

Aortic Graft Infection In-line Reconstruction

How Can In-line Flow be Established? Indications, What grafts, and Technical Tips

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Disclosure

- Nothing to disclose
- No relevant financial relationship(s) with any commercial interest that pertains to the content of this presentation



VLFDC Studies: Aortic Graft Infection

- Aortic graft infection: 0.5-6%
- High mortality, limb loss, and recurrent graft infection reported in many patients
- **Debate about optimal treatment**
- Limited series, with low volume of cases and conflicting management advice
- **Five VLFDC studies with >800 patients in 24 institutions throughout the world**



The Use of Cryopreserved Aortoiliac Allograft for Aortic Reconstruction in the United States

On behalf of the *Vascular Low-Frequency Disease Consortium*:

Michael P. Harlander-Locke, MPH, Liv K. Harmon, MD, Peter F. Lawrence, MD, Gustavo S. Oderich, MD, Robert A. McCreedy, MD, Mark D. Morasch, MD, Robert J. Feezor, MD, Wei Zhou, MD, Jean Bismuth, MD, William C. Pevec, MD, Mateus P. Correa, MD, Jeffrey Jim, MD, Joseph S. Ladowski, MD, Panagiotis Kougiyas, MD, Paul G. Bove, MD, Catherine M. Wittgen, MD, and John V. White, MD



220 Patients at 14 institutions

Type of Initial Aortic Procedure	n (%)
Open reconstruction	209 (95%)
Endovascular	11 (5%)

Indication for Use of CAA	n (%)
Prosthetic graft infection	134 (61%)
Aortic infection Adjacent to Graft	35 (16%)
Graft enteric fistula/erosion	33 (15%)
Infection pseudoaneurysm	9 (4%)
Other, including high risk of graft infection	9 (4%)

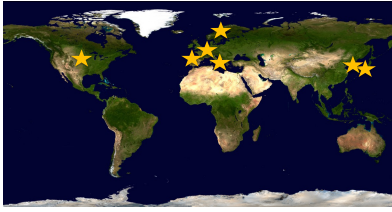


Complete Resection of Aortic Graft Infection

Matthew Janko, Karen Woo, Grant Hubbard, Jonathan Bath, Matthew Smeds, Robert Hacker, Donald Baril, Vikram Kashyap, Peter Lawrence, and Jayar Chung, for the Vascular Low Frequency Disease Consortium



241 patients, 34 institutions, 7 countries



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**In-situ Bypass and Extra-Anatomic Bypass
Result in Similar Survival in Patients with
Secondary Aorto-Enteric Fistula**

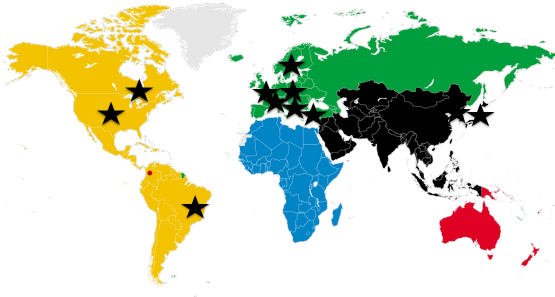
•**Matthew Janko**¹, Robert Hacker², Karen Woo³, Vikram Kashyap¹,
Jonathan Bath⁴, Matthew Smeds⁵, Donald Baril³, Peter Lawrence³, Jayer
Chung⁶

¹University Hospitals Case Western Reserve University School of Medicine, Cleveland, OH,
USA; ²Mercy Health Hospital, Toledo, OH, USA; ³University of California Los Angeles, CA,
USA; ⁴University of Missouri, USA; ⁵Saint Louis University, MO, USA; ⁶Baylor University, TX

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182 patients, 34 institutions, 11 countries



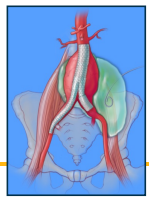
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**Treatment and Outcomes of Aortic
Endograft Infection**

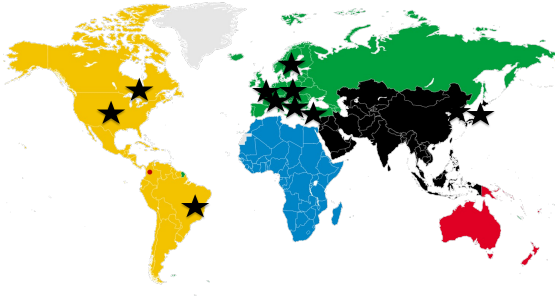
On behalf of the **Vascular Low-Frequency Disease
Consortium:**

