

Aortic valve surgery

The patient perspective

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*Reconstruction of the Aortic Valve and Root:
A practical approach
Homburg / Saar, 12 September 2018*

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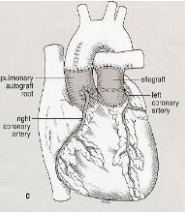
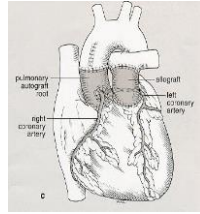
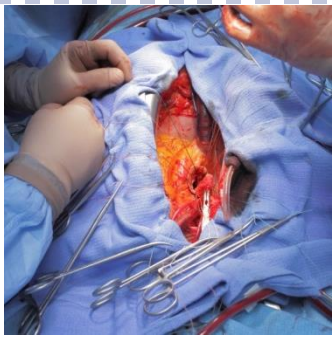
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SCORE: 2



VERSUS






This presentation



- Risks of the AV surgery options for nonelderly patients
- The cardiologist and surgeon perspective on prosthetic heart valve selection
- The emerging role of the patient in clinical decision making
- How do patients experience prosthetic heart valve selection?
- Tools to implement shared decision making in choosing the optimal HVD therapy
- Take home message



Late risks in non-elderly adults after AV surgery

	Mech AVR 	AV repair 	Ross 
Late mortality	1.9%/yr	1.3%/yr	0.6%/yr
Reop	0.6%/yr	2.4%/yr	0.8 + 0.6%/yr
TE	1.0%/yr	0.5%/yr	0.4%/yr (TE/BL combined)
Bleeding	0.8%/yr	0.0%/yr	

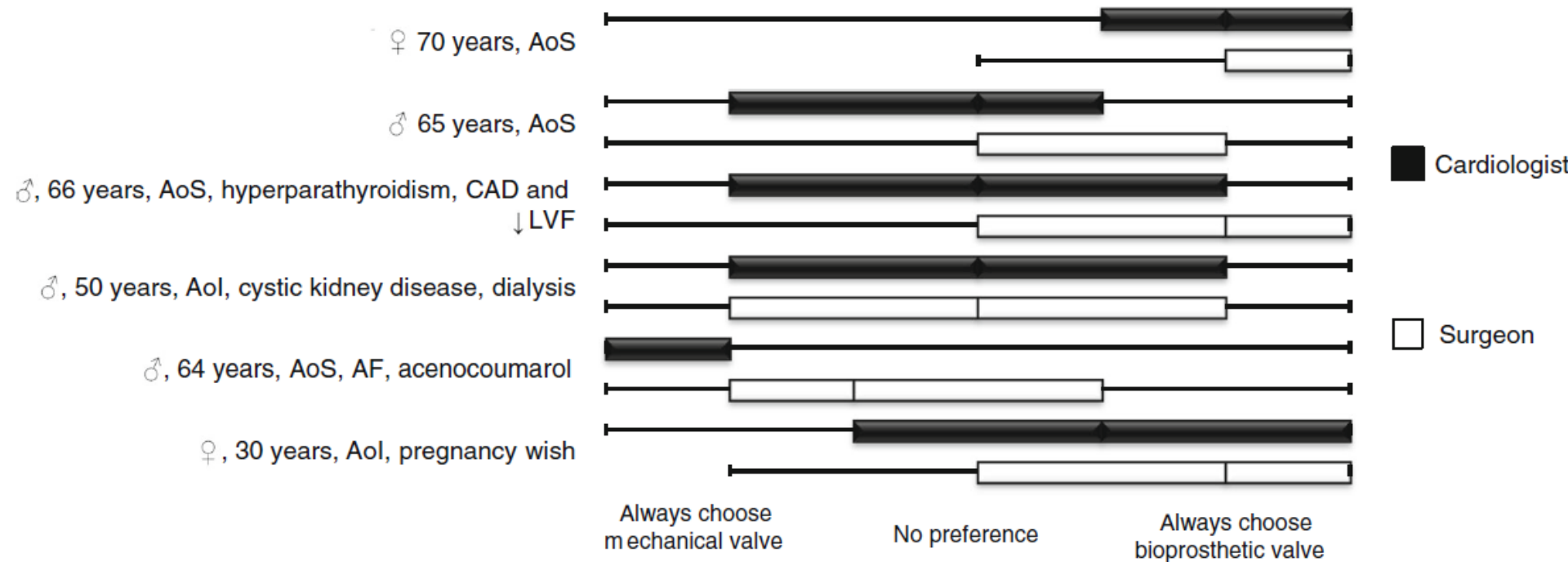
Late risks in non-elderly adults after AV surgery

	Bentall 	VS ARR 
Late mortality	2.0%/yr	1.5%/yr
Reop	0.5%/yr	1.3%/yr
TE	0.8%/yr	0.4%/yr
Bleeding	0.6%/yr	0.2%/yr

