Contemporary Evidence Challenges Historical Concerns About Elective AAA Repair in Women

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Saturday, April 25th, 2026 12:10-12:20pm

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Disclosures

- None

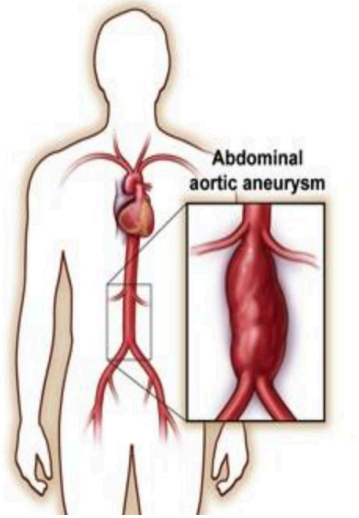
The AAA Paradox in Women

Rupture Risk

- Women rupture earlier and at smaller diameters

Guideline Endorsed AAA Safety BenchmarksV

SVS

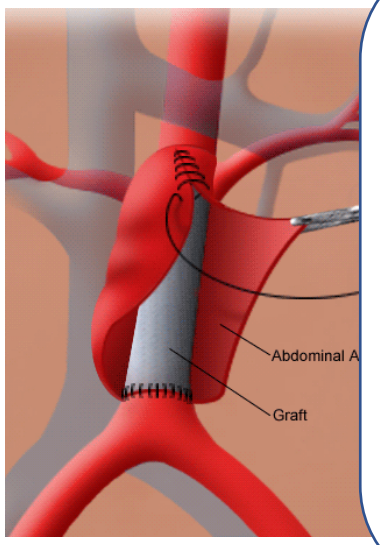


Chaikof et al. J Vasc Surg 2018; Rokosh et al. J Vasc Surg 2021

Evidence Gap

- Landmark AAA trials included very few women

→ Limited sex-specific outcome data



Need contemporary real-world benchmarks

for AAA repair in women

Guidelines derived largely from male-dominated trials

Creates uncertainty about optimal treatment thresholds in women

Study Objective

- Evaluate outcomes of *elective infrarenal* AAA repair in women
  - Assess impact of age and aneurysm diameter on operative risk
  - Compare EVAR and Open repair outcomes
  - Provide contemporary benchmarks for counseling and guidelines

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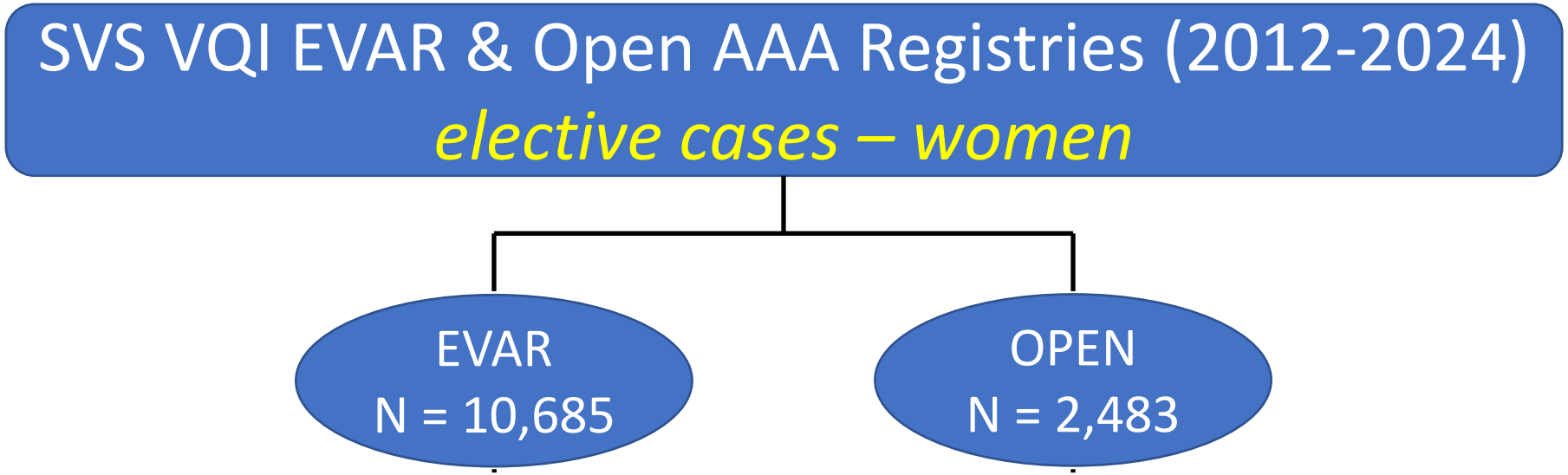
Study Design



Endpoints & Statistical Analysis

Primary:

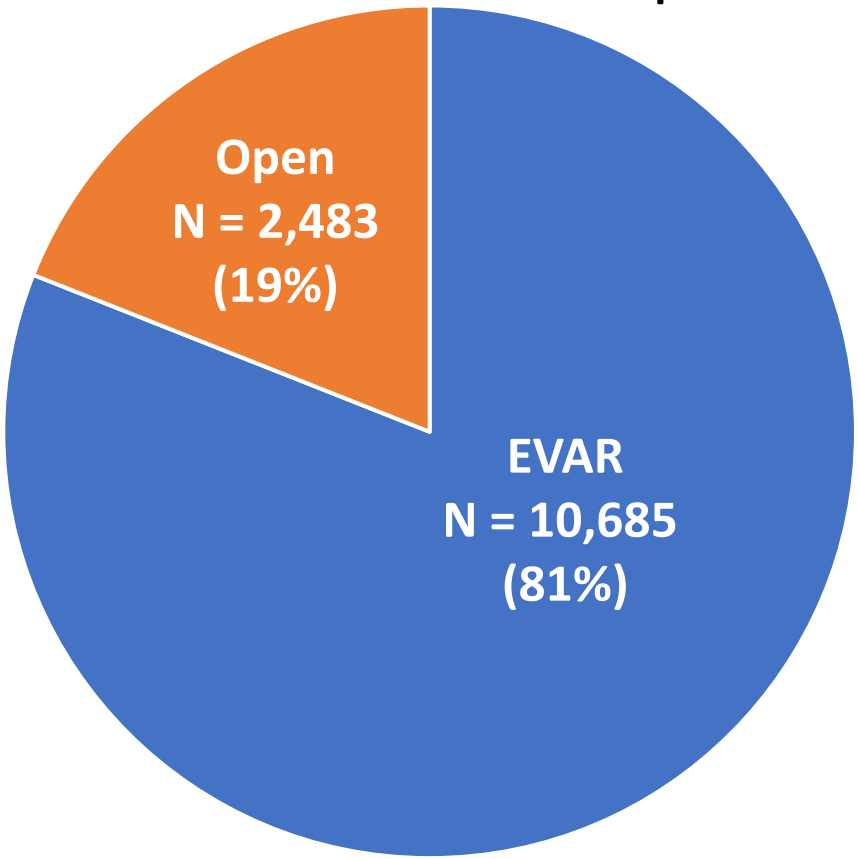
In-hospital mortality

Secondary:

