


The vascular world is coming together to create a better future. And You're Invited!



**SESSION 41: OPEN AND ENDO TREATMENT OF COMPLEX AAAs (JUXTA, PARA- AND SUPRA-RENAL AND TAAAs: NEW DEVICES FOR THEIR TREATMENT**

**Hybrid Repair of a TAAA (Proximal Endograft + Distal Open Repair – the Upchurch Procedure): When is it Indicated; What are the Advantages and Updated Results?**

**Gilbert R. Upchurch, Jr., MD  
Edward M. Copeland, III, MD and  
Ann & Ira Horowitz Chair of Surgery**

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**TEVAR Followed by Open TAAA (Staged Hybrid)**

Staged hybrid approach using proximal thoracic endovascular aneurysm repair and distal open repair for the treatment of extensive thoracoabdominal aortic aneurysms

Staged hybrid repair of extensive thoracoabdominal aortic aneurysms secondary to chronic aortic dissection

William R. Johnston, MD, Gilbert R. Upchurch, Jr., MD, Margaret C. Frank, MD, Kenneth A. Chen, MD, Scott M. Brink, MD, and John A. Kiser, MD, (collectively, the "Authors"). Reproduction of this article is permitted in printed or electronic form only if the original source is credited. For more information, contact the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, www.copyright.com. © 2014 by the American Association of Thoracic Surgeons. All rights reserved. This article is intended solely for the personal use of the individual user and is not to be disseminated broadly. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or by any information storage or retrieval system, without the prior written permission of the American Association of Thoracic Surgeons. For more information, contact the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, www.copyright.com.

**Treatment Strategy**

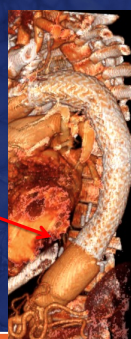
	Extent II/III	Extent IV
Mortality	13-42%	4-24%
Paraplegia	7.5-32%	1 – 6.5%

➔

1. Repair proximal TAAA with dissection first with TEVAR
2. Followed by interval open distal TAAA
  - Eliminates complex high proximal anastomosis
  - Direct inline flow to visceral, renal, spinal branches
  - Distributes spinal cord ischemia over time

**Staged Distal Open Repair**

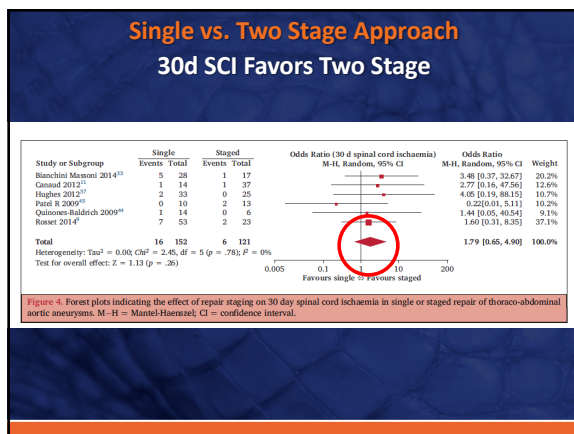
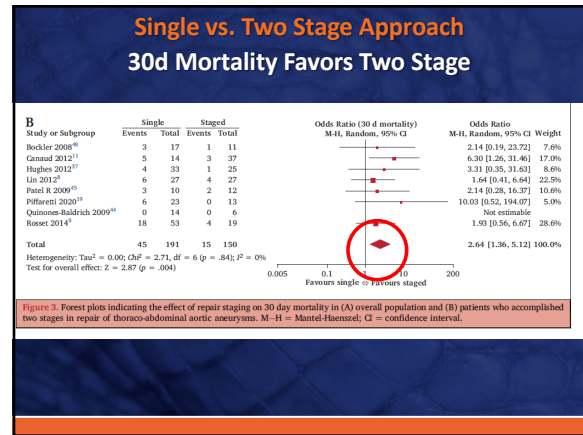
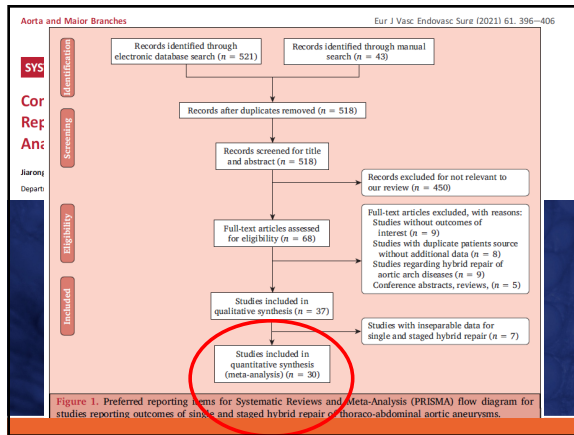
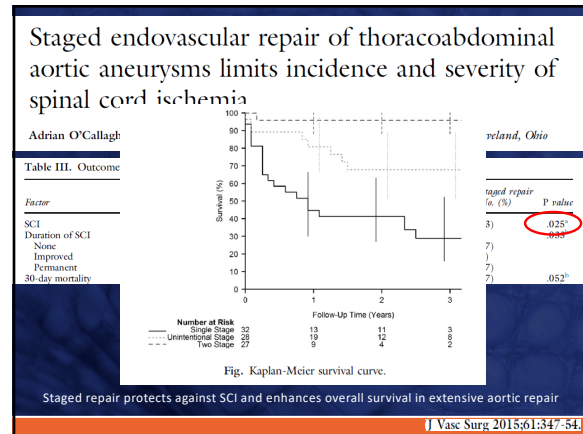
- Aorta and endograft are transected
- Dissection septum is divided to allow endograft expansion
- Tapered aortic wall + endograft sewn directly to graft
- Partial cardiopulmonary bypass, perfusion of mesenteric and renals used




### Combined Mid-Term Outcomes – Stages 1 and 2

TEVAR	(N = 19), No. (%)	Open TAAA repair	(N = 19), No. (%)
Death	0 (0)	Death	0 (0)
Stroke/paraplegia	0 (0)	Stroke/paraplegia	1 (5.2)
Acute kidney injury	1 (5.2)	Acute kidney injury	5 (26.3)
Type I endoleak	2 (10.5)	(Serum creatinine >2 mg/dL)	
Type II endoleak	1 (5.2)	Chronic renal failure	0 (0)

3 patients with baseline renal insufficiency with pre op GFR < 60 returned to their pre op renal functions. All with S Cr < 2mg/dl



### Summary

- Staged hybrid repair viable option for complex TAAA
  - Especially with dissection
- Two staged approach associated with:
  - Decreased mortality
  - Fewer SCI
- Still need to determine optimal time between operations

## STAGED HYBRID REPAIR IMPORTANT TO HAVE IN YOUR TOOLBOX AS A TAAA SURGEON