(Ann Thorac Surg 2016;■:■-■)
(Ann Thorac Surg 2015;100:1126-31)

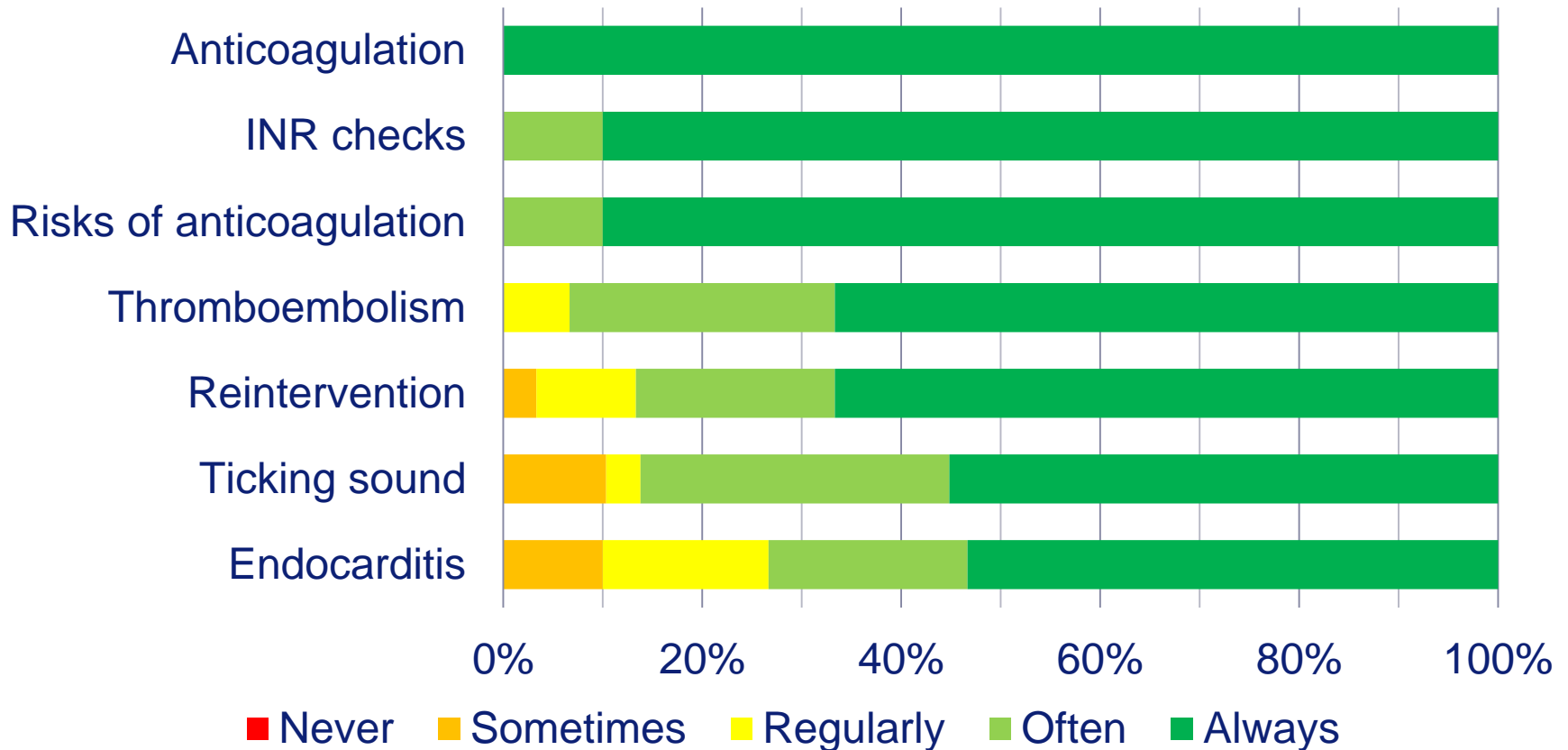
Cardiologist and cardiac surgeon view on decision-making in prosthetic aortic valve selection: does profession matter?

