

Step by Step: Launching a Ross Program

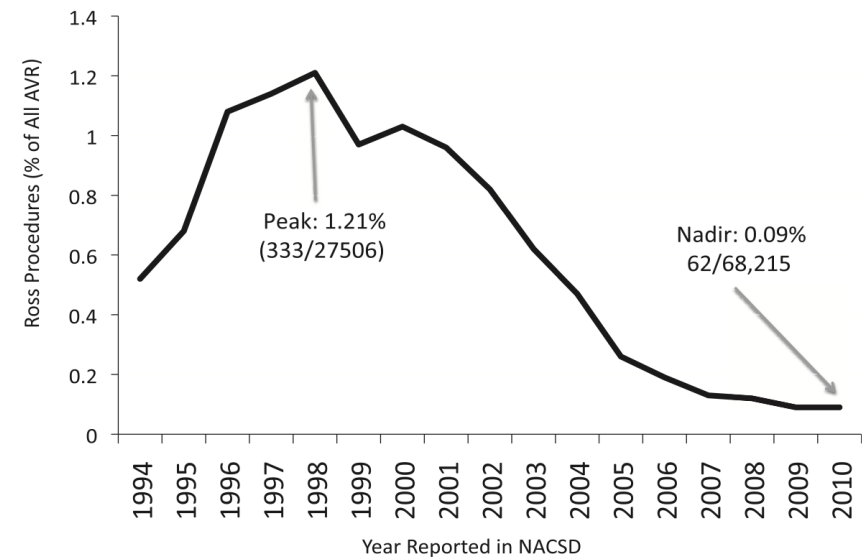
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Disclosures

- Edwards Lifesciences - consultant

The Ross procedure in context

- The Ross procedure replaces the lowest morbidity and mortality operation in cardiac surgery – AVR in the young
- Significant skepticism in the community:
 - “Operative Risk is Higher”
 - “They don’t last. All patients need reop within 20 years”
 - ”Replaces 1-valve disease with 2-valve disease”
 - “Just do a tissue AVR and then ViV”



Starting a Ross program

- Technical
- Programmatic
- Referral



Technical aspects

- Watch a high-volume Ross surgeon
 - Ismail El-Hamamsy (Mount Sinai)
 - Hans-Joachim Schäfers (Universitätsklinikum des Saarlandes)
 - Chris Burke (University of Washington)
- Master the Ross literature
- Iron out which version of the Ross you will do



Technical aspects

- Enlist a partner
 - 2/3rds of Ross' are done by 2 attendings
- Practice!!!
 - Pig Ross
 - Pulmonary autograft harvest
 - Master the rhythm of the operation
 - Human heart Ross
 - Pig Ross is a good approximation, but not perfect
 - Pulmonary tissue is much more fragile in humans



