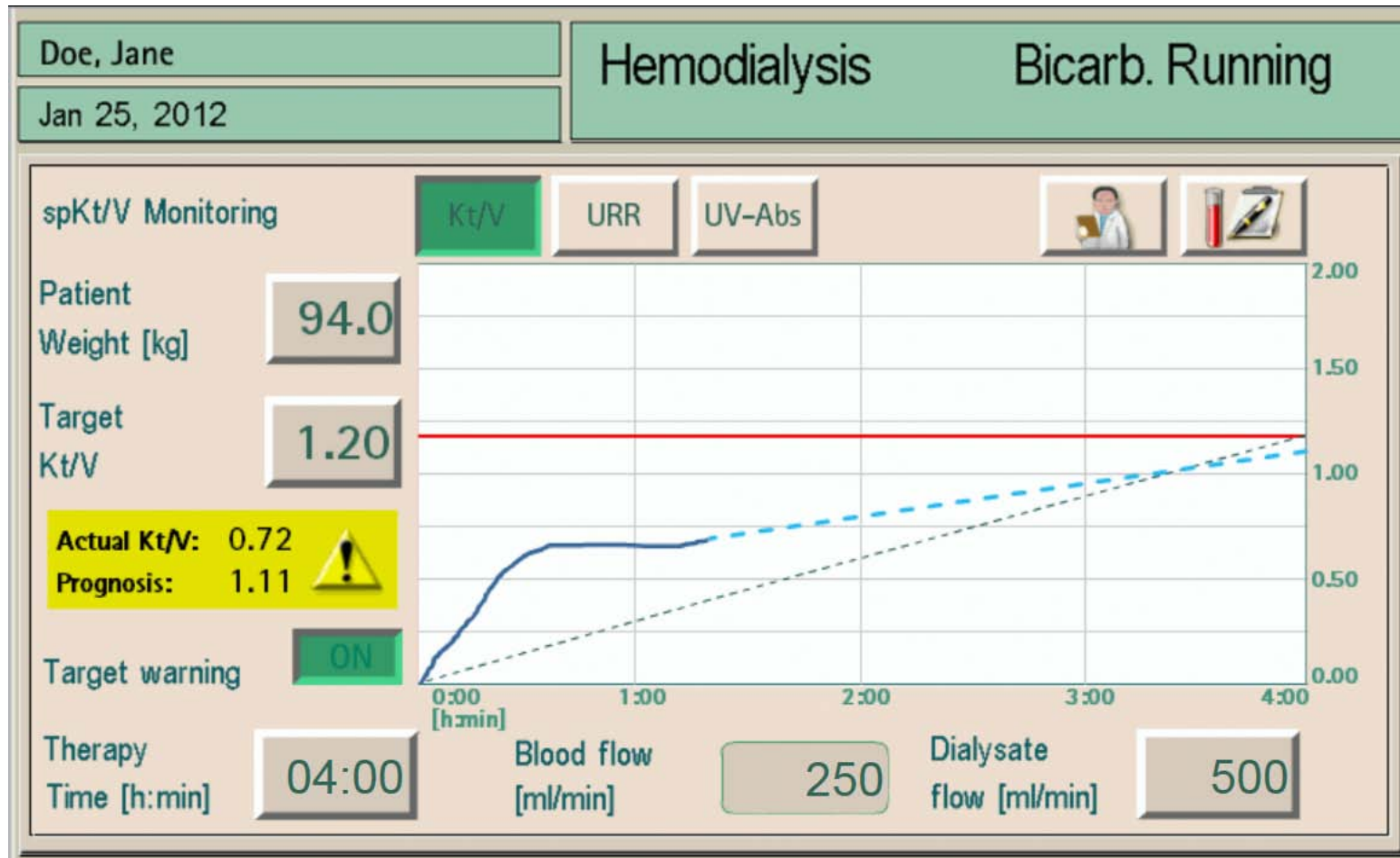
Blood Flow Rate

Adimea UV-Kt/V

Legend:
- —— Actual treatment curve (including change in treatment parameters)
- ·········· Predicted treatment curve without adjustment in treatment parameters
- – – – Kt/V orientation line (Dialog⁺ screen)
- —— Target Kt/V
- ○ User intervention time point

Increase in blood flow → Improved clearance → More substances in the spent dialysate ▶ Higher light absorption → Positive effect on Kt/V

