

An intraoperative photograph showing the aortic valve during a surgical procedure. The valve is partially open, and the surrounding tissue is visible. The image is used as a background for the title slide.

AORTÁLNÍ STENÓZA

KATEŘINA LINHARTOVÁ,

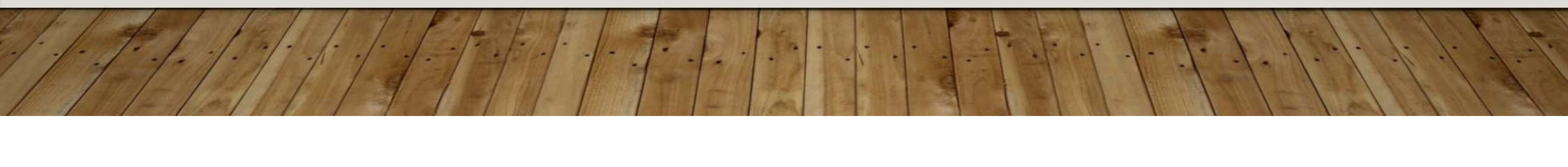
KARDIOCHIRURGICKÉ ODDĚLENÍ FN PLZEŇ, KARDIOLOGIEV SADECH

Populační zátěž AS

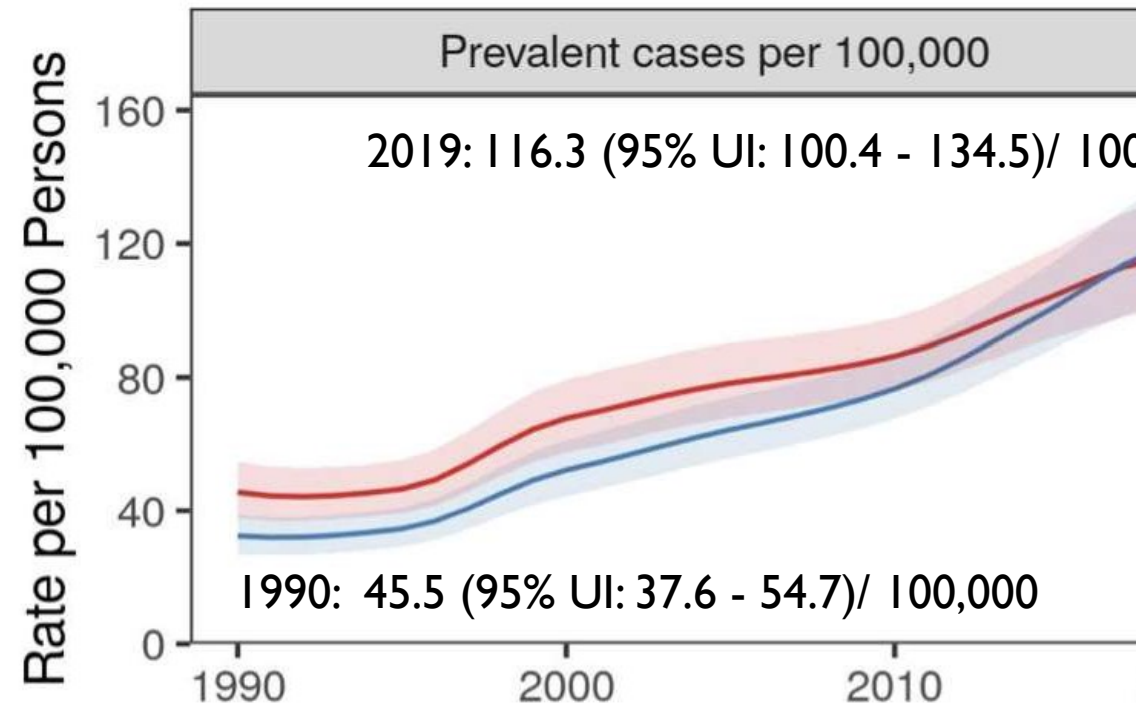
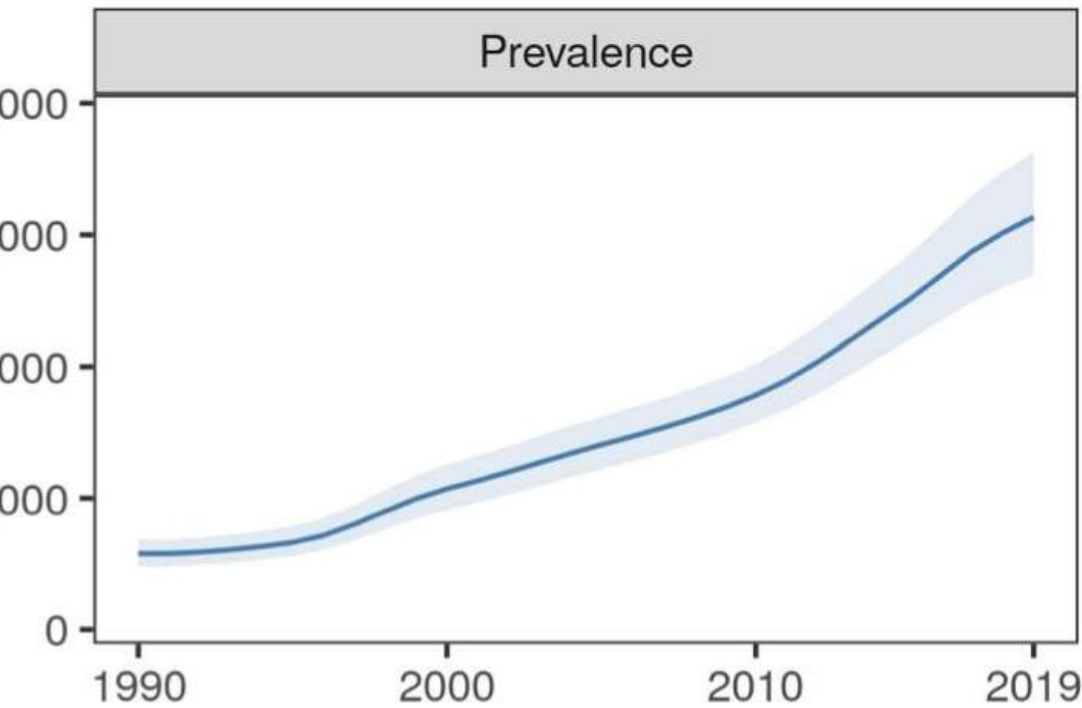
Kvantifikace vady
a hodnocení levé
komory