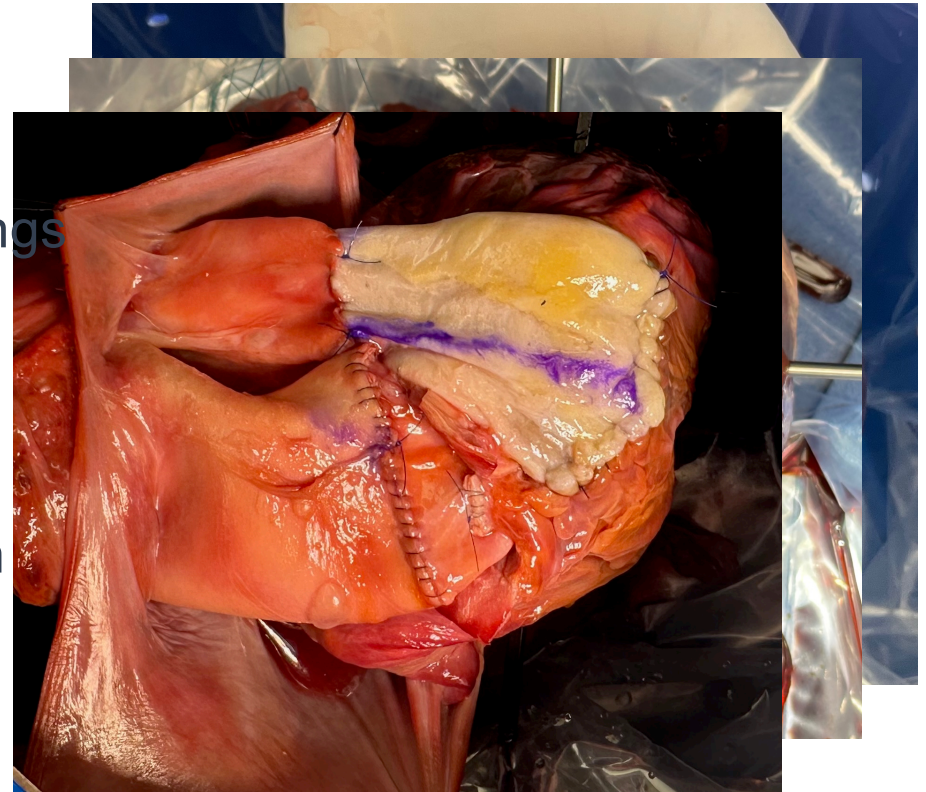
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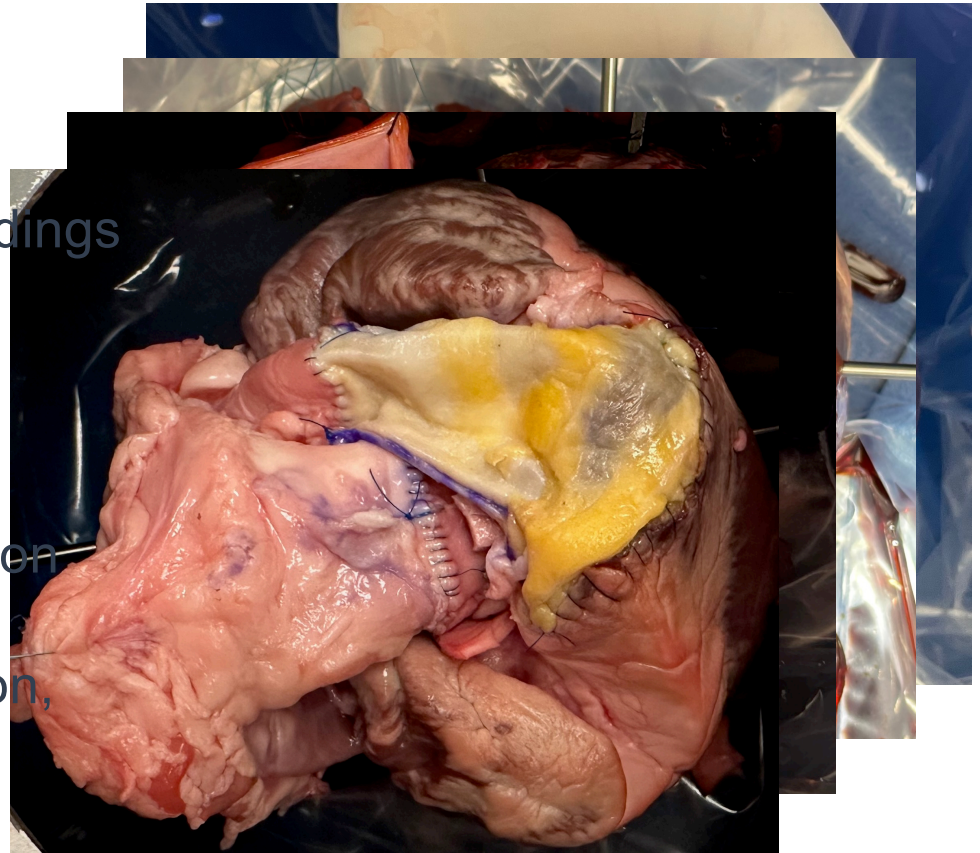
