

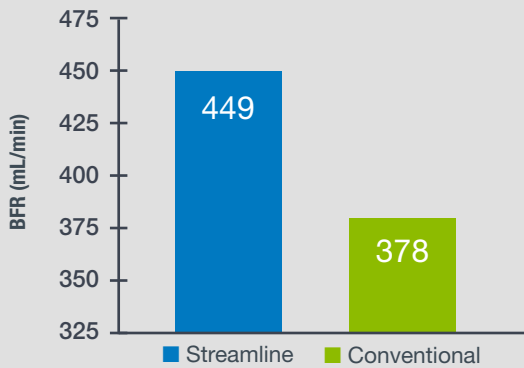
When compared to conventional bloodlines, Streamline® enabled higher blood flow rates, which improved average Kt/V<sup>1</sup>

**Improved Blood Flow and Adequacy with Streamline Bloodlines**

Renal Week 2010: Abstract Sessions

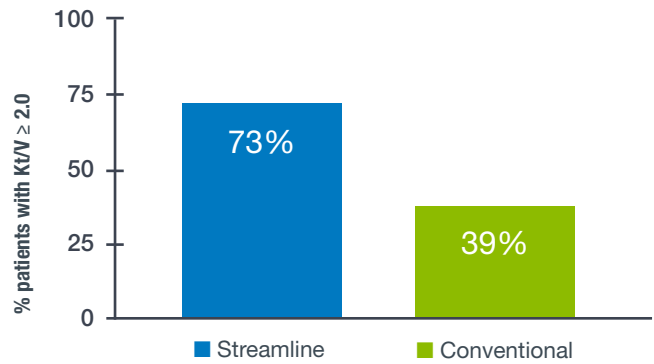
Arslanian JE, Lockman CM, Parker YC, Charytan C. – In this cross-over study of 202 patients at the NY Hospital of Queens, in Flushing, NY, Streamline significantly increased average blood flow rates with minimal increase in average arterial pressure and improved average Kt/V.

**With Streamline, average blood flow rates increased by 71 mL/min (p<0.001)**



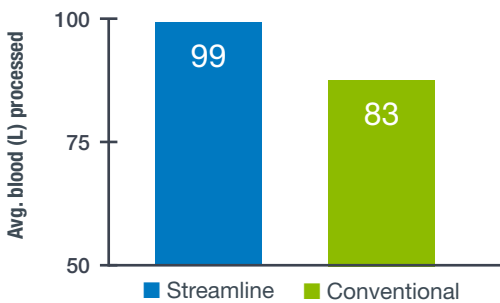
In this study, blood flow rates increased significantly by 19%. Average arterial pressures with Streamline increased 4% beyond conventional bloodline levels (-167 vs. -161 respectively).

**With Streamline, 34% more patients achieved Kt/V ≥ 2.0**



In this study, average Kt/V and the percentage of patients with Kt/V ≥ 2.0, improved significantly (p<0.001).

**With Streamline, average blood liters processed increased by 16 L per treatment\***



\* Blood liters calculation = overall average blood flow x average treatment time

**With Streamline, average Kt/V improved by 9%**

	Average Kt/V
Conventional bloodline	1.94
Streamline	2.11

## Increased Blood Flow and Improved Kt/V

This study showed that Streamline enabled an increase in average blood flow rates with a minimal increase in average arterial pressure. Increasing blood flow with Streamline enabled improvements in Kt/V.

**Study Design:** Cross-over study of 202 patients designed to evaluate the impact of using Streamline bloodline on arterial pressure and blood flow rates. Outcomes and measurements include average blood flow rate, average arterial pressure, average Kt/V, average dialysate flow rates, % patients achieving  $Kt/V \geq 1.2$ , and dialyzer types and accesses. Patients with changes in treatment times, dialysate flows, dialyzers or access between periods were excluded from the study.

**Study Limitations:** This was a cross-over study. Limitations of cross-over studies may include confounding due to issues of order, carry-over and learning.

**Important Information:** The Streamline blood tubing sets are prescription devices and, like all medical devices, involve some risks. Failure to observe all warnings and precautions noted in the Streamline Instructions for Use may result in serious complications, including blood loss due to clotting or air entering the bloodstream. Each patient's care plan should be determined by the physician, based on the individual facts and circumstances of the patient. The use of anticoagulation is at the discretion of the prescribing physician.

### References:

1. Arslanian JE, Lockman CM, Parker YC, Charytan C. Improved blood flow and adequacy with streamline bloodlines. Abstract presented at American Society of Nephrology Conference, 2010.