

How to start an aortic valve repair program? 😊

Reconstruction of the Aortic Valve and Root: A practical approach, Homburg/Saarland

Jan Vojacek, M.D., Ph.D.

Professor of Cardiac Surgery

Department of Cardiac Surgery, University Hospital Hradec Kralove

Czech Republic



I.

I have received (a) research grant(s) / in kind support

A

... from current sponsor(s)

YES

NO

B

... from any institution

YES

NO

II.

I have been a speaker or participant in accredited CME/CPD ...

A

... from current sponsor(s)

YES

NO

B

... from any institution

YES

NO

III.

I have been a consultant / strategic advisor etc. ...

A

... for current sponsor(s)

YES

NO

B

... for any institution

YES

NO

IV.

I am a holder of (a) patent / shares / stocks or ownership...

A

... related to presentation

YES

NO

B

... not related to presentation

YES

NO

SCORE: 3

How to start an aortic valve repair program? 😊

Reconstruction of the Aortic Valve and Root: A practical approach, Homburg/Saarland

Jan Vojacek, M.D., Ph.D.

Professor of Cardiac Surgery

Department of Cardiac Surgery, University Hospital Hradec Kralove

Czech Republic



AORTIC VALVE REPAIR: How to start

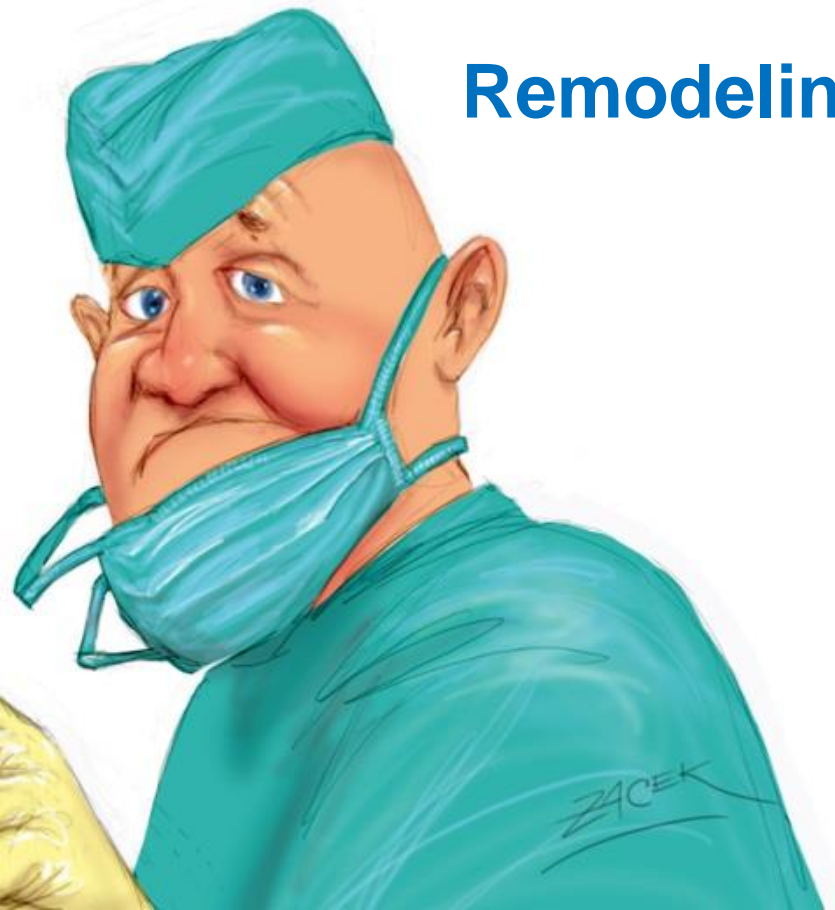
Should I invite prof.
Schäfers or prof. El
Khoury??

Repair or replacement?

Bicuspid or tricuspid?

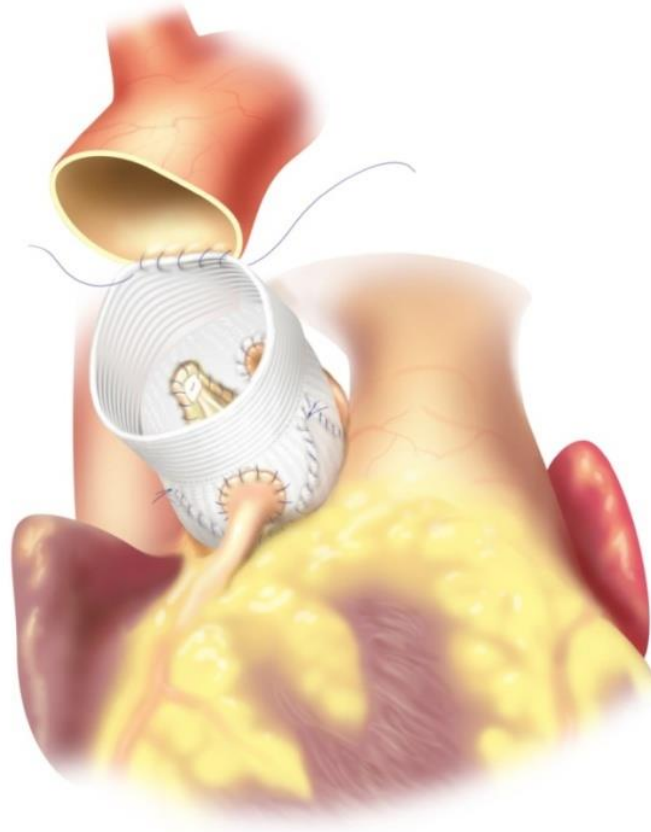
Reimplantation?

Remodeling?



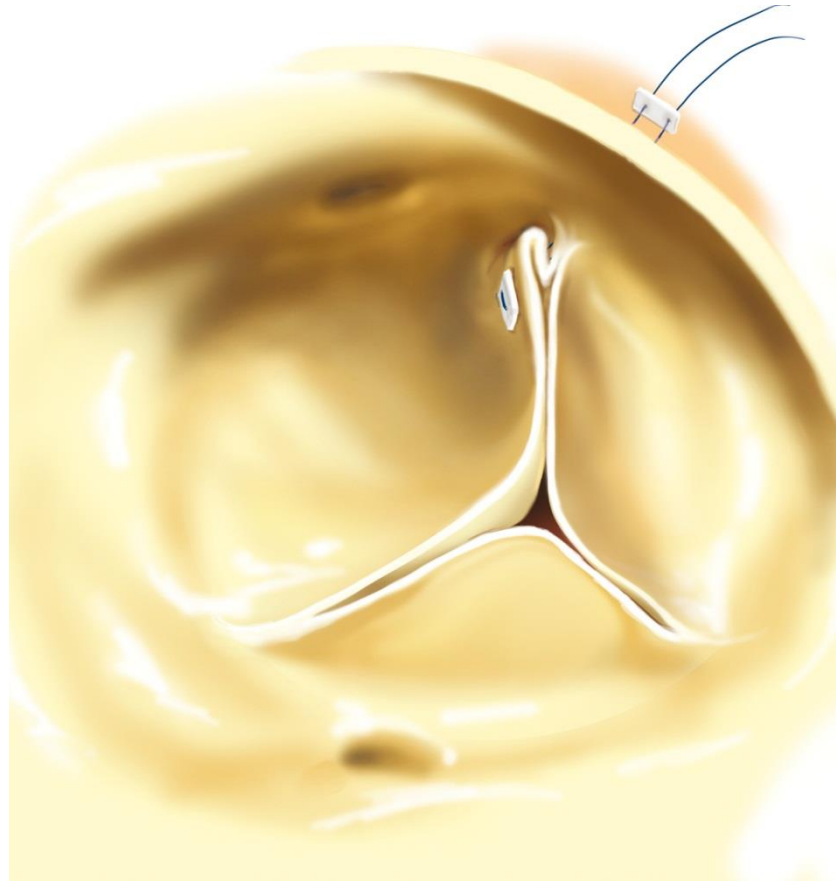
AORTIC VALVE REPAIR:

How to start



AORTIC VALVE REPAIR:

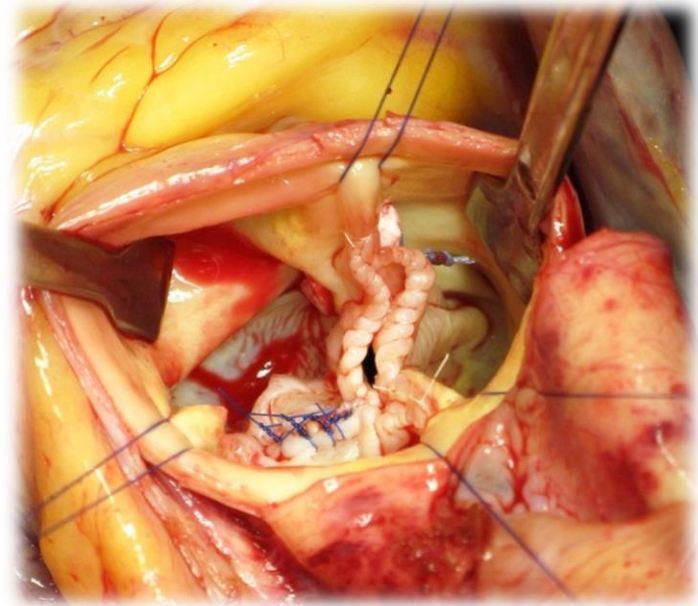
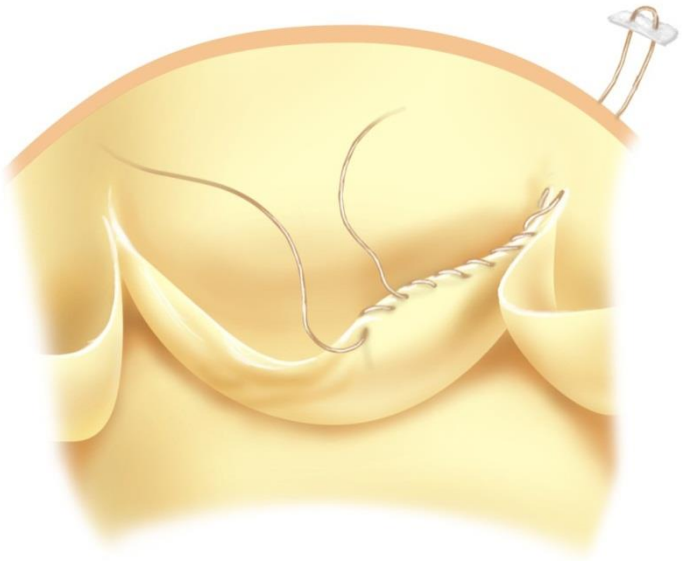
How to start