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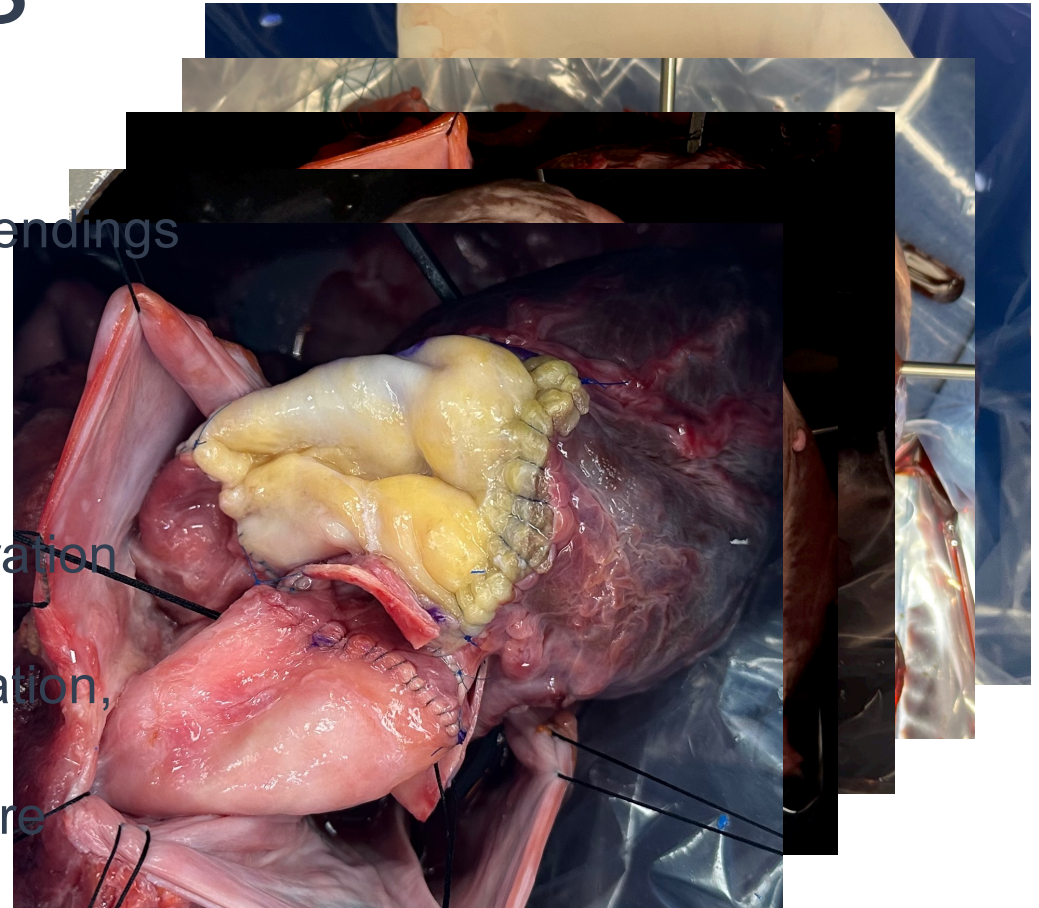
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Programmatic Aspects