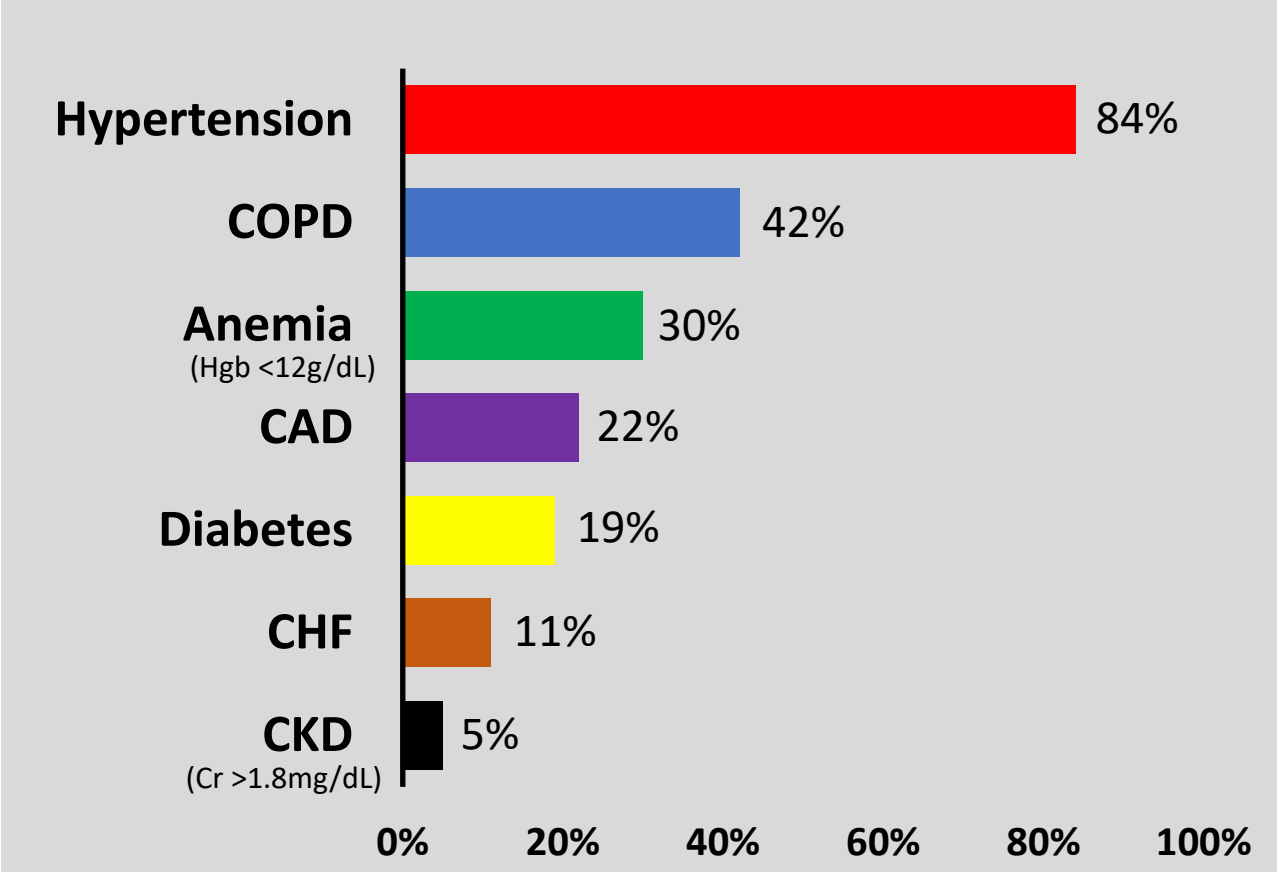
In-hospital complications, survival

Baseline Risk Profile in Women Undergoing AAA Repair

- N = 13,168 women underwent AAA repair

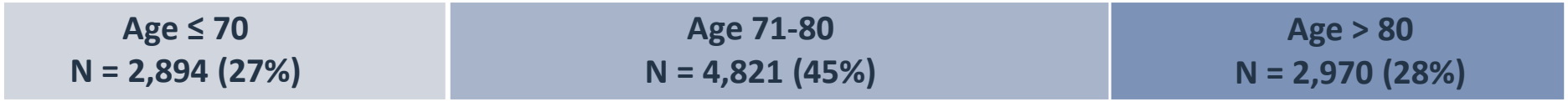


- Comorbidity prevalence for all patients



Age Distribution Undergoing Elective AAA Repair

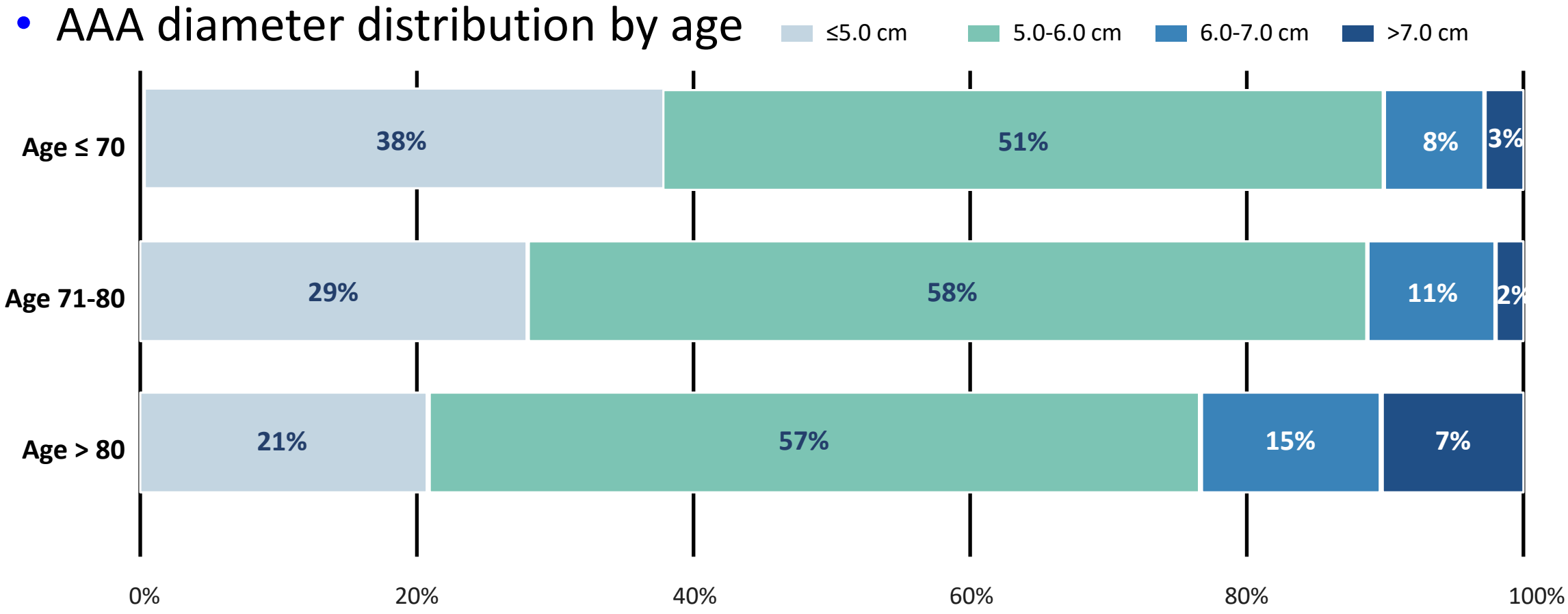
- EVAR



