OPEN REOPERATIONS FOR COMPLICATIONS OF ENDOVASCULAR AORTIC PROCEDURES: TIP OF THE ICEBERG?

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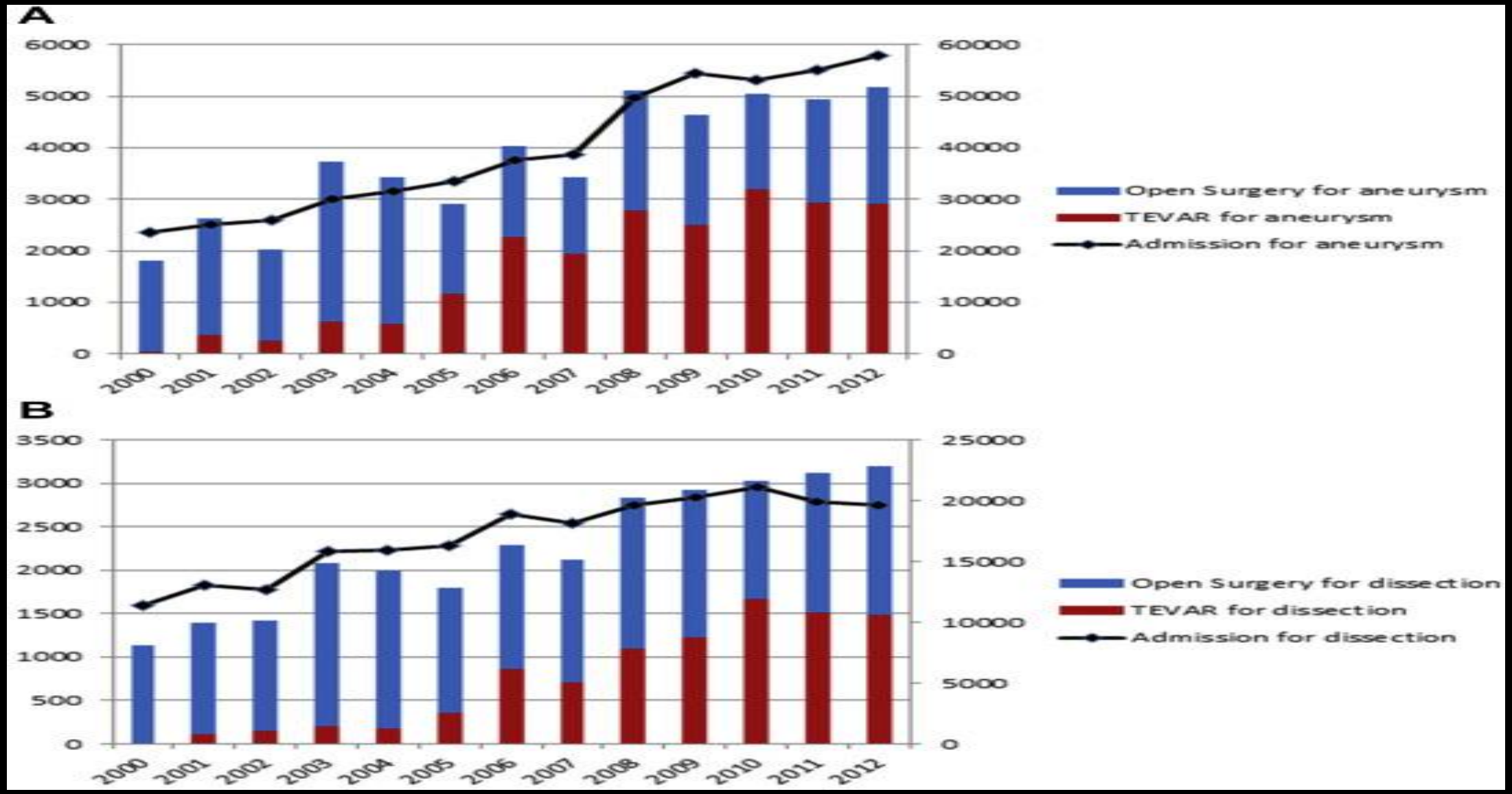
NO DISCLOSURES