Léčba AS - prevence a
zmírnění srdečního
selhání jako jednotící
léčebný princip

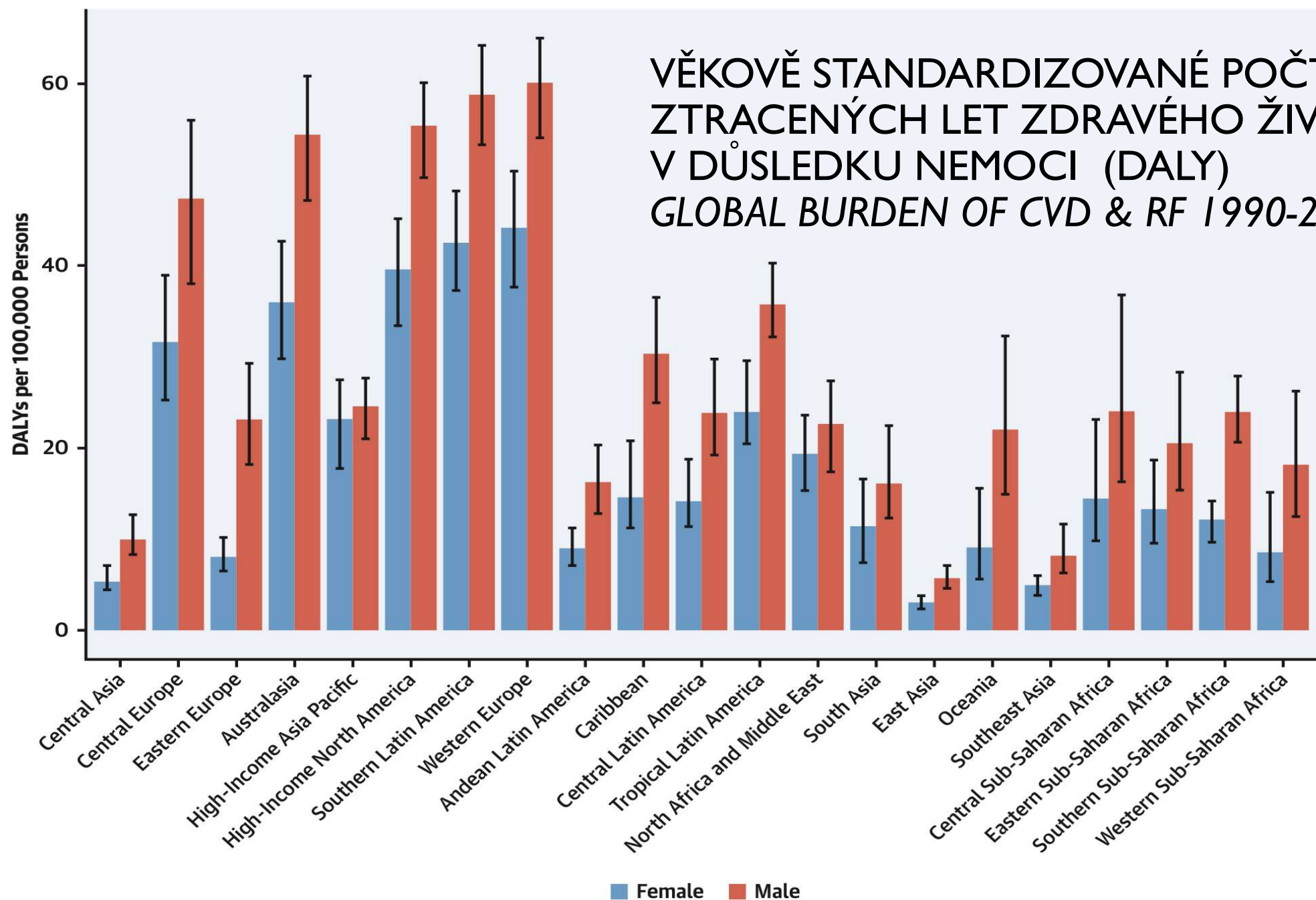
Pacient v centru dění



PREVALENCE KALCIFIKOVANÉ/NEREVDMATICKÉ AS *GLOBAL BURDEN OF CVD & RF 1990-2019*



VĚKOVĚ STANDARDIZOVANÉ POČTY ZTRACENÝCH LET ZDRAVÉHO ŽIVOTA V DŮSLEDKU NEMOCI (DALY) GLOBAL BURDEN OF CVD & RF 1990-2019



ENDY TĚŽKÉ 1997-2016

Olmsted County

Mírný pokles incidence pouze u
žen, celkově bez změny

Nárůst počtu AVR

Mortalita od dg. významné AS
zatím neklesla

Benfari, *Eur Heart J* 2024

Geographically defined population
based aortic valve stenosis
epidemiology over 20 years

OLMSTED COUNTY, MN, USA

Geographically defined

Self contained

Isolated

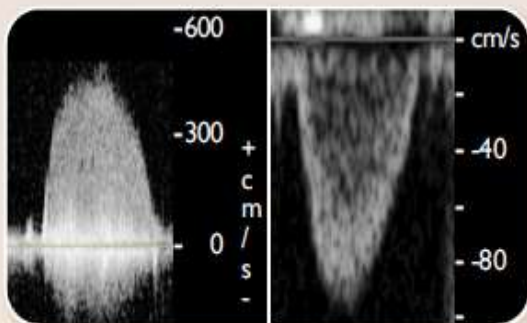
All care available

Stable echo methods

Stable echo utilization



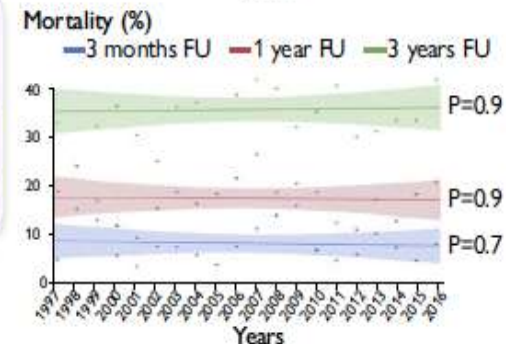
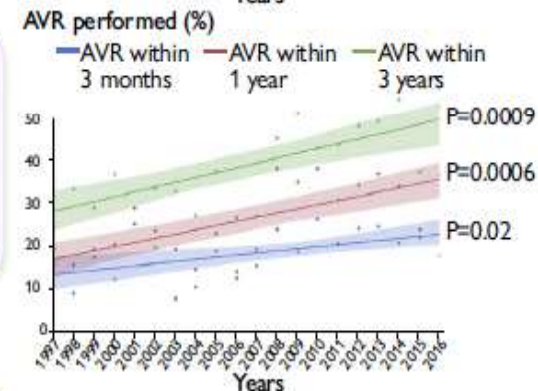
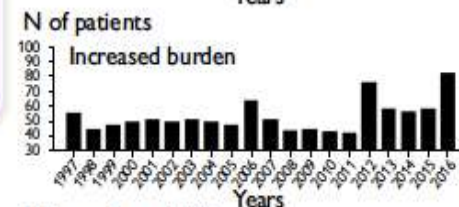
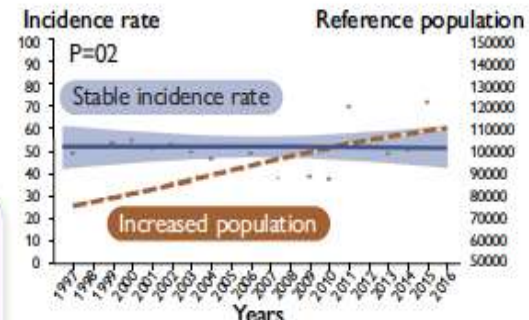
Severe AS by quantitative criteria



Severe AS incidence:
stable over 20 years
but increasing case
burden due to
increasing population

Severe AS treatment:
increasing
but incomplete

Severe AS mortality:
considerable short-term,
but not yet declining
and stable over 20 years



OBROVNOVANÁ OBSTRUKCE AORTÁLNÍHO ÚSTÍ - AKTIVNÍ KALCIFIKACE



A



B



Vrozená predispozice
Bi- nebo unikuspidální
chlopeč
0.5-2% v populaci,
50% operovaných vad

Prevalenční studie –
nás vzácná



C



D

Copyright 2005 by Elsevier Science

Braunwald
Disease 20

PŘIROZENÝ PRŮBĚH AS

Aortální skleróza ($v_{\max} \text{ ao} < 2.0 \text{ m/s}$)

- progrese k významné vadě $\approx 10\%$ do 5 let

AS

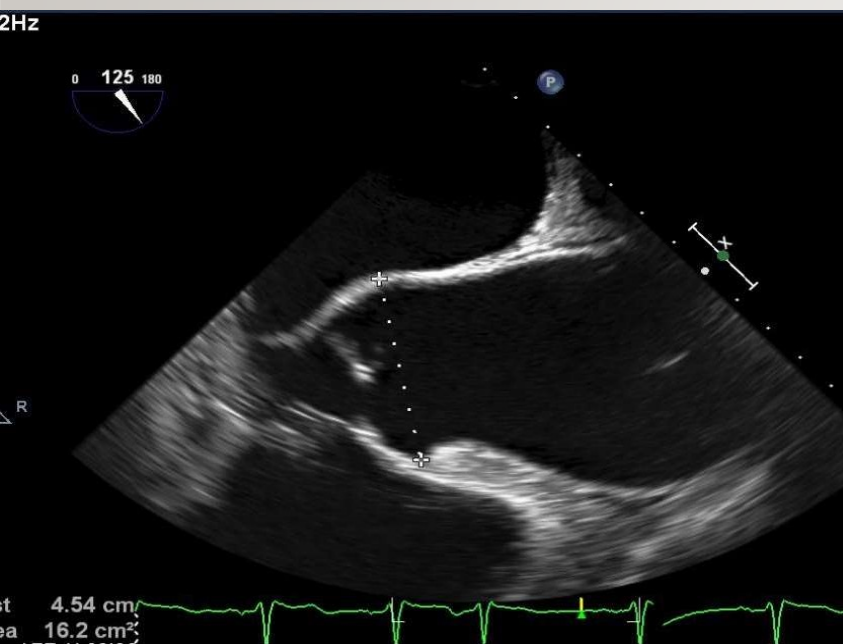
- průměrná progrese
 - $V_{\max} 0.3 \text{ m/s/rok}$
 - stří grad 7 mmHg/rok
 - AVA $0.1 \text{ cm}^2/\text{rok}$
- variabilita inter- i intraindividuální !