- Open

EVAR: Diameter Distribution

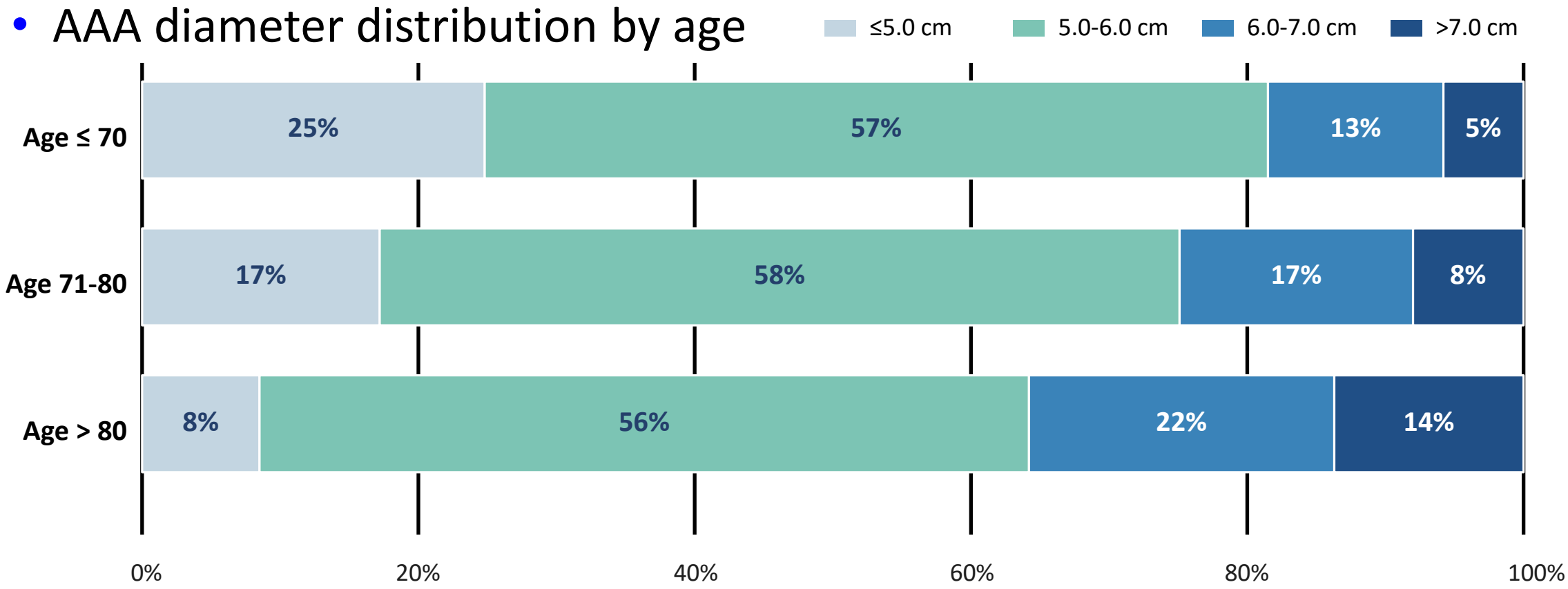
- AAA diameter distribution by age



Larger aneurysms (>6 cm) more common with age

Open: Diameter Distribution

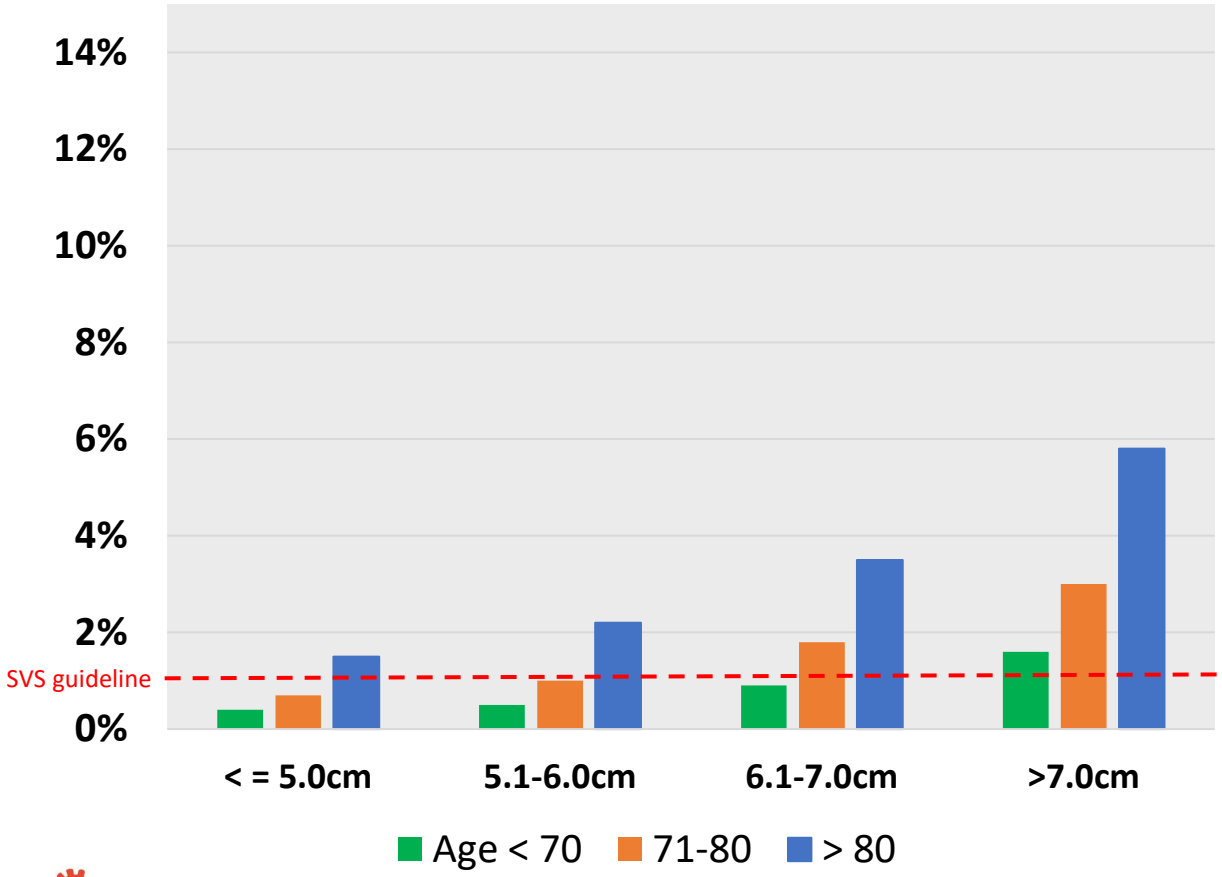
- AAA diameter distribution by age



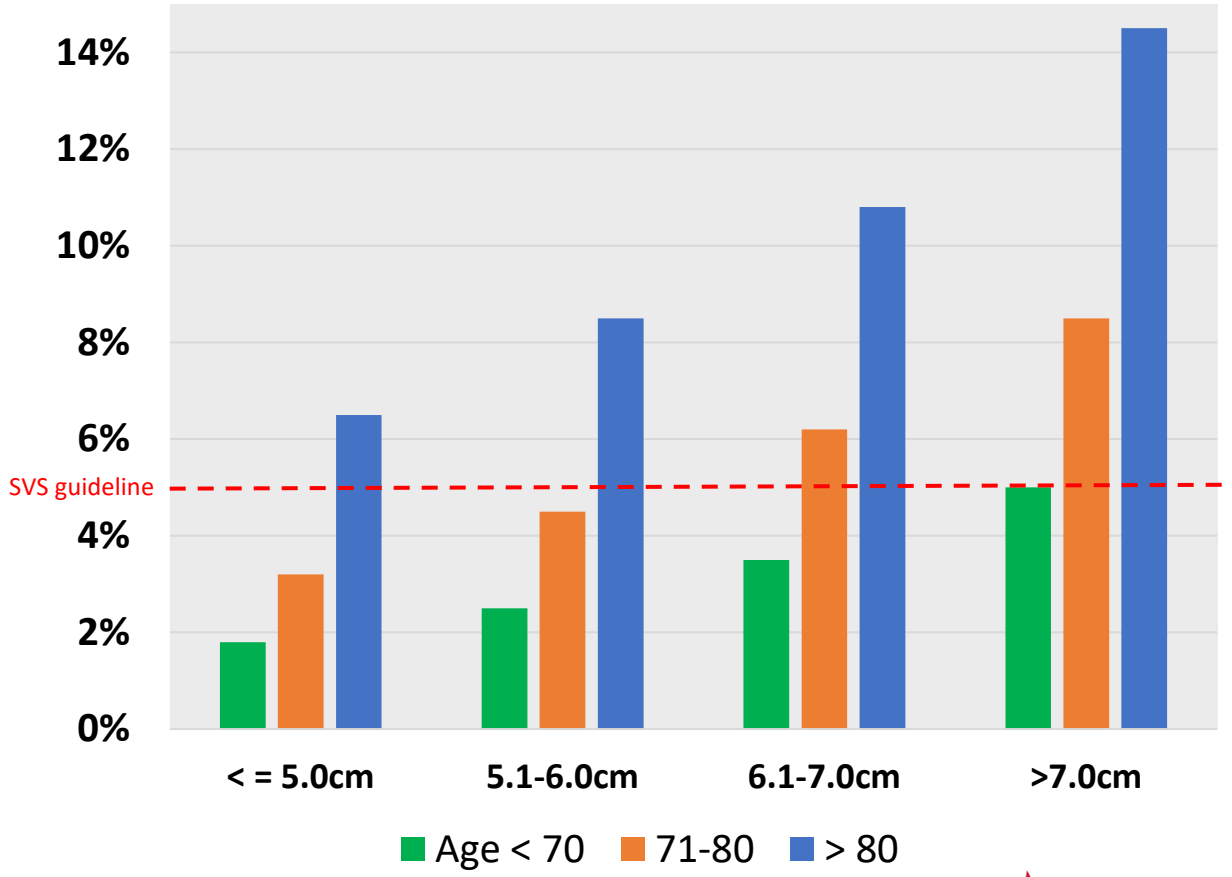
Larger aneurysms (>6 cm) more common with age

