Role of Direct Segmental Artery Revascularization To Prevent SCI After Endovascular TAAA Repairs: When And How To Do It

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DISCLOSURES

- W.L. Gore & Associates: Consultant, Research Support, Site PI for TAMBE, TBE, OSMB for GREAT registry, Scientific Advisory Board (No personal income, all paid to USC)
- Cook Medical: Consultant, Instructor/Proctor for Zenith Fenestrated, Site PI for ZFEN PLUS
- Medtronic: Consultant
- *Physician-Modified Endografting is an off-label procedure*

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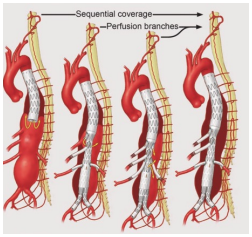
SPINAL CORD ISCHEMIA AFTER TEVAR/FBEVAR

- Cleveland Clinic Experience
  - 1251 patients with endovascular treatment of aortic aneurysms
  - 1998~2010
- 2.8% risk of SCI
  - AAA: 0.3%
  - JRAAA: 0.4%
  - TA: 4.6%
  - TAAA: 4.8%
  - 53mm vs 33mm supraceliac coverage



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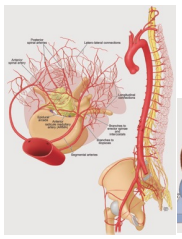
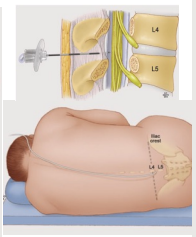
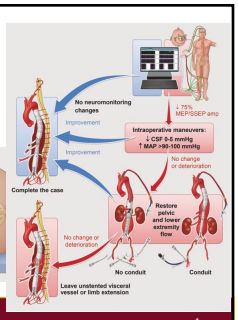
Eagleton MJ, J Vasc Surg 2016.

SCI PREVENTION STRATEGIES







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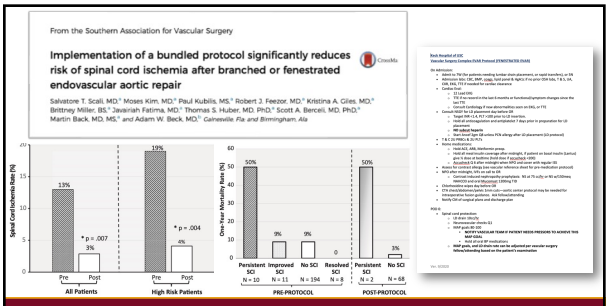

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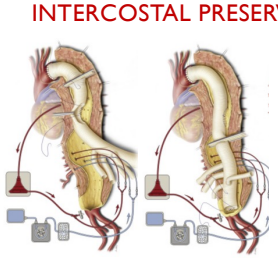
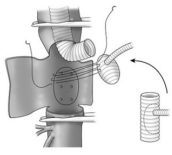
INTERCOSTAL PRESERVATION





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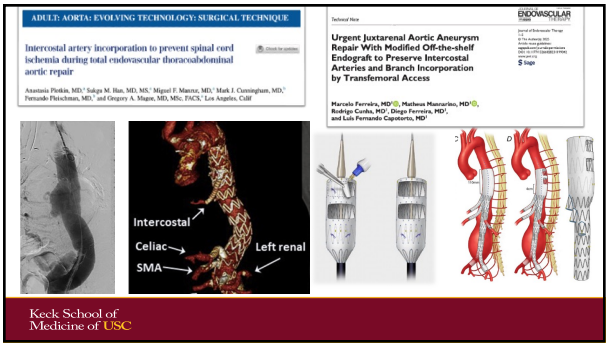

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SEGMENTAL ARTERY FBEVAR

	N= 9
Incorporation Configuration	
Directional Branch	5 (56%)
Stented fenestration	2 (22%)
Unstented fenestration	2 (22%)
Mean Follow-Up (days)	624 +/- 489
SCI	0
Branch Patency	89%

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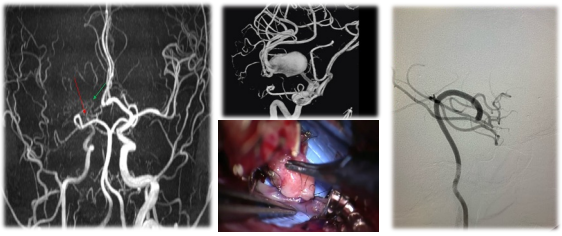
NEUROPROTECTIVE EXTRA-ANATOMIC BYPASS



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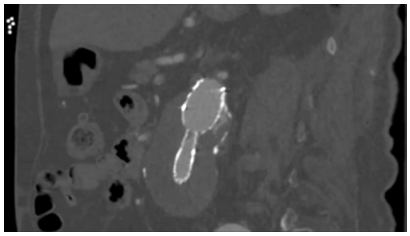

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IDENTIFICATION OF SIGNIFICANT SEGMENTAL ARTERIES TO THE SPINAL CORD

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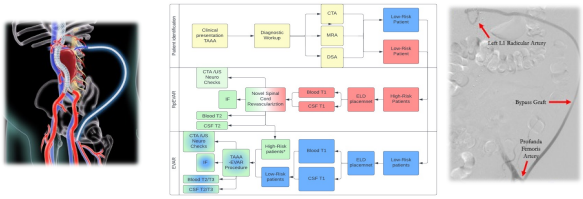
KECK USC NEUROREVASCULARIZATION CENTER



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SUMMARY

- Current SCI mitigation strategies consist of multi-modal augmentation of oxygen delivery via collateral network
- Preservation of segmental artery perfusion is feasible
  - Endovascular incorporation
  - Extra-anatomic bypass
  - Identification of significant contributor to the spinal cord perfusion
- Ideal patient selection, risk/benefit remain to be determined

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ACKNOWLEDGEMENTS

- Jonathan Russin, MD
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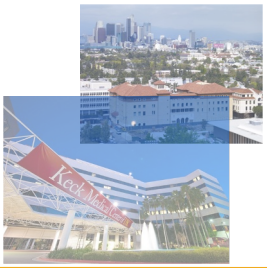

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