BAV

- 80% progreduje ke stenóze
- 20% k regurgitaci



AORTOPATIE SPOJENÁ S BAV



Detaint, D, Heo
2014 ; Fedak, P.
Circulation. 200

AORTOPATIE SPOJENÁ S BAV- SROVNÁNÍ VZORCE PROGRESE OPROTI MARFANOVU SYNDROMU

353 BAV
51 MFS

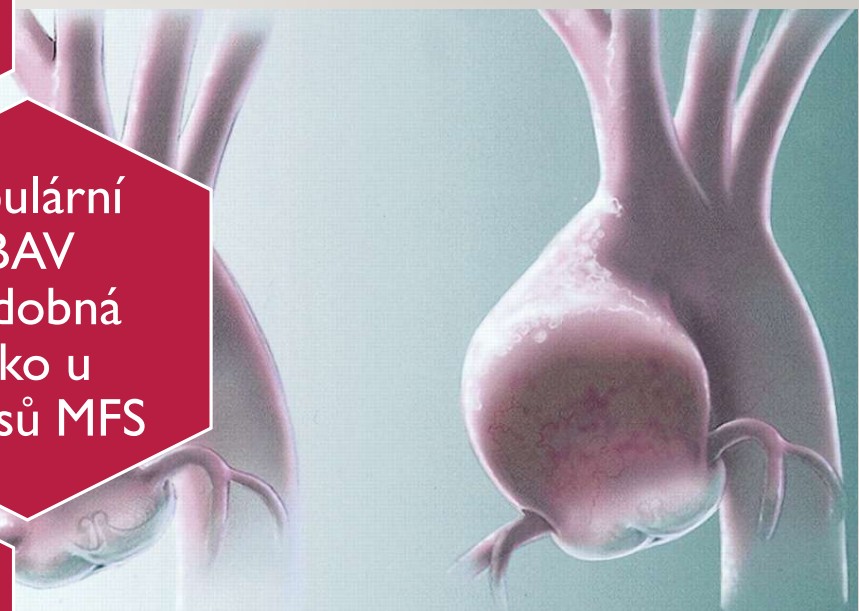
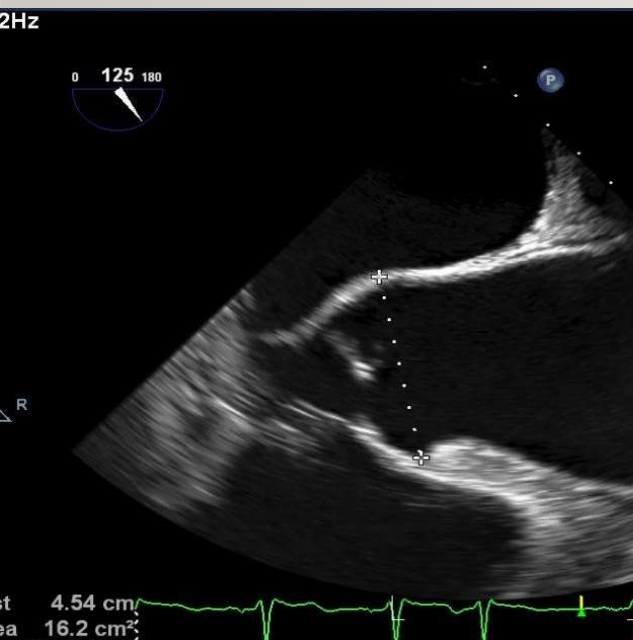
3.6 ± 1.2
let

Rychlost
progrese

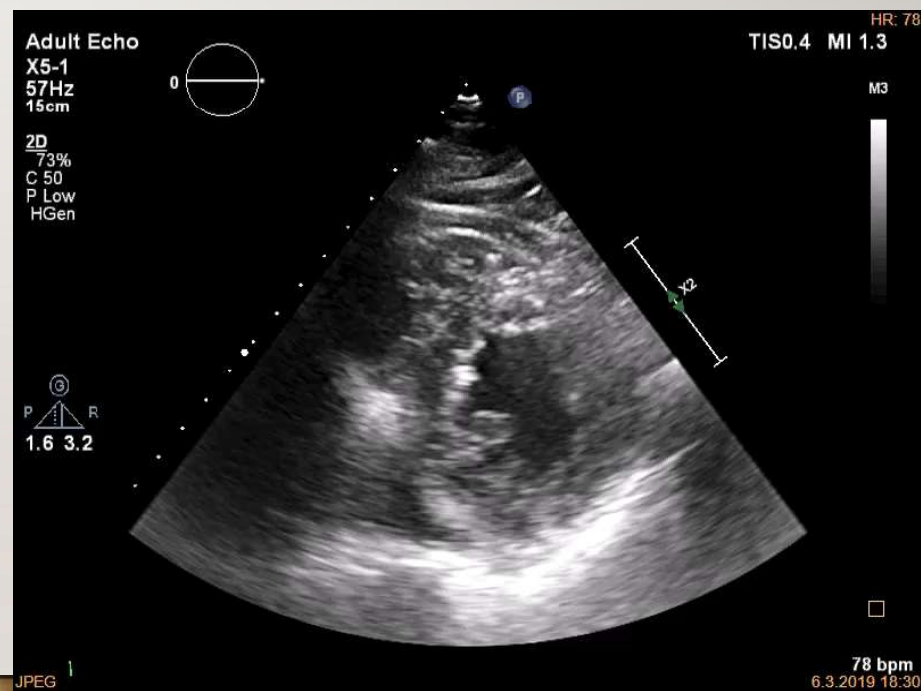
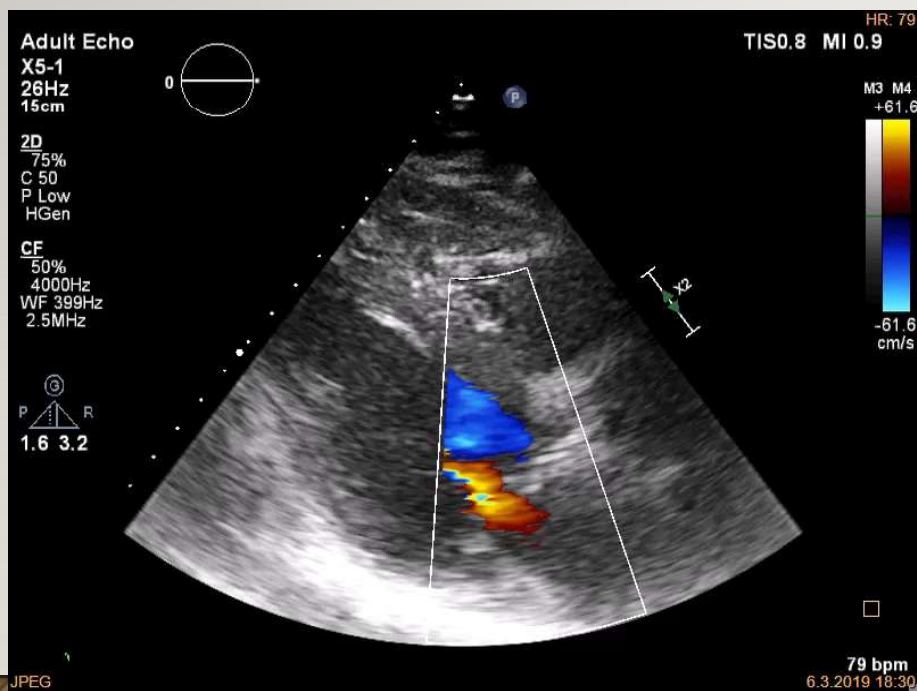
tubulární
BAV
podobná
jako u
sinusů MFS