B | BRAUN
SHARING EXPERTISE

Alarm with Low Kt/V Projection

➤ Increased Blood Flow and Alarm Turned Off

B | BRAUN
SHARING EXPERTISE

Blood Flow Rate

Increased Blood Flow Rate

B|BRAUN SHARING EXPERTISE
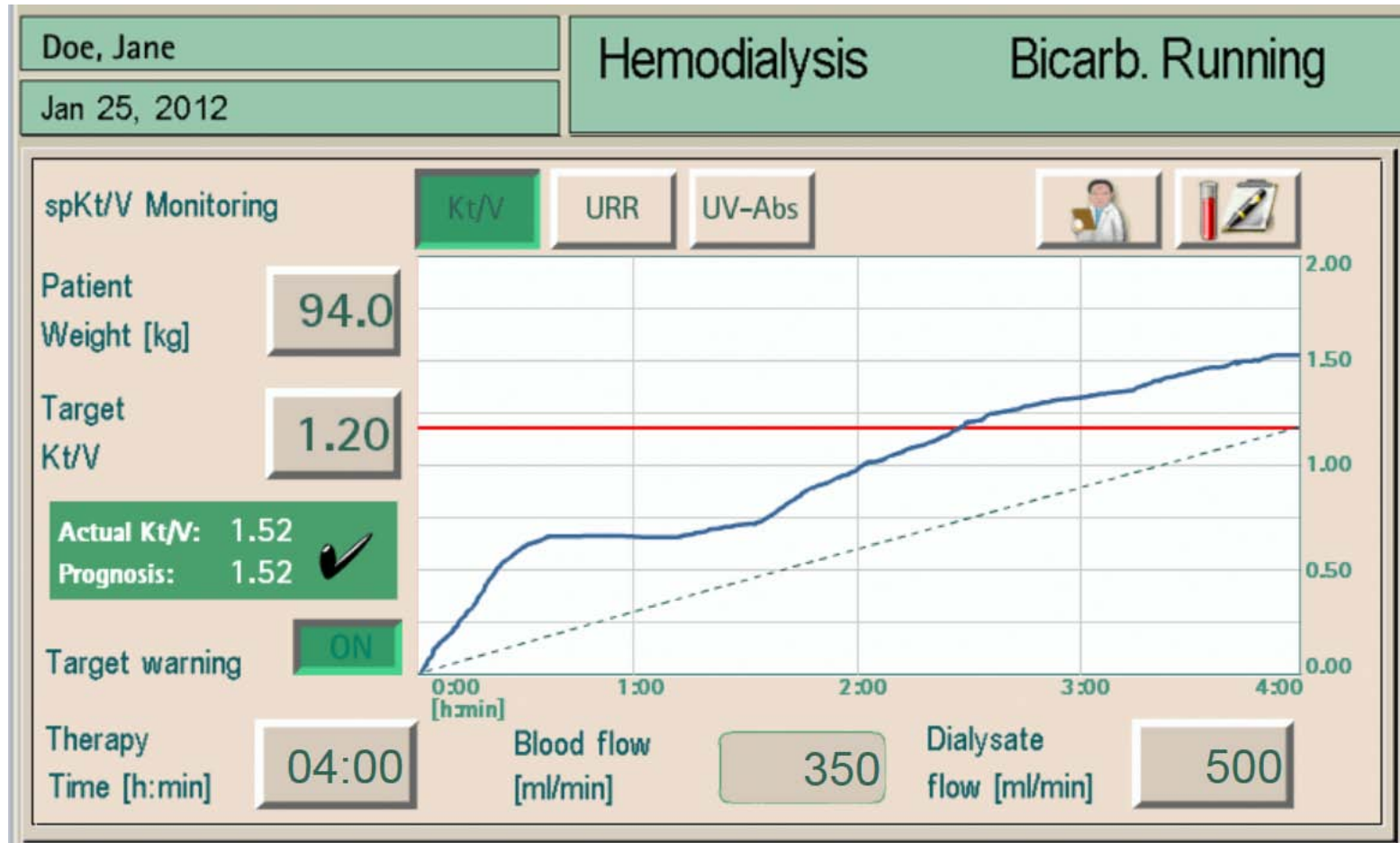
Extending Dialysis Treatment Time

