

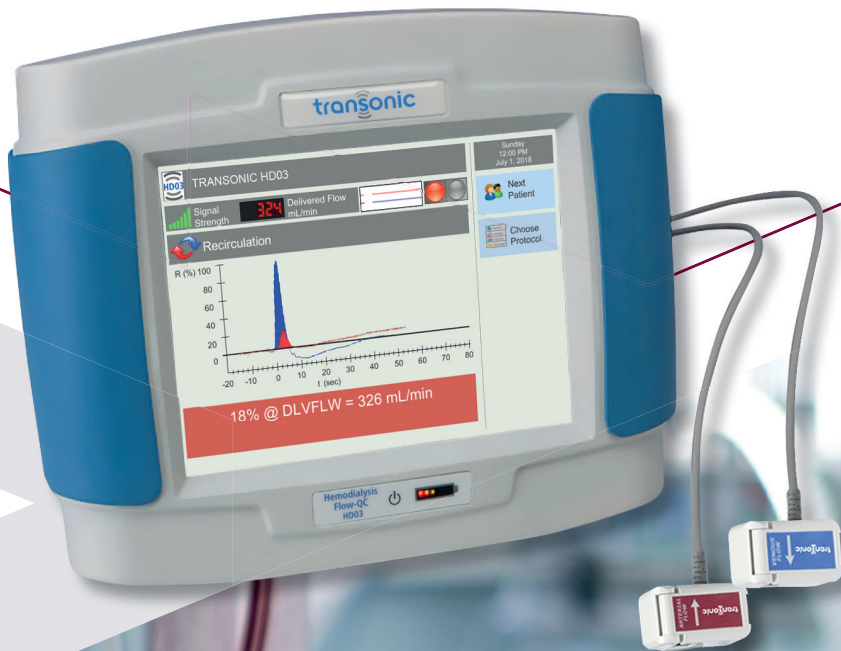
KIMAL

transonic
THE MEASURE OF BETTER RESULTS.

Transonic® Haemodialysis Monitor

The Power of Precision Measurements **In Your Hands**

Support on the spot vascular access assessment with **precise, fast measurements**.



A close-up photograph of a patient lying in a hospital bed. The patient is wearing a maroon long-sleeved shirt. Their right arm is extended, and a medical device with a red sensor and a clear tube is attached to their forearm. The background is a light blue hospital blanket. The text "Patient care starts with preventing access dysfunction." is overlaid in the center of the image, flanked by two horizontal white lines.

**Patient care starts
with preventing access
dysfunction.**

Data That Drives Better Patient Care

In dialysis, one of most critical quality-of-care issues is early identification of vascular access dysfunction. Vascular access dysfunction can cause a host of health problems for the patient, and potentially lead to negative outcomes.

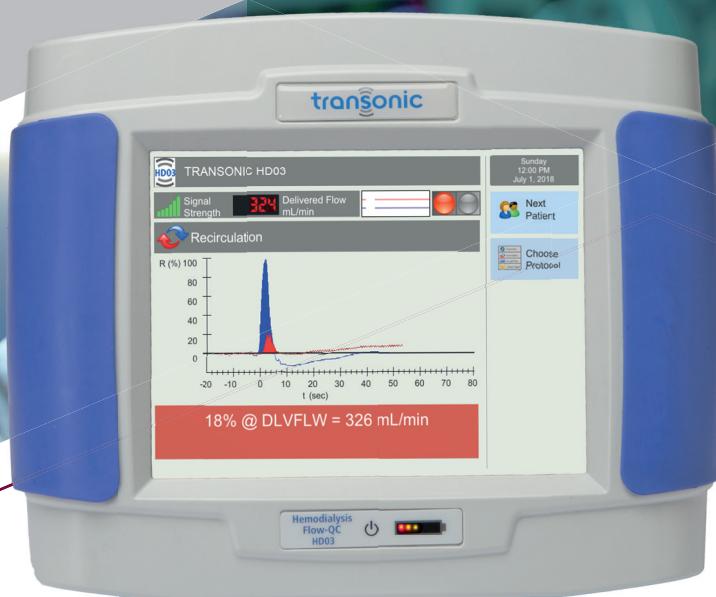
Multi-disciplinary vascular access care programs are recommended in multiple vascular access guidelines^{1,2,3}. The goal of these guidelines is the establishment of life plans and access plans tailored to the needs of each patient.