BACKGROUND

- RATE OF THORACIC ENDOVASCULAR AORTIC REPAIR (TEVAR) HAS INCREASED DRAMATICALLY OVER THE PAST TWO DECADES

PREVALENCE OF OPEN SURGERY AND TEVAR FOR THORACIC ANEURYSM AND DISSECTION

Wang et al. JVascSurg 2018; 67: 16-49



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- OPEN REOPERATION INDICATED WHEN ENDOVASCULAR OPTIONS NOT FEASIBLE
- NUMBER OF SECONDARY OPEN AORTIC OPERATIONS (SOAP) LIKELY TO INCREASE OVER TIME

COMPLICATIONS FOLLOWING TEVAR THAT REQUIRE OPEN OPERATION

- ENDOLEAK
- ANEURYSM EXPANSION OR RUPTURE
- RETROGRADE AORTIC DISSECTION
- FISTULA FORMATION
- STENT GRAFT INFECTION
- STENT GRAFT FRACTURE, COLLAPSE, MIGRATION OR EROSION

META-ANALYSIS OF SECONDARY OPEN AORTIC PROCEDURES FOLLOWING TEVAR

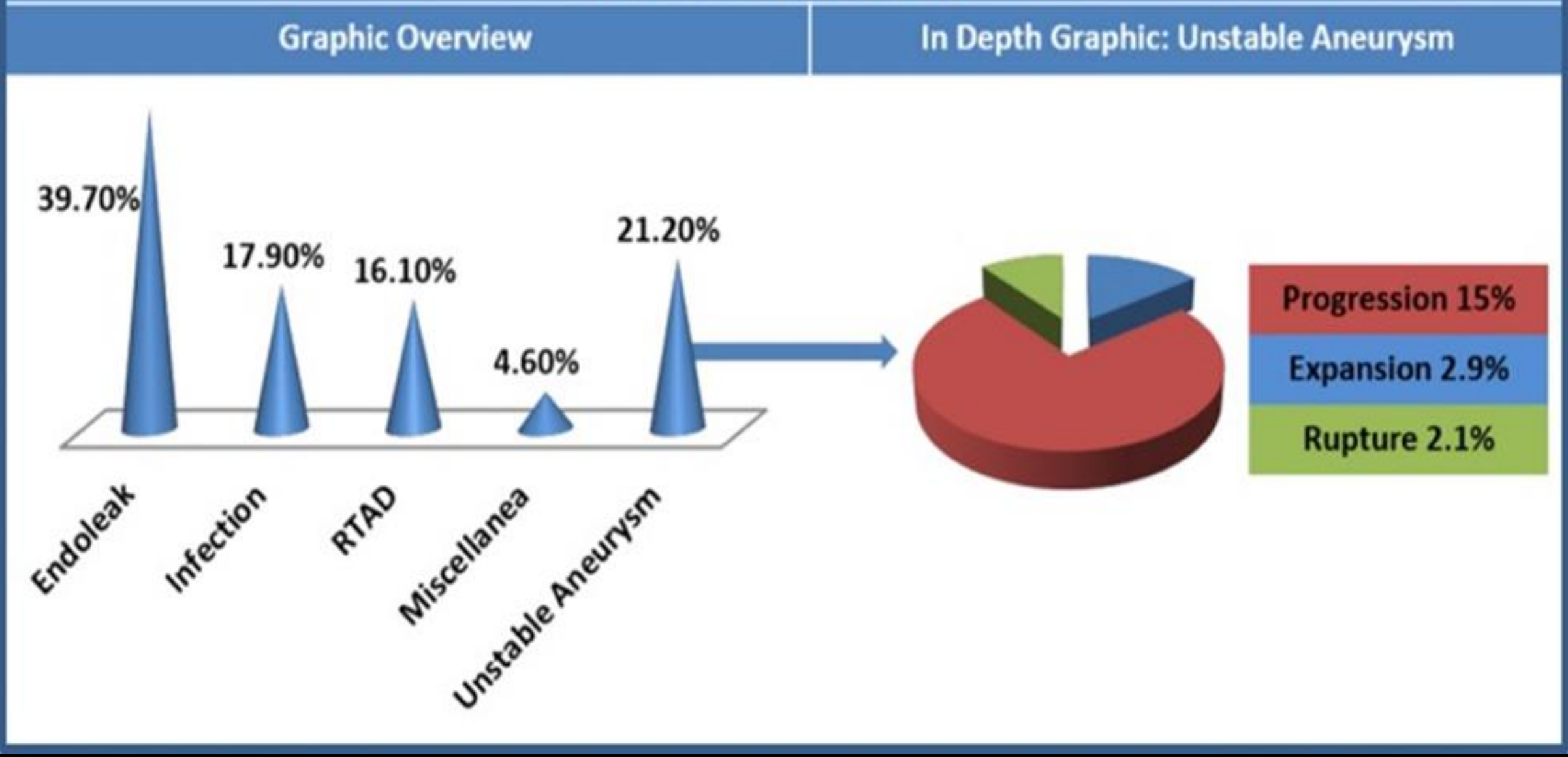
Gambardella et al. J. Am heart Assoc 2017;13:1-20