Avšak
k progresi
nedošlo

u 43%
BAV vs
20% MFS



ODPOVĚĎ LEVÉ KOMORY



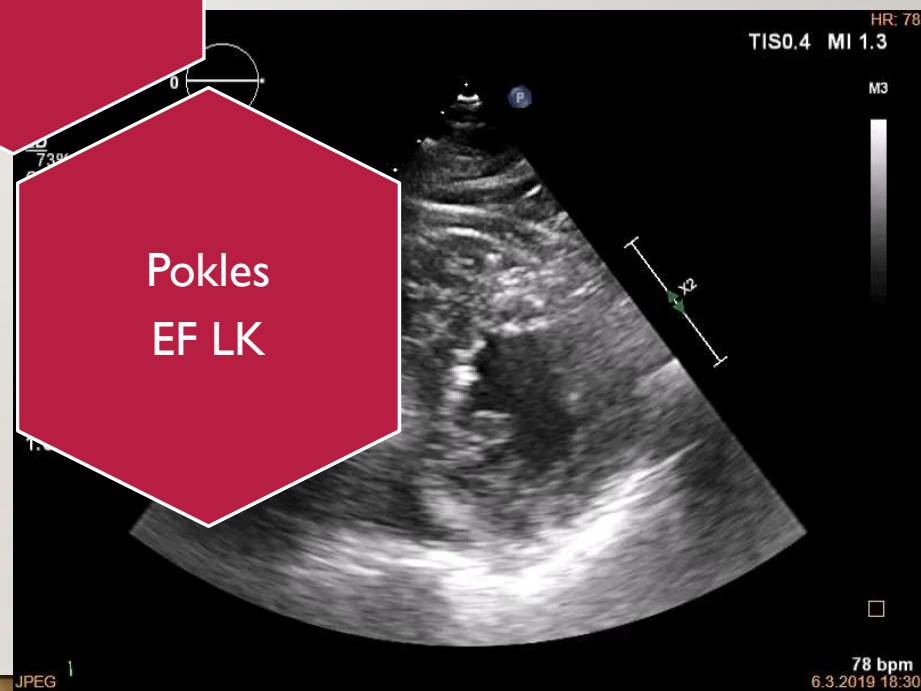
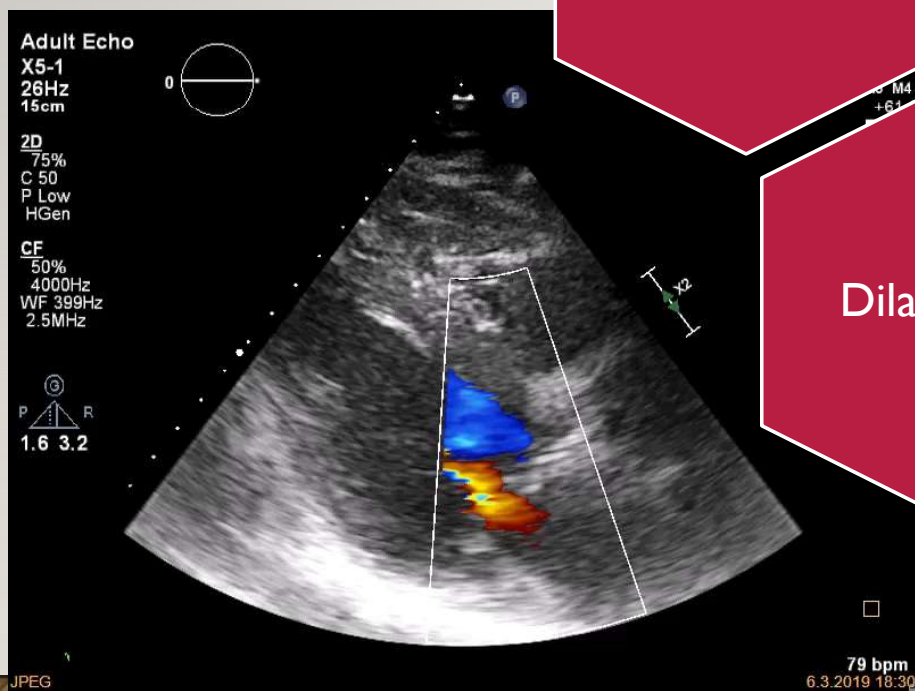
ODPOVĚĎ LEVÉ KOMORY - STUPEŇ ZMĚN LK NEKORELUJE TĚSNĚ SE STUPNĚM STENÓZY

Koncentrická
remodelace..