Transonic measurements support clinical access care, providing clinicians with information critical to maintaining access function as long as possible. Measurements help to detect indications of early access dysfunction empowering the nephrologist to make timely referrals to the multidisciplinary vascular access care team.

Why Perform Surveillance?

Because there is no patient health without access health. Monitoring and surveillance are the tools that forewarn dysfunction as recommended by multiple vascular access guidelines. The **HD03** provides Delivered Flow, Recirculation, and Access Flow measurements to alert clinicians to potential problems before they become emergent.





Transonic® **HD03** Haemodialysis Monitor Measurements

HD03 measurements can be performed on all chronic and acute adult, as well as paediatric haemodialysis patients with AV fistulas, grafts, and catheters during routine dialysis.



EASY TO USE

The **HD03** is operator independent and easy to use with on-screen step-by-step procedure.



QUICK AND ACCURATE

Results are displayed immediately on the **HD03** monitor screen.



RESULTS

The **HD03** Patient-less Measurement Module (PMM) displays measurement results that can be manually recorded in the patient's chart.



PORTABLE

Rechargeable battery permits portable, easy mobility between patients.



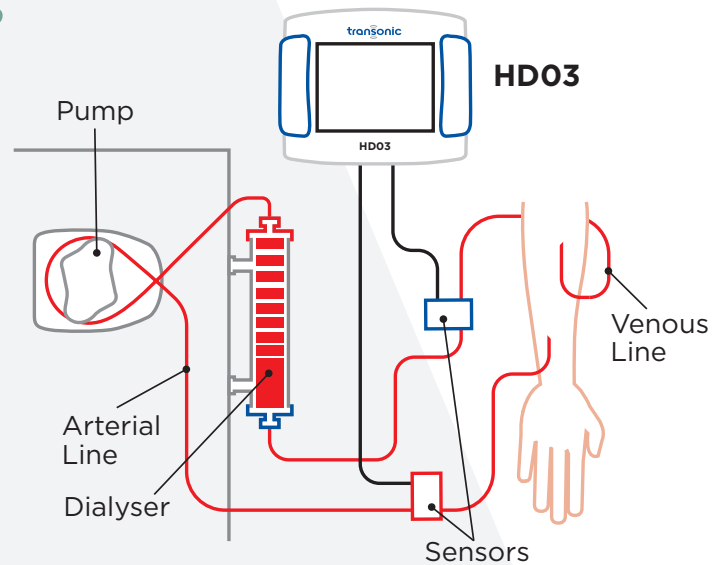
Did you know...

Measurement takes **less than 10 minutes** per patient.

What Benefits Does the HD03 Provide?

Delivered Flow

The **Transonic HD03** uses transit-time ultrasound to measure blood flow in the lines. This delivered flow can differ from the dialysis machine setting, so it is important to compare the machine setting to the actual circuit flow to optimise dialysis adequacy.

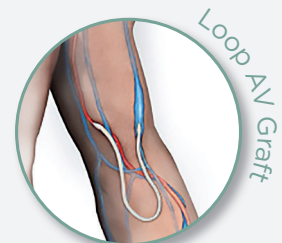
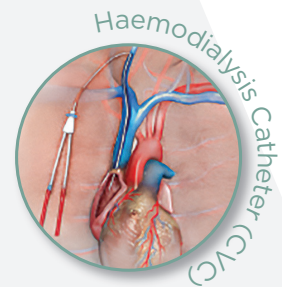


Recirculation

Recirculation is the mixing of dialysed and undialysed blood in the vascular access. Access recirculation is an important cause of inadequate dialysis. Our **HD03** meter can tell you the exact percentage of recirculation, helping you be sure your patients are receiving the correct dialysis treatment.

