

## Fresenius Medical Care Showcases Innovations in Kidney Care at ASN Kidney Week 2024



- A dedicated session will highlight new advancements in hemodiafiltration therapy showcasing its potential to improve patient outcomes through enhanced toxin removal in dialysis treatments.
- Company-wide researchers and clinical experts share insights from large global databases, revealing crucial trends in kidney failure etiology, cardiovascular risks, and treatment modalities across different regions.
- Nearly 75 abstracts presented across a broad range of cutting-edge research, covering topics from the global impact of dialysis to advancements in kidney care technology, sustainability, and health equity.

Fresenius Medical Care (FME), the world's leading provider of products and services for individuals with renal diseases, today announced the presentation of nearly 75 company-affiliated research abstracts at the American Society of Nephrology's (ASN) [Kidney Week 2024](#) taking place October 24-27 in San Diego.

"We are pleased to present research that exemplifies our ongoing commitment to advancing kidney care on a global scale," said Frank Maddux, MD, Global Chief Medical Officer at Fresenius Medical Care. "This year's abstracts highlight key innovations in treatment approaches, including high-volume hemodiafiltration, as well as the integration of artificial intelligence. We aim to leverage insights from Fresenius Medical Care's global databases to improve patient outcomes and drive more equitable, sustainable care for people working to live meaningful lives with kidney disease worldwide."

Fresenius Medical Care has provided an educational grant to the American Society of Nephrology in support of an educational symposium during Kidney Week, [The Role of Hemodiafiltration in the Management of Dialysis-Dependent Chronic Kidney Failure](#), on October 25, 2024, 12:45 PM PDT - 01:45 PM PDT.

In recent years, hemodiafiltration (HDF) has been increasingly recognized for the treatment of patients with kidney failure requiring dialysis. HDF uses enhanced convection in combination with diffusion to improve the removal of large solutes such as beta-2-microglobulin and kappa and lambda light chains. While HDF has been used in Europe widely for many years, beginning in 2025, Fresenius Medical Care will gradually introduce this therapy into its Fresenius Kidney Care dialysis clinics in the United States. In February 2024, [Fresenius Medical Care received FDA 510\(k\) clearance for the company's 5008X Hemodialysis System](#), an HDF and **HighVolume**HDF-capable dialysis machine in the U.S.

At the ASN Kidney Week 2024, scientific and medical experts from across Fresenius Medical Care will present research related to many important topics in kidney disease care. Highlights of this year's presentations include:

### Advancing High-Volume Hemodiafiltration (HVHDF)

- [Mortality Risk on Hemodiafiltration Compared with High-Flux Hemodialysis: Real-World Evidence from a Large Brazilian Cohort](#) : Patients undergoing online hemodiafiltration (HDF) have been associated with better survival compared to those on high-flux hemodialysis (HD). Recently, the use of HDF has grown markedly in Brazil, but there is no robust real-world Brazilian study on the impact of this dialysis modality on patient's outcomes.
- [Hemodiafiltration Is Associated with Lower Hospitalization Rates Compared with Hemodialysis in a Singapore Cohort](#) : Hemodialysis (HD) patients suffer from high rates of hospitalization leading to significant morbidity, mortality, and costs. Hemodiafiltration (HDF) has been shown to improve patient outcomes.
- [Adequate Convective Volume Can Be Achieved in Majority of Multiethnic Asian Patients Receiving Hemodiafiltration in Singapore](#) : High-volume hemodiafiltration (HDF) has been shown to improve patient outcomes. However, there is a very common concern amongst

healthcare practitioners about the feasibility of achieving optimal convective volume (CV) in Asian patients.

### Sustainability and Equity in Kidney Care

- [High Prevalence and Inequities in Unmet Social Risk in Diverse Urban Patients on Hemodialysis](#) : Health-related social risks (SR) are associated with adverse health outcomes amongst patients with kidney disease. We aimed to identify and analyze SR in a diverse population of hemodialysis (HD) patients.
- [Survival Sex Differences among Pediatric and Young Adult Hemodialysis Patients in the Global MONDO Registry](#) : For all age groups, women with ESKD on HD have higher rates of cardiovascular (CV) events compared to men, but their all-cause mortality is reduced. Survival in pediatric and young adult HD patients (pts) from across the globe is understudied.
- [Canadian Wildfires of 2023 and Risk of Mortality and Hospitalization Among ESKD Patients](#) : Climate change driven droughts are increasing frequency and intensity of wildfires, a significant source of air pollution. Smoke plumes from the 2023 Canadian wildfires travelled long distances and negatively impacted air quality across large swaths of eastern US. We investigated the association between exposure to 2023 Canadian wildfire-related air pollutants and risk of mortality and hospitalization among hemodialysis patients in New England, the Mid-Atlantic, and the Midwest U.S.

### Harnessing the Power of Global Databases to Drive Care

- [Cardiovascular Morbidity Patterns in Patients on Dialysis Globally in Apollo Dial DB](#) : Cardiovascular diseases (CVDs) affect most people with kidney failure but are undefined globally. We aimed to analyze CVD prevalence among dialysis patients treated in 40 countries across six continents, as represented in the first version of a global dialysis database called Apollo Dial DB.
- [Profiles of Home Medication Use in Patients on Dialysis Globally](#) : Global patterns of medication use in dialysis are undefined. This project aims to provide a real-world view of home medication use in dialysis using a global dialysis dataset from 40 countries. The most common prescribed medications administered at home by patients were compared by modality.
- [Changes in Fluid Overload during the First 6 Months of Dialysis among More than 13,000 Patients](#) : Fluid overload (FO) is a recognized risk factor for mortality in dialysis patients; however, less has been reported on factors related to changes in FO. Whole-body bioimpedance spectroscopy (BIS) has been validated for hydration assessment. We used Body Composition Monitor (BCM) data, a whole-body BIS, to evaluate changes in the degree of FO during the first 6 months of hemodialysis (HD) or hemodiafiltration (HDF) and characteristics associated with those changes using Apollo Dial DB.

### Leveraging Artificial Intelligence (AI), Computational Medicine, and Advanced Analytics for Patient Care

- [Arteriovenous Fistula Failure Prediction Using Single Treatment Information](#) : Predicting the natural course of AVF complications with technical surveillance has been an elusive task. We developed a machine learning algorithm assessing the risk of failure of AVF using information collected by the dialysis machine in a single treatment.
- [Validation of a Cloud-Based Convolutional Neural Network Classifying Arteriovenous Access Aneurysms in a Multicenter Study](#) : Arteriovenous (AV) access aneurysms may become life-threatening, e.g., in the event of ruptures. We developed an artificial intelligence classification application (ACA) that categorizes aneurysms using AV access images. This study prospectively evaluates ACA's classification of AV aneurysms against physicians specializing in access care.
- [Joint Modeling of Longitudinal Ferritin Trajectories and COVID-19 Infections in Native American, Hispanic, and White Patients on Hemodialysis](#) : American Indians/Alaska Natives (AIAN) and Hispanic individuals in the U.S. are overrepresented in the hemodialysis (HD) population and were hardest hit by COVID-19. Early in the pandemic, hyperferritinemia was linked to COVID-19 infections. Joint modeling learns from both longitudinal and time-to-event data for predictive accuracy and dynamic estimation. We investigated the predictive utility of ferritin w/ COVID-19 infection in a cohort of AIAN, Hispanic and White HD patients.

For more information about Fresenius Medical Care's presence at ASN Kidney Week 2024, please visit [www.freseniusmedicalcare.com/en/ASN-2024/](http://www.freseniusmedicalcare.com/en/ASN-2024/).

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