



2019 KDOQI Guidelines & HD03 Surveillance


ESRD Life-Plans Supported by HD03 Measurements

Examples of customized ESKD Life-Plans for vascular access with inclusion of Transonic HD03 measurements include the following: a pediatric patient, a young patient, an elderly patient, an acute start patient and a home dialysis patient.

Pediatric Patient: 6-yr-old Girl	Description	ESRD Life-Plan Modality Choice	Dialysis Access	Comments
	Congenital cause of kidney disease, CKD not yet on dialysis, family wants to be evaluated for living related donors, left handed	<ol style="list-style-type: none"> 1. PD 2. Living donor transplant if donor is identified; however, if not, place on the transplant wait list 3. Hemodialysis 	<ol style="list-style-type: none"> 1. PD catheter 2. Transplant 3. RC-AVF (right) 	<ul style="list-style-type: none"> * Follow closely, lifelong anticipated * Flexibility required as Life-Plan may change * Life-Plan must consider multiple modalities & optimize access
<p>Transonic Measurement Clinical Application once RC-AVF is the active access:</p> <ul style="list-style-type: none"> • Routine clinical examination (look, listen, feel, arm elevation, and augmentation) should be used regularly as part of the pre-cannulation process. • Transonic Access Flow measurements are intended to be utilized in conjunction with the clinical examination to detect/confirm indications of access dysfunction. 				


Young Patient: 28-year-old male	Description	ESRD Life-Plan Modality Choice	Dialysis Access	Comments
	Alport syndrome with rapid CKD progression requiring dialysis initiation, multiple abdomen surgeries related to a trauma, R handed, plays guitar/drums in a band	<ol style="list-style-type: none"> 1. HD outpatient 2. Evaluation for living related Tx or Tx waiting list 3. Return to HD if needed to return to dialysis post-transplant 	<ol style="list-style-type: none"> 1. Lower arm endovascular AVF (left) 2. BC-AVF (left) if endovascular AVF fails 	<ul style="list-style-type: none"> * Endovascular AVF preferred to reduce steal syndrome risk or mega fistula to avoid impairment of his ability to play guitar or drums. Reduce physical disfigurement from a surgical AV access. * Follow closely, lifelong anticipated
<p>Transonic Measurement Clinical Application:</p> <ul style="list-style-type: none"> • Routine clinical examination (look, listen, feel, arm elevation and augmentation) should be used regularly as part of the pre-cannulation process. • Transonic Access Flow measurements can be used with with a clinical examination to detect/confirm indications of access dysfunction. • A potential for cardiac overload exists if the Access Flow is > 1600mL/min. Evaluate patient for signs and symptoms of high-output cardiac failure if Access Flow reaches the high range. 				

ESRD Life-Plans Supported by HD03 Measurements cont.

Elderly Patient 80-year-old female	Description	ESRD Life-Plan Modality Choice	Dialysis Access	Comments
	CDM, HTN, CHF, vision issues, CKD rapidly advancing with multiple hospitalizations, lives with her husband, active but does require the use of a walker, R handed	1. Hemodialysis outpatient	1. Forearm early cannulation AVG 2. Secondary upper arm AVF	* Patient likely has a limited life expectancy * Focus on AV access and limiting CVC dependency vs. preserving sites for future access

Transonic Measurement Clinical Application:

- Routine clinical examination (look, listen, feel, arm elevation, augmentation) should be used regularly as part of the pre-cannulation process.
- Transonic Access Flow measurements can be used with a clinical examination to detect/confirm indications of access dysfunction.
- A potential for cardiac overload exists if the Access Flow is > 1600mL/min. Evaluate patient for signs and symptoms of high-output cardiac failure if Access Flow reaches the high range.


Acute Start Patient: 45-year-old male crash-lands on HD	Description	ESRD Life-Plan Modality Choice	Dialysis Access	Comments
	Acute start with no prior treatment of CKD; Urgent placement of HD catheter for hemodialysis, lives alone and lacks family support, R handed	1. Acute HD 2. HD outpatient 3. Evaluate for transplant and placement on the transplant waiting list	1. Tunnel Cuffed Catheter 2. RC-AVF (left) 3. Transplant while maintaining the vascular access if needed for return to hemo dialysis	* Follow closely, lifelong anticipated * Flexibility required as Life-Plan may change * Life-Plan must consider multiple modalities and optimize dialysis access

Transonic Measurement Clinical Application:

- Utilize Delivered Flow and Recirculation as part of the hemodialysis catheter algorithm for "On The Spot" catheter adequacy check and adjustment of blood flow rate and or catheter connection configuration as needed. Utilize this in both the acute hospital setting and outpatient hemodialysis facility.

Once the RC-AVF is created and being utilized as the dialysis access:

- The routine clinical examination (look, listen, feel, arm elevation, and augmentation) should be used regularly as part of the pre-cannulation process.
- The Transonic Access Flow measurements are intended to be utilized in conjunction with the clinical examination to detect/confirm indications of access dysfunction.

Home HD Patient: 55-year-old female	Description	ESRD Life-Plan Modality Choice	Dialysis Access	Comments
	On hemodialysis for 3 years including home HD for past 2 years. CKD caused by nephrotoxic chemotherapy drugs to treat previous colon cancer, R handed.	1. Home Hemodialysis 2. Waiting to reach 5 plus years post cancer to be evaluated for a kidney transplant	1. RC-AVF 2. Revision of her current AVF if fails or move up the arm for new AVF	* Maximize the lifespan of her current RC-AVF * Preserve R arm vessels above the current RC-AVF for any required revision or creation of a new AVF above the current RC location.

Transonic Measurement Clinical Application:

- Routine clinical examination (look, listen, feel, arm elevation and augmentation) should be used regularly as part of the pre-cannulation process.
- Transonic Access Flow measurements are intended to be utilized in conjunction with the clinical examination to detect/confirm indications of access dysfunction.
- A potential for cardiac overload exists if the Access Flow is > 1600mL/min. Evaluate patient for signs and symptoms of high-output cardiac failure if Access Flow reaches the high range.