N. M. Korteland • J. Kluin • R. J. M. Klautz •
J. W. Roos-Hesselink • M. I. M. Versteegh •
A. J. J. C. Bogers • J. J. M. Takkenberg

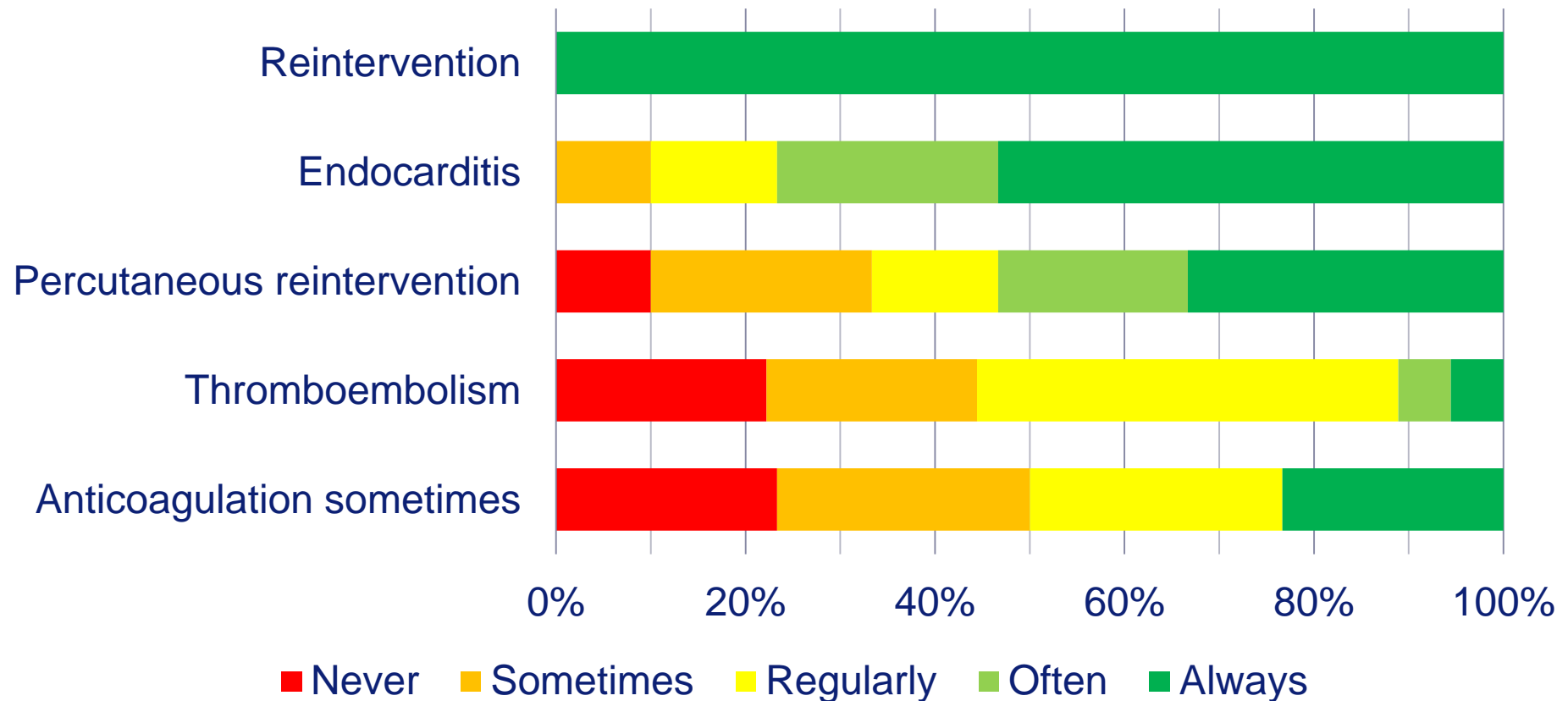


- Doctor's preferences vary widely!

What do you tell patients about mechanical valve replacement?



