

## Implications of Hemodialysis Access Surveillance on Reducing Risk of Access Thrombosis: A Meta-analysis of Randomised Studies

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### Introduction:

Published studies have shown conflicting results of the utility of access flow monitoring in reducing the risk of dialysis access thrombosis. We conducted a meta-analysis of the published randomized controlled trials of AV access surveillance using access blood flow monitoring. The aim was to assess whether this method can reduce the risk of hemodialysis access thrombosis or not.

### Methodology:

We conducted a systematic review in Pubmed, Medline, and EMBASE database to identify randomized studies that assessed the effect of hemodialysis access surveillance on the risk of thrombosis. Data collected were the name of the first author, journal title, year of publication, the country where the study was conducted, number of patients in access surveillance arm and the no-surveillance arm, number of patients who had dialysis access thrombosis in each arm. A fixed-effects model was used for the meta-analysis.

### Results:

1127 abstracts were reviewed. 10 randomized studies were included in the meta-analysis. The total number of patients included in the analysis was 904. The estimated overall pooled risk ratio was 0.75 (confidence interval ranges from 0.59 to 0.94) favoring access surveillance. We performed a subgroup analysis among those who had AV fistulas. Among this subgroup, the estimated overall pooled risk ratio was 0.55 (confidence interval ranges from 0.37 to 0.84) favoring access surveillance.

### Conclusion:

Hemodialysis access surveillance using access blood flow monitoring is an important and recommended method in reducing the risk of access thrombosis