

Research Opportunities for Cardiothoracic Surgery in Aging Populations

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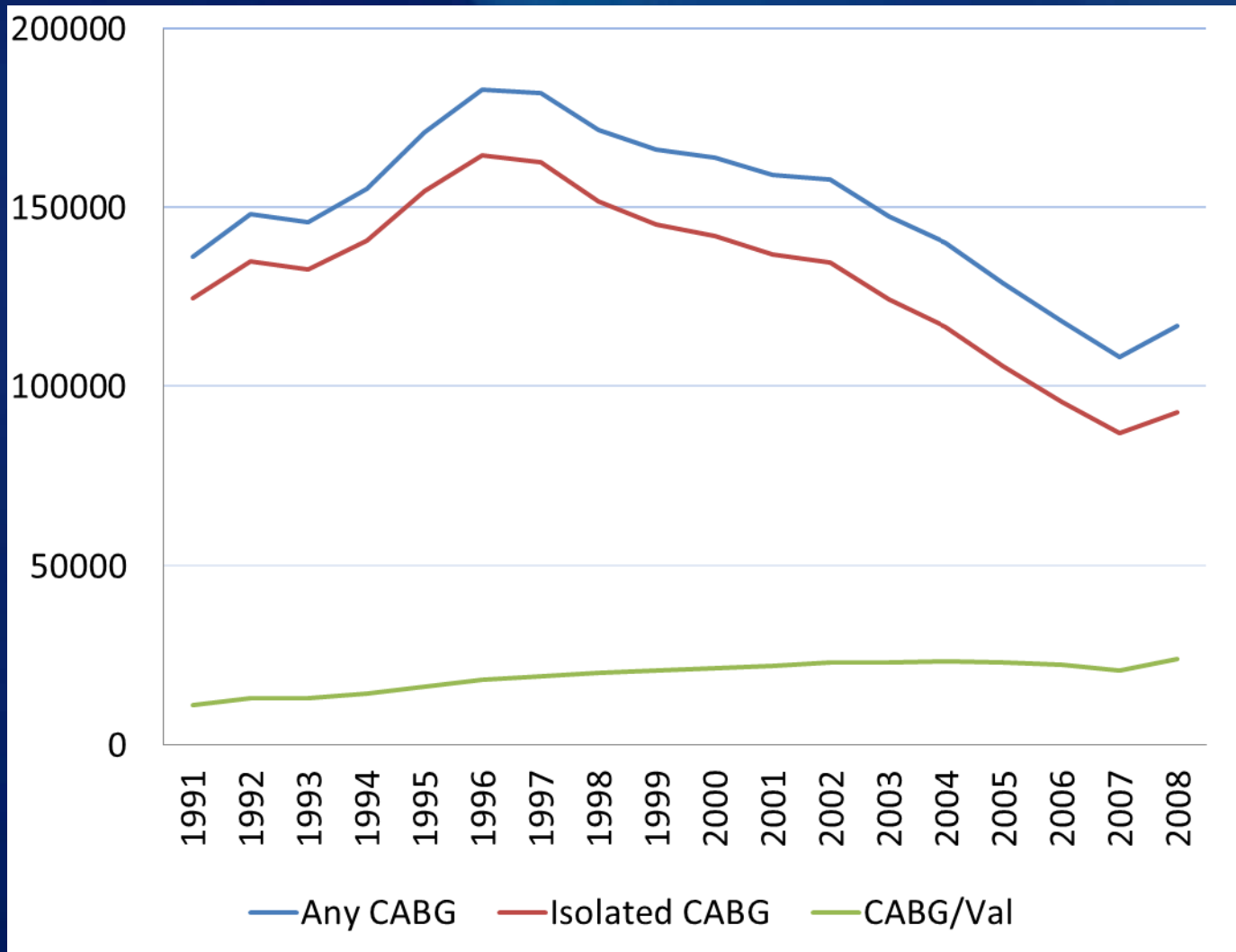
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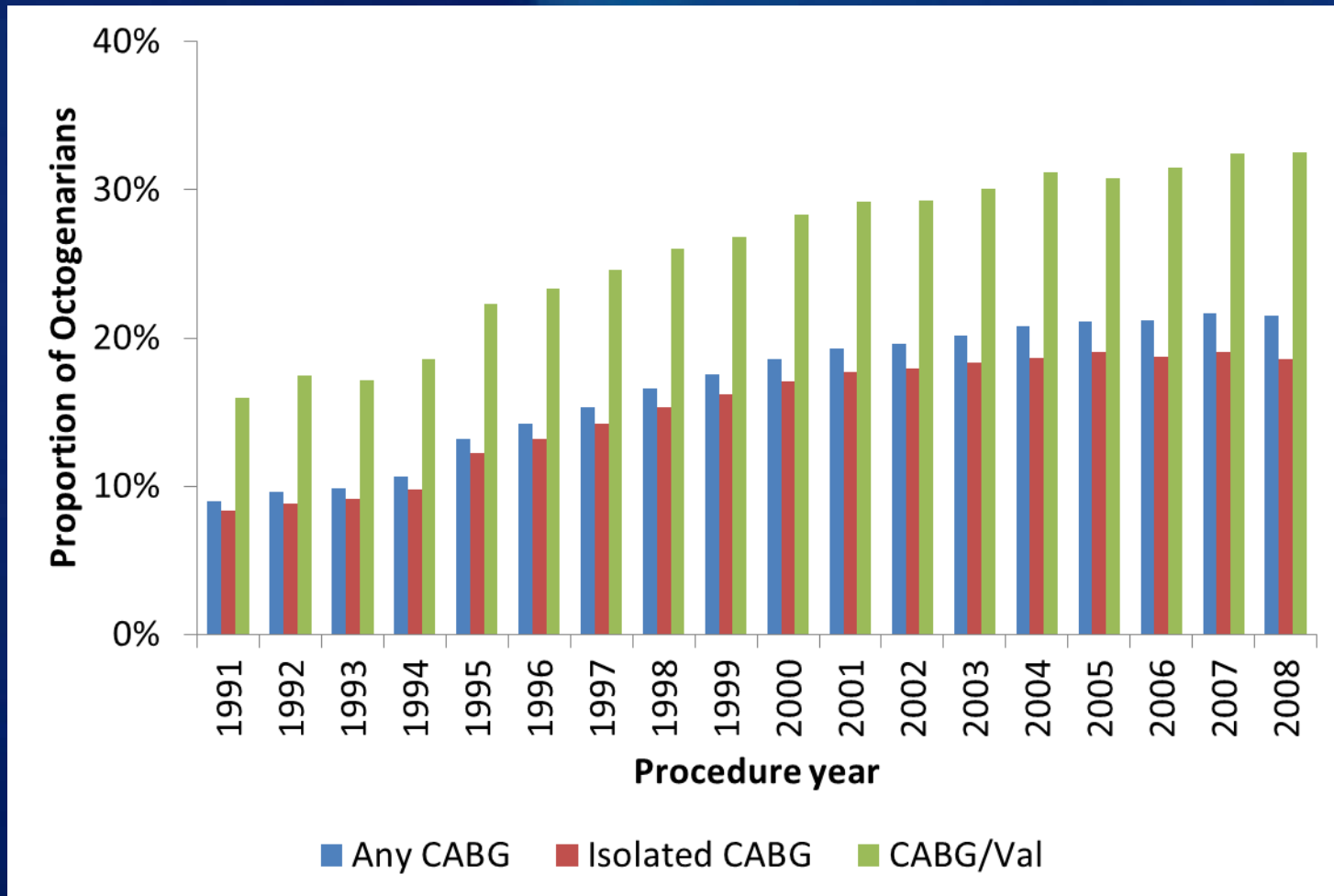
Background: CT Surgery in Older Populations