Paracommissural plication according to TRUSLER

AORTIC VALVE REPAIR:

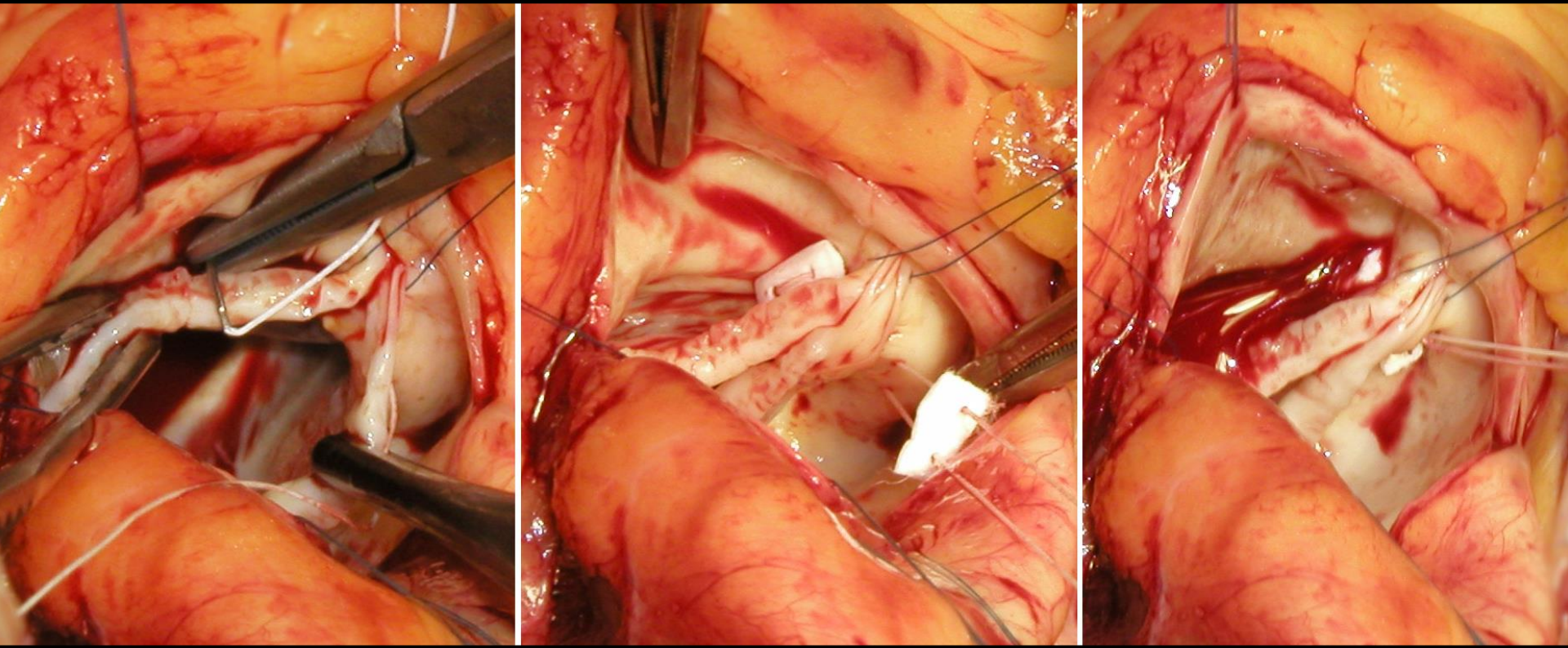
How to start



Reinforcement of the free margin with PTFE

AORTIC VALVE REPAIR:

How to start



Subcommissural plication according to Cabrol

AORTIC VALVE REPAIR:

How to start

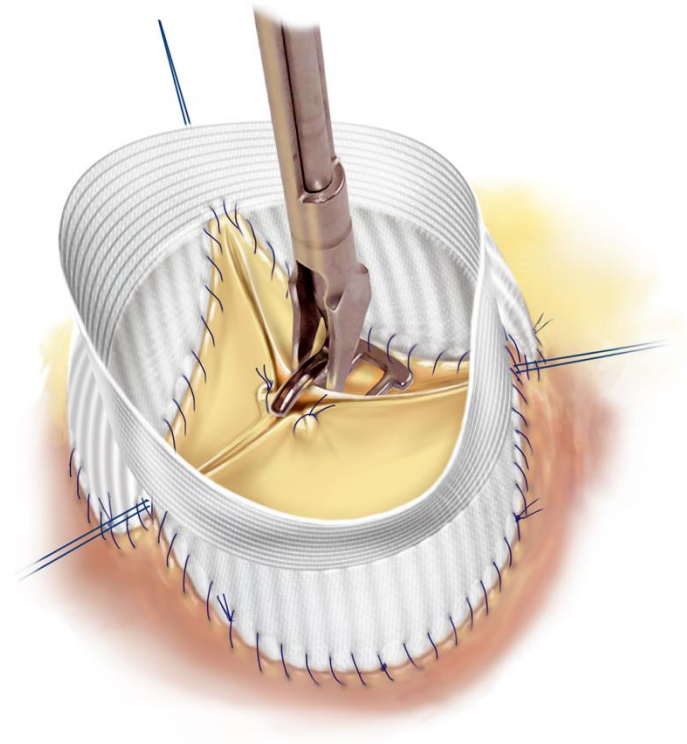
Residual prolapse

Induced prolapse

AORTIC VALVE REPAIR: How to start

Residual prolapse

Induced prolapse



AORTIC VALVE REPAIR: How to start

Residual prolapse

Induced prolapse



AORTIC VALVE REPAIR:

How to start

Reconstruction of the Aortic Valve and Root:
A Practical Approach
DVD



Module 1: Aortic Valve Repair

University Hospital of Saarland, Homburg/Saar, Germany

June 5th/6th, 2008

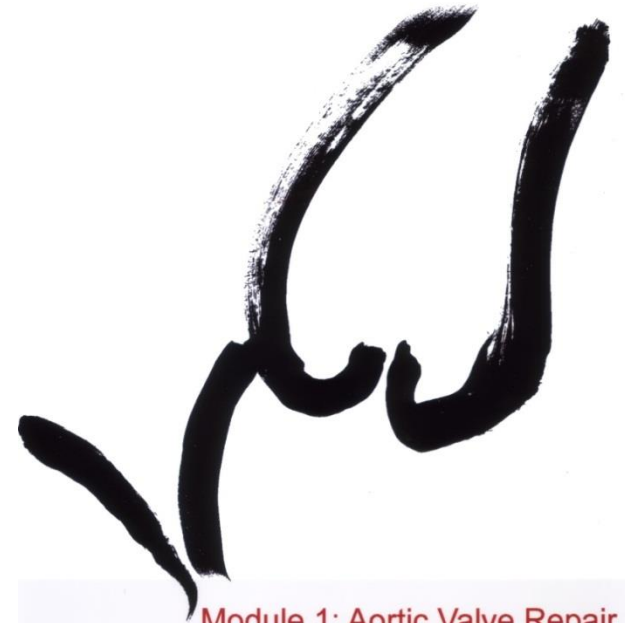
AORTIC VALVE REPAIR:

How to start

Participate in
the workshops

Reconstruction of the Aortic Valve and Root:
A Practical Approach

DVD



Module 1: Aortic Valve Repair

University Hospital of Saarland, Homburg/Saar, Germany

June 5th/6th, 2008

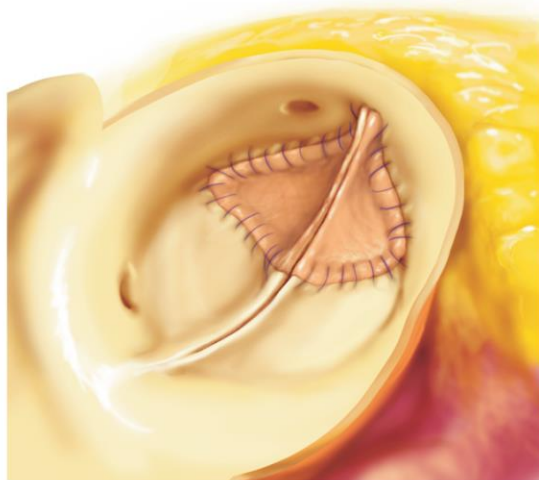
AORTIC VALVE REPAIR:

How to start

**Kardiochirurgická klinika LF a FN Hradec Králové si Vás dovoluje pozvat na přednášku
prof. Hanse Joachima Schäferse z University Hospitals of Saarland, Homburg**

Aortic valve repair - alternative to replacement?

Přednáška bude spojena s živým přenosem z operačního sálu - 2 záchovné operace unikuspidální aortální chlopně.



13. srpna 2010 v 8.30

Konferenční místnost Bedrnova pavilónu (1. patro)
Fakultní nemocnice Hradec Králové



Edwards Lifesciences

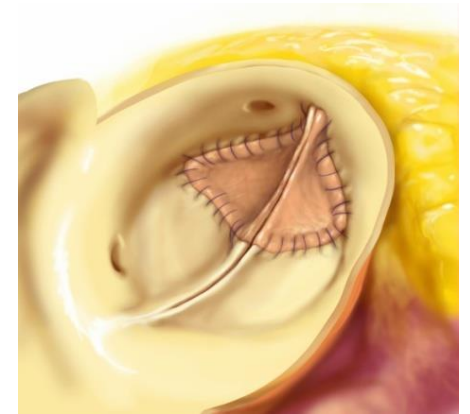
Za organizační výbor
doc. MUDr. Jan Harrer, CSc.
doc. MUDr. Jan Vojáček, Ph.D.