Hypertrofie

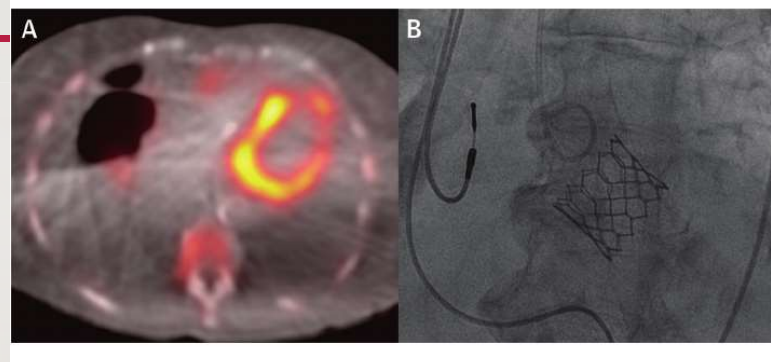
Dilatace LK

Pokles
EF LK

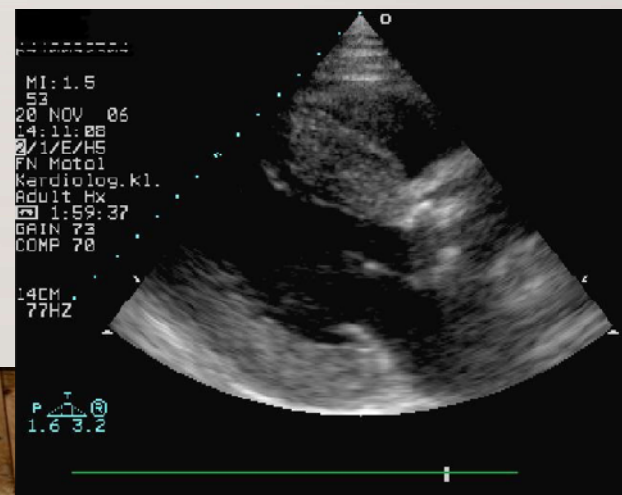


AMYLOIDÓZA (WTTR) U 14% KANDIDÁTŮ TAVI

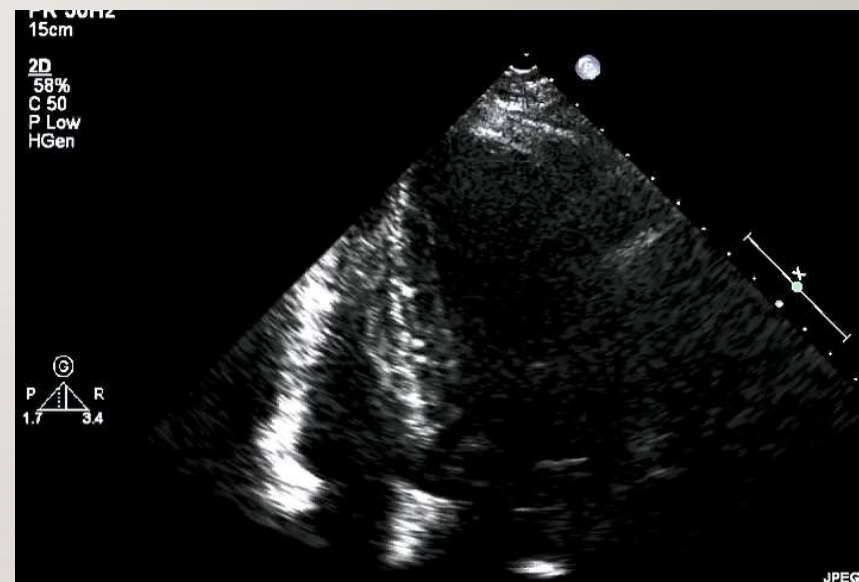
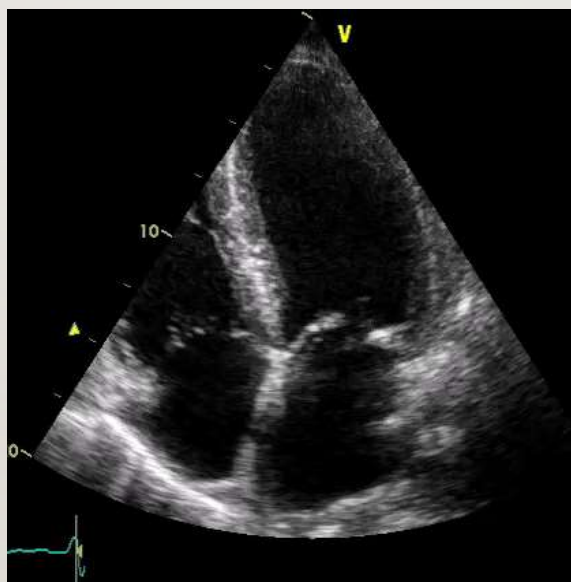
- ATTRact-AS
- 101 pacientů s AS, kandidátů TAVI, 86±5 let, 46% muži
- ^{99m}Tc DPD SPECT/CT
- 14% wtTTR amyloidózu, stejné zastupení mužů a žen,
 - pouze tendence k nižšímu gradientu u wtATTR $p=0.11$
 - 2 pt zemřeli před TAVI



*Scully et al. JACC 71
2018:463–7*

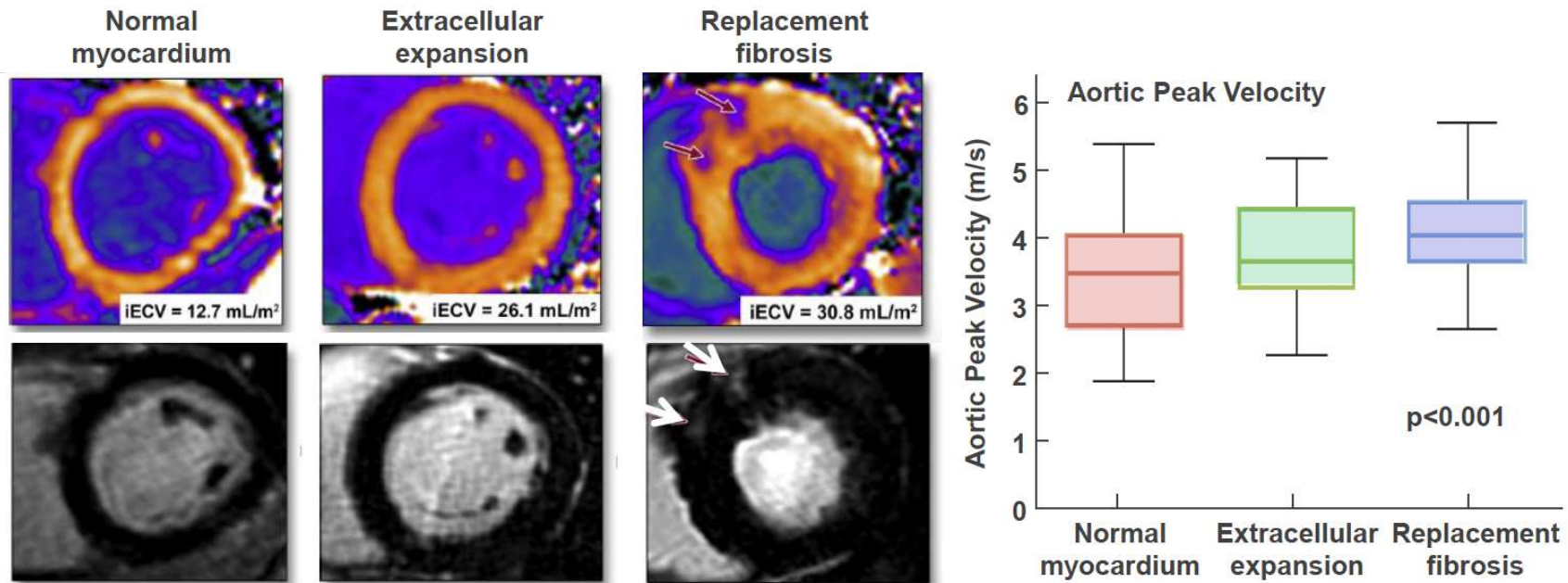


HODNOCENÍ ODPOVĚDI LEVÉ KOMORY – MÁ VÝZNAM I PRO STAGING AS U „ASYMPTOMATICKÝCH“ PACIENTŮ



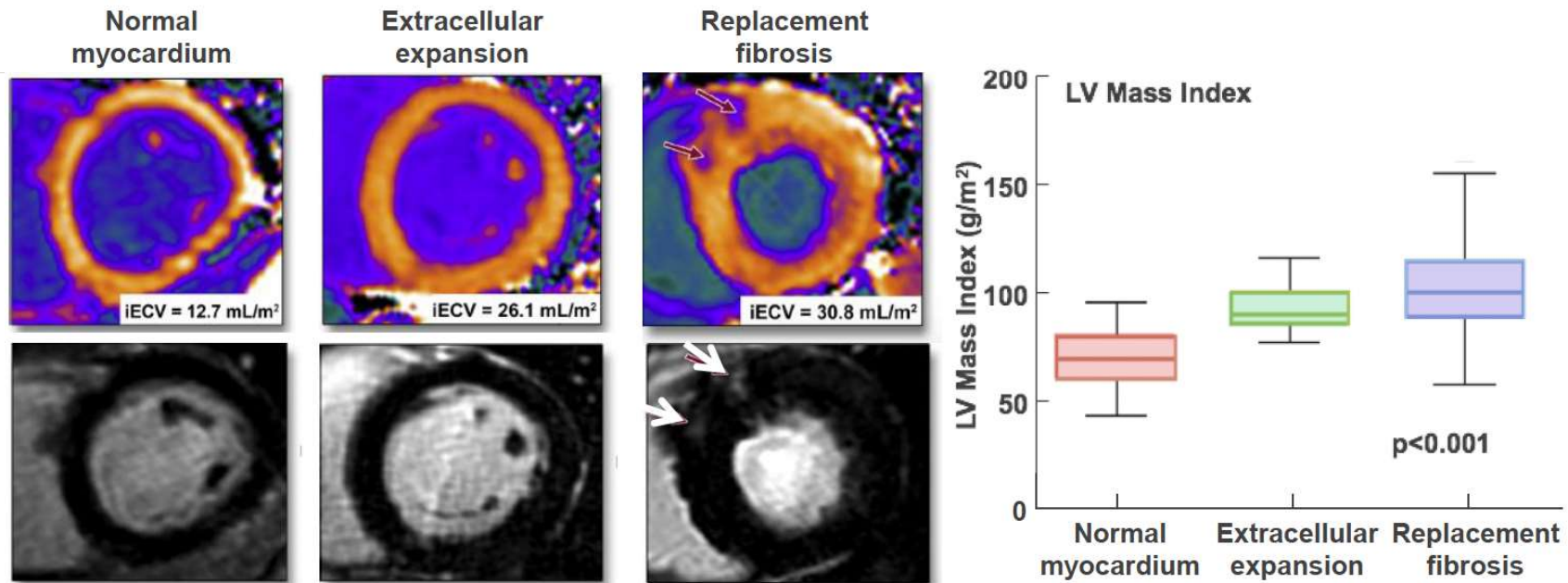
Myocardial Fibrosis and Cardiac Decompensation in Aortic Stenosis