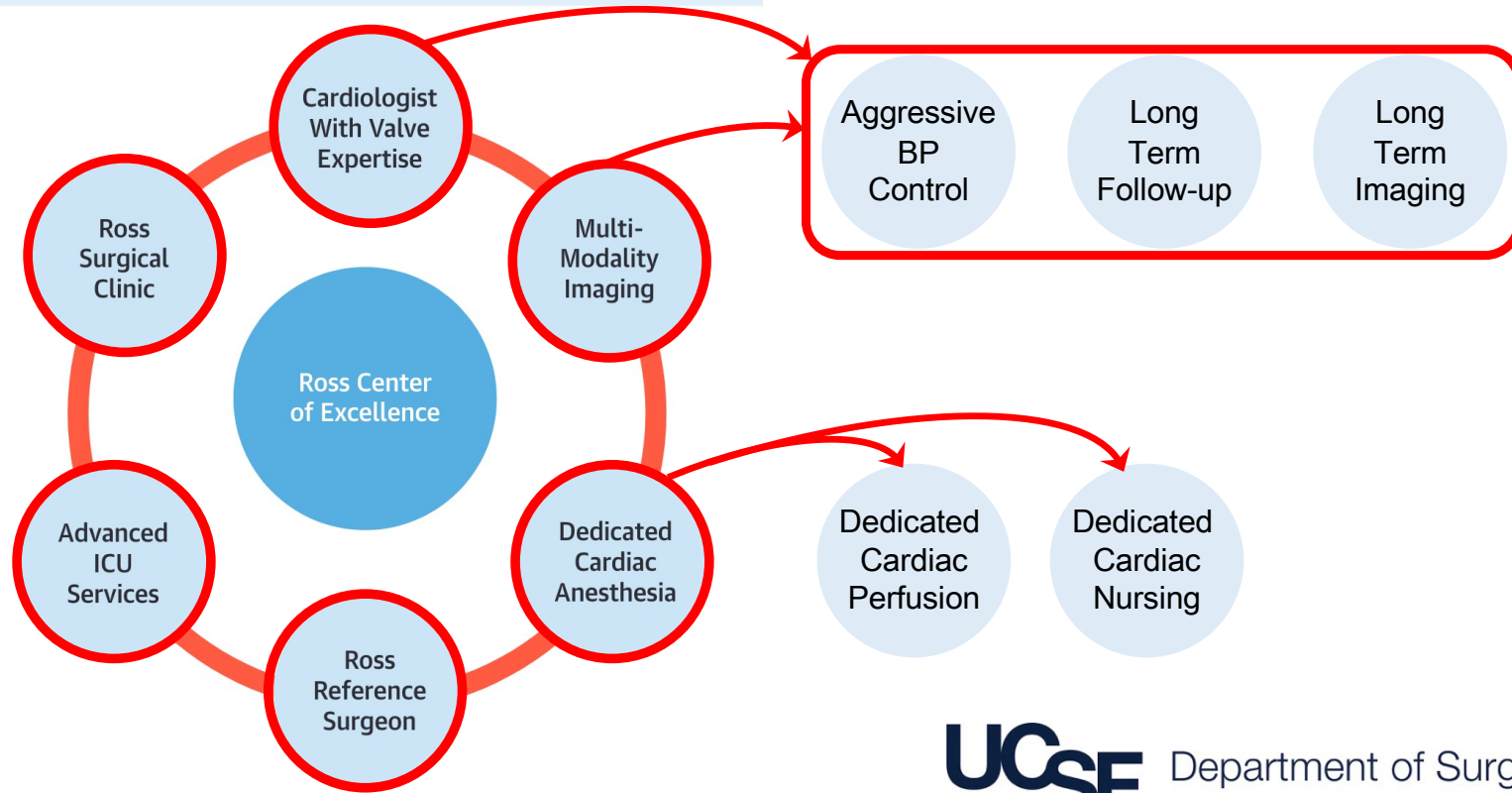
EDITORIAL COMMENT

The Ross Procedure

Clinical Relevance, Guidelines Recognition, and Centers of Excellence*

Ismail El-Hamamsy, MD, PhD,^a Patrick T. O’Gara, MD,^b David H. Adams, MD^a

FIGURE 1 Key Components of a Ross Center of Excellence



Programmatic Aspects

- Create a team – anesthesia, perfusion and nursing
- Anesthesia
 - TEE – pulmonary valve and autograft evaluation
 - Post-pump blood pressure management
 - Anesthesia Grand Rounds by Menachem Weiner (Mount Sinai)
- Perfusion
- Nursing
- Critical care



Referral

- Support from your boss and partners
 - Tom Nguyen
- Cardiologists
 - Pick a cardiology partner
 - Give talks
 - UCSF and ZSFG Cardiology GR
- Social media and marketing

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Ross Procedure the Right Choice for Active Patient With Aortic Stenosis



February 17, 2023



UCSF Department of Surgery

First cases – Nov 17&18, 2022

- Pick the right case
 - AS > AI
 - Non-redo
 - No annular dilation
 - Normal EF
 - No concomitant procedures
- Bring a proctor
- Have attending help



First year

- 12 cases
 - 10 aortic valve repairs
- Mortality – 0%
- Afib – 16%
- Prolonged intubation – 0%
- Renal failure – 0%
- Stroke – 0%
- Readmission – 8%
- Pulmonary autograft AI:
 - None/trace – 84%
 - Mild – 16%
 - Mod or sev – 0%



Summary

- Very doable operation
 - Pulmonary autograft is fragile and unforgiving
- Technical
 - Practice is key
- Programmatic
 - Create a dedicated Ross team
- Referral
 - Outreach and education
 - Focus on good results

Thank you!

