

# SHARESOURCE ADEQUEST

Peritoneal Dialysis (PD) modeling integrated with the Sharesource Connectivity Platform

## PERITONEAL EQUILIBRATION TEST (PET)

Sharesource Adequest provides kinetic PD modeling directly integrated with the Sharesource Connectivity Platform, which includes several PET options to assist with defining your patient's peritoneal membrane's clearance and ultrafiltration.



### STANDARD PET

- A standard test used to clinically characterize peritoneal membrane transport of creatinine, urea, and glucose in order to measure the permeability and efficiency of a patient's membrane
- The PET uses a series of dialysate and plasma samples to measure solute equilibration, rate of glucose absorption, and net ultrafiltration. It can also be used to identify residual dialysate volume after a full drain
- Three dialysate samples [at 0, 2, and 4 hours] and one blood [serum] sample [at 2 hours] are taken during a standardized four-hour dwell using 2.27% glucose/2.5% dextrose dialysis solution. The exchange immediately preceding the PET is required to be an overnight (>8 hour) dwell using a 2L fill volume of 2.27% glucose/2.5% dextrose dialysis solution [not containing icodextrin]

### STANDARD PEDIATRIC PET

- A test used to clinically characterize the peritoneal membrane transport in pediatric patients of creatinine, urea, and glucose in order to measure the permeability and efficiency of a pediatric patient's membrane
- The pediatric PET uses a series of dialysate and plasma samples to measure solute equilibration, rate of glucose absorption, and net ultrafiltration. The pediatric PET can also be used to identify residual dialysate volume after a full drain
- Three dialysate samples [at 0, 2, and 4 hours] and one blood [serum] sample [at 2 hours] are taken during a standardized four-hour dwell using 2.27% glucose/2.5% dextrose dialysis solution. The exchange immediately preceding the PET required to be an overnight (>8 hour) dwell using a fill volume of 30-50 mL/Kg with 2.27% glucose/2.5% dextrose dialysis solution [not containing icodextrin]
- **Sharesource Adequest** will classify a patient as pediatric based on their calculated age of less than 16 years. A clinician may choose to manually change an adult to pediatric status to utilize the pediatric specific formulae in the modeling of collections
- Pediatric Total Body Water (TBW) volume calculation uses the Morgenstern, Schaefer, Warady method and Pediatric Body Surface Area (BSA) uses the Gehan and George method

## MODIFIED PET

- A test used to clinically characterize peritoneal membrane transport of creatinine, urea, glucose, and sodium in order to assess peritoneal membrane function, free water transport (aquaporin function), and specifically indicated to assist in the diagnosis of ultrafiltration failure
- The modified PET is similar to the standard PET, but uses 2L of 3.86% glucose/4.25% dextrose dialysis solution
- Also, an additional dialysate sample is taken at 1 hour
  - The 1-hour sample (but frequently all samples) is assayed for sodium as well
  - The 4-hour dialysate sample may also be assayed for total protein

## FAST PET

- A simplified version of the standard PET used to clinically characterize peritoneal membrane transport of creatinine, urea, and glucose
- Allows clinical screening of patients with suspected changes in peritoneal membrane function
- The fast PET is not intended as a replacement for a standard PET, but as a follow-up in response to clinical change
- Only one dialysate and one blood sample (at 4 hours) are required; otherwise, the fast PET follows the same procedures as the standard PET

## MINI PET

- A simple and fast method to assess free water transport in order to assess loss of peritoneal membrane ultrafiltration
- Mini PET consists of a 1-hour dwell using 2L of 3.86% glucose/4.25% dextrose dialysis solution
- Two dialysate samples (at 0 and 1 hour) and one blood (serum) sample (at 1 hour) are taken during the Mini PET. The dialysate must be drained at 1 hour for this test to determine ultrafiltration during this period
- This is an additional PET for assessing peritoneal membrane function, free water transport (aquaporin function) and sodium sieving, and is not considered a substitute for a standard/modified PET

## SIMULATED PET

- When the clinical procedures for a PET are sufficiently deviant from the protocol, then **Sharesource Adequest** calculates PET results that would have been obtained had the protocol been closely followed, a so-called simulated PET
- For further details on the criteria that will result in a Simulated PET for each (Standard Adult PET, Standard Pediatric PET, Modified PET, and Fast PET), please refer to the User Guide

Modified, Mini & Fast PETs - Data from literature represents adult patients. For smaller adults classified in Sharesource Adequest as pediatrics use, it is the responsibility of the clinician to decide how to best proceed.

Sharesource Adequest is intended to calculate solute clearances and net fluid removal for individual patients, based on therapy parameters provided by the clinician. Additionally, it is intended to assist the clinician in calculating patient peritoneal membrane transport characteristics and peritoneal dialysis adequacy from data that is inputted into the system by the clinician. The resulting information is used by clinicians in their selection of treatment regimens for individual patients. The calculations can be used for both Continuous Ambulatory PD (CAPD) and Automated PD (APD) patients, and are based on publicly-available information. It is not intended to be a substitute for good clinical management practices, nor does its operation create decisions or treatment pathways. Access the Adequest website to: update your user account information, search for other users at your dialysis center, add Sharesource patients to Adequest, view and enter patient information, 24 hour treatment data and results, PET data and results and generate PD Regimens, Generate reports.

The Sharesource portal is intended for use by healthcare professionals to remotely communicate new or modified treatment parameters with compatible dialysis instruments and transfer completed treatment data to a central database to aid in the review, analysis, and evaluation of patients' historical treatment results. This system is not intended to be a substitute for good clinical management practices, nor does its operation create decisions or treatment pathways.

For the safe and proper use of the devices mentioned herein, refer to the Instructions for Use.