Adimea UV–Kt/V **Additional time**

Legend:
- **x** Difference in Kt/V with different treatment durations
- — Actual treatment curve (including change in treatment parameters)
- ·········· Predicted treatment curve without adjustment in treatment parameters
- - - - Kt/V orientation line (Dialog+ screen)
- — Target Kt/V
- O User intervention time point
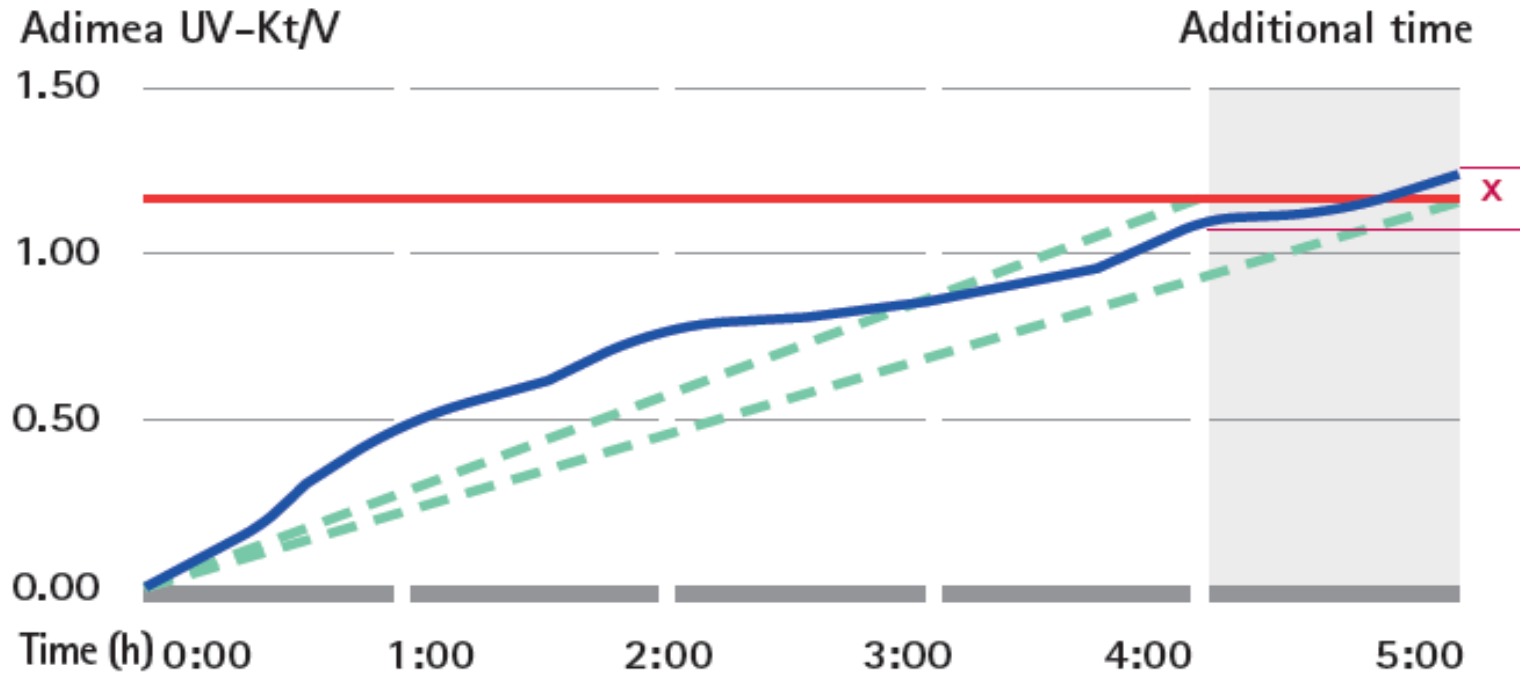
Longer dialysis time