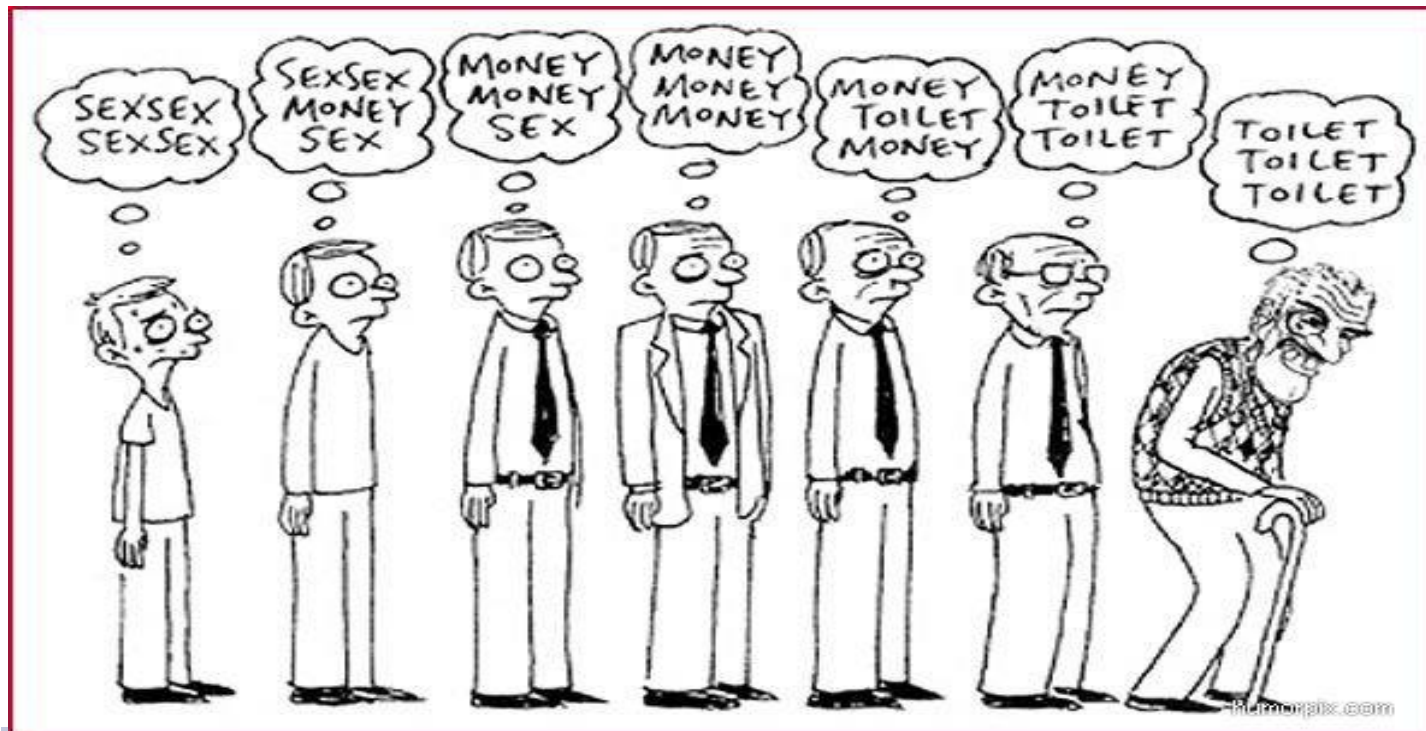
What do you tell patients about biological valve replacement?



Doctors often provide selective information about prosthetic heart valves

Cardiologist and surgeon perspectives:

- Doctors have preferences that vary widely
- Doctors often provide selective information about prosthetic heart valves
- But life is more than risks, there is also QOL



Quality of life after aortic valve surgery: Replacement versus reconstruction

Diana Aicher, MD,^a Annika Holz,^a Susanne Feldner, MD,^a Volker Köllner, MD,^b and Hans-Joachim Schäfers, MD^a

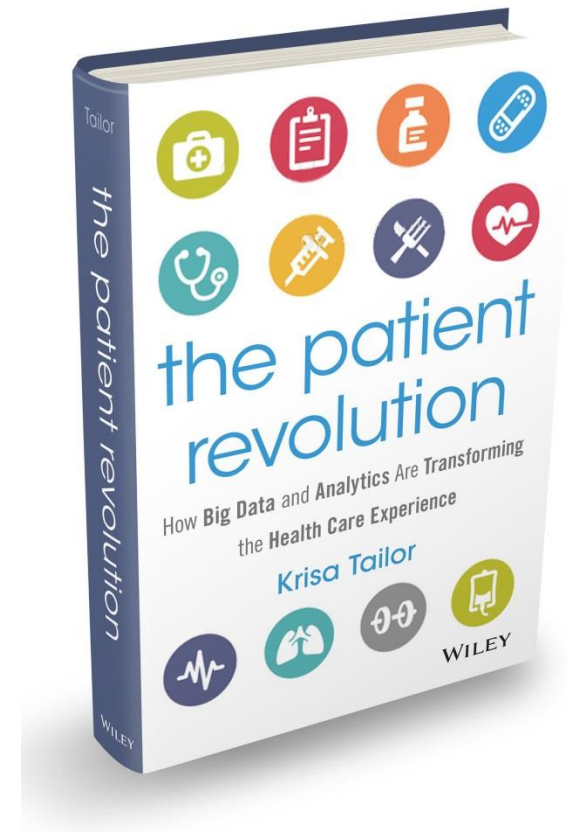
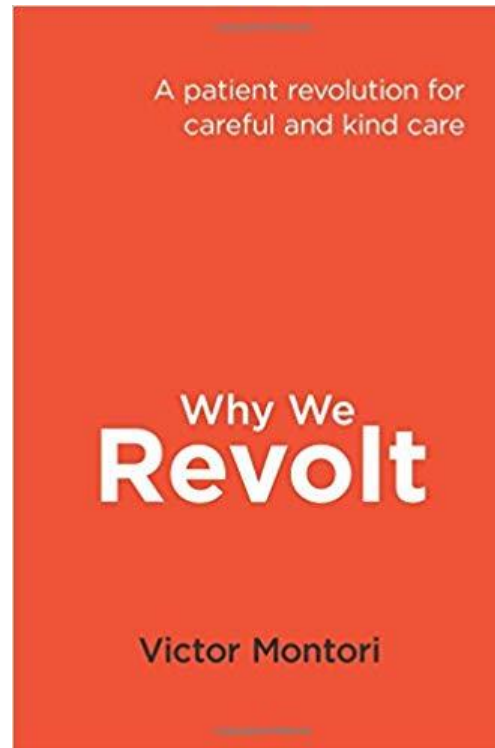
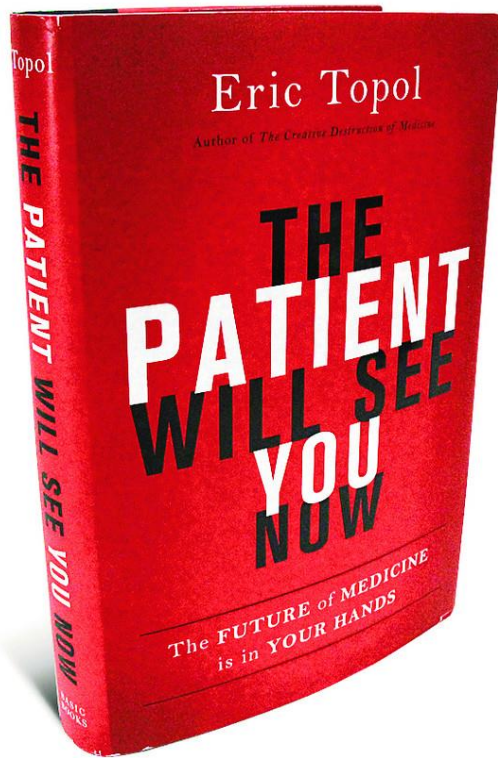
- AV repair/Ross vs mechanical AVR associated with:
 - Better physical functioning, general and mental health
 - Less bothered by valve sound
 - Less bothered by doctor visits and blood tests
 - Less concerned about possible bleeding
 - Surprisingly: slightly less worried about possible valve failure