Audra A. Duncan, MD, Matthew R. Smeds, MD, Michael P. Harlander-
Locke, MPH, Peter F. Lawrence, MD, Sean P. Lyden, MD, Javairiah Fatima,
MD, Kristofer M. Charlton-Ouw, MD, Mark Morasch, MD, Raghu L.
Motaganahalli, MD, Peter Nelson, MD, Shereene Shalhoub, MD, Paul G.
Bove, MD, J. Gregory Modrall, MD, Victor J. Davila, MD, Nasim Hedayati,
MD, Ahmed Abou-Zamzam, MD, Christopher J. Abularrage, MD, Catherine
M. Wittgen, MD



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206 patients, 27 institutions, 14 countries



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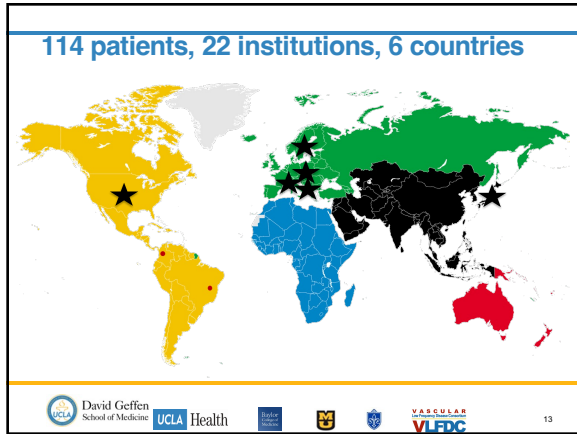
Partial Resection of Aortic Graft Infections

Matthew Janko¹, Karen Woo², Grant Hubbard¹, Megan Mitchell¹,
Jayer Chung³, Peter Lawrence², Vikram Kashyap¹, Robert Hacker⁴,
Jonathan Bath⁵, Matthew Smeds⁴

¹University Hospitals Case Western Reserve University, Cleveland, OH, USA;
²University of California Los Angeles, CA, USA; ³Baylor University, TX, USA;
⁴Saint Louis University, MO, USA; ⁵University of Missouri

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Questions Related to In-line

Treatment of Aortic Graft Infection

1. Are results comparable, better, or worse than extra-anatomic bypass?
2. Do you need to remove the entire infected graft?
3. Are there are differences in outcome if the AGI is due to endograft or AEF infection?
4. What are the techniques to prevent AGI infection recurrence?

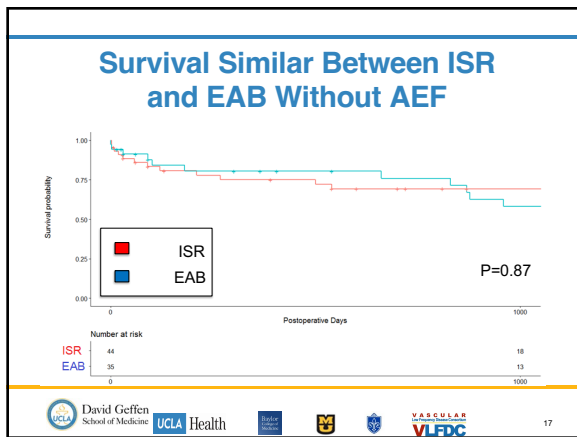
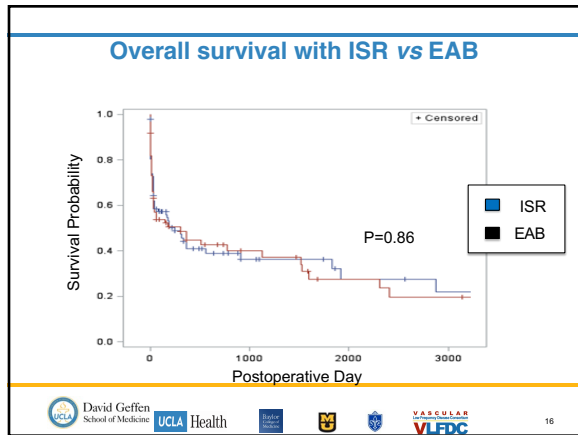
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Questions Related to In-line

