



Aortic root surgery by Right Anterior Thoracotomy

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disclosures

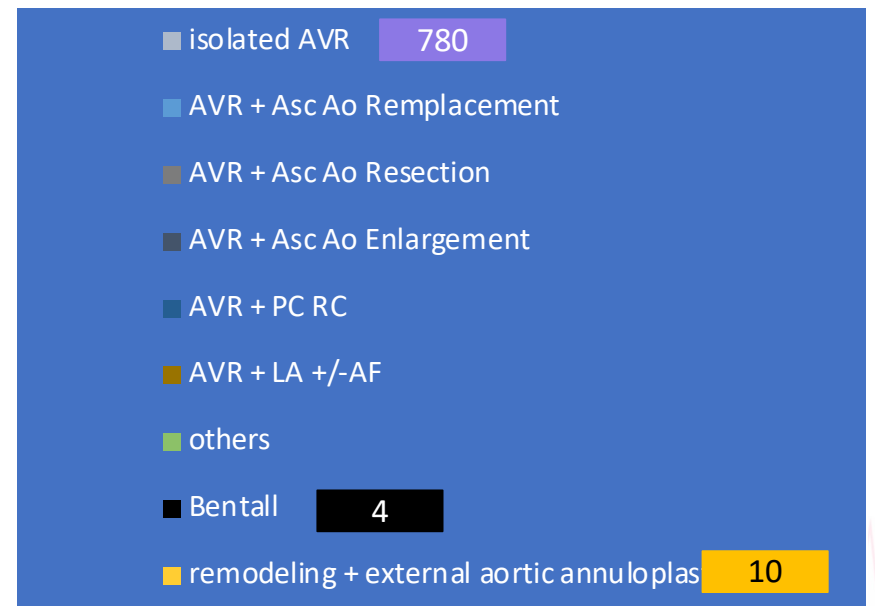
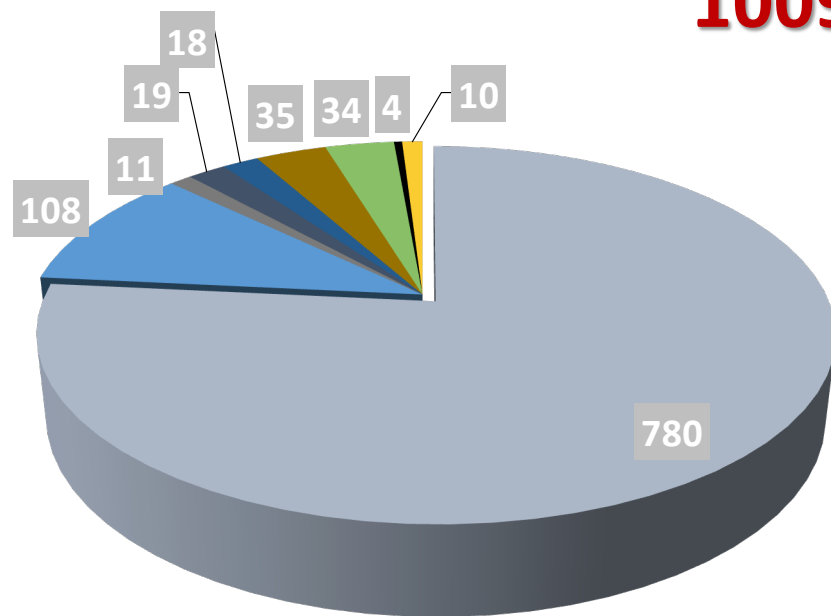
- Consultant and proctor for Edwards lifesciences and Medtronic for aortic valve replacement by right anterior thoracotomy