More time to remove urinary excreted substances

Higher Kt/V at the end of dialysis

B|BRAUN
SHARING EXPERTISE

Reducing Blood Flow Rate for Recirculation

Adimea UV–Kt/V
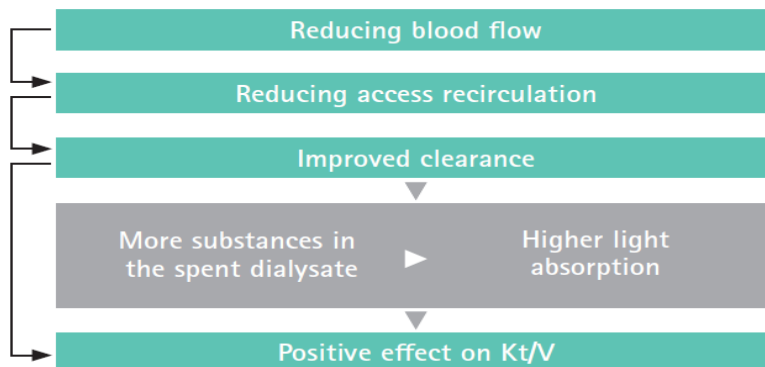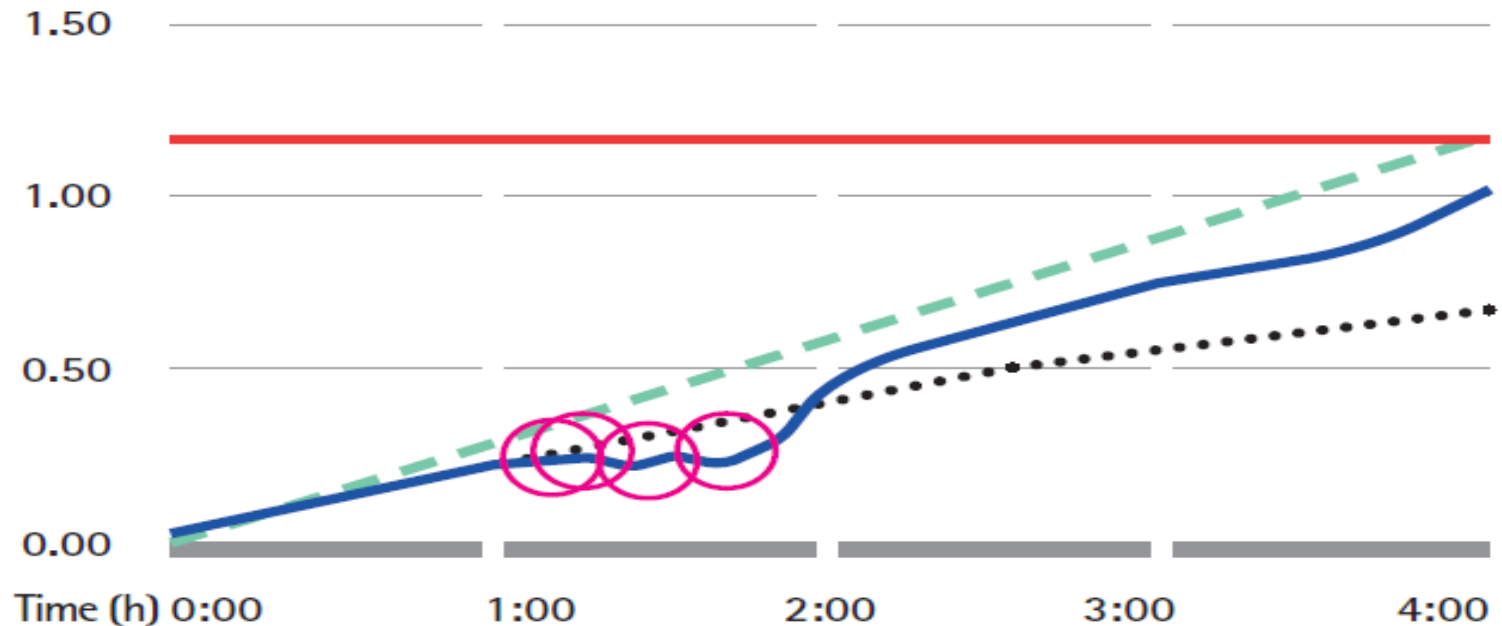
Legend:
- Actual treatment curve (including change in treatment parameters)
- Predicted treatment curve without adjustment in treatment parameters
- Kt/V orientation line (Dialog⁺ screen)
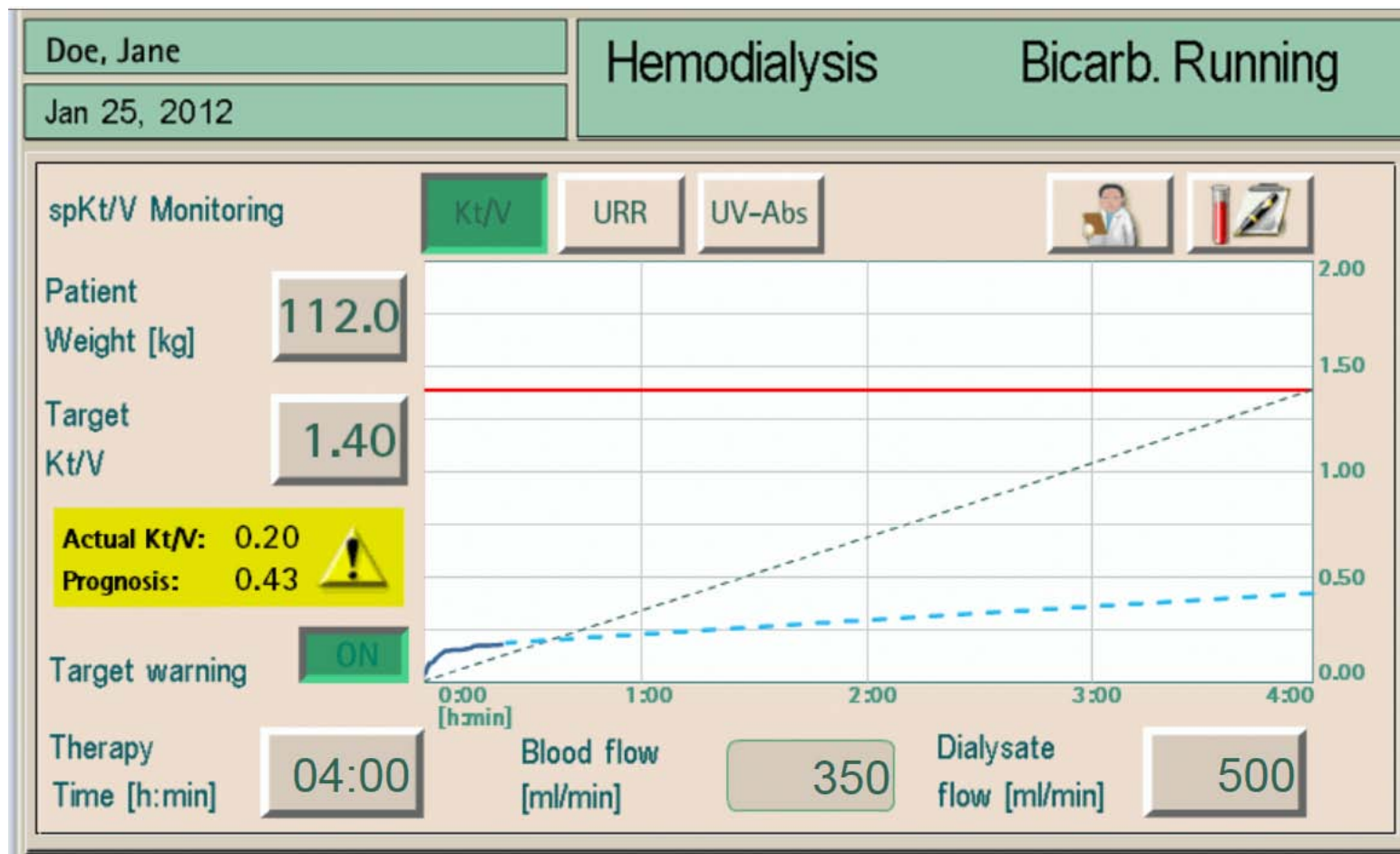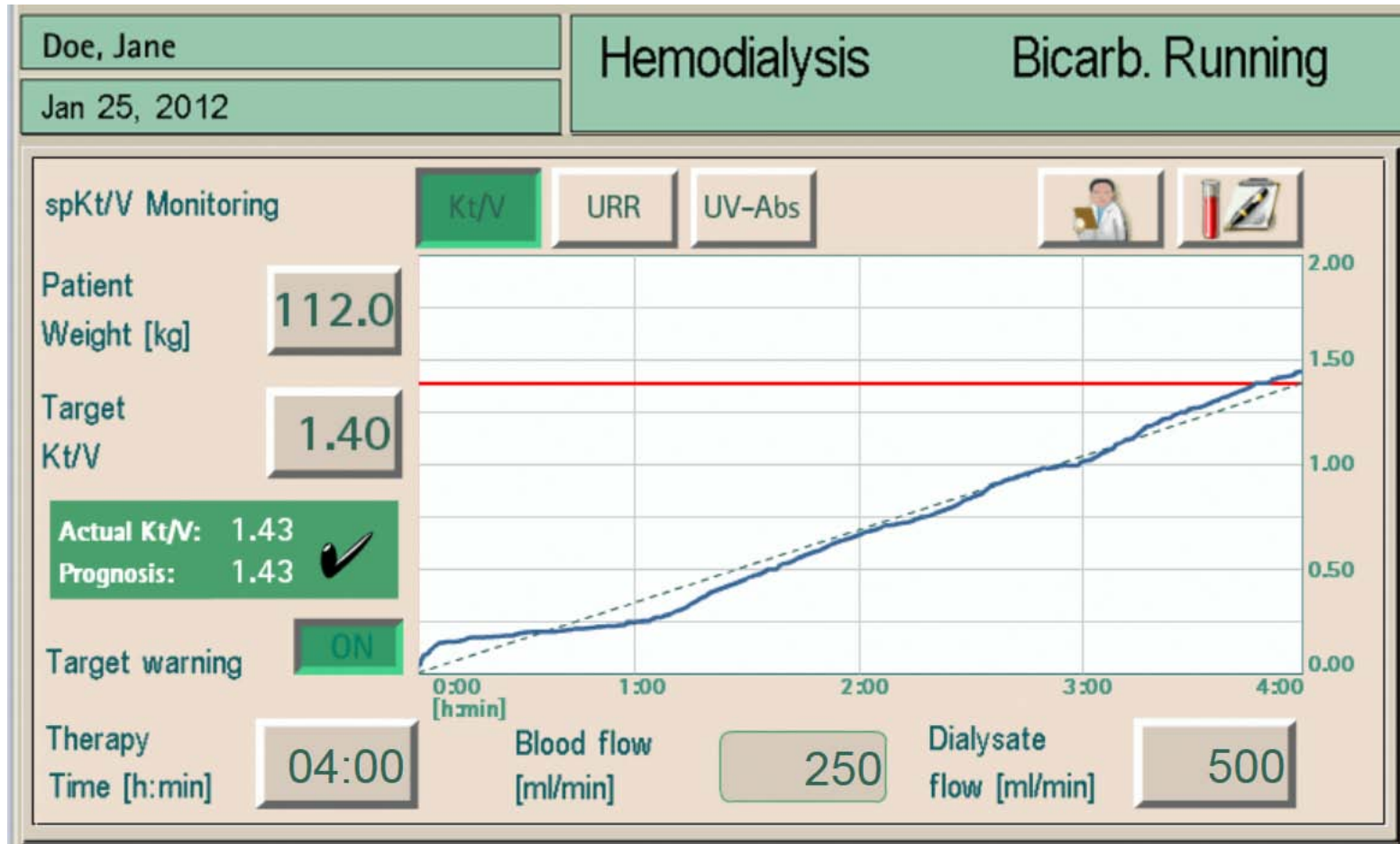- Target Kt/V
- User intervention time point