Treatment of Aortic Graft Infection

1. Are results comparable, better, or worse than extra-anatomic bypass?

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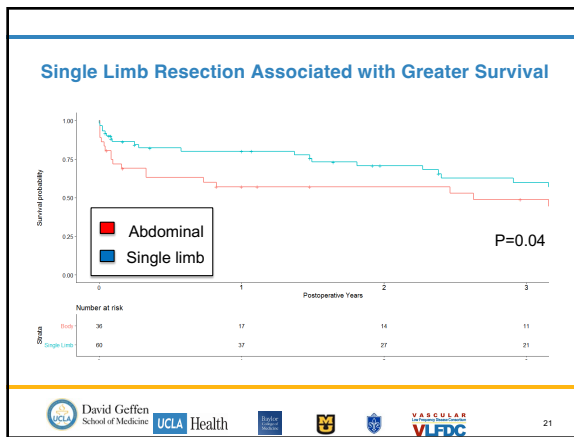
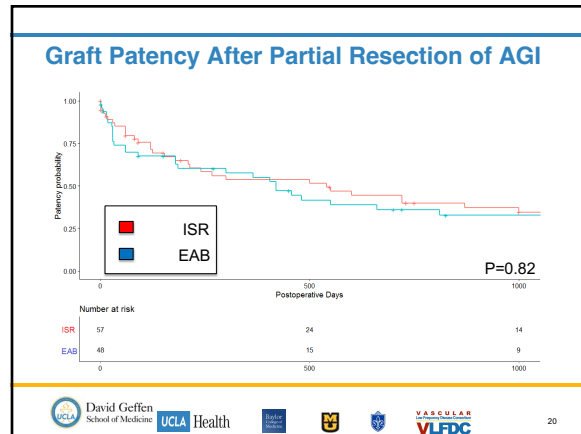
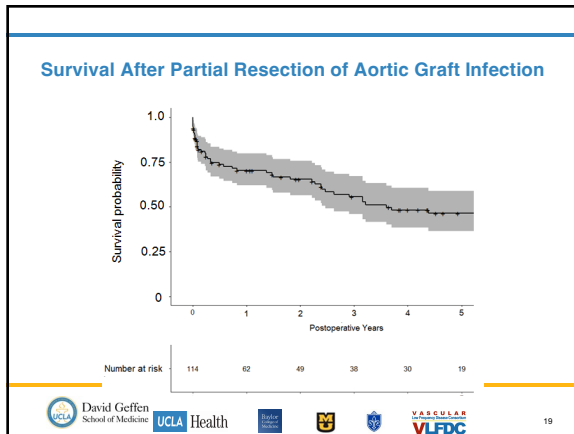


Questions Related to In-line

Treatment of Aortic Graft Infection

2. Do you need to remove the entire infected graft?

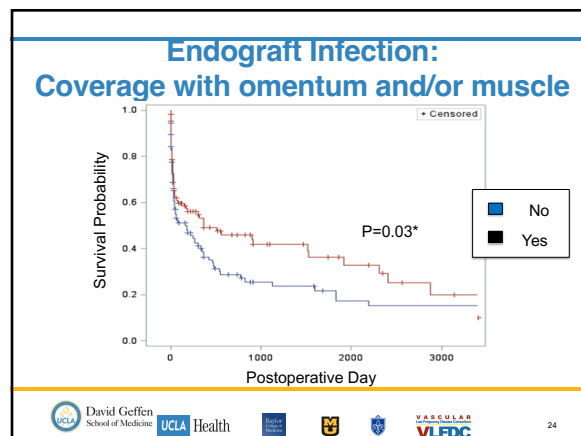
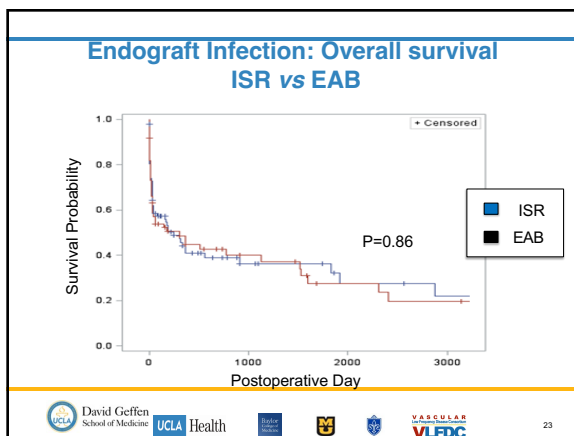
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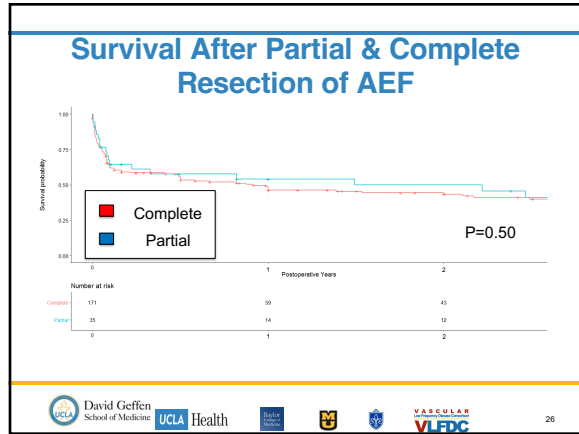
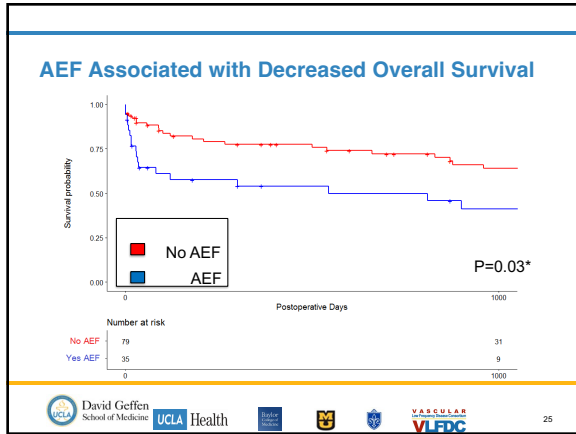