In-hospital Mortality

- EVAR

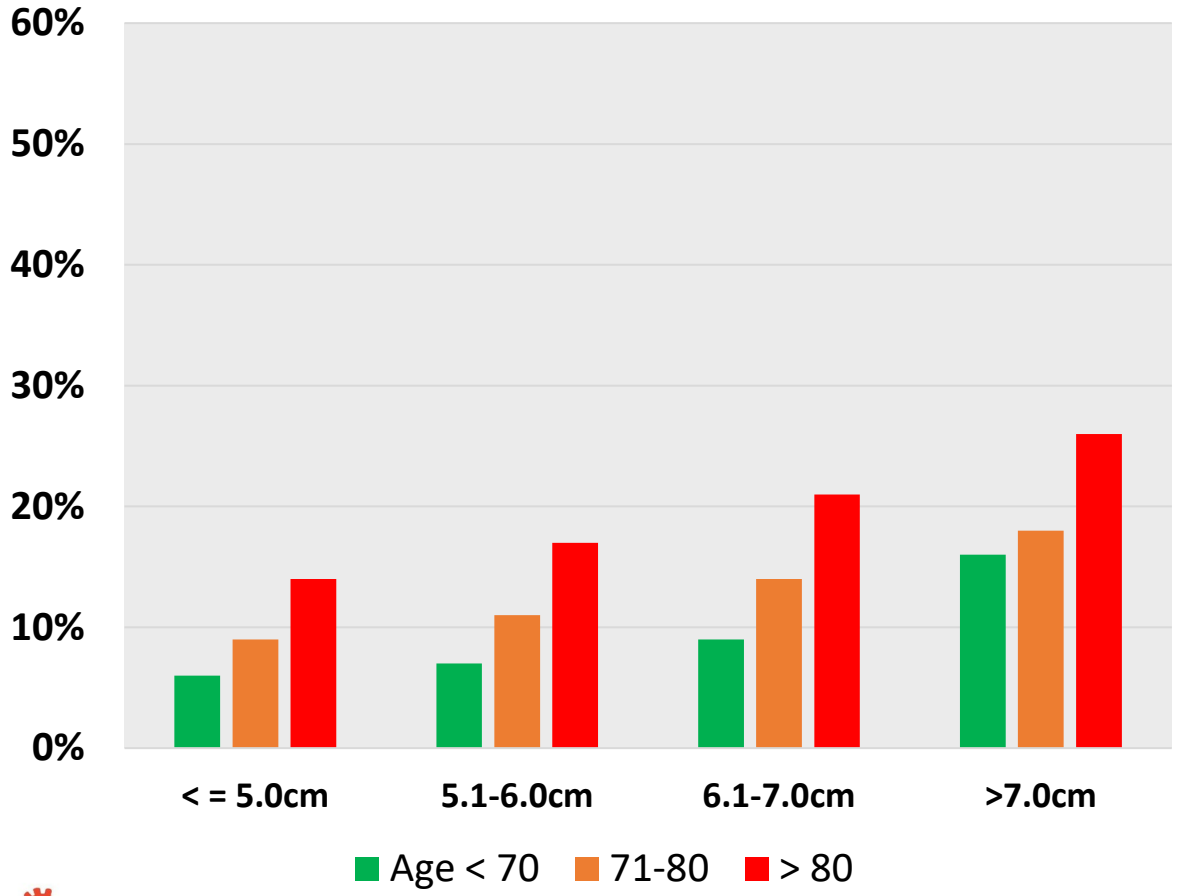


- Open AAA repair

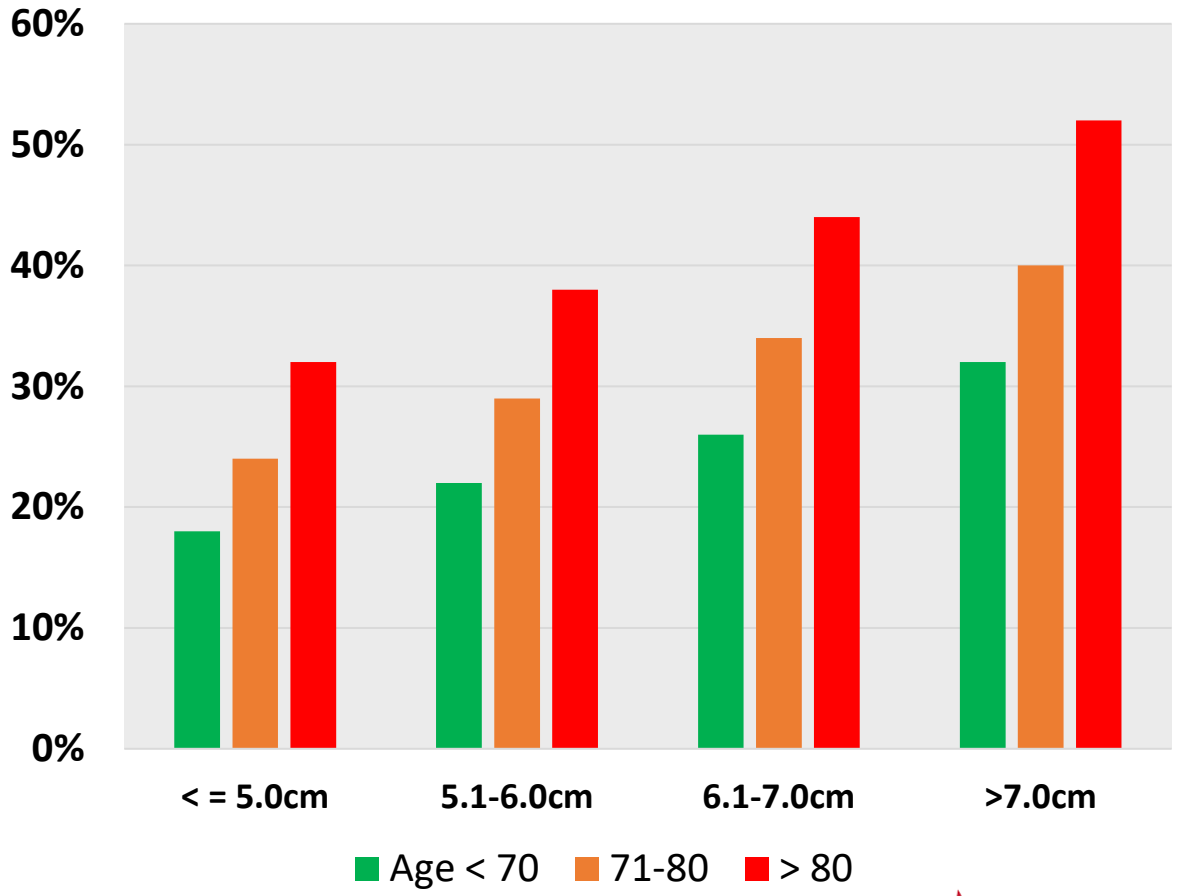


Rate of In-hospital Complications

- EVAR

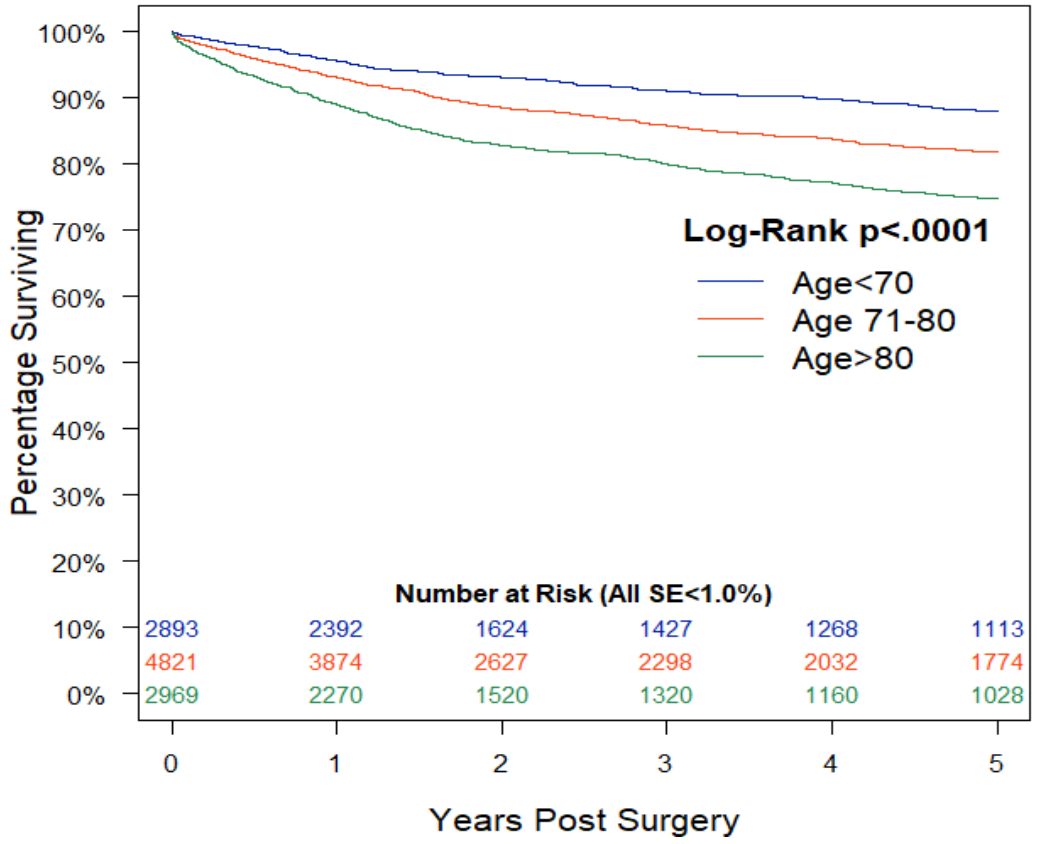


- Open AAA repair

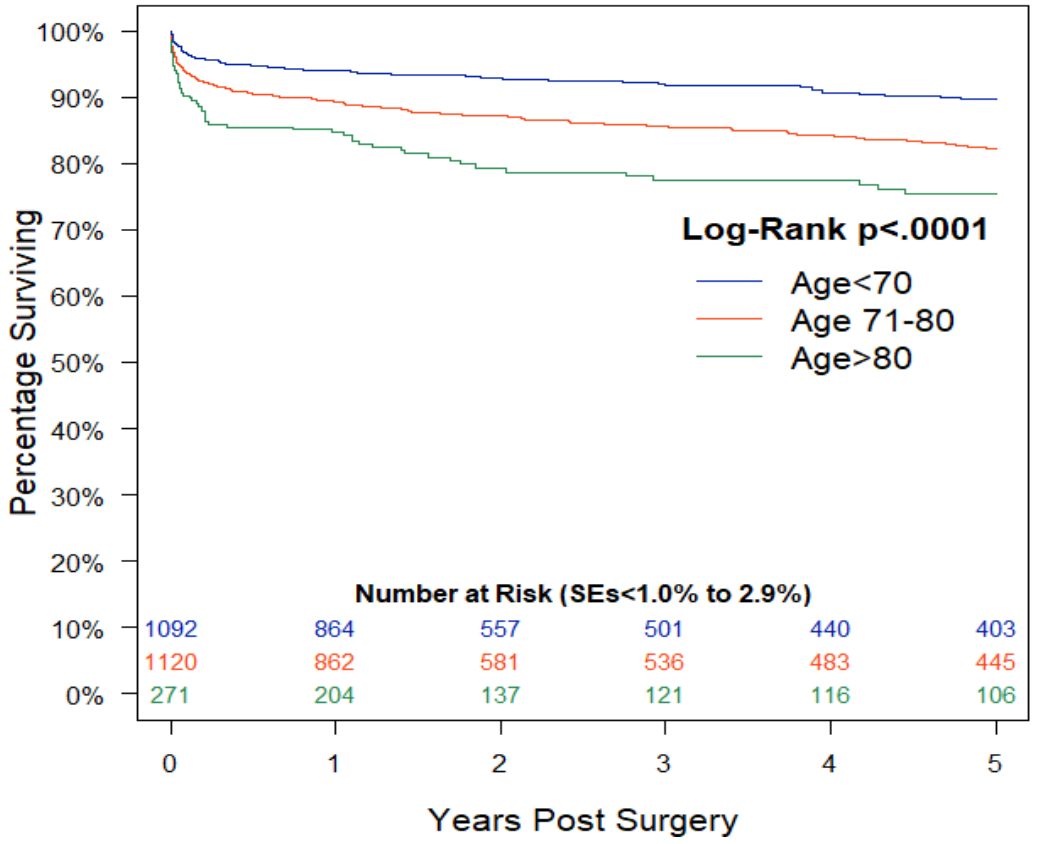


Survival Stratified by Age

- EVAR

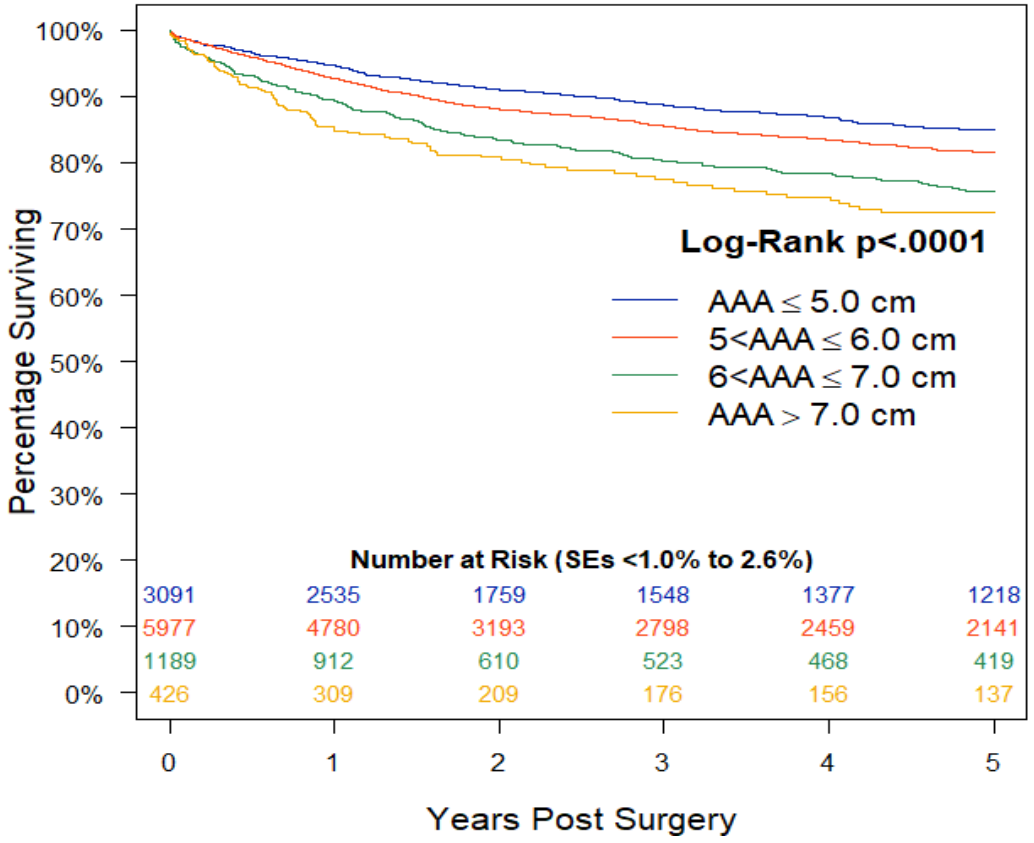


- Open AAA repair

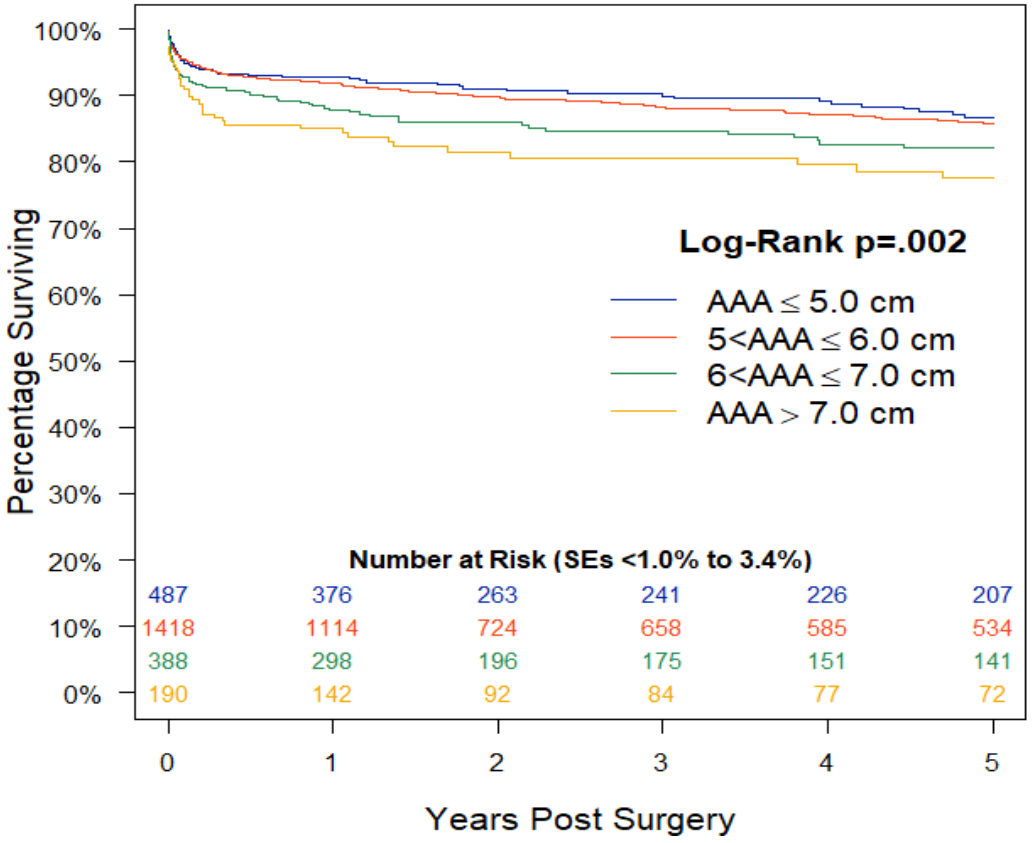


Survival Stratified by Diameter

