

A digital echosystem supporting ArterioVenous Fistula care: from creation to transition plans

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Vascular access management is a critical component of care for hemodialysis patients and should align with an individualized End-Stage Kidney Disease (ESKD) life-plan. Access decisions should consider individual clinical trajectories, anatomical factors, comorbidities, and overall health status to ensure optimal outcomes. Arteriovenous fistulas (AVFs) often provide superior long-term outcomes, yet its maintenance still presents unresolved challenges. A **data-driven, preventive approach** may enhance patient safety and support clinical decision-making, contributing to more efficient and cost-effective vascular access management.

Our current research agenda is focused on exploring solutions for AVF management incorporating advanced analytics, artificial intelligence, metabolomics, and real-time dialysis machine data to support proactive and individualized care over the entire AVF lifecycle.