The VHD Guidelines

- 2017 update AHA/ACC VHD Guidelines
 - **Shared decision-making** remains a Class I indication (LOE C-LD) in selecting a mechanical or bioprosthetic valve.
 - Among patients undergoing aortic or mitral valve replacement, the age range is expanded from age 60-70 to age 50-70 for the Class IIa (LOE B-NR) indication for either a mechanical or bioprosthetic valve choice.
- 2017 ESC/EACTS VHD Guidelines
 - **The desire of the informed patient** remains a Class I indication (LOE C) in selecting a mechanical or bioprosthetic valve.
 - Mechanical prosthesis should be considered <age 60 (aortic) / <age 65 (mitral)
 - Bioprosthesis should be considered >age 65 (aortic) / >age 70 (mitral) (LOE C)

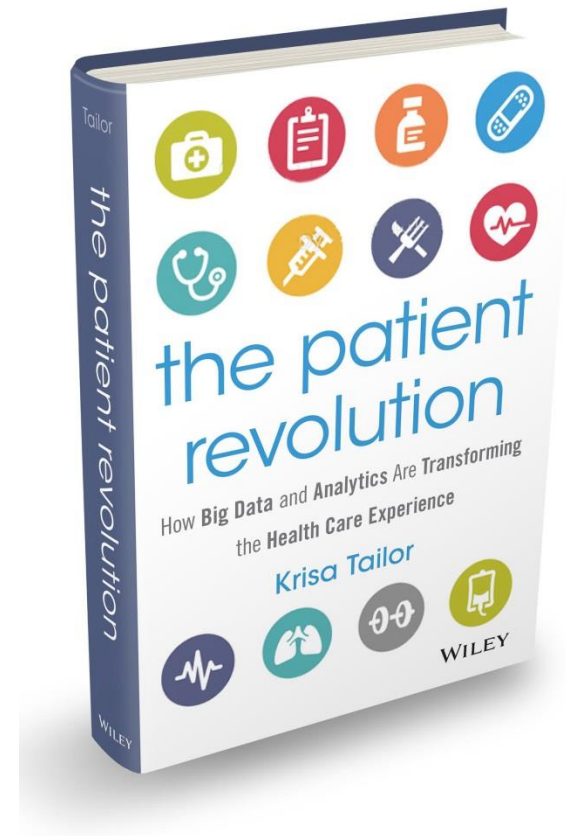
Patient perspectives.....