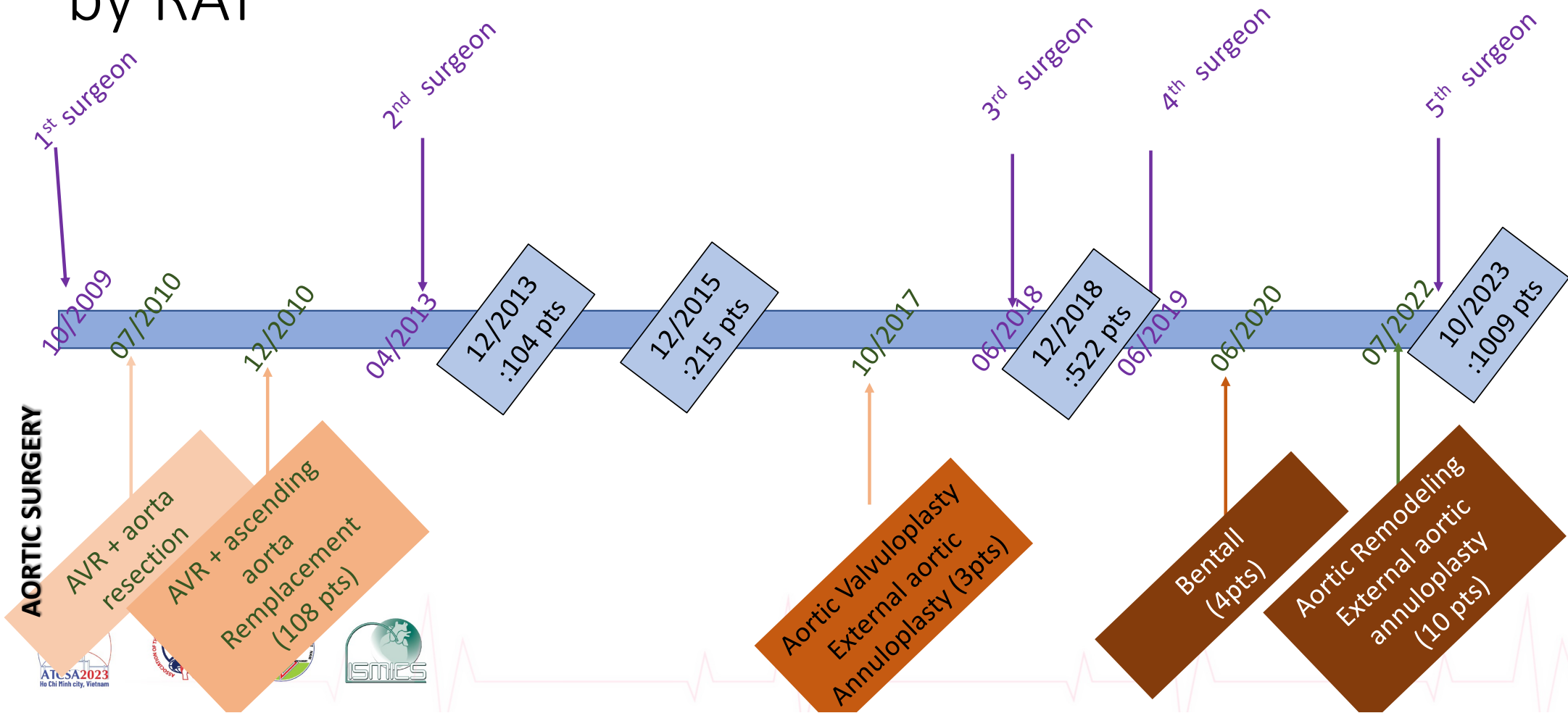
Dijon experience : AVR by RAT

• November 2009 – October 2023

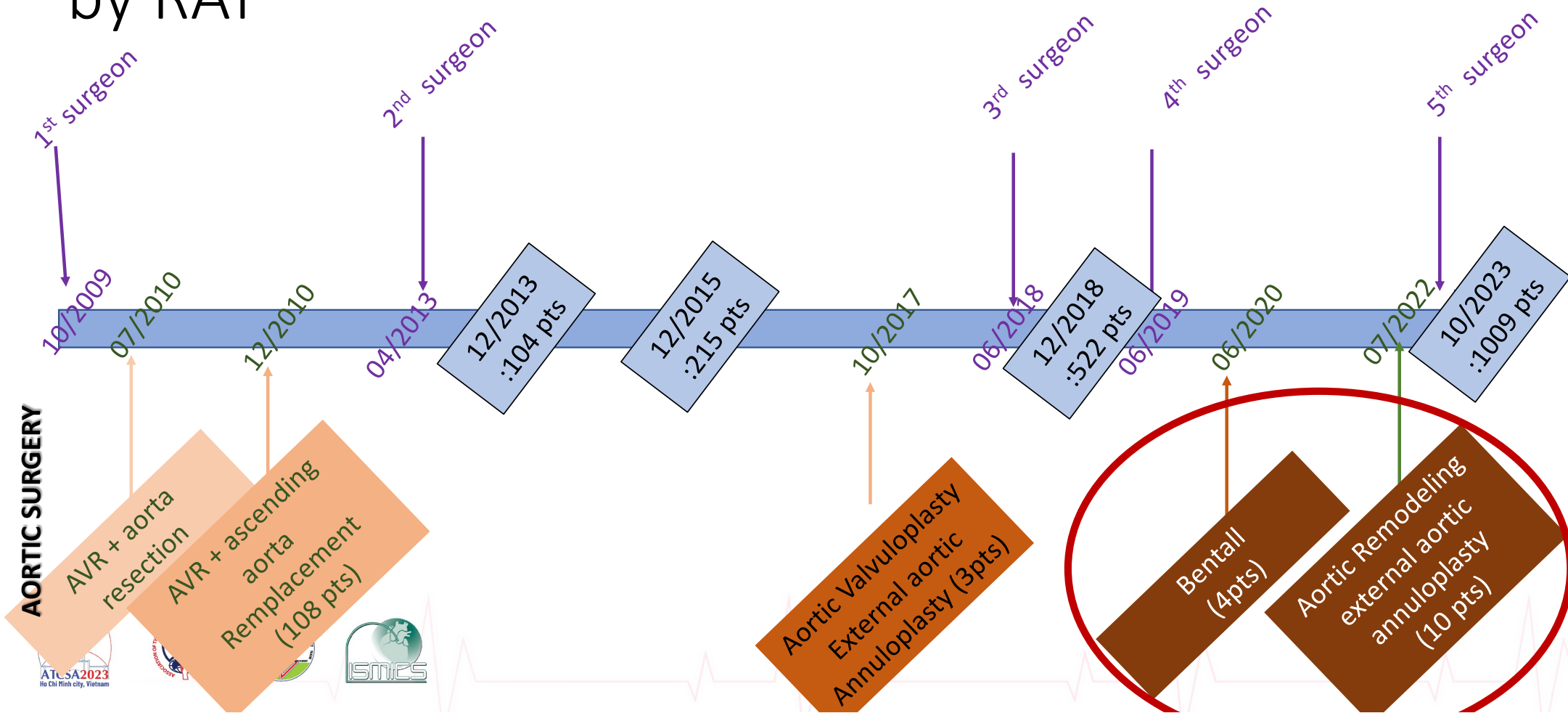
1009 SAVR RAT (4 surgeons)



Dijon experience :AVR ascending aortic surgery by RAT



Dijon experience :AVR ascending aortic surgery by RAT



Preoperative data

	BENTALL n=4	Aortic remodeling + external aortic annuloplasty n=10
AGE	72 [69-80]	54 [26-67]
BMI	26 [21 – 30]	25 [19- 30]
SEXE (M/F)	4/0	10/0
AORTIC VALVE (TRI/BI)	1/3	7/3
AI/AS	0/4	6/0
AORTIC INSUFFICIENCY		Grade 0 : 4 Grade 1 : 2 Grade 2 : 1 Grade 3 : 2 Grade 4 : 1
MEAN GRADIENT (mmHg)	46	
AORTIC SURF AREA (cm ²)	0.7	
DIAM MAX AO (mm)	49 (45-53)	52 (48- 52)
LVEF	59	60