15 PUBLICATIONS SUITABLE FOR ANALYSIS (2004-2016)

330 SECONDARY OPEN PROCEDURES

- MEAN AGE 62 YEARS
- 61% MALE
- 35% PROCEDURES NON-ELECTIVE
- MEAN INTERVAL BETWEEN TEVAR AND SOAP = 20 MONTHS (.3-62 MONTHS)

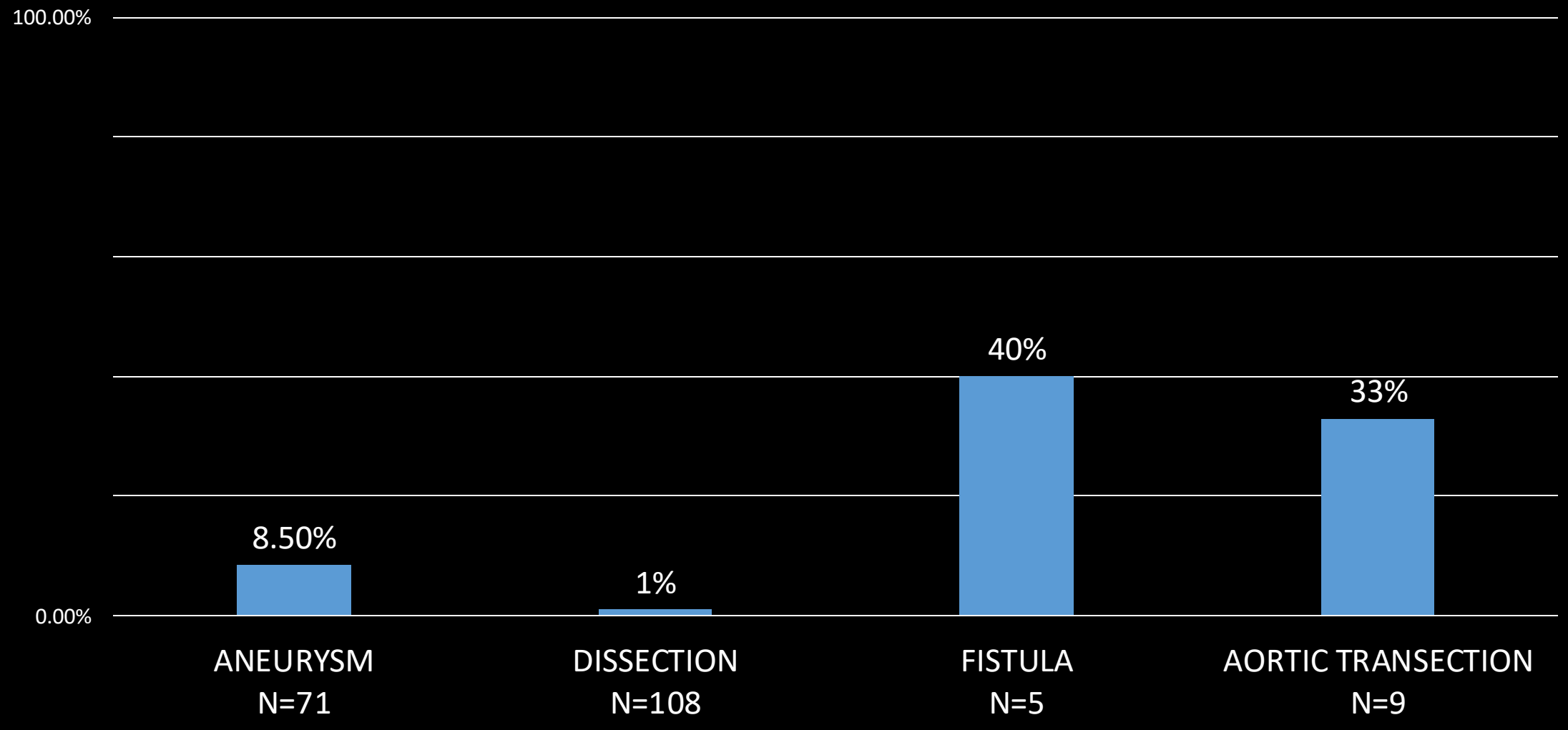
Indications for SOAP



J. Am heart Assoc 2017;13:1-20

OPERATIVE OUTCOMES		
	NUMBER OF STUDIES WITH AVAILABLE DATA (TOTAL = 15)	NUMBER OF PATIENTS
EARLY MORTALITY		
10.6% (4%-20%)	14	305
MORBIDITY	12	268
• STROKE 5.1%		
• PARAPLEGIA 8.3%		
• PULMONARY 19.0%		
• RENAL 15.8%		
• CARDIAC 5.7%		
• BLEEDING 5.0%		
		J. Am heart Assoc 2017;13:1-20