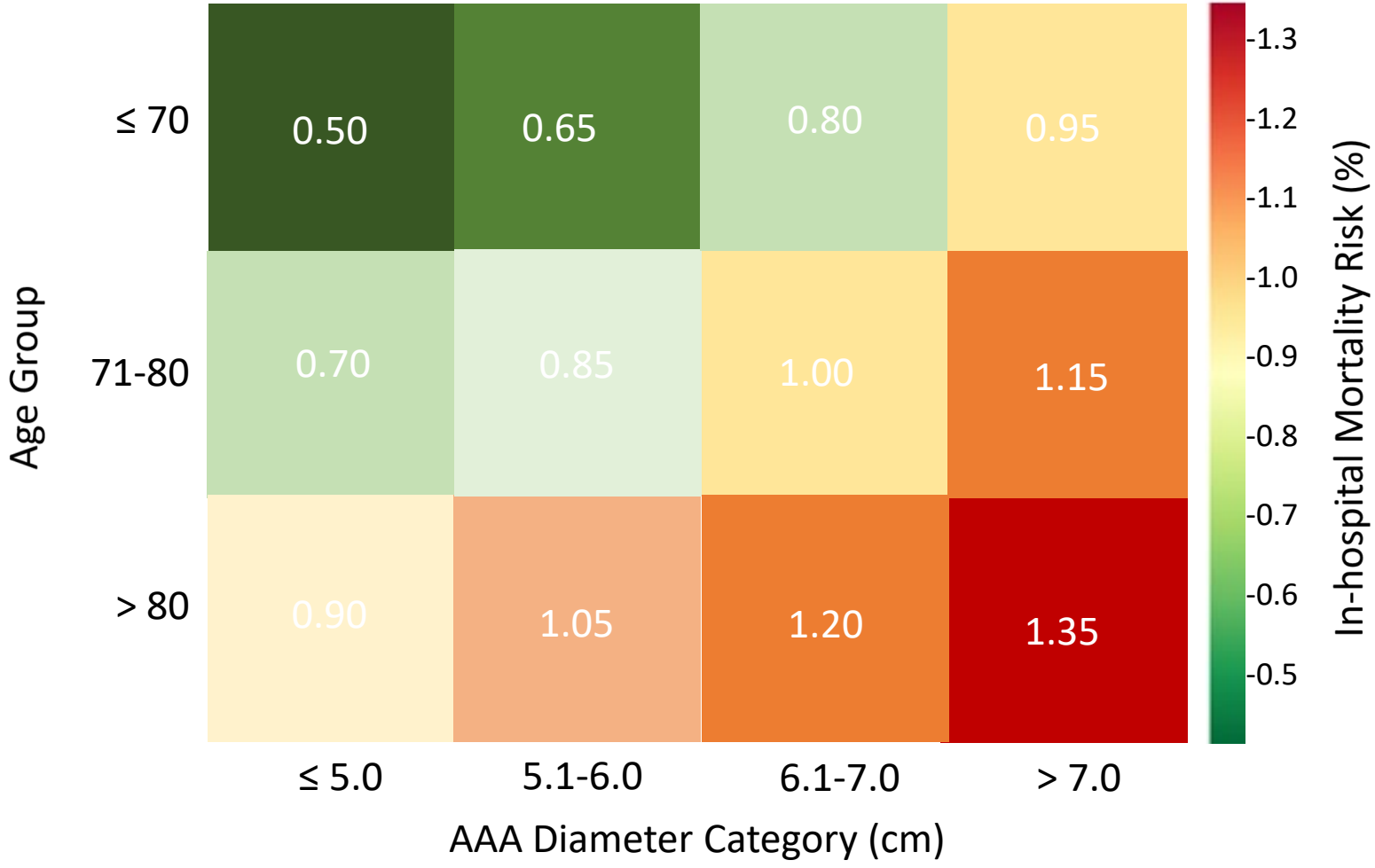
- EVAR



- Open AAA repair



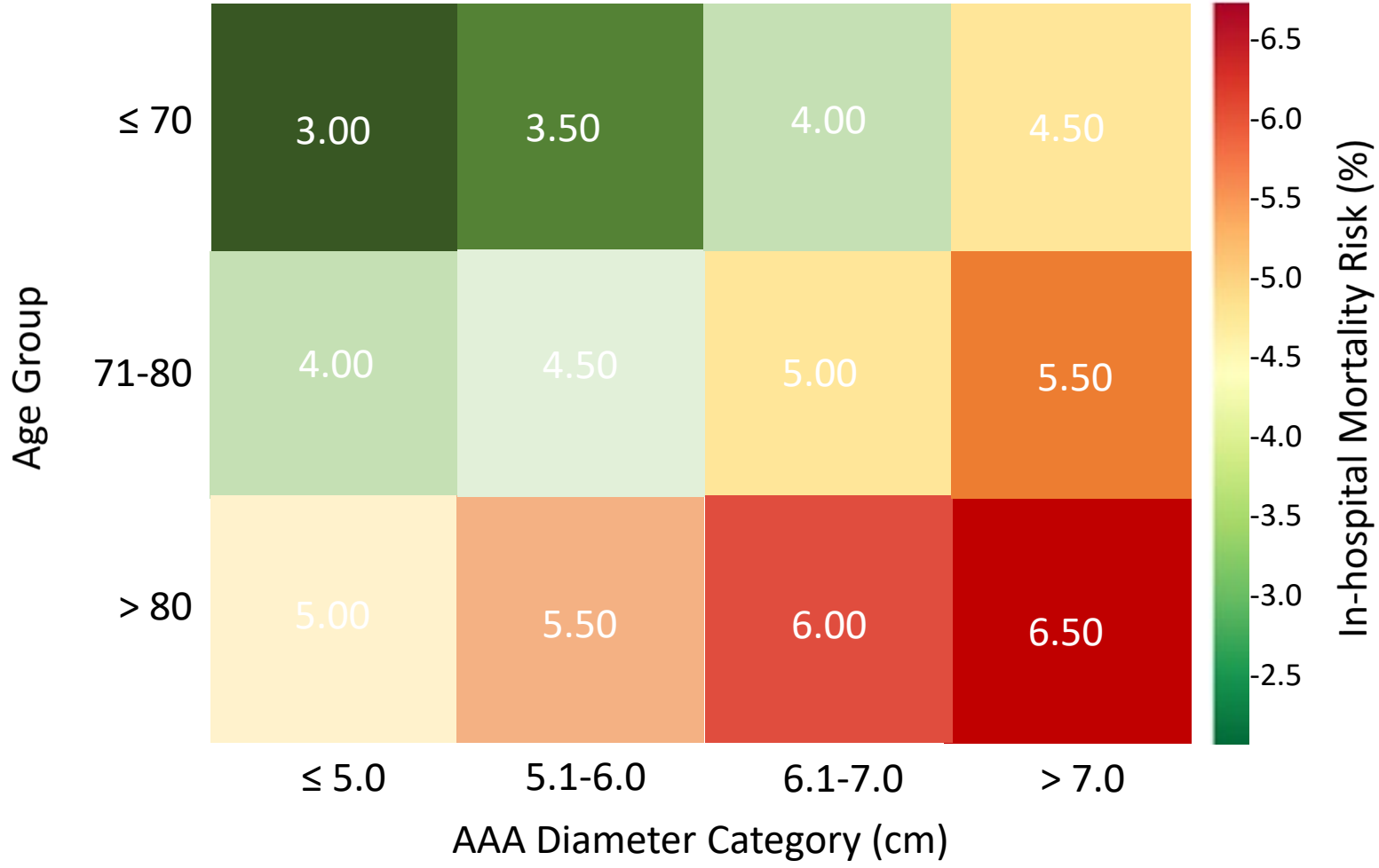
Age and Diameter Risk Matrix: EVAR



Diameter effects dominate in younger patients

Age amplifies risk at all diameters

Age and Diameter Risk Matrix: Open

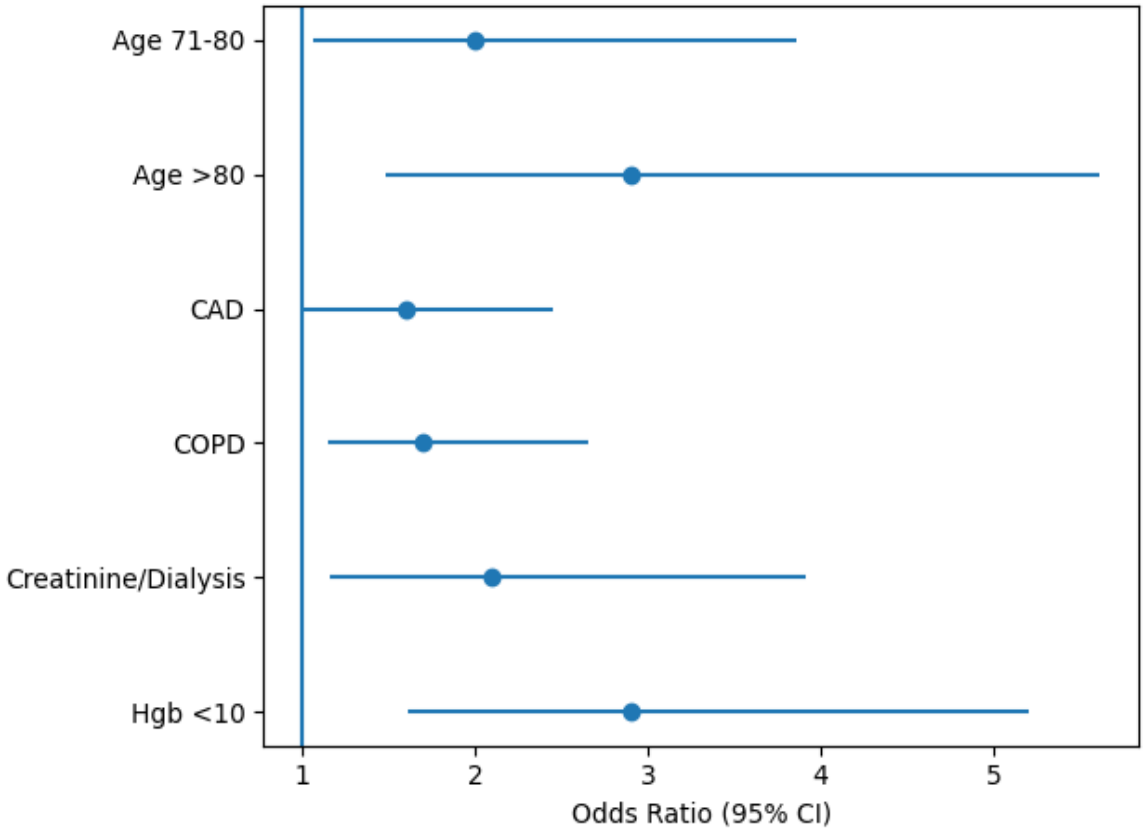


Higher baseline risk relative to EVAR across

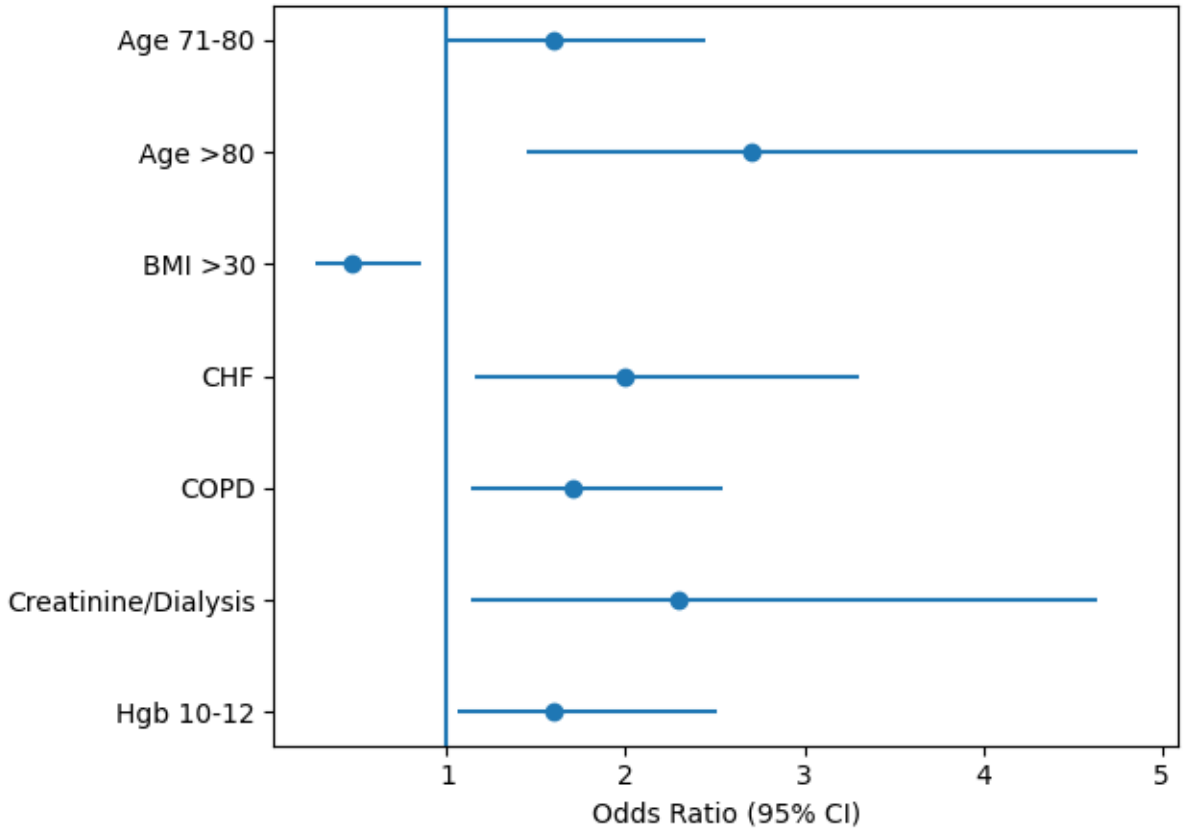
All strata have inherent procedure-related risk. Age has greater impact than diameter

Predictors of In-hospital Mortality

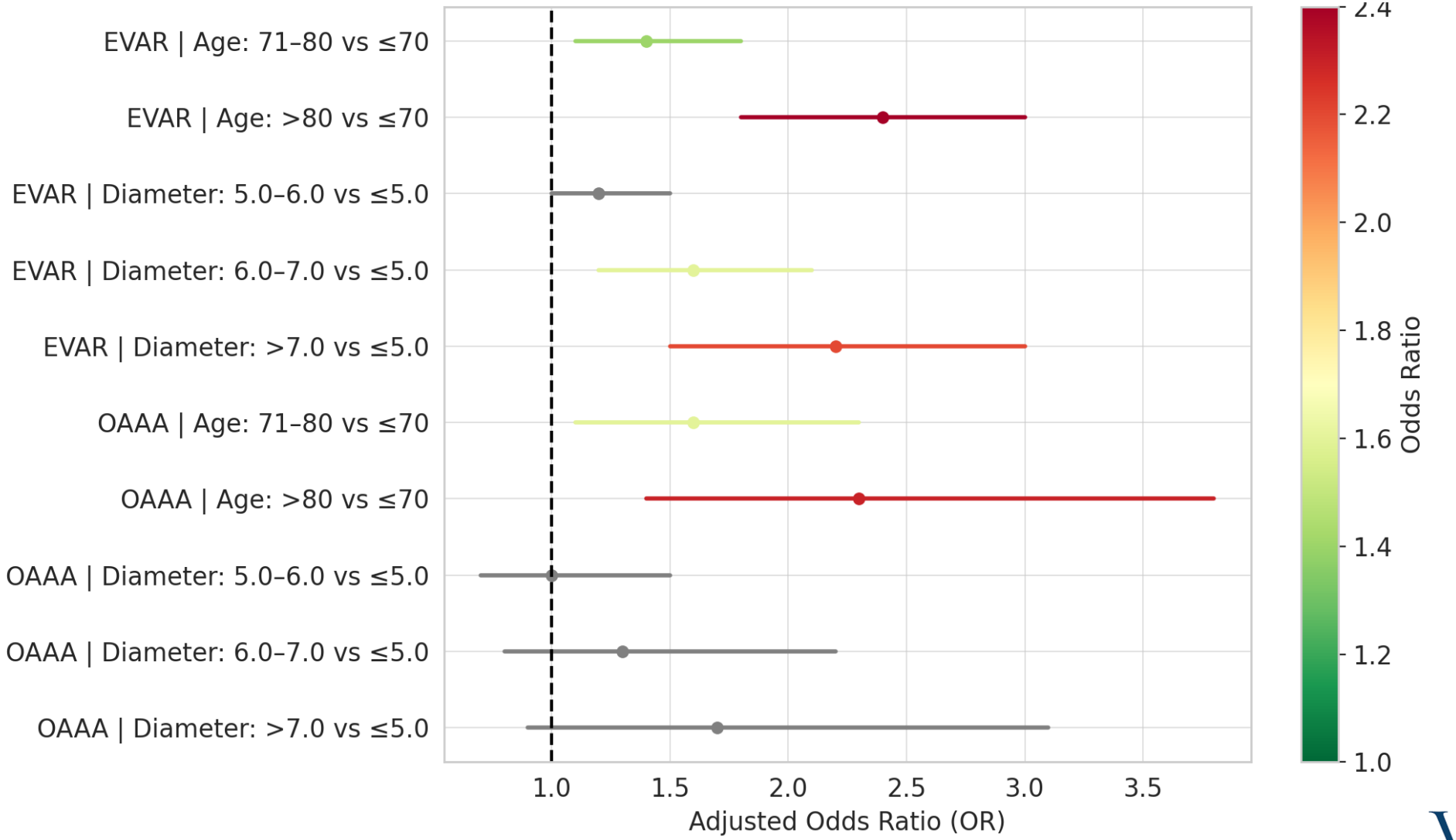
- EVAR



- Open AAA repair



Odds of 1-Year Mortality by Age and Diameter



Limitations

- Registry-based observational design with selection bias/residual confounding. May not be generalizable to national practice
- No group of non-operated women for comparison
- Incomplete follow-up data limits out-of-hospital event capture
- Survival estimates need to be interpreted with caution

Conclusions

- Contemporary elective infrarenal AAA repair in women, especially EVAR, meets accepted safety benchmarks.
- Operative risk is modified by both age and aneurysm diameter, with the highest-risk phenotype seen in older women undergoing open repair.
- These data challenge the idea that women uniformly experience prohibitive operative risk. Suggesting, that a more nuanced, risk-stratified approach to counseling and treatment thresholds in women is warranted.

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Thank you

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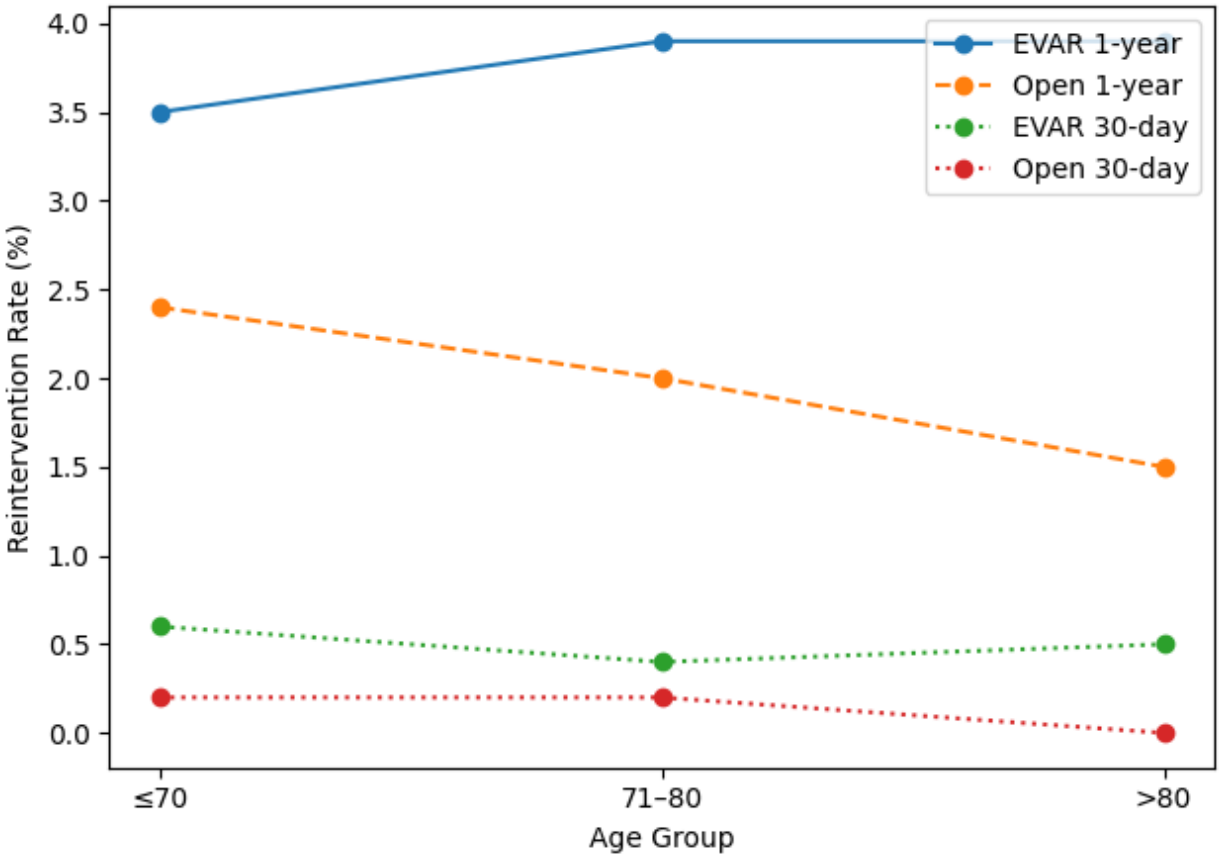
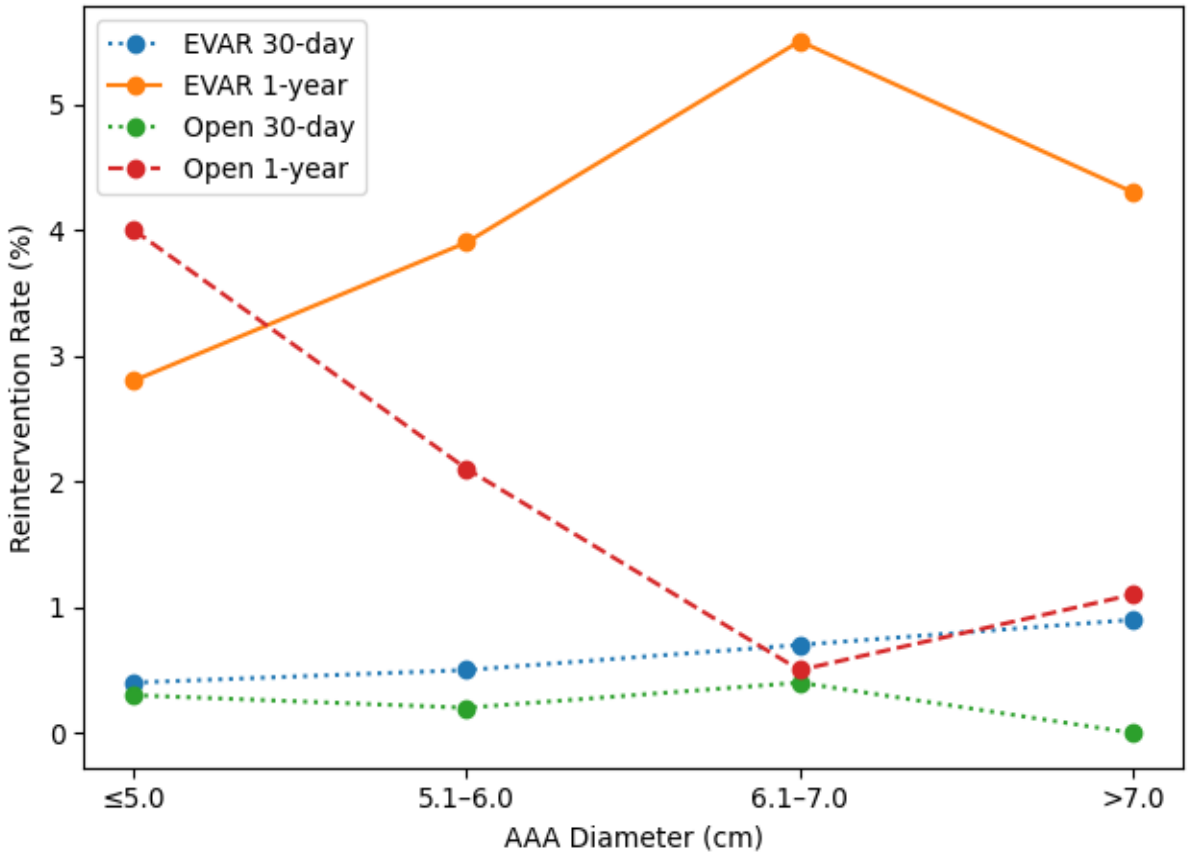
Reintervention





Reintervention follow-up incomplete: ~22% (30-day), ~23% (90-day), ~45% (1-year); interpret long-term estimates with caution.

Age and Diameter Risk Matrix (alternate?)

- EVAR

Age:Diameter	≤ 5.0cm	5.0-6.0cm	6.1-7.0cm	>7.0cm
≤ 70				
71 - 80				
> 80				

More gradual risk escalation
Diameter effects dominate in younger patients
Age amplifies risk at all diameters

- Open AAA repair

Age:Diameter	≤ 5.0cm	5.0-6.0cm	6.1-7.0cm	>7.0cm
≤ 70				
71 - 80				
> 80				

Higher baseline risk relative to EVAR across
All strata have inherent procedure-related risk
Age has greater impact than diameter

Lowest observed risk
Moderate risk
High risk
Highest observed risk