KARDIOCHIRURGIE
Hradec Králové

AORTIC VALVE REPAIR:

How to start



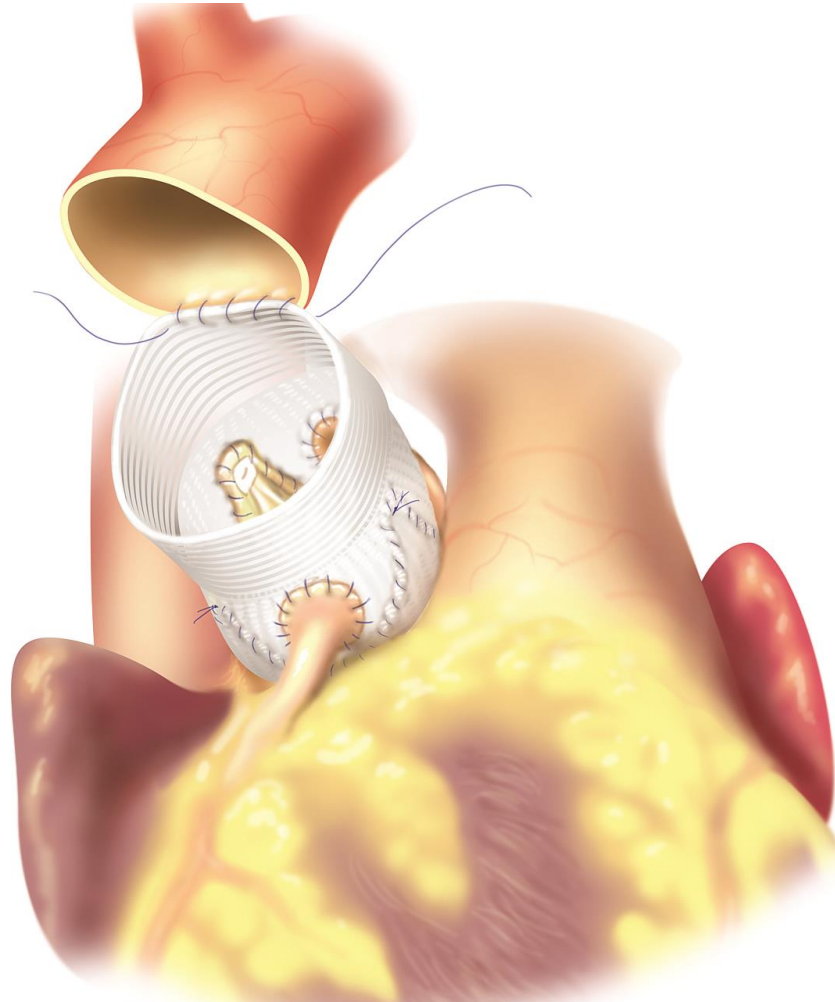
AORTIC VALVE REPAIR:

How to start



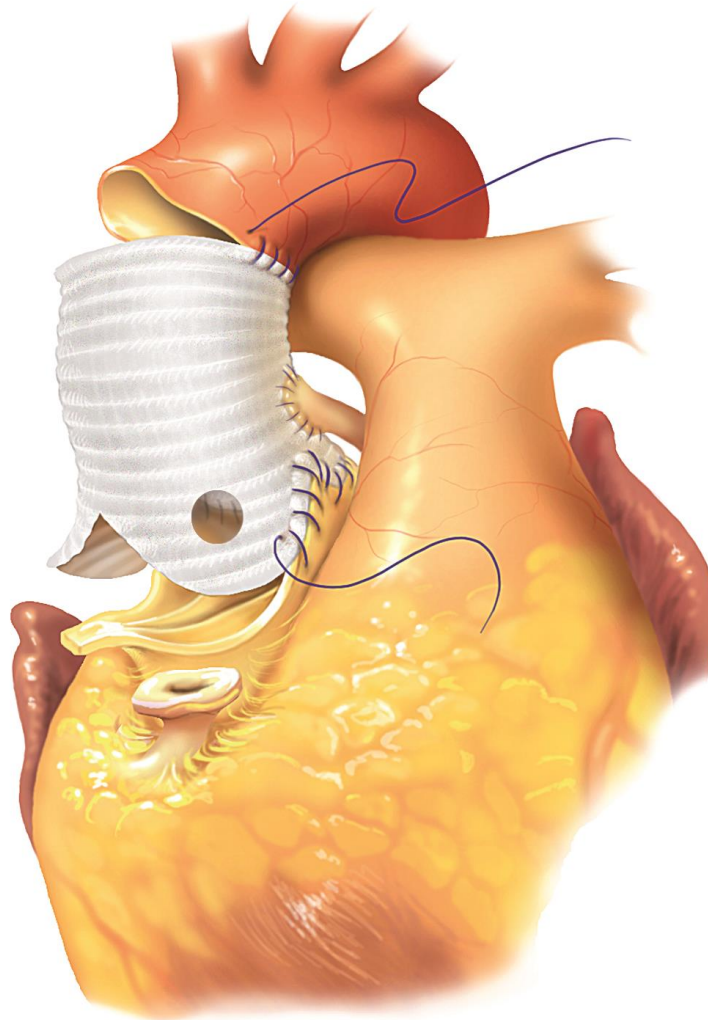
AORTIC VALVE REPAIR:

How to start

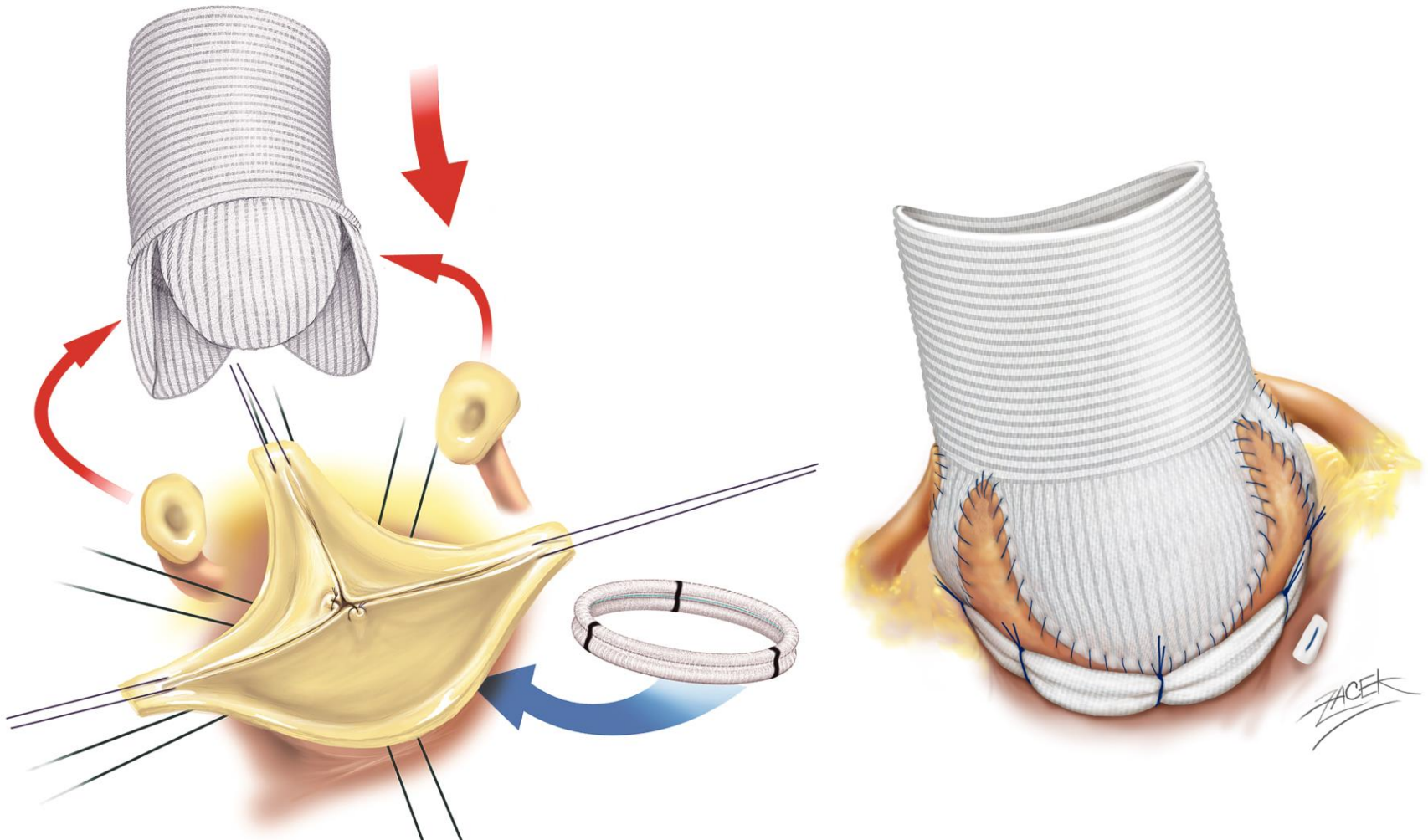


AORTIC VALVE REPAIR:

How to start

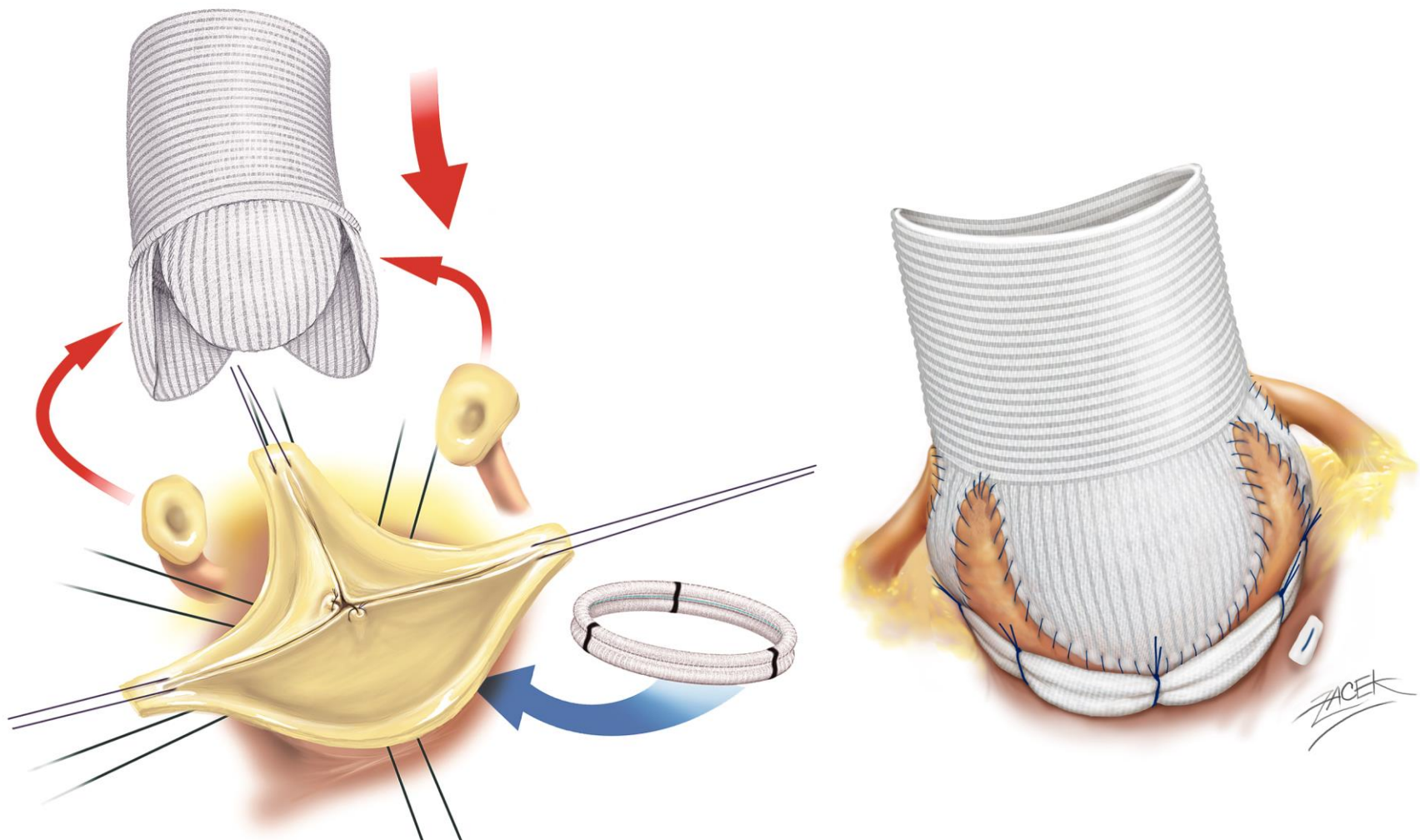


AORTIC VALVE REPAIR: How to start



AORTIC VALVE REPAIR:

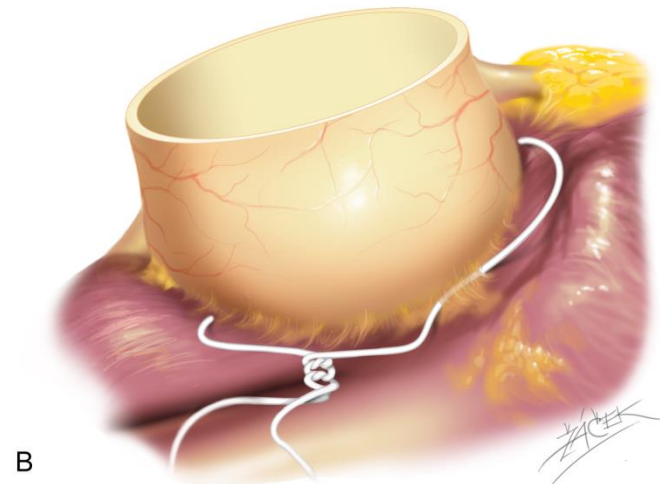
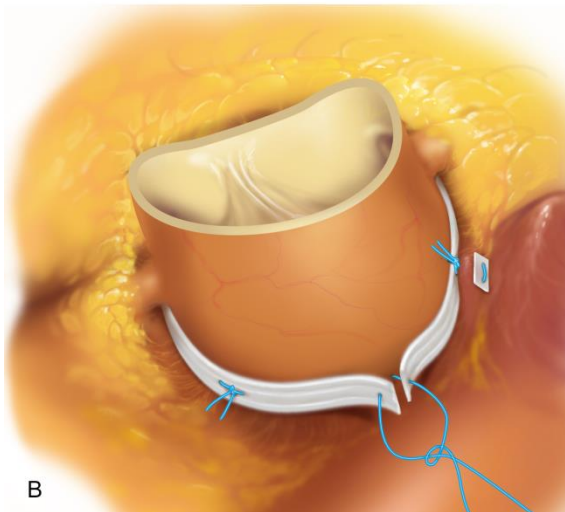
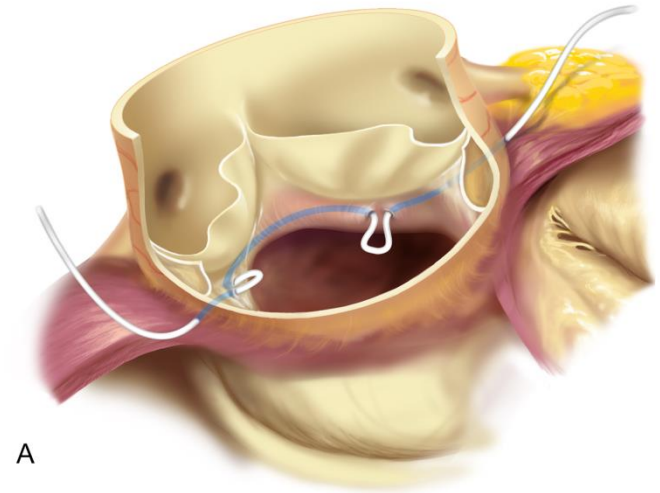
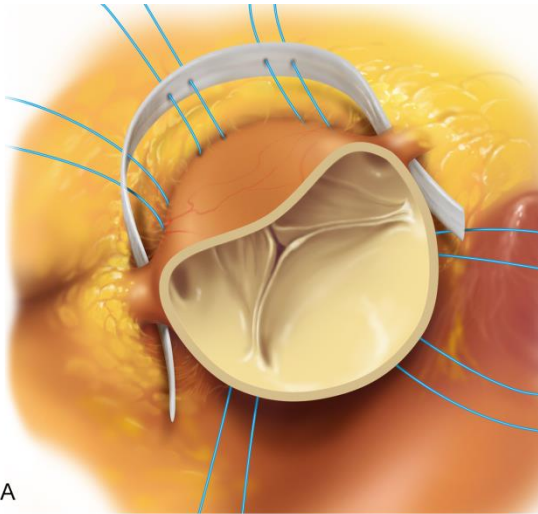
How to start



Procedure of choice in the last 57 patients

AORTIC VALVE REPAIR:

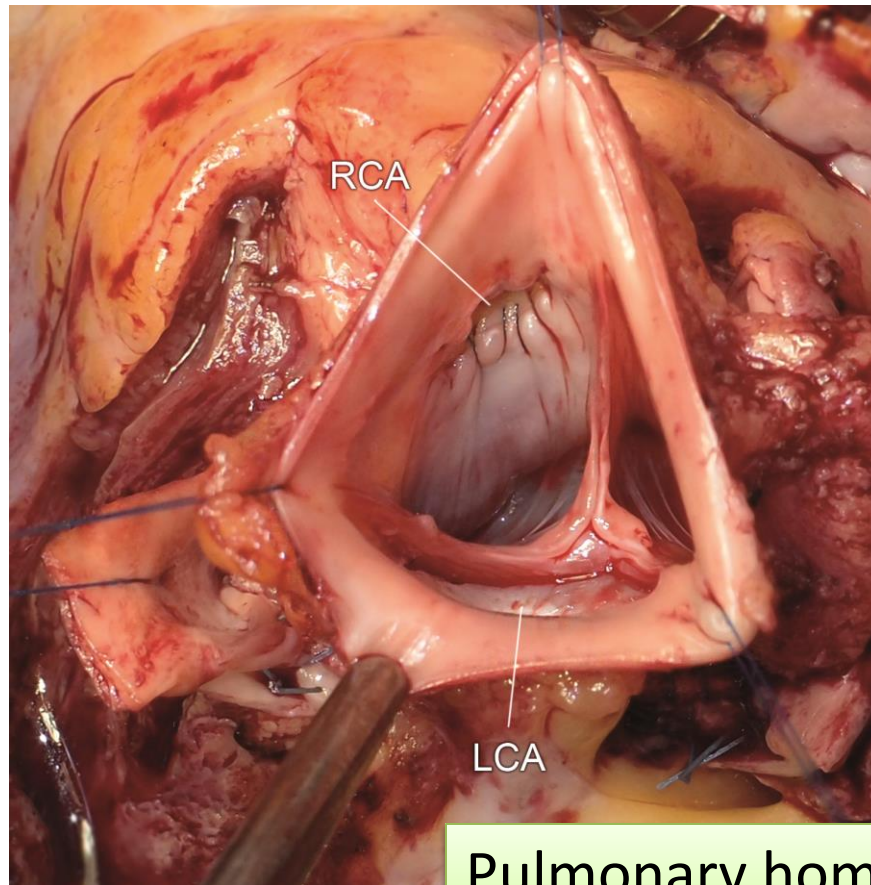
How to start



AORTIC VALVE REPAIR:

How to start

The Ross procedure



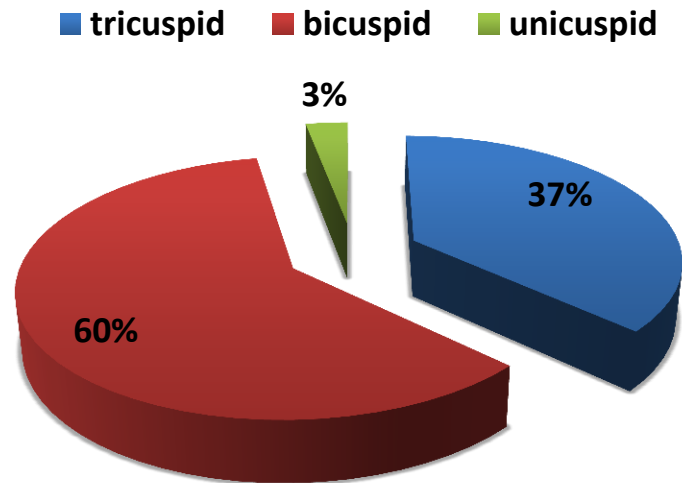
Pulmonary homograft on site!