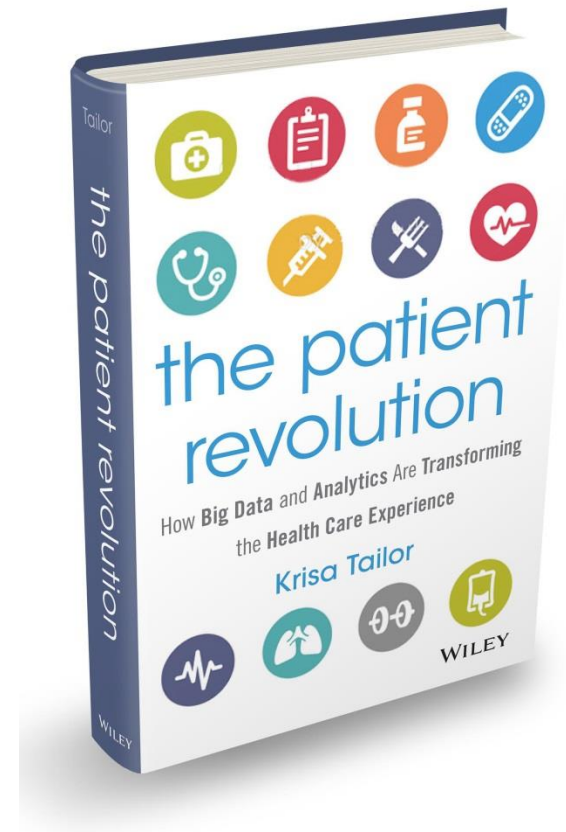
What do patients want?

- Most patients want to be informed
- As soon as patients are well informed, they want to be actively involved in the management of their disease



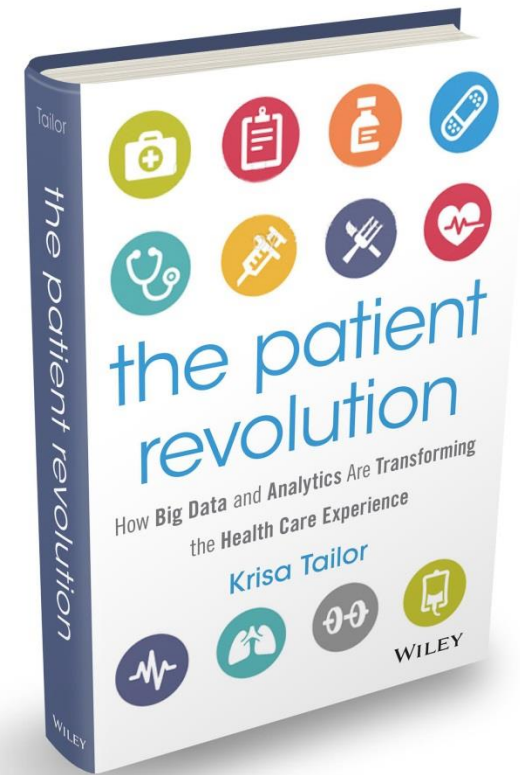
Patients simply want to be informed!

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- As soon as patients are well informed, they want to be actively involved in the management of their disease
- Challenges:
 - Doctors think they are good at assessing patients' preferences, but they actually suck at this.....



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 - **Patients have difficulties in understanding their disease and simple health statistics**



Three simple questions

A person taking Drug A has a 1% chance of having an allergic reaction.
If 1,000 people take Drug A, how many would you expect to have an allergic reaction?

10 persons out of 1,000

70% correct

A person taking Drug B has a 1 in 1,000 chance of an allergic reaction.
What percent of people taking Drug B will have an allergic reaction?

0.1%

25% correct

Imagine that I flip a coin 1,000 times.

What is your best guess about how many times the coin would come up heads in 1,000 flips?

500 times out of 1,000

76% correct

Helping Doctors and Patients Make Sense of Health Statistics

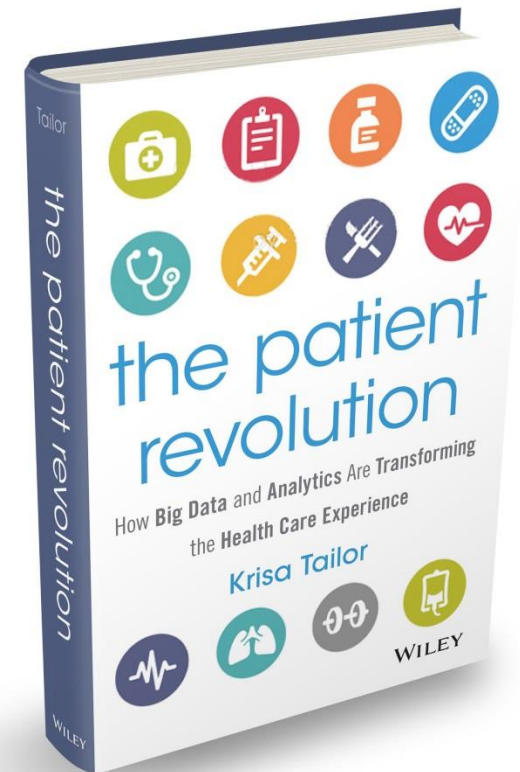
Gerd Gigerenzer,^{1,2} Wolfgang Gaissmaier,^{1,2} Elke Kurz-Milcke,^{1,2} Lisa M. Schwartz,³ and Steven Woloshin³

