

## Abdominal Aortic Aneurysms among Medicare Beneficiaries

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### Introduction

Sex, race, and socioeconomic status are known to contribute to adverse outcomes after EVAR. However, the influence of geographic location on both outcomes and follow-up after EVAR is not well understood.

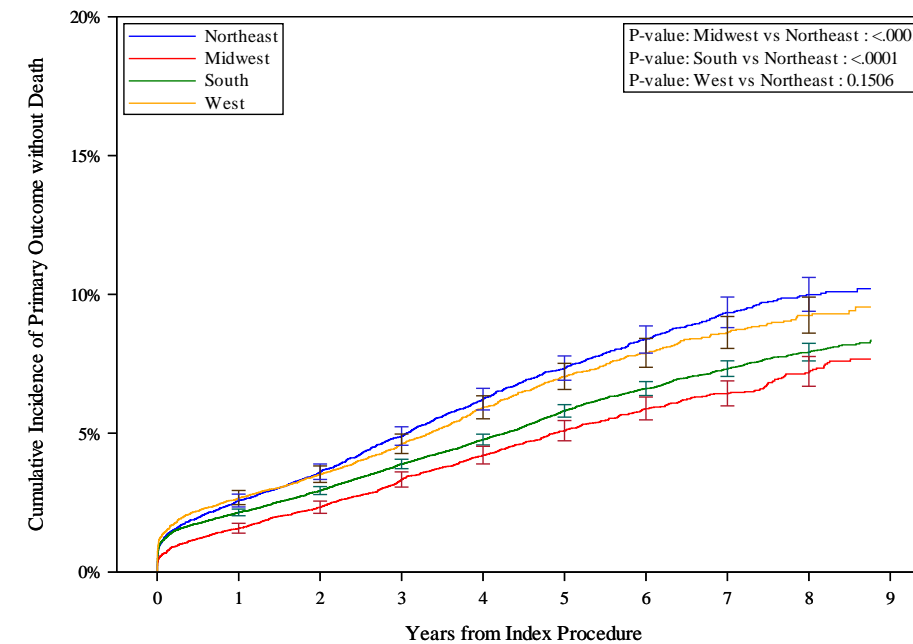
### Objectives

- Assess regional differences in outcomes following EVAR.

### Methods

- Retrospective cohort study
- Medicare data (January 1, 2011- December 31, 2019)
- All patients undergoing endovascular aortic aneurysm repairs for intact AAA with a bifurcated graft
  - Divided into cohorts based on region
- **Primary outcome:** Composite incidence of late aneurysm rupture, aortic reintervention, conversion to open repair and all-cause mortality at 9 years
- **Statistical analysis**
  - Cumulative incidence of the primary composite outcome was determined using Kaplan Meier methods and compared across disparity groups using log-rank tests
  - Unadjusted and multivariable-adjusted Cox regression analyses were conducted to compare outcomes across each disparity

### Figures/ Tables



	Midwest vs Northeast			South vs Northeast			West vs Northeast		
9-year outcomes	aHR	95%CI	p-value	aHR	95%CI	p-value	aHR	95%CI	p-value
Late aneurysm rupture, aortic reintervention, conversion to open repair or death	1.04	1.01,1.07	0.02	1.02	0.99,1.05	0.12	1.01	0.97,1.05	0.61
Late aneurysm rupture, aortic reintervention, conversion to open repair	0.77	0.71,0.85	<.001	0.84	0.79,0.90	<.001	1	0.91,1.09	0.98
All- cause mortality	1.08	1.05,1.12	<.001	1.06	1.03,1.09	<.001	1.01	0.98,1.04	0.57
Aortic Reintervention	0.68	0.61,0.75	<.001	0.69	0.62,0.77	<.001	0.81	0.75,0.87	<.001
Conversion to Open	0.79	0.64,0.97	0.03	0.71	0.60,0.85	<.001	0.73	0.58,0.92	0.01
Late Rupture	0.62	0.52,0.75	<.001	0.69	0.60,0.79	<.001	0.81	0.67,0.97	0.02

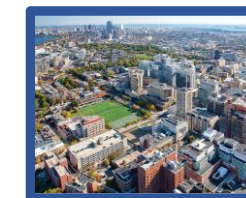
### Results

- At 9 years, the incidence of the primary outcome was 74.1% in patients in the Northeast compared with 72.9% in the Midwest, 73.3% in the South, and 70.6% in the West.
- After adjustment, compared with the Northeast, the incidence of the primary outcome was higher in the Midwest, but similar in the South and West.
- When mortality was separated from the primary outcome, living in the Midwest or South was associated with lower rates of EVAR-related complications, but higher mortality
- There were also lower rates of EVAR-related office visits and AAA surveillance imaging studies in the Midwest, South, and West compared with the Northeast.

### Conclusions

- Patients residing in the Northeast had a higher rate of EVAR-related events but lower all-cause mortality, while those in the Midwest and South had lower rates of EVAR-related complications but higher mortality and higher loss to follow-up.

### Acknowledgments



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