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Sanjay K. Prasad, MD,^d Scott Semple, PhD,^e David E. Newby, MD, PhD,^a Marc R. Dweck, MD, PhD^a



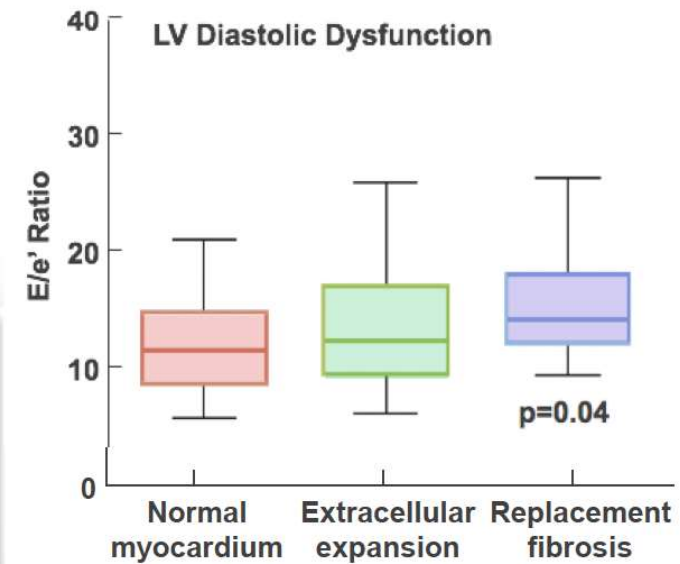
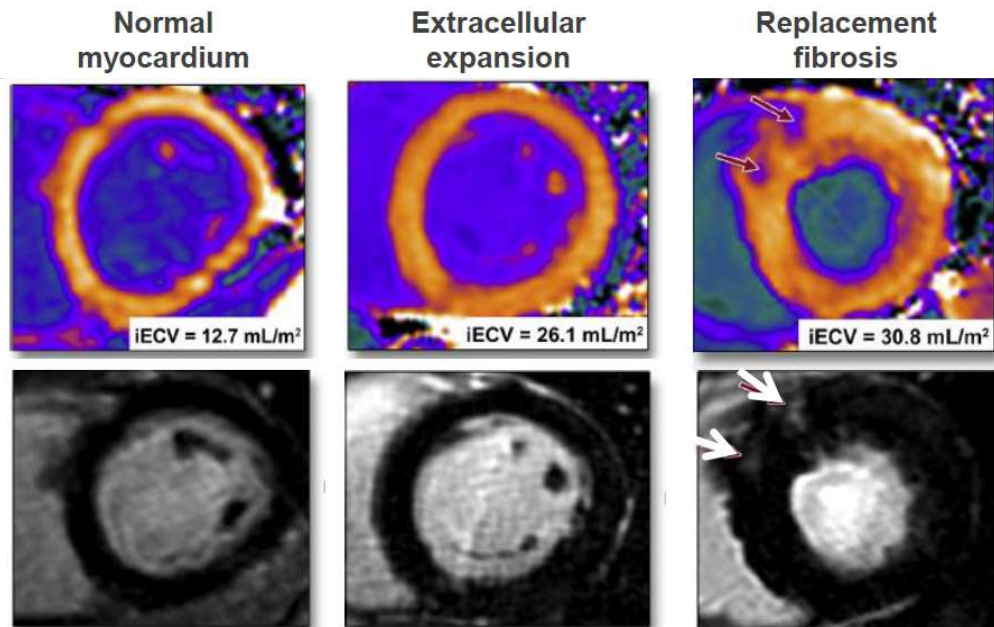
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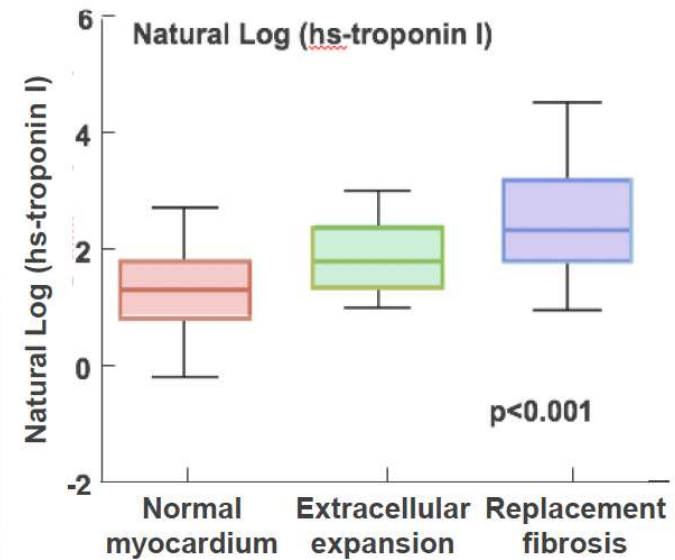
