

Vasc-Alert Efficacy
How Accurate is Vasc-Alert as an Indicator for Significant Stenosis?

This paper will present summaries of studies and other documents that speak to the accuracy of Vasc-Alert as an indicator of stenosis. The highlighted documents can be accessed over the Internet if this document is viewed on-line.

There have been a number of studies published and presented at various meetings on the efficacy of Vasc-Alert as a tool for access site surveillance. These studies are summarized in the following table:

| | # of Patients | Sensitivity | Specificity | True Positive Rate | False Positive Rate | False Negative Rate |
|--|---------------|-------------|-------------|--------------------|---------------------|---------------------|
| AJKD published study 2002 - results @ 6 months (1) | 120 | 74% | 92% | 91% | 4% | |
| Use with Fistulas 2004 - results @ 6 months (2) | 79 | 94% | 86% | 94% | 14% | 6% |
| University of Chicago study 2006(3) | 234 | 90% | 90% | 95% | 10% | |
| Ball Memorial Hospital Case Study (4) | 126 | 94% | | 94% | 6% | |
| Arterial Pressure Ratio Test for grafts @ 6 months (5) | 98 | 100% | 96.7% | 100% | 3.3% | |
| Arterial Pressure Ratio Test for fistulas @ 6 months (5) | 66 | 100% | 94.9% | 100% | 5.1% | |

1. Frinak S, Zasuwa G, Dunfee T, Besarab A, Yee J. Dynamic venous access pressure ratio test for hemodialysis access monitoring. Am J Kidney Dis. 2002;40(4):760-8. 90% This was the original study on the efficacy of this method was published in the American Journal of Kidney Disease in October of 2002. [AJKD published study](#)
2. Frinak S, Zasuwa G, Besarab A, Yee J, Dynamic Venous Access Pressure Surveillance in Arterio-Venous (AV) Fistula, unpublished data from 2004 study required for FDA approval of Vasc-Alert use for patients with fistulas.
3. Hammes M, Funaki B, Hirschman K, Kennedy J, Aneziokoro O, Vasc-Alert is an Effective Tool to Predict Venous Stenosis, ASN Poster 2006 [University of Chicago study](#)
4. Stewart G, Vasc-Alert Statistics, Presentation at Network 9/10 Meeting 2007, Chicago
5. Frinak S, Zasuwa G, Besarab A, Yee J, Arterial Pressure Ratio Test for Hemodialysis Access Monitoring of Arteriovenous Grafts and Fistulas, unpublished data from 2004 study required for FDA approval of Vasc-Alert use for arterial surveillance.