Process flow:
- Reducing blood flow
- Reducing access recirculation
- Improved clearance
- More substances in the spent dialysate ▸ Higher light absorption
- Positive effect on Kt/V

B | BRAUN
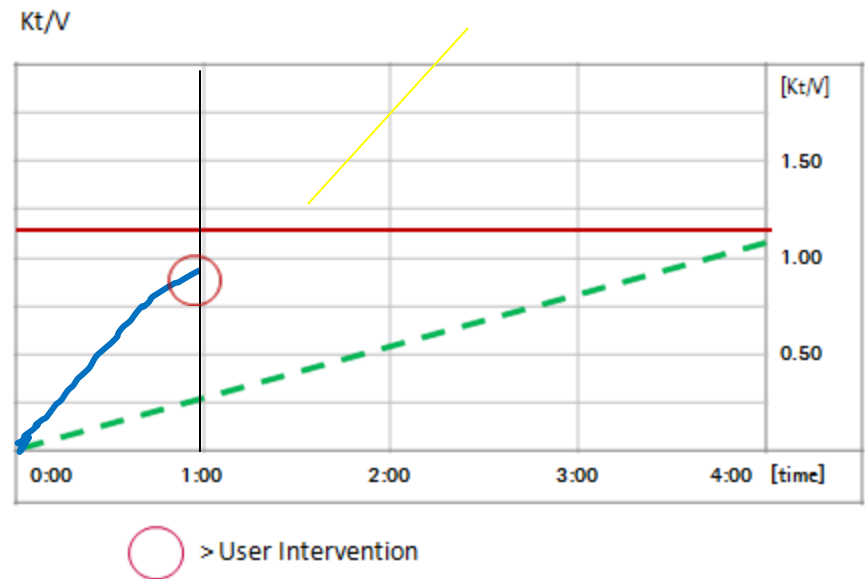SHARING EXPERTISE

Recirculation

B BRAUN
SHARING EXPERTISE

Recirculation–Decreased BFR

Recirculation

> Graph shows significant recirculation

B|BRAUN SHARING EXPERTISE

Arm Placement Problem
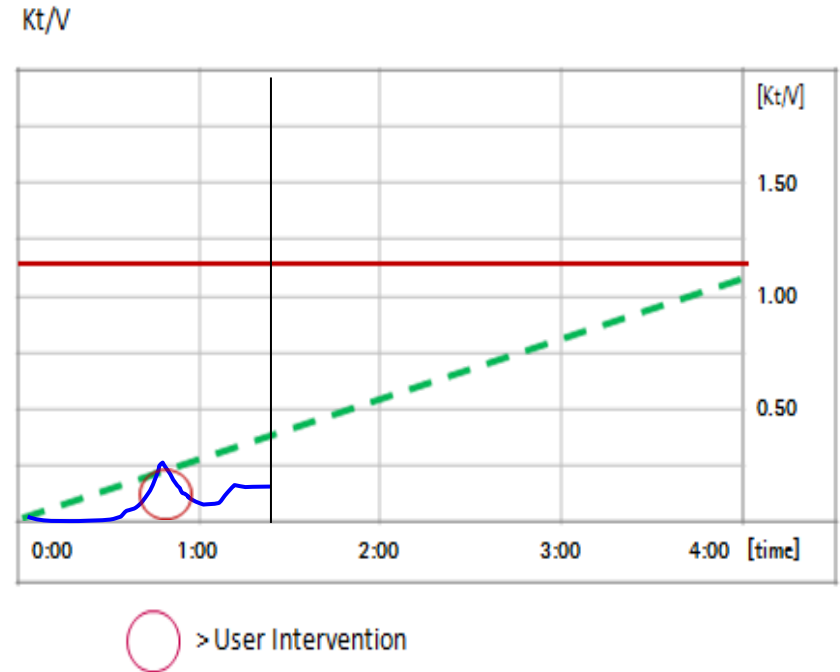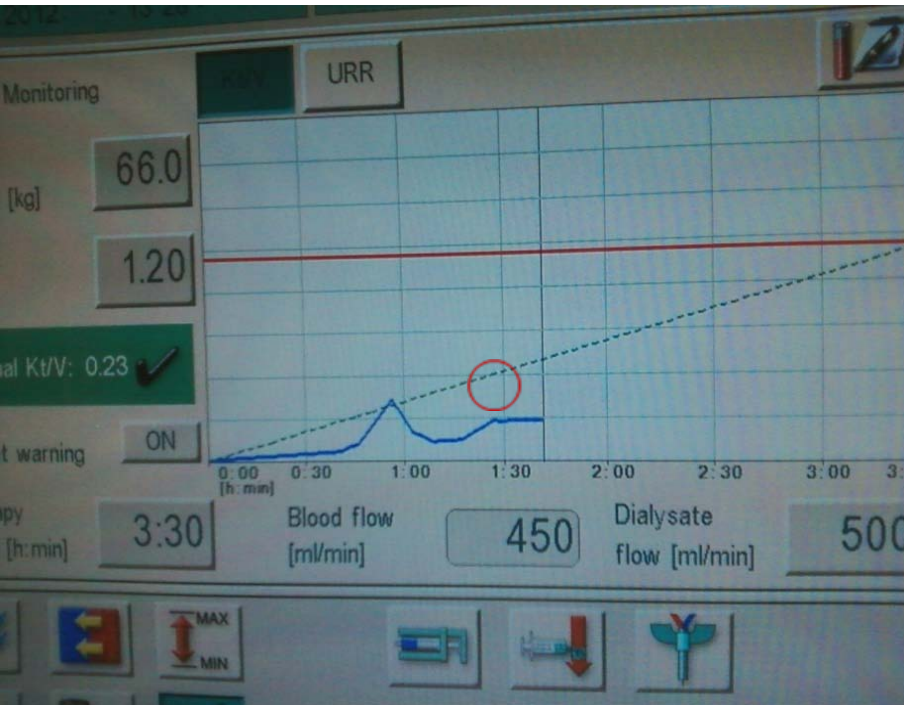
> This graph was taken on a patient who had his arm in a chair. The patient's arm was repositioned up and out of the chair. Needles were checked for placement and line reversal. Note the sudden upswing at approximately 40 minutes after arm repositioning.