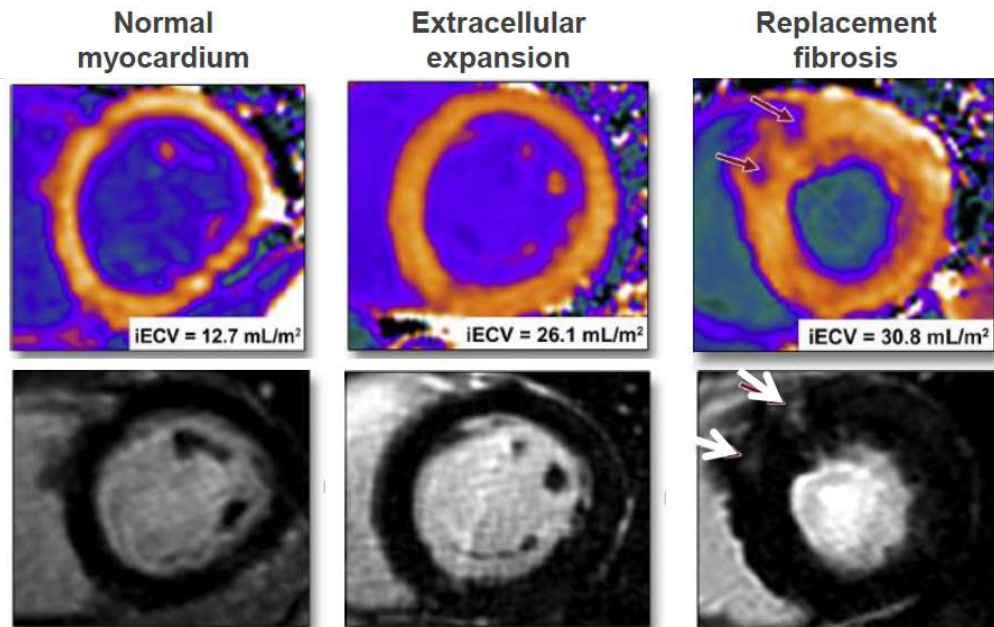
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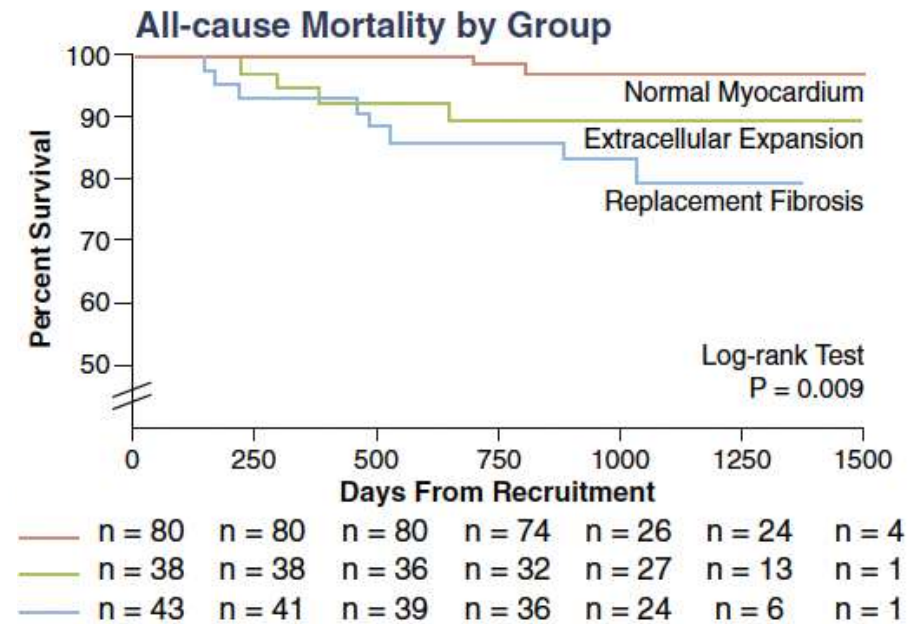
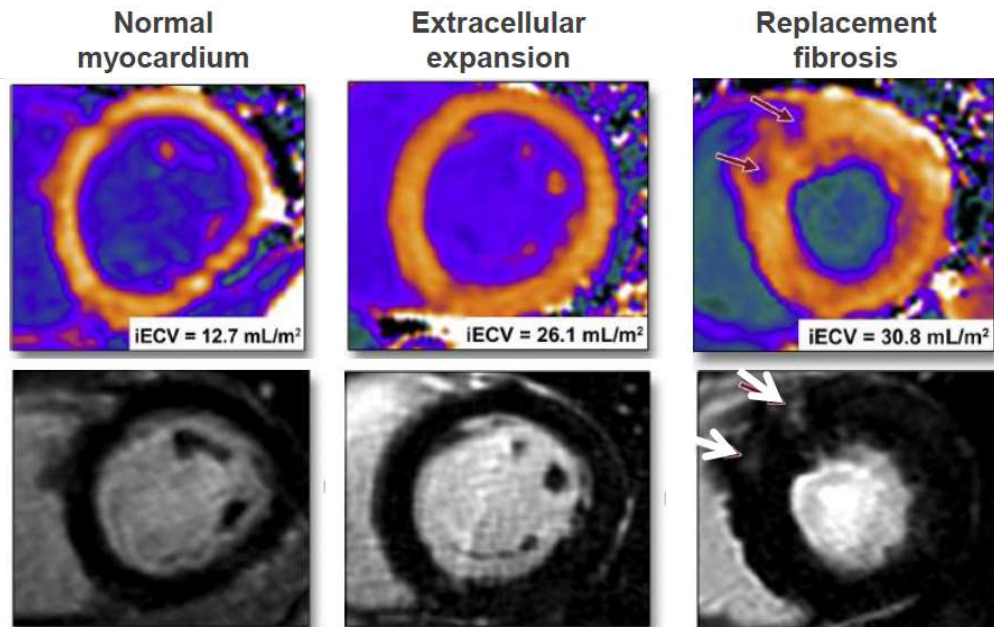
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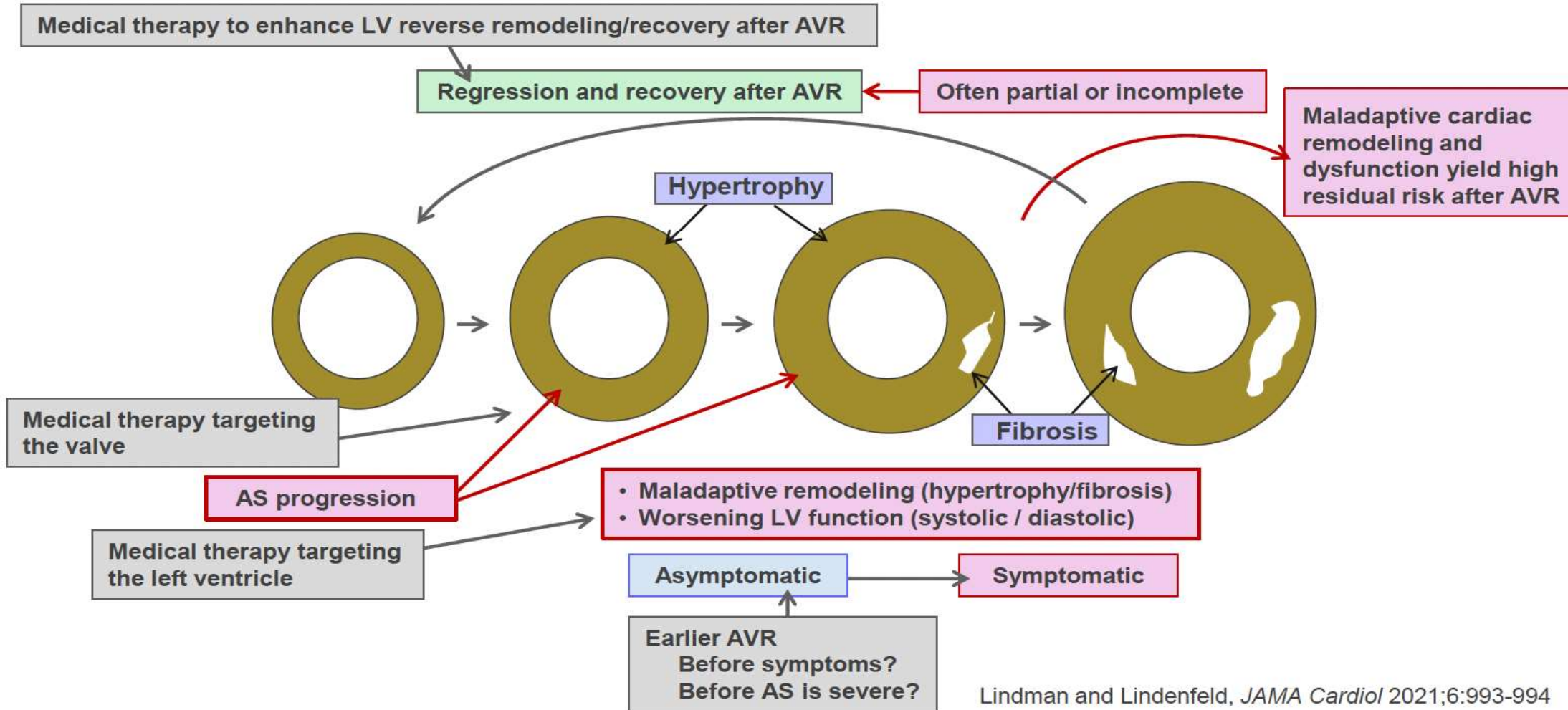