Bentall by RAT



Remodeling + external aortic annuloplasty by RAT



Results

	BENTALL n=4	Aortic remodeling + External aortic annuloplasty n=10
Combined procedure	1 : left appendage resection	Aortic valvuloplasty:7 (plicature, shaving)
Diam aortic valve  / ring 	25 : 2 / 29:2	27 : 8 / 29: 2
Diam prosthesis  	28: 2 / 30: 2	26: 5 / 28: 4 / 30: 1
ACC (min)	118 [93- 141]	193 [157-240]
CPB (min)	146 [121- 178]	231 [157- 320]
Reclamp	0	2
complications	CVA :1 ; AF:2 ; Hemothorax:1	AF:1; abdominal aortic dissection:1
Hospital stay (days)	9 [5-14]	6 [5-8]
AI post op	0	Grade 0 : 5 / Grade 0.5:4 / Grade 1:1

Litterature



Mini-Invasive Bentall Procedure Performed *via* a Right Anterior Thoracotomy Approach With a Costochondral Cartilage Sparing

Qiang Ji^{1†}, YuLin Wang^{1†}, FangYu Liu^{1†}, Ye Yang¹, Jun Li¹, XiaoNing Sun¹, ZhaoHua Yang¹, Sun Pan¹, Hao Lai^{1*} and ChunSheng Wang^{1,2*}

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Variable	Value
CPB time (median, IQR; min)	138.5 (130.5–163.5)
ACC time (median, IQR; min)	95.0 (85.5–98.8)

TABLE 3 | Perioperative and follow-up results.

Variables	Value
Intraoperative	
Number of patients	15
Immediate repeat operation	1 (6.7%)
In-hospital	
Number of patients	15
Surgical death	0
Blood transfusion	3 (20.0%)
[#] Drainage volume (median, IQR; ml)	200.0 (117.0–552.5)
Mechanical ventilation time (median, IQR; hours)	12.5 (11.0–25.0)
Length of ICU stay (median, IQR; days)	1.5 (1.0–3.0)
Postoperative hospital stay (days)	5.8 ± 1.2
Follow-up	
Number of patients	15 (100%)
Duration of follow-up (median, IQR; months)	8.0 (6.0–10.0)
Survival	15 (100%)
Reoperation	0



Litterature

Original Article

Midterm results of less invasive approach to ascending aorta and aortic root surgery

Jakub Staromyński^{1*}, Mariusz Kowalewski^{1,2,3*}, Wojciech Sarnowski¹, Radosław Smoczyński¹, Anna Witkowska¹, Maciej Bartczak¹, Dominik Drobiński¹, Waldemar Wierzbą⁴, Piotr Suwalski¹



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Valve-sparing David procedure *via* minimally invasive access does not compromise outcome

Malakh Shrestha^{*†}, Tim Kaufeld[†], Pamela Shrestha,
Andreas Martens, Saad Rustum, Linda Rudolph, Heike Krüger,
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Featured Article

Minimally invasive valve sparing aortic root replacement (David procedure) is safe

Malakh Shrestha, Heike Krueger, Julia Umminger, Nurbol Koigeldiyev, Erik Beckmann, Axel Haverich, Andreas Martens

- Ministernotomy
- Shorter ACC and CPB time /RAT
- Good results
- Combined aortic arch surgery





Take home message

- Aortic root surgery by RAT is possible
 - Experimented surgeon
 - To RAT
 - To Aortic root surgery (Bentall, Valve sparing , aortic valvuloplasty)
 - Selected patients
 - No comorbidity, good LVEF
 - No aortic arch surgery
 - Mechanism of AI
 - « simple » aortic Valvuloplasty
- Long time aortic cross clamp and CPB
- Risk of aortic root bleeding
- Ministernotomy could be an alternative





Thank you for your attention



Burgundy wine

