

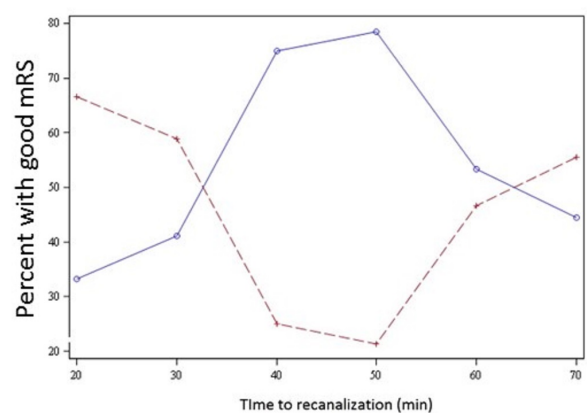
## Introduction

A previous study on the effect of mechanical thrombectomy procedural time on outcome for AIS patients determined that procedures which extended beyond 60 minutes from groin puncture to recanalization resulted in increased incidence of complication, increased cost, and worse outcomes. With improvements in thrombectomy methods, it is necessary to reevaluate this relationship with new technologies. The purpose of this study was to investigate whether time to achieve vessel recanalization affects outcomes ADAPT technique for mechanical thrombectomy.

## Methods

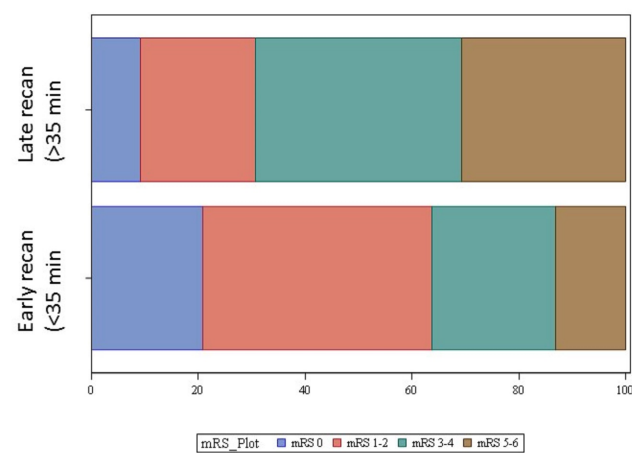
We retrospectively studied a prospectively maintained database of AIS cases that underwent mechanical thrombectomy using the ADAPT technique at a high volume center for anterior circulation occlusions. We determined that at approximately 35 min, a bad outcome was more likely than a good outcome. Patients were dichotomized into two groups: 'Early recan' in which recanalization was achieved in 35 minutes or less, and 'Delayed recan' in which procedures extended beyond 35 minutes

**Figure 1. Good outcomes vs time to recanalization**



Good outcomes (blue line, mRS 0-2) compared to poor outcomes (red line, mRS 3-6), versus time to recanalization

**Figure 2. Early and late recan groups versus mRS**



Distribution mRS in the early (<35min) recan group versus late (> 35min)

## Results

216 patients (44.4% women) with a mean age  $66.8 \pm 14.0$  years were identified. The mean NIHSS score was similar between 'Early recan' patients ( $14.9 \pm 6.8$ ) compared with 'Delayed recan' patients ( $15.9 \pm 7.2$ ). Among 'Early recan' patients, recanalization was achieved in  $18.4 \pm 8.4$  min compared with  $68.4 \pm 38.4$  min in the 'Delayed recan' patients. The likelihood of achieving a good outcome (mRS score 0-2) was higher in the 'Early recan' group (63.74%) compared with the 'Late recan' group (30.77%;  $p < 0.001$ ). Using logistic regression analysis, time to revascularization from groin puncture, baseline NIHSS, revascularization, diabetes, and hemorrhages were found to significantly impact outcome at 90 days.

## Conclusions

Our findings suggest that extending mechanical thrombectomy procedure times while using the ADAPT technique beyond 35 minutes increases complication rates and worsens outcomes. In addition, the financial cost of the procedure increases as well due to the increased number of devices used and procedure time.