VIEWPOINT

Prevention and Mitigation of Heart Failure in the Treatment of Calcific Aortic Stenosis

A Unifying Therapeutic Principle

Brian R. Lindman, MD, MSc; JoAnn Lindenfeld, MD



The Next Frontier: Discovering Targets to Treat Aortic Stenosis

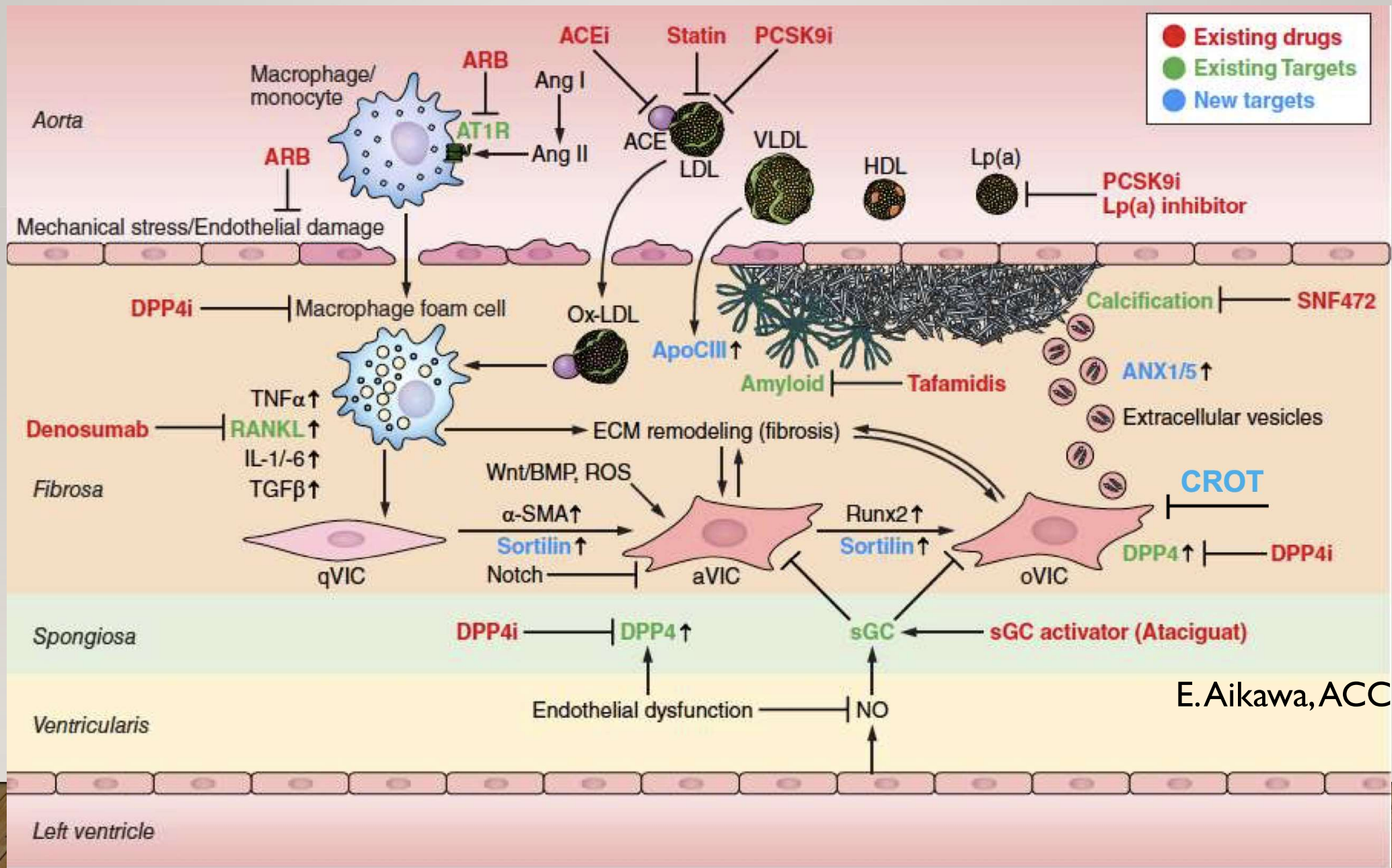
Elena Aikawa MD, PhD
Director, Heart Valve Translational Research Program
Head, Cardiovascular Life Sciences

Brigham and Women's Hospital
Harvard Medical School

ACC.2024
Atlanta, GA
April 6, 2024

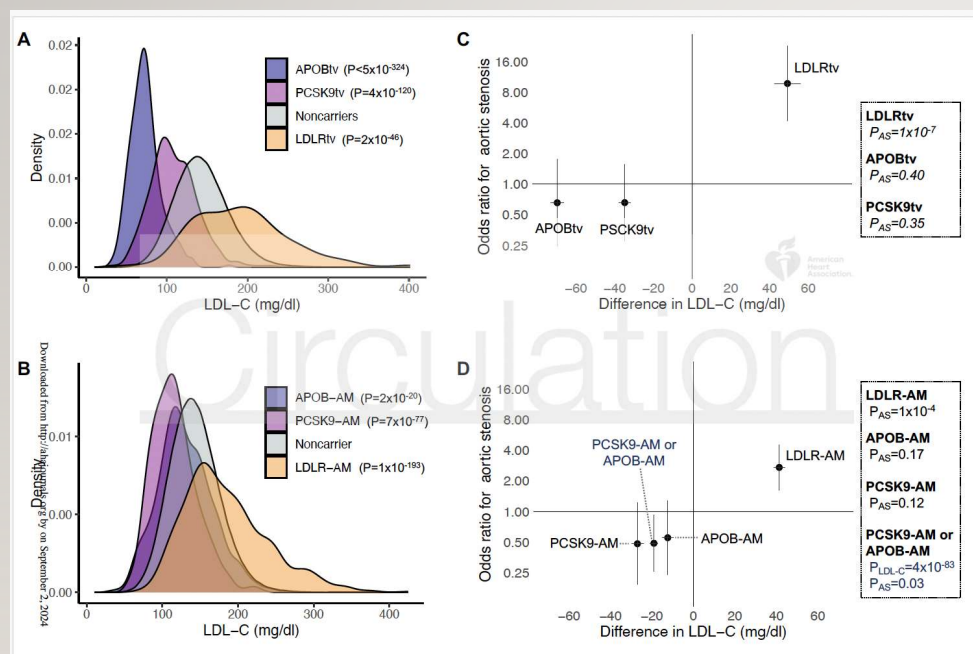


POTENCIÁLNÍ CÍLE V LÉČBĚ AS



E. Aikawa, ACC 2011

ASOCIACE GENETICKÝCH VARIANT „ZTRÁTA FUNKCE“ LDLR, APOB A PCSK9 S HLADINOU LDL A AS

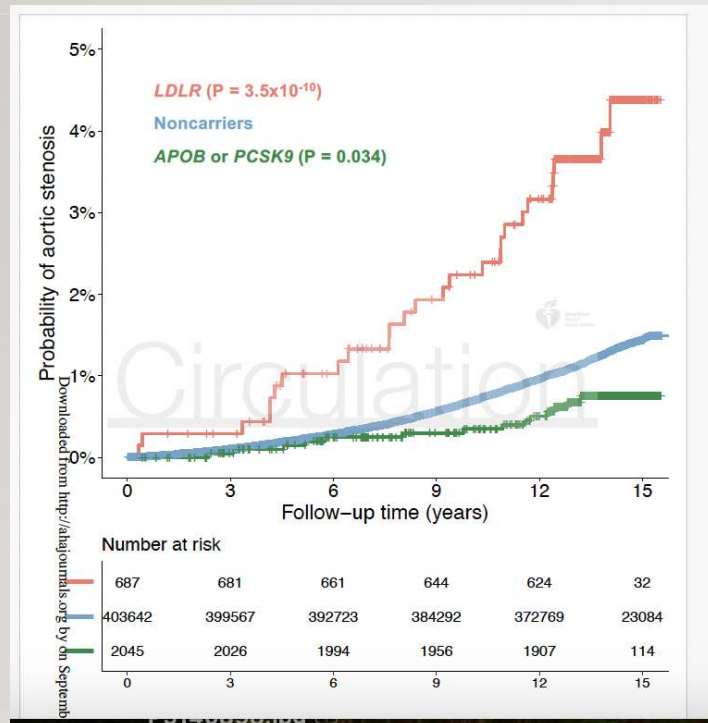


- Data z UK Biobank
- 421,049 pt (54% žen; $N=5,621$ s AS)
- 98 nositelů LDLRtv (prům věk $55,8 \pm 8,9$ let, 63% žen),
- 402 nositelů APOBtv ($56,6 \pm 7,9$ let, 57% žen) a 514 nositelů PCSK9tv ($56,7 \pm 8,3$ let, 59% žen)