EARLY MORTALITY ACCORDING TO PATHOLOGY AT INDEX TEVAR



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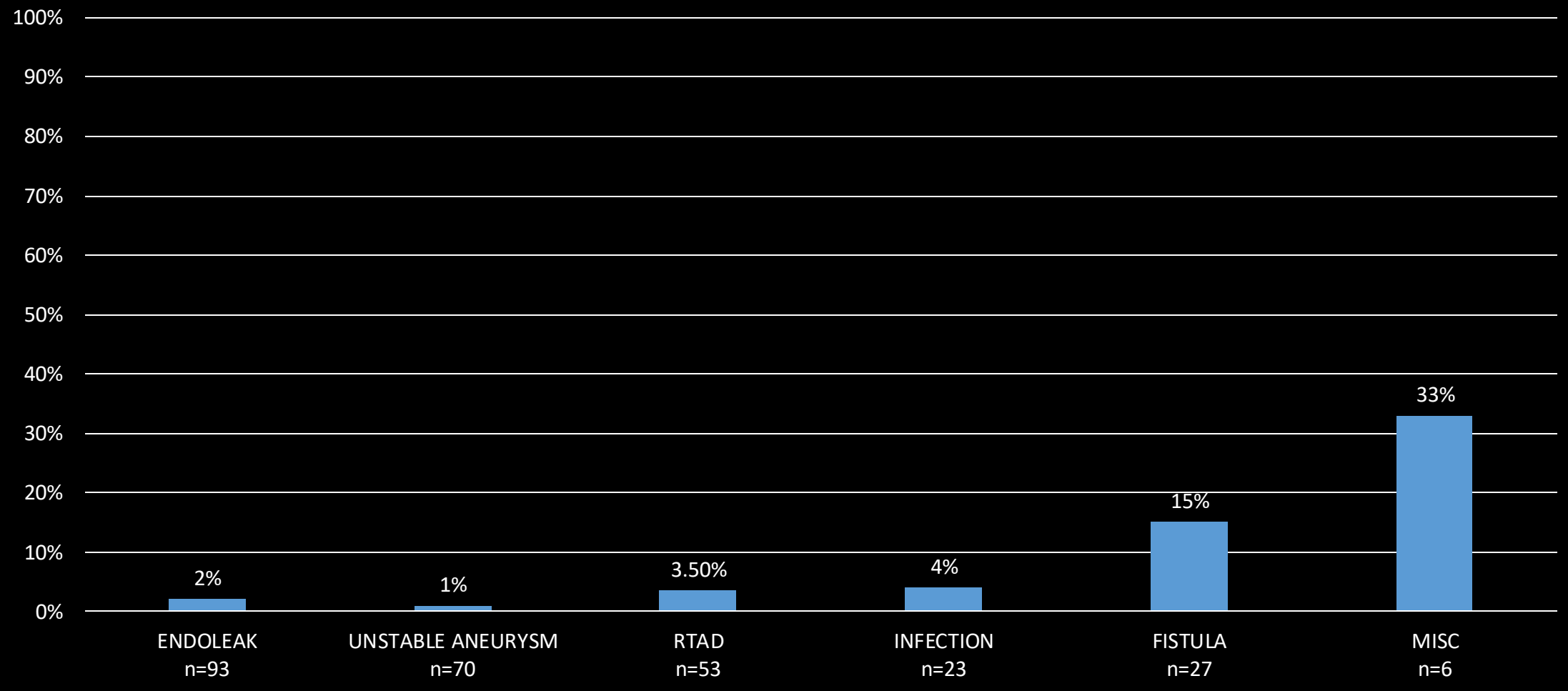