Questions Related to In-line Treatment of Aortic Graft Infection

3. Are there are differences in outcome if the AGI is due to endograft or AEF?

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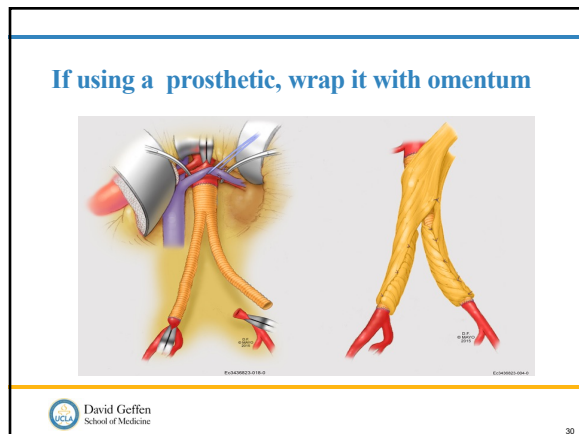
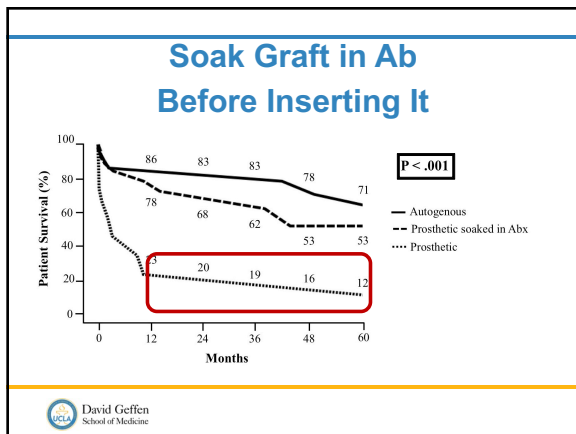
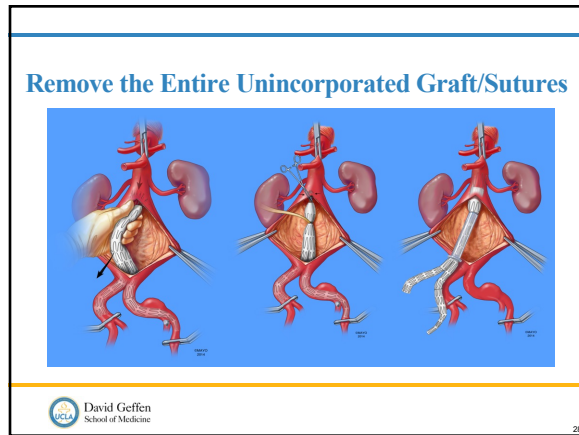




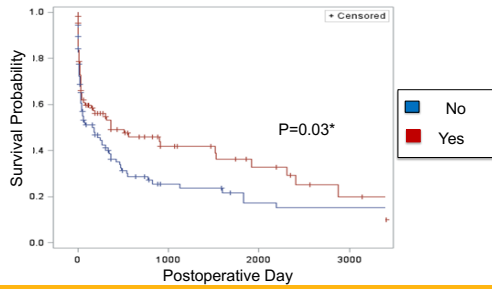
Questions Related to In-line Treatment of Aortic Graft Infection

4. What are the techniques to prevent AGI infection recurrence?

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Aortic coverage with omentum/muscle



Conclusions

- In-line reconstruction is comparable to extra-anatomic bypass mortality and graft patency
- AEF has higher mortality; endograft does not
- When using in-line reconstruction, remove entire infected, unincorporated graft
- Partial resection of single limb graft infection has a lower mortality than entire graft removal
- Soak prosthetic grafts in Ab before insertion
- Wrap prosthetic grafts with omentum