

# Decompressive Craniectomy for Stroke: A National Inpatient Sample Database Analysis

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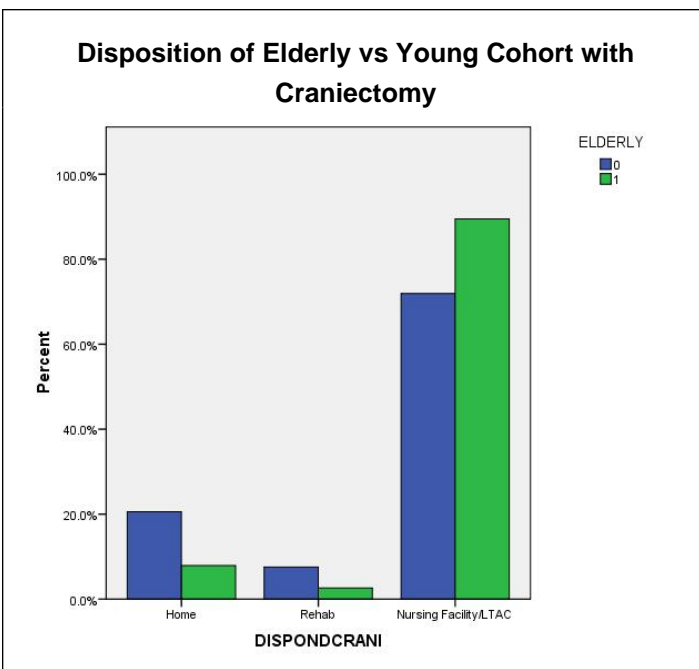


## Introduction

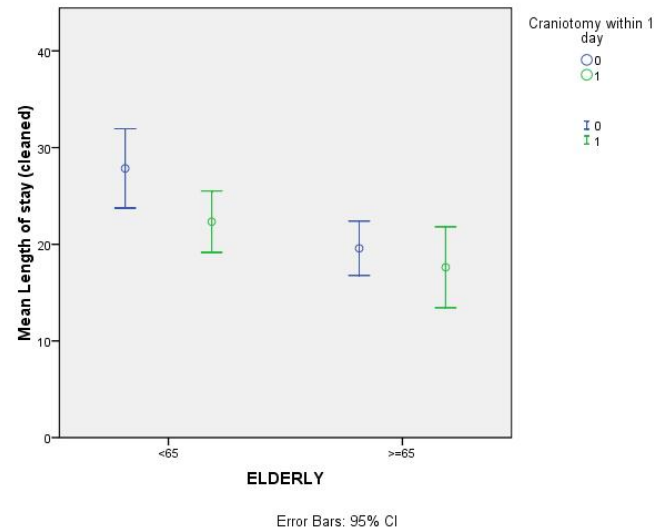
A review of the literature of DECIMAL, DESTINY, and HAMLET showed that patients had reduced fatalities and improved outcomes, but excluded those over sixty years old. Zhao et al. recruited patients up to eighty years of age and showed improved outcomes and decreased mortality through all age groups. We took a look at national inpatient sample database to look at the length of stay after decompression and discharge disposition.

## Methods

The national inpatient sample (NIS) database was utilized for this study. Patients were selected from 2005 to 2009 using the ICD 9 codes for CVA including 43401, 43411, and 43491. A subset of patients were determined using the ICD 9 code for craniectomy, 0124. Data was analyzed in SPSS using a two-way anova. Patients were broken into two groups: elderly, which included those sixty-five years old and up; those who had craniectomy within one day of admission.



## Length of Stay vs Elderly with and without Craniectomy



## Results

The NIS database had a total of 502,262 stroke diagnoses with 478 patients requiring craniectomy. 223 received craniectomy within one day of admission. Elderly patients showed decreased length of stay regardless of craniectomy timing, 16.8 days versus 25.5 days, which held true when in-hospital deaths were removed with  $p=0.002$ . However, elderly patients had an increased likelihood of a discharge to a nursing home, skilled nursing facility, or long term acute care hospital. Elderly patients also had an increased mortality of 34% versus 23% with  $p=0.017$ .

## Conclusions

Elderly patients likely have a decreased length of stay due to increased availability of funding. Another issue confounding this data, a lack of funding in younger patients may result in the inability to be placed in a nursing home or rehabilitation facility. This study illustrates that craniectomy does decrease mortality when required for stroke as compared to previous publications in younger populations.

## Learning Objectives

NIS database improved mortality with stroke and decompressive craniectomy.