¹Max Planck Institute for Human Development, Berlin; ²Harding Center for Risk Literacy, Berlin; ³The Dartmouth Institute for Health Policy and Clinical Practice's Center for Medicine and the Media, Dartmouth Medical School

Only 72% of doctors is able to answer all 3 questions correctly!!!

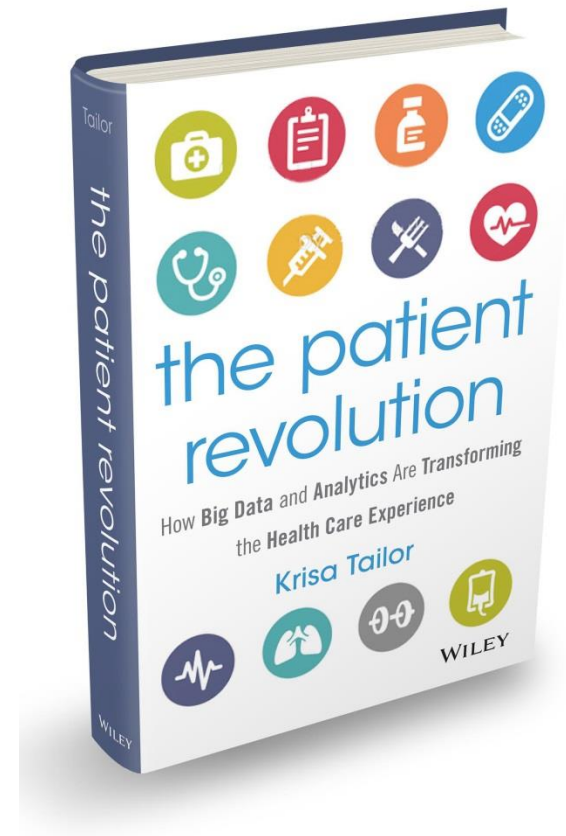
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 - Patients have difficulties in understanding their disease and simple health statistics
 - **Doctors often provide selective information**



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 - Doctors think they are good at assessing patients' preferences, but they actually suck at this.....
 - Patients have difficulties in understanding their disease and simple health statistics
 - Doctors often provide selective information
 - **Doctors have preferences too.....**



Informed patient preferences

- ↑ Conservative treatment selection
- ↑ Patient involvement
- ↑ Patient knowledge
- ↑ Agreement patient values and choice
- ↓ Regret

How do patients experience valve selection?

Prosthetic aortic valve selection: current patient experience, preferences and knowledge

- Prospective cohort study of 132 patients undergoing AVR:
 - Decisional conflict in 56% (severe in 25%)
 - 68% wanted to be involved in decision making
 - Only 53% felt involved
 - Basic knowledge of disease and treatment sufficient in 69%
 - Limited numeracy: 56%

Nelleke M Korteland,¹ Frans J Bras,² Fabienne M A van Hout,³ Jolanda Kluin,² Robert J M Klautz,³ Ad J J C Bogers,¹ Johanna J M Takkenberg¹