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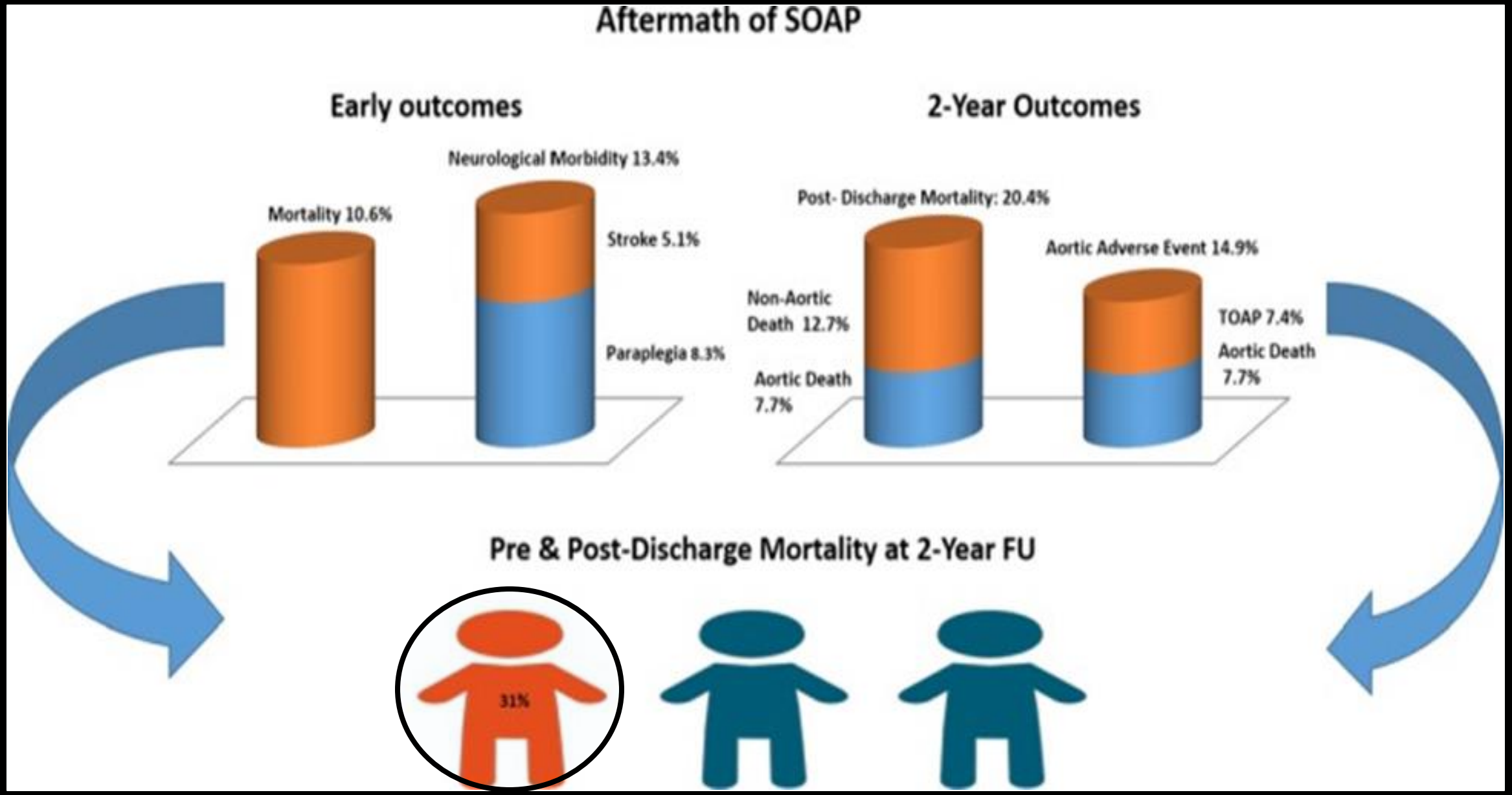


J. Amer Heart Assoc

Open Descending Thoracic or Thoracoabdominal Aortic Approaches for Complications of Endovascular Aortic Procedures: 19-year Experience

(Spiliotopoulos, Coselli et al. JTCVS 2018;155:10 – 18)