B | BRAUN
SHARING EXPERTISE

Arm Placement Position
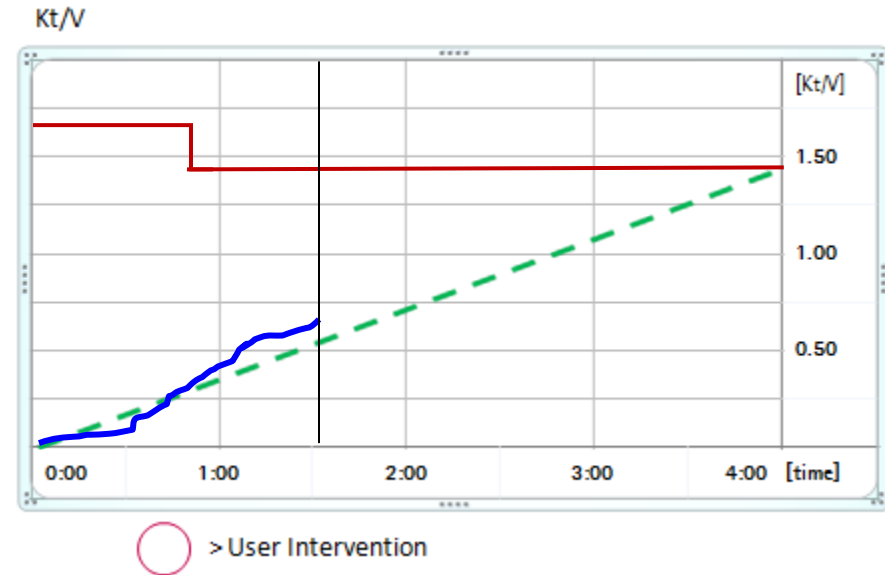
> ➤ Arm position changed during first 30 minutes of treatment

B | BRAUN
SHARING EXPERTISE
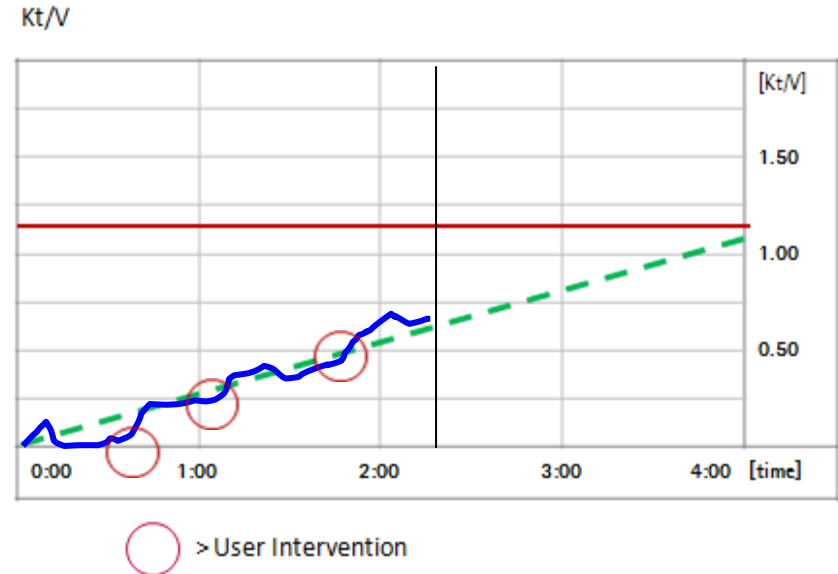
Catheter Patient