AORTIC VALVE REPAIR:

How to start

- **N: 168 patients**
 - 10/2007 – 6/2016
 - Ø age $50,5 \pm 13$ (23 – 77)

Type of aortic valve



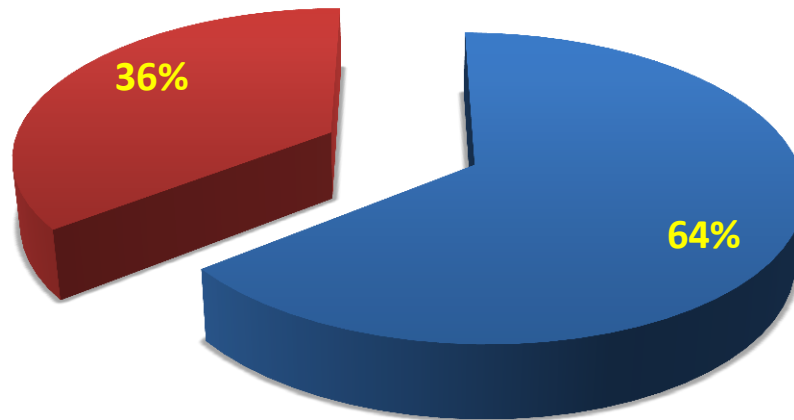
AORTIC VALVE REPAIR:

How to start

- **N: 168 patients**
 - 10/2007 – 6/2016
 - Ø age $50,5 \pm 13$ (23 – 77)

Type of the procedure

■ ascending aorta replacement+valve repair ■ isolated aortic valve repair



AORTIC VALVE REPAIR:

How to start

- **N: 168 patients**
 - 10/2007 – 5/2016
 - Ø age 50,5 ± 13 (23 – 77)
- Hospital mortality: 0%
- Ø follow-up: Ø 46 months (1-106)
- Survival: 99%
 - 2 late death (1x cardiac related)
- Freedom from ReDo **92%** (**13 reoperations**)
 - in hospital mortality for ReDo 0%

The long-term results of VSARR

Table 2. Linearized Occurrence Rates of Late Outcome Events

Pooled Late Outcome Events	LOR + 95% CI	Heterogeneity (I^2)	Included Studies (n)
Late mortality	1.53 (1.19–1.96)	82.6	31
Reoperation on aortic valve	1.32 (1.0–1.74)	72.3	31
Hemorrhage	0.23 (0.13–0.42)	78.7	26
Thromboembolism	0.41 (0.22–0.77)	27.6	26
Endocarditis	0.23 (0.11–0.51)	0.00	30
MAVRE	1.66 (1.24–2.23)	100	20

Arabkhani et al. **Reported Outcome After Valve-Sparing Aortic Root Replacement for Aortic Root Aneurysm: A Systematic Review and Meta-Analysis.** Ann Thorac Surg 2015 Sep;100(3):1126-31.

The long-term results of VSARR

Table 2. Linearized Occurrence Rates of Late Outcome Events

Pooled Late Outcome Events	LOR + 95% CI	Heterogeneity (I^2)	Included Studies (n)
Late mortality	1.53 (1.19–1.96)	82.6	31
Reoperation on aortic valve	1.32 (1.0–1.74)	72.3	31
Hemorrhage	0.23 (0.13–0.42)	78.7	26
Thromboembolism	0.41 (0.22–0.77)	27.6	26
Endocarditis	0.23 (0.11–0.51)	0.00	30
MAVRE	1.66 (1.24–2.23)	100	20

Risk of ReDo: **13% at 10 years**

Arabkhani et al. **Reported Outcome After Valve-Sparing Aortic Root Replacement for Aortic Root Aneurysm: A Systematic Review and Meta-Analysis.** Ann Thorac Surg 2015 Sep;100(3):1126-31.

The long-term results of VSARR

Table 2. Linearized Occurrence Rates of Late Outcome Events

Pooled Late Outcome Events	LOR + 95% CI	Heterogeneity (I ²)	Included Studies (n)
Late mortality	1.53 (1.19–1.96)	82.6	31
Reoperation on aortic valve	1.32 (1.0–1.74)	72.3	31
Hemorrhage	0.23 (0.13–0.42)	78.7	26
Thromboembolism	0.41 (0.22–0.77)	27.6	26
Endocarditis	0.23 (0.11–0.51)	0.00	30
MAVRE	1.66 (1.24–2.23)	100	20

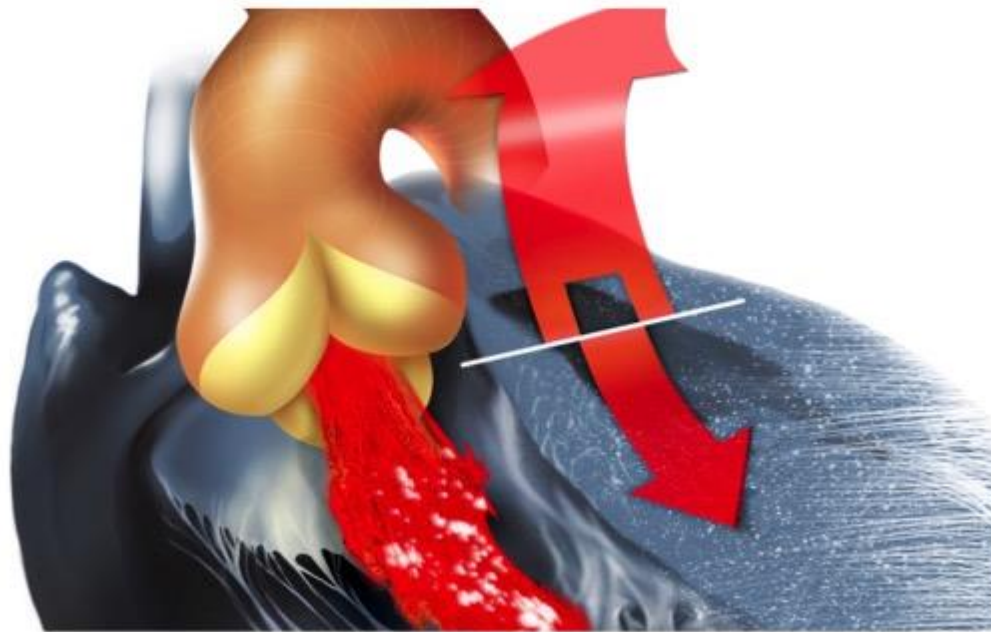
Freedom from ReDo: **87% at 10 years**

Freedom from ReDo: **92% (13 reoperations)**

Arabkhani et al. **Reported Outcome After Valve-Sparing Aortic Root Replacement for Aortic Root Aneurysm: A Systematic Review and Meta-Analysis.** Ann Thorac Surg 2015 Sep;100(3):1126-31.

Aortic regurgitation

J. Vojacek, P. Zacek, J. Dominik



GRADA 2016

ovascular Disorders

Surg 2016;■:■-■) SS
Thoracic Surgeons

Mark

Root
y,

bradek, MD,
D, EBCR,

An Ex
Remo
Effecti
Three-

Tomas Ho
Martin De
Pavel Zace

AORTIC VALVE REPAIR:

How to start

Suggestions??

AORTIC VALVE REPAIR:

How to start

Strong believe



AORTIC VALVE REPAIR:

How to start

Strong believe



AORTIC VALVE REPAIR:

How to start

**Get support of
your chief**



AORTIC VALVE REPAIR:

How to start


**Participate in
the workshops**

AORTIC VALVE REPAIR:

How to start

**Participate in
the workshops**

*la pratica dev' essere edificata sopra la buona teorica
(Practice must always be founded on sound theory)
Leonardo Da Vinci*




PROGRAM
PROGRAM

**Reconstruction of the Aortic Valve and Root
A practical approach**

■ **Wednesday, September 14th to Friday, September 16th, 2016**

Location
**University Hospital of Saarland
Homburg/Saar, Germany**

Chairman
Prof. Hans-Joachim Schäfers



UKS
Universitätsklinikum
des Saarlandes

AORTIC VALVE REPAIR:

How to start

Participate in
the workshops



AORTIC VALVE REPAIR SUMMIT

1ST-3RD JULY / BRUSSELS - BELGIUM

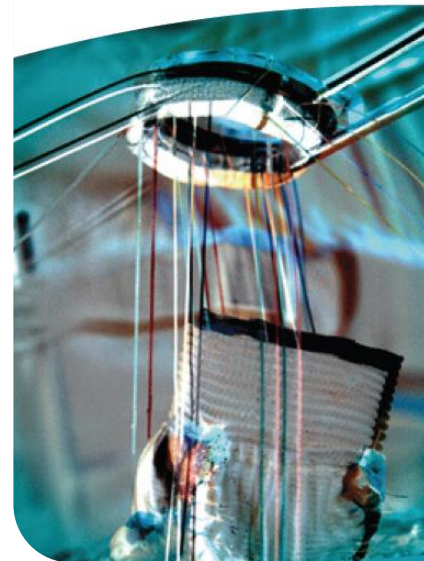
BRINGING TOGETHER THE DIFFERENT SCHOOLS OF THOUGHT IN AV REPAIR

AORTIC VALVE REPAIR:

How to start

Participate in
the workshops

INVITATION **June 21-22, 2012** **AORTIC VALVE REPAIR :** A STEP BY STEP APPROACH



Dear Colleagues,

We are pleased to invite you to the second edition of **Aortic Valve Repair: a step by step approach**. This two day session will focus on the management of dystrophic aortic roots, from echocardiographic analysis to a standardized and physiological approach to aortic valve repair. Our aim is to question current knowledge through lectures from international faculty, live-on-tape surgeries, short videos from difficult cases, management of intraoperative failures and reoperations.

We look forward to your participation during the interactive discussions on the evolving field of aortic valve repair.