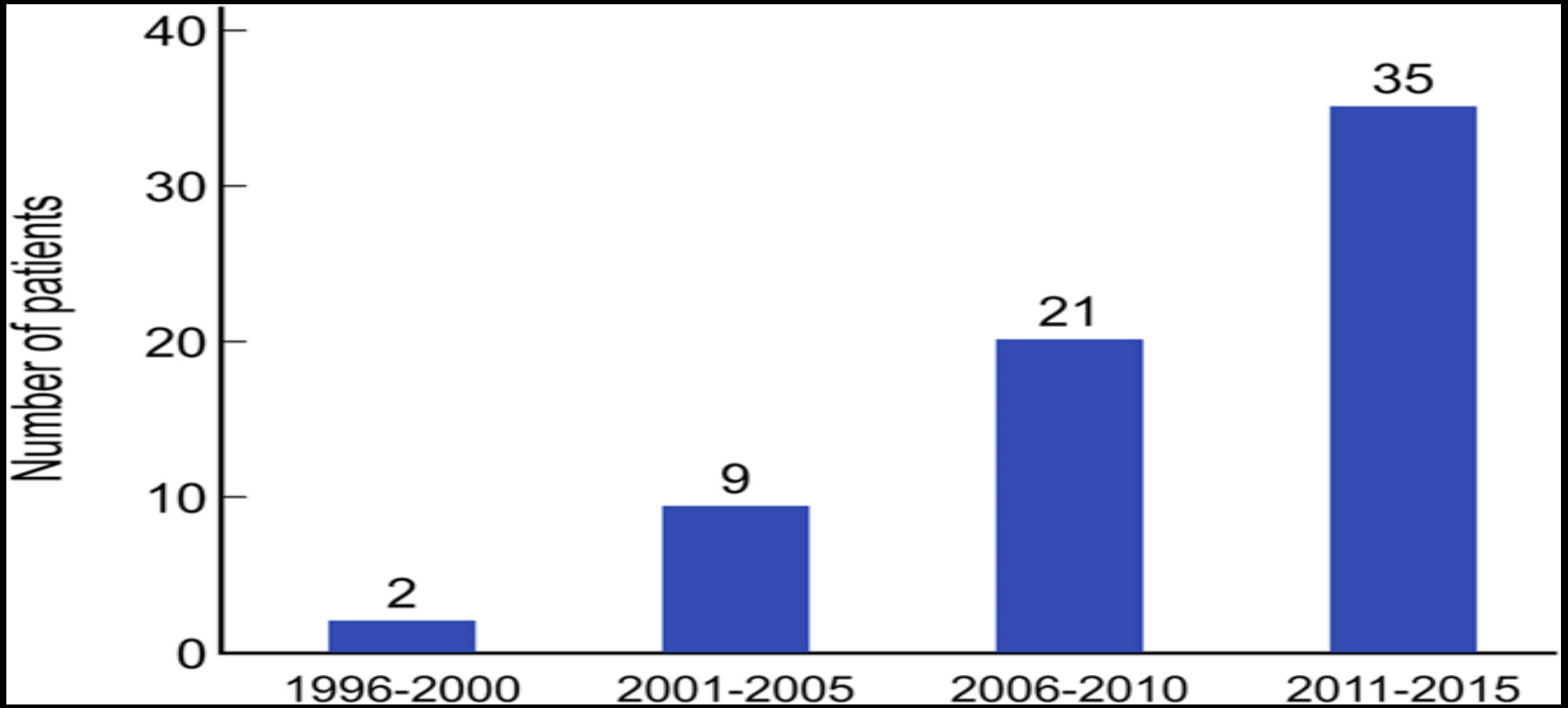
45 PATIENTS AFTER TEVAR*

- MEAN AGE; 54 years
- 61% MALE
- 67% CHRONIC DISSECTION
- 38% MARFAN OR LOEYS-DIETZ SYNDROME
- MEDIAN INTERVAL BETWEEN TEVAR AND SOAP = 11 MONTHS (2-33 MONTHS)

57% HAD SOAP > 1 YEAR AFTER TEVAR

* PATIENTS WITH RETROGRADE AORTIC DISSECTION NOT INCLUDED

INCREASE IN NUMBER OF OPEN REPAIRS AFTER ENDOVASCULAR AORTIC REPAIR



JTCVS 2018;155:10 – 18

OPERATIVE OUTCOMES

EARLY MORTALITY

6.7%

MORBIDITY

- STROKE 0
- SPINAL CORD INJURY 7%
- PULMONARY 22%
- RENAL 4%
- CARDIAC 13%

LATE MORTALITY* 33%

64% IN PATIENTS WITH INFECTION

* MEDIAN FOLLOW-UP=36 MONTHS

JTCVS 2018;155:10 – 18

TEVAR IN PATIENTS WITH MARFAN SYNDROME

(BÖCKLER ET AL, GEFÄßCHIRURGIE 2017;22: S51-57)

7 PUBLICATIONS SUITABLE FOR ANALYSIS

72 PATIENTS

- 4% EARLY MORTALITY
- 20% SUBSEQUENT ENDOVASCULAR PROCEDURE
- 22% SUBSEQUENT OPEN AORTIC PROCEDURE
- 15% LATE MORTALITY AT MEAN FOLLOW-UP OF 32 MONTHS

Conclusions

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- SOAP IS PERFORMED MORE THAN ONE YEAR AFTER TEVAR IN 50% OF PATIENTS; STRINGENT LONG TERM FOLLOWUP IS ESSENTIAL