Vascular Access Flow

The Transonic ultrasound dilution method is used to measure the blood flow inside the vascular access in mL/min. Changes in the Access Flow can indicate access dysfunction, including inflow stenosis and outflow stenosis. The Access Flow measurements are used to trend changes over time and to confirm other clinical indicators, including physical exam indications of dysfunction.



Transonic Measurement	Haemodialysis Catheter (CVC)	AV Fistula or AV Graft (AVF or AVG)
Delivered Flow	✓	✓
Recirculation	✓	✓
Access Flow		✓

Transonic HD03 FAQs

➤ Haemodialysis Vascular Access Trending

On-the-spot vascular access assessment with the HD03 helps safeguard the health of your patient's vascular access. Access flow can be measured and trended in AVFs and AVGs.

Measurements take less than 10 minutes per patient.

➤ Using the HD03 during Haemodialysis

Transonic HD03 Haemodialysis Monitor measures vascular access flow directly in AVFs and AVGs for an immediate snapshot of access function.

The HD03 is also used to optimise dialysis delivery by measuring delivered pump blood flow and recirculation in AVFs, AVGs and central venous catheters.

➤ How Does the HD03 Help the Dialysis Care Team?

The HD03 provides a full range of surveillance measurements (competitors do not offer all three measurements provided by HD03) to alert clinicians to potential vascular access issues before they threaten patient health.

➤ How Does the HD03 Help the Nephrologist?

From HD03 measurement results, a nephrologist can identify a failing access and avert underdialysis and/or thrombosis.

The staff can alert the nephrologist of measurement results that may indicate access dysfunction, allowing the nephrologist to make timely referrals.

➤ How Does HD03 Trending Help the Clinic?

By proactively addressing vascular access or treatment problems, a clinic is able to retain patients and keep their chairs filled.

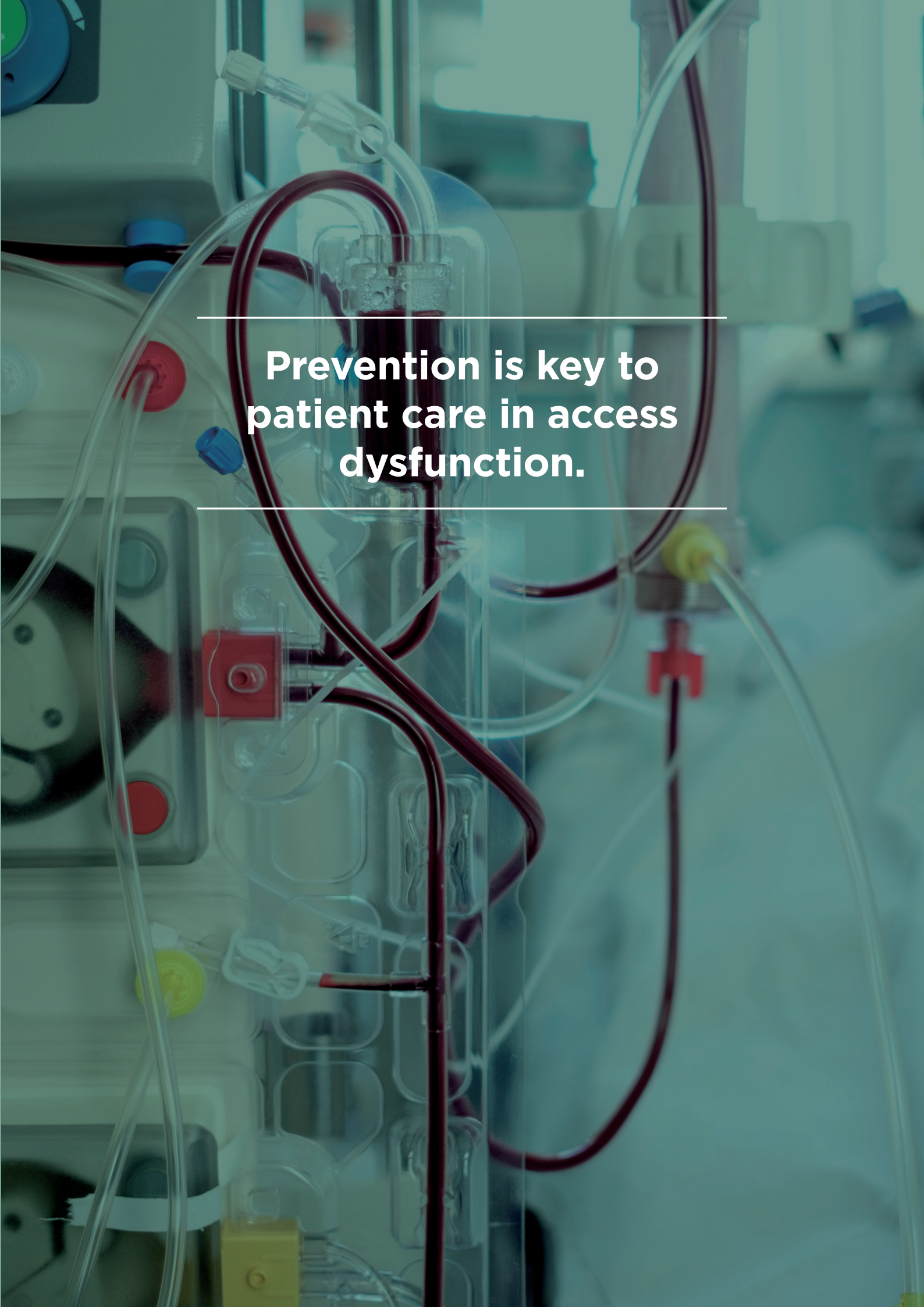
Appointments are not missed because emergencies can be averted before a patient needs to go to a hospital.