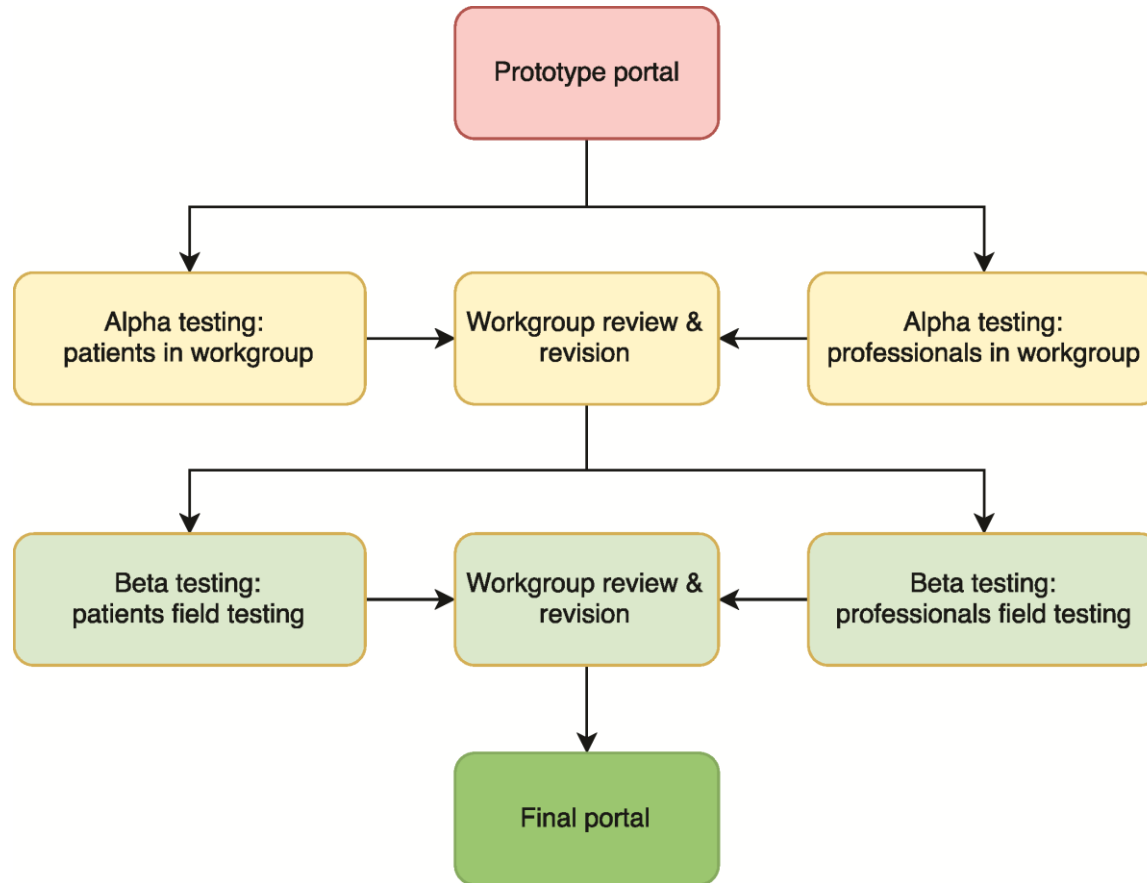


Open Heart 2015;2

Pilot decision aid development



Pilot decision aid development



Does the Use of a Decision Aid Improve Decision Making in Prosthetic Heart Valve Selection?

A Multicenter Randomized Trial

Nelleke M. Korteland; Yunus Ahmed; David R. Koolbergen, MD, PhD; Marjan Brouwer; Frederiek de Heer, MSc; Jolanda Kluin, MD, PhD; Eline F. Bruggemans, MSc; Robert J.M. Klautz, MD, PhD; Anne M. Stiggelbout, PhD; Jeroen J.J. Bucx, MD, PhD; Jolien W. Roos-Hesselink, MD, PhD; Peter Polak, MD; Thanasie Markou, MD; Inge van den Broek; Rene Ligthart; Ad J.J.C. Bogers, MD, PhD; Johanna J.M. Takkenberg, MD, PhD

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Praktische informatie

Hartklepkeuzehulp

Decisional conflict the same
Better knowledge
Better informed
Less anxiety and depression
Better mental quality of life

PCI Choice Decision Aid for Stable Coronary Artery Disease

A Randomized Trial



Megan Coylewright, MD, MPH; Sara Dick, MS; Becky Zmolek, BSN; Jason Askelin, ADN;
Edward Hawkins, BSN; Megan Branda, MS; Jonathan W. Inselman, BA;
Claudia Zeballos-Palacios, MD; Nilay D. Shah, PhD; Erik P. Hess, MD, MSc;
Annie LeBlanc, PhD; Victor M. Montori, MD, MSc; Henry H. Ting, MD, MBA

(*Circ Cardiovasc Qual Outcomes*. 2016;9:767-776. DOI: 10.1161/CIRCOUTCOMES.116.002641.)

Decisional conflict the same
Better knowledge
Better informed



Developing a shared decision support framework for aortic root surgery in Marfan syndrome

Tom Treasure,¹ Annette King,² Loreto Hidalgo Lemp,³ Tal Golesworthy,⁴ John Pepper,⁵ Johanna JM Takkenberg⁶

Treasure T, et al. *Heart* 2017;0:1–7. doi:10.1136/heartjnl-2017-311598



Take home message



- Prosthetic valve selection
 - = Value sensitive, both for the doctor and the patient
 - Requires the consideration of informed patient preferences
 - Patients usually want to be informed and participate in treatment decision making
 - There are several challenges in doing so
- A patient decision aid to support prosthetic valve choice is effective
- More patient portals are underway
- Implementation in clinical practice will improve quality of decision making and care

Acknowledgements

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dutch heart foundation*



Hartstichting



ZonMw





The
heart valve
society

SAVE THE DATE

HVS ANNUAL MEETING 2019, 11-13 APRIL

MELIA HOTEL, SITGES (BARCELONA), SPAIN

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