> ➤ Patient on a problem catheter

B BRAUN
SHARING EXPERTISE

Adimea used in conjunction with the Patient Card Reader provides details at a glance

Go to Adimea by pressing the followed by the icon

Smith							
Sep 17, 2008 - 13 00 -			**Preparation**		**Acknowledge data!**		
Therapy Date and time	Target Kt/V	Patient Weight (kg)	Actual Therapy time	Average Blood flow	Average Dialysate flow	Act. URR (%)	Act KT/V
17.09.2008 9:00	1.40	72.0	04:04	400	700	77	1.45
15.09.2008 9:00	1.40	72.4	04:00	400	700	80	1.43
13.09.2008 9:02	1.40	72.8	04:03	400	720	79	1.48
10.09.2008 8.59	1.40	71.9	04:05	400	750	78	1.40
08.09.2008 9:05	1.40	72.0	04:00	410	700	77	1.42
06.09.2008 9:10	1.40	72.2	04:04	420	720	77	1.43
03.09.2008 9:00	1.40	72.3	04:02	410	740	77	1.44

▸ The above data for the last 25 patient treatments is stored on the patient card

▸ Weight gains, access issues and clearance trends can be detected at an early stage

B|BRAUN
SHARING EXPERTISE

Kt/V History Utilizing Patient Card

This function gives the clinician the ability to compare the current Kt/V or URR curve with a history curve of their choice which can be displayed together on the main Adimea screen

❖ A list with the previous 12 therapies will appear
❖ Select "Doctor" icon
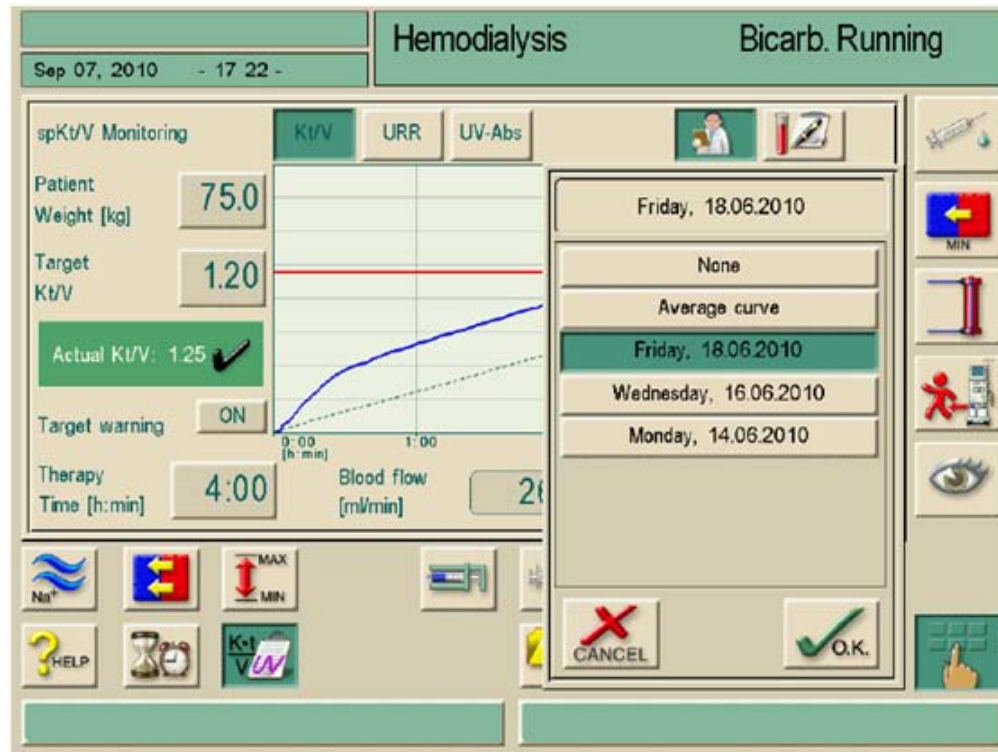
➢ Select the therapy you would like to see on the screen.
➢ The Kt/V curve of the selected therapy is displayed together with the actual one as a black dashed line (1, below).
➢ Also possible with URR and UV absorbance curves.

B BRAUN
SHARING EXPERTISE

Questions

For additional clinical resources please visit us online at:

www.BBraunUSA.com/Clinical

B BRAUN
SHARING EXPERTISE

Thank you for your time

B | BRAUN
SHARING EXPERTISE