Emmanuel Lansac, MD,
on behalf of the scientific committee

committee
on behalf of the scientific
Emmanuel Lansac, MD

workshop
workshop and of aortic valve
interactive discussions on the
participation during the
we are pleased to invite you

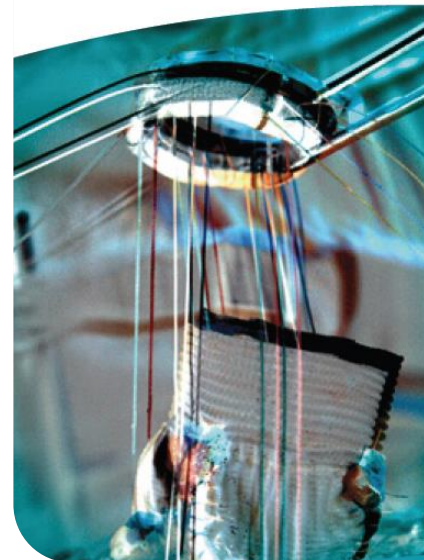
AORTIC VALVE REPAIR:

How to start

Participate in the workshops

Try a technical manipulation of
anatomic heart during WET LAB

INVITATION **June 21-22, 2012** AORTIC VALVE REPAIR : A STEP BY STEP APPROACH



Dear Colleagues,

We are pleased to invite you to the second edition of **Aortic Valve Repair: a step by step approach**. This two day session will focus on the management of dystrophic aortic roots, from echocardiographic analysis to a standardized and physiological approach to aortic valve repair. Our aim is to question current knowledge through lectures from international faculty, live-on-tape surgeries, short videos from difficult cases, management of intraoperative failures and reoperations.

We look forward to your participation during the interactive discussions on the evolving field of aortic valve repair.

Emmanuel Lansac, MD,
on behalf of the scientific
committee

committee
on behalf of the scientific
Emmanuel Lansac, MD,
vice:

invited list of experts will
discuss the challenges of the
participation during the
the two days session will
be on the management of

AORTIC VALVE REPAIR:

How to start

Do first cases with the help of an expert



AORTIC VALVE REPAIR:

How to start

**What lesion you
should start with?**

TRICUSPID??

BICUSPID??

ISOLATED VALVE REPAIR??

**AORTIC VALVE SPARING
SURGERY WITH ROOT
REPLACEMENT??**

AORTIC VALVE REPAIR:

How to start

What lesion you should start with?

TRICUSPID??

BICUSPID??

ISOLATED VALVE REPAIR??

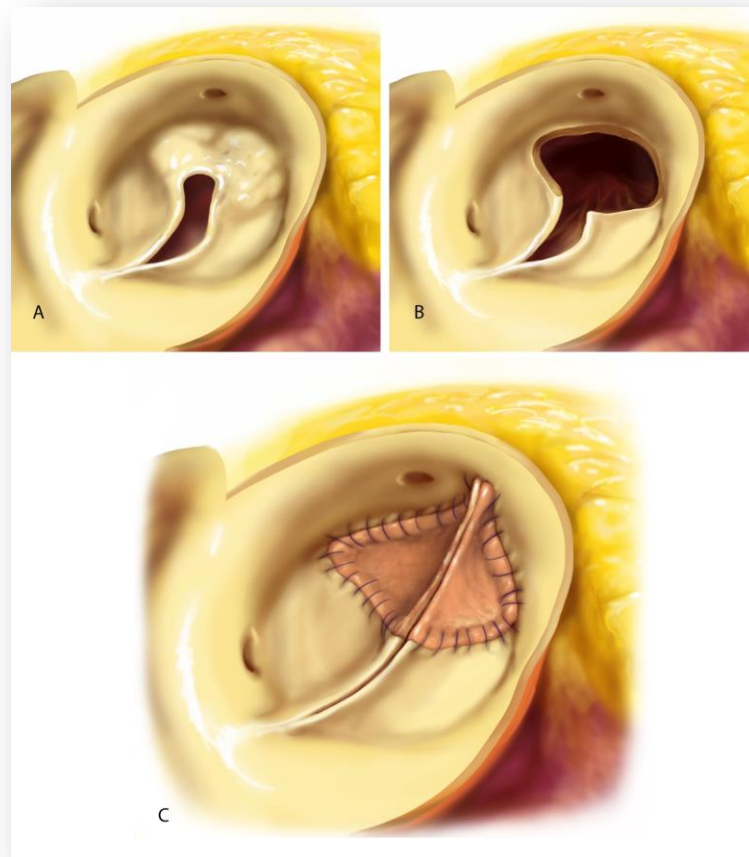
AORTIC VALVE SPARING
SURGERY WITH ROOT
REPLACEMENT??

Start with easy cases in low risk patients

AORTIC VALVE REPAIR:

How to start

What lesion you should start with?

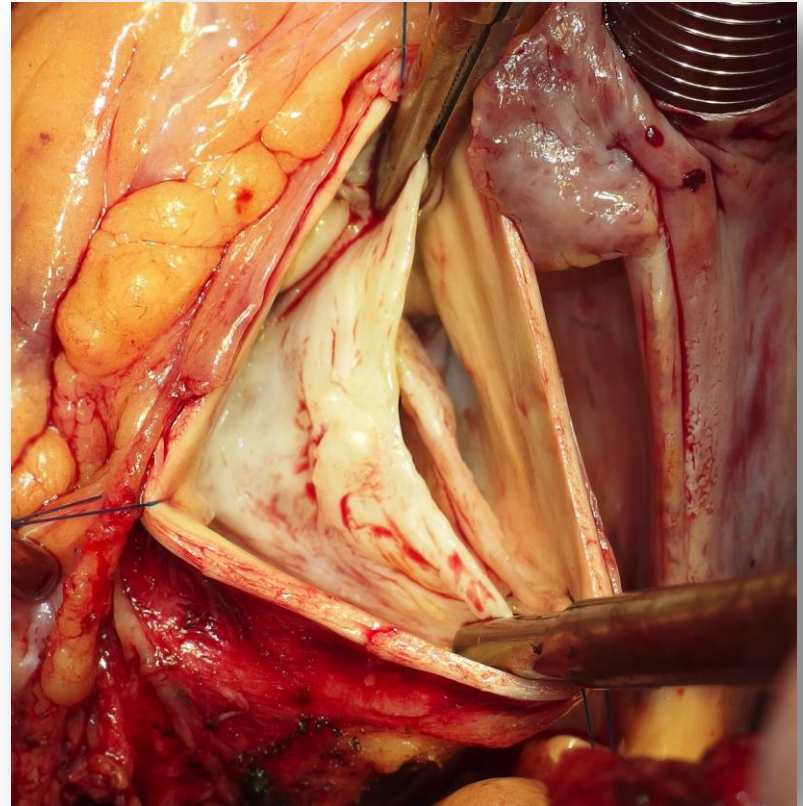


Start with easy cases in low risk patients

AORTIC VALVE REPAIR:

How to start

What lesion you should start with?

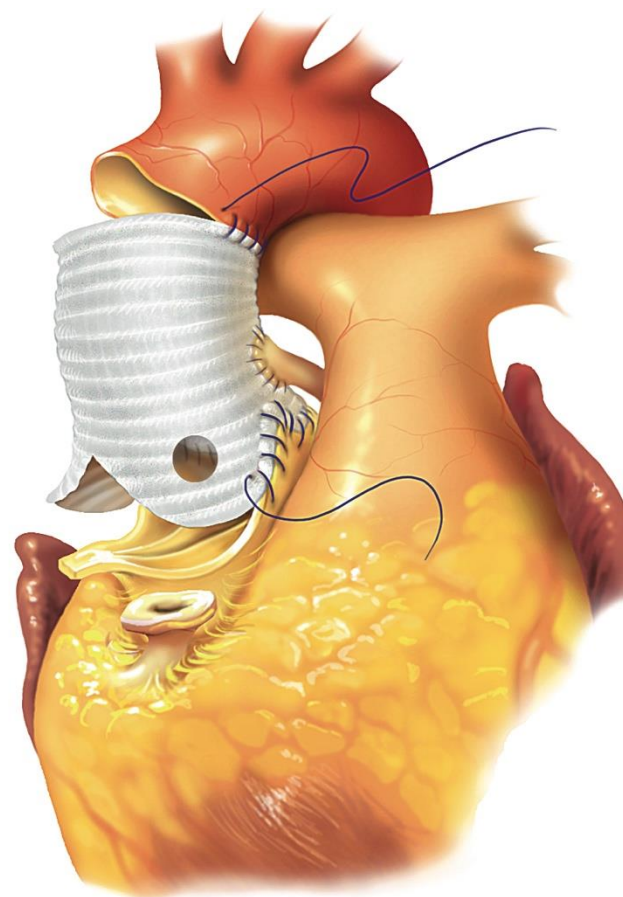


Start with easy cases in low risk patients

AORTIC VALVE REPAIR:

How to start

What lesion you should start with?



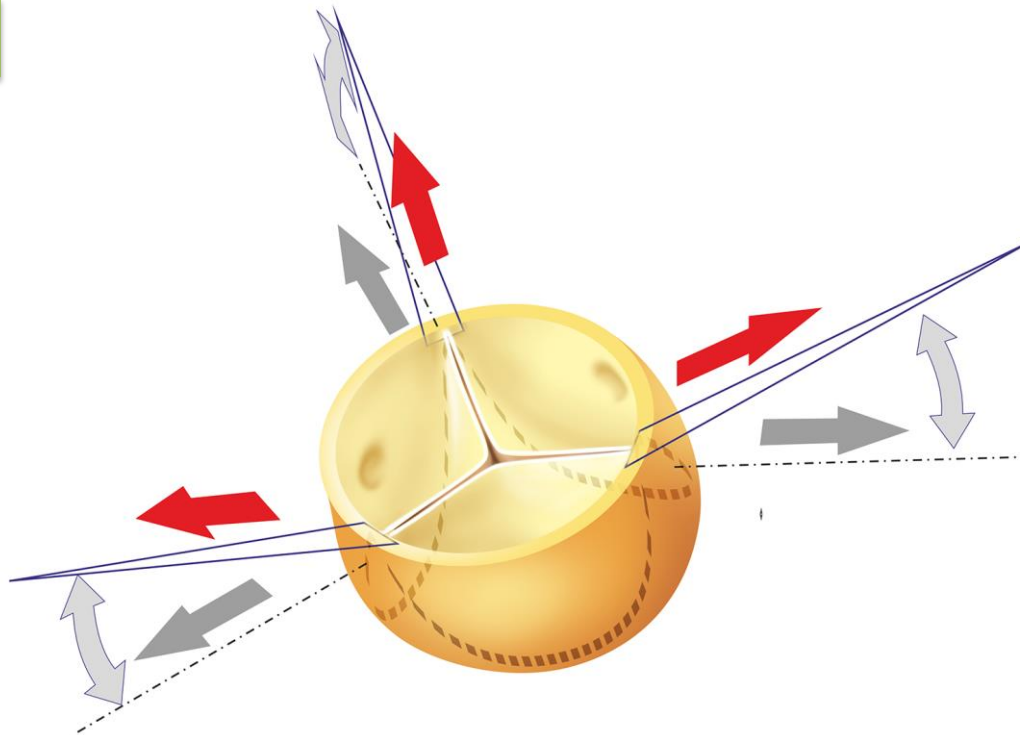
Start with easy cases in low risk patients