➤ How Does HD03 Trending Help the Patient?

HD03 Trending ensures the maintenance of a healthy access.

With HD03 trending, access dysfunction can be identified and addressed in a timely manner.



A close-up photograph of a medical dialysis machine. The machine is white with various colored ports (red, blue, yellow) and a network of clear and red plastic tubing. A central transparent chamber shows internal components. The background is blurred, showing more of the machine and some medical equipment. The text "Prevention is key to patient care in access dysfunction." is overlaid in white, centered, and framed by two horizontal white lines.

**Prevention is key to
patient care in access
dysfunction.**

REFERENCES:

1. Lok CE, Huber TS, Lee T, et al; KDOQI Vascular Access Guideline Work Group. KDOQI clinical practice guideline for vascular access: 2019 update. Am J Kidney Dis. 2020;75(4)(suppl 2):S1-S164.
2. Aitken, E., Anijeet, H., Ashby, D. et al. UK Kidney Association Clinical Practice Guideline on vascular access for haemodialysis. BMC Nephrol 26, 461 (2025). <https://doi.org/10.1186/s12882-025-04374-y>
3. Ibeas J, Roca-Tey R, Vallespín J, Moreno T, Moñux G, Martí-Monrós A, Del Pozo JL, Gruss E, Ramírez de Arellano M, Fontseré N, Arenas MD, Merino JL, García-Revilla J, Caro P, López-Espada C, Giménez-Gaibar A, Fernández-Lucas M, Valdés P, Fernández-Quesada F, de la Fuente N, Hernán D, Arribas P, Sánchez de la Nieta MD, Martínez MT, Barba Á; por el Grupo Español Multidisciplinar del Acceso Vascular (GEMAV). Spanish Clinical Guidelines on Vascular Access for Haemodialysis. Nefrologia. 2017 Nov;37 Suppl 1:1-191. English, Spanish. doi: 10.1016/j.nefro.2017.11.004. Erratum in: Nefrologia (Engl Ed). 2019 Jan - Feb;39(1):1-2. doi: 10.1016/j.nefro.2018.07.001. Erratum in: Nefrologia (Engl Ed). 2019 Nov - Dec;39(6):680-682. doi: 10.1016/j.nefro.2019.09.001. PMID: 29248052.

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