- n 'Older populations' (i.e., 75+) make up a growing proportion of those undergoing CT surgery
- n Older patients are 'complex' with increased disease severity and concomitant comorbid conditions
- n Morbidity and mortality following CT surgery rise with increasing age, but are improving over time
- n Older populations have typically been under-represented in CT surgery clinical studies

1990-2008 CMS CT Surgery Trends



1990-2008 CMS Proportion of CMS CT Surgery in Octogenarians



Representation in CT Surgery Trials

Trial	Type	% patients 75+ Years
CASS	CABG vs Medical	0
VA Cooperative	CABG vs Medical	0
RITA	CABG vs PCI	22
BARI	CABG vs PCI	109
STICH	CABG vs OMT EF <35	76
EVEREST II	MVR vs Perc Clip	81

Research Issues in Older Populations

- n **Representative % of older patients in trials**
 - l Coronary, Valvular and AF research
- n **Better pre-operative risk evaluation tools**
 - l Objective 'practical' tools to assess physiologic age
- n **Cognitive issues post CT surgery**
 - l Short- and long-term impact; Therapies to prevent
- n **Regenerative research:**
 - l Age-related reductions in reparative processes
- n **Longitudinal outcomes in older populations**
 - l Clinical/functional outcomes
- n **Studies on patient and clinician decision support**

Study of Downstream Outcomes of Revascularization in Older Adults

n Longitudinal cohort

- | Older multi-vessel coronary disease patients following CABG, PCI, and medical therapy
- | Younger 'control' group

n Examine pre-operative and longitudinal outcomes

- | Clinical events
- | Functional status
- | Symptoms
- | Frailty measures
- | Cognitive function
- | Biomarkers