AORTIC VALVE REPAIR:

How to start

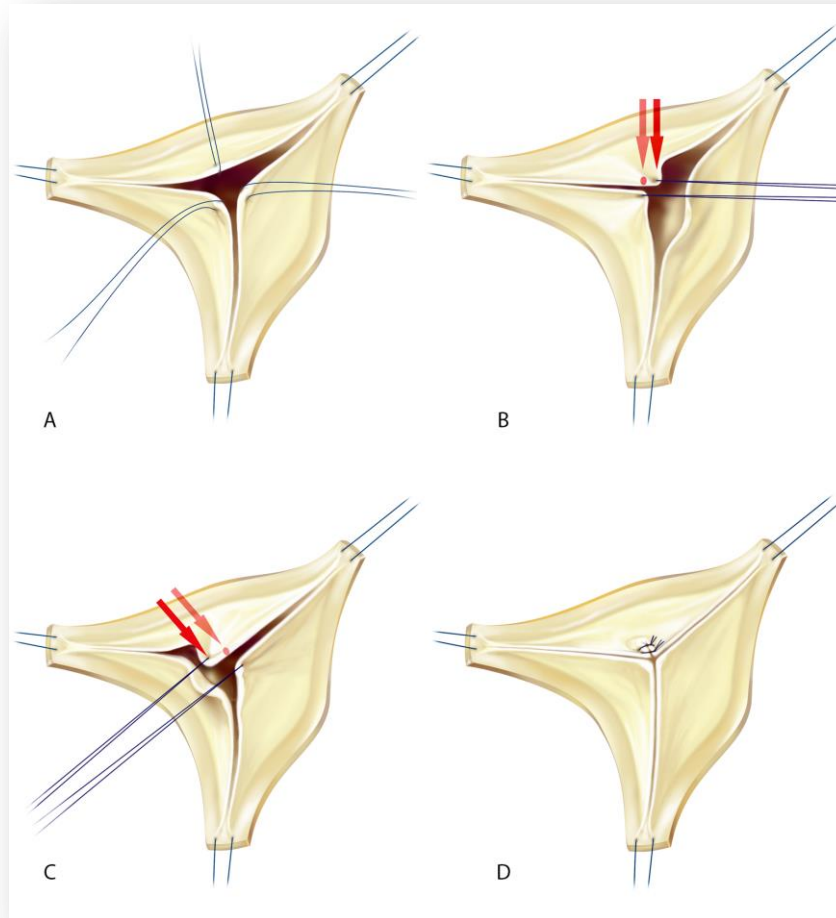
Elementary technique – **Standardized technique**

EXPOUSURE



AORTIC VALVE REPAIR: How to start

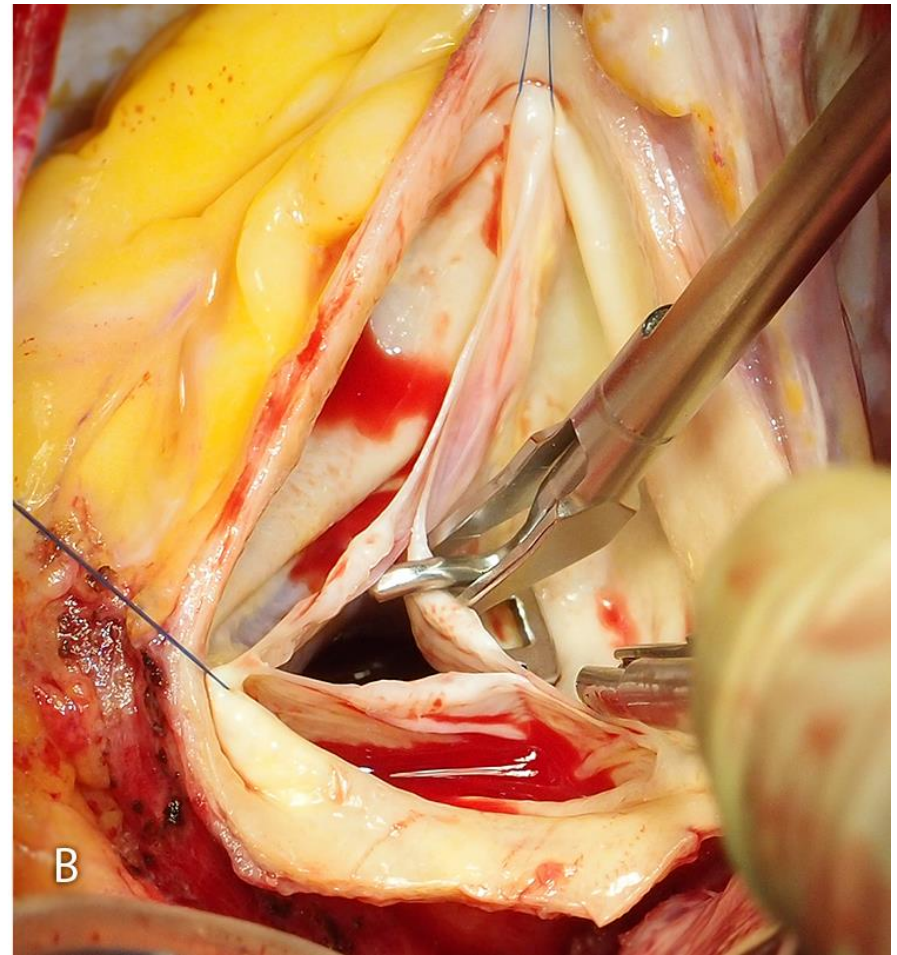
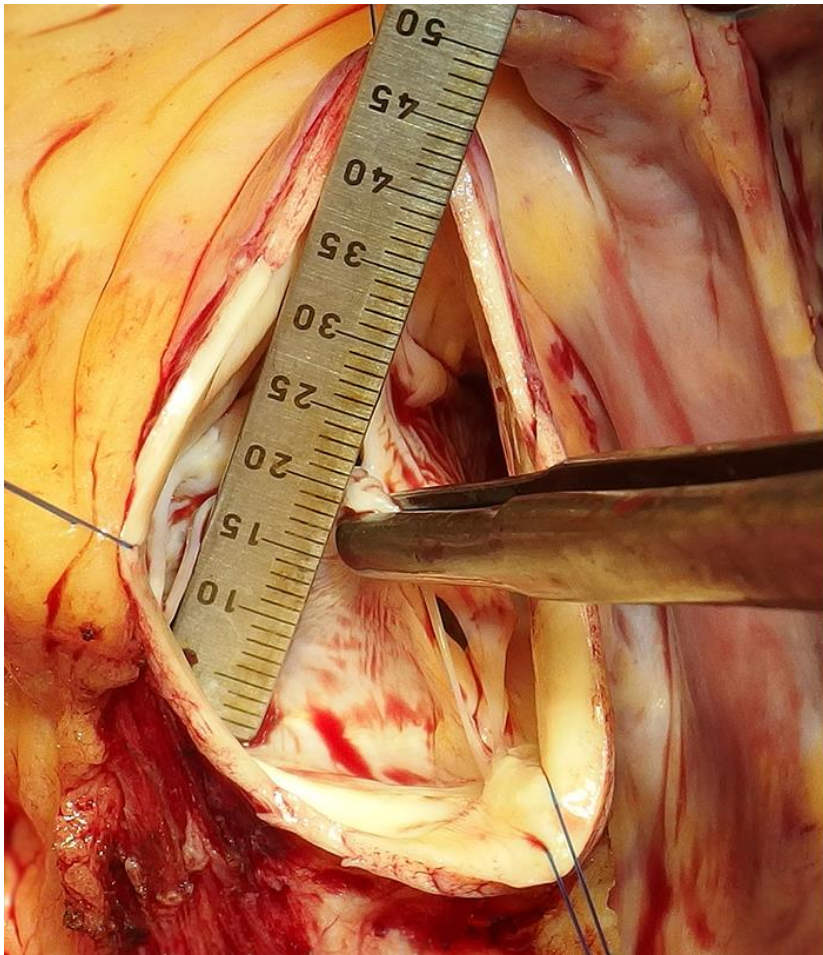
Elementary technique – Valve analysis (cusp alignment)



AORTIC VALVE REPAIR:

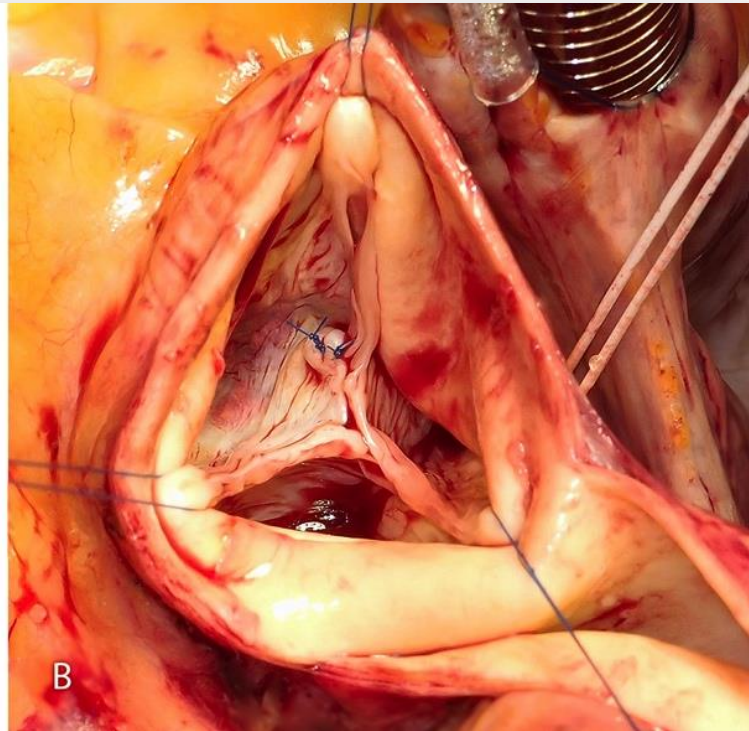
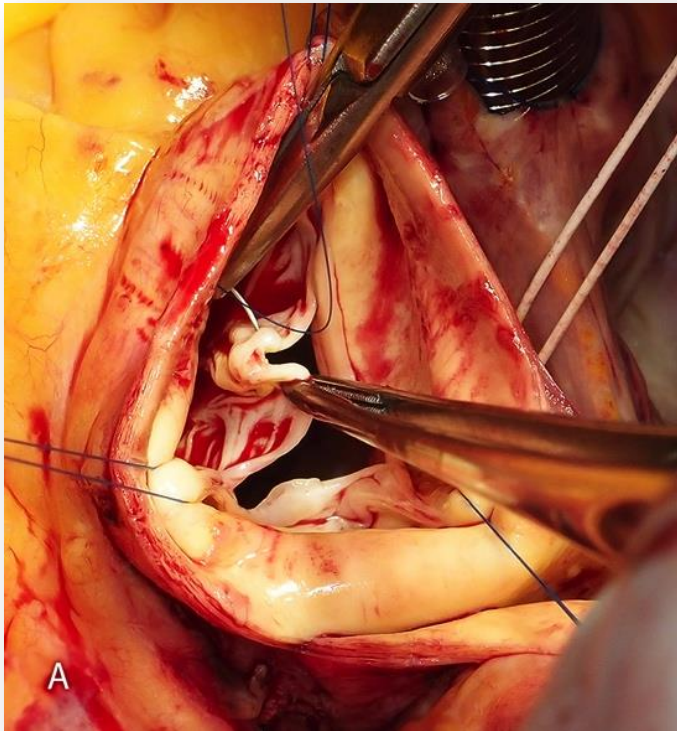
How to start

Elementary technique – Valve analysis (eH, gH)



AORTIC VALVE REPAIR: How to start

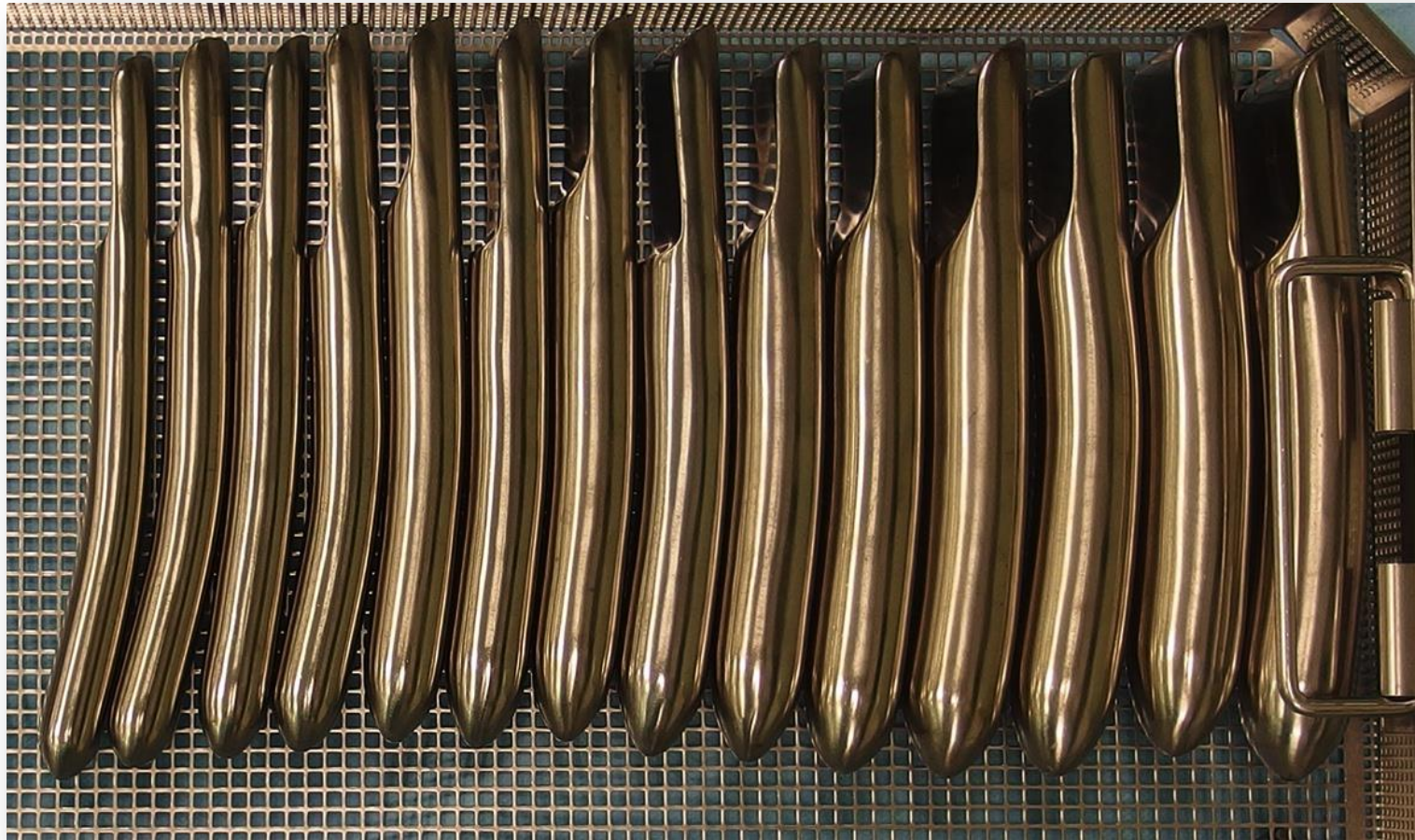
Elementary technique



AORTIC VALVE REPAIR:

How to start

Elementary technique – Valve analysis (sizing of the annulus)

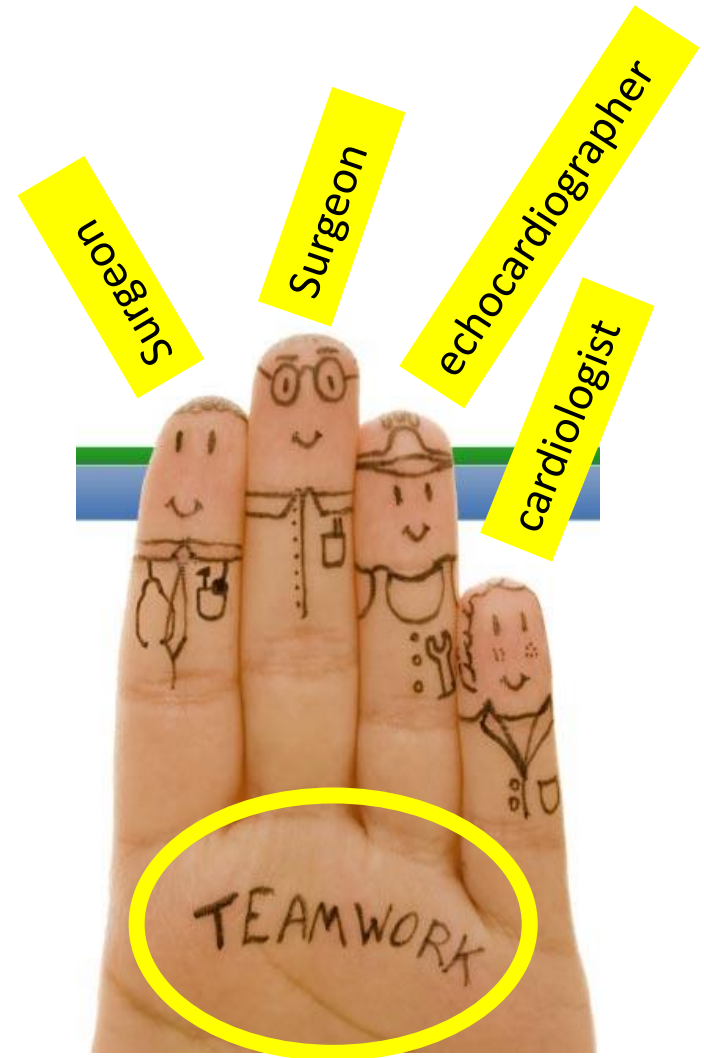


AORTIC VALVE REPAIR:

How to start

Built-up „the aortic valve repair team“

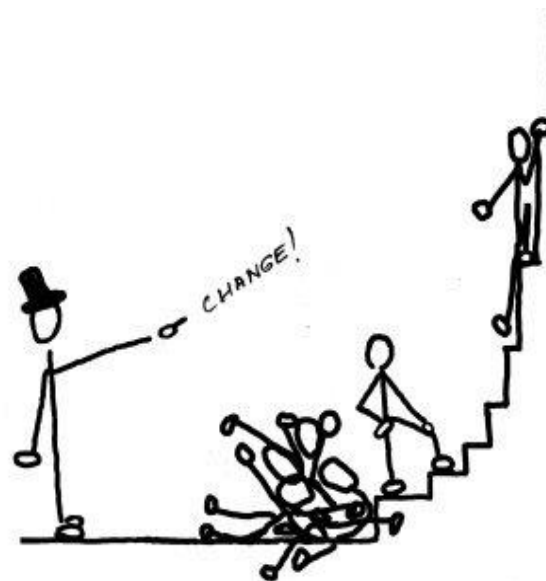
You need a good echocardiographer



AORTIC VALVE REPAIR:

How to start

- ✓ Workshops
- ✓ Patient selection
- ✓ Do first cases with the help of an experts
- ✓ Aortic valve repair team



Minimize the learning curve

AORTIC VALVE REPAIR:

How to start

**Get enough
patients**

And **crowds** of happy patients...



AORTIC VALVE REPAIR:

How to start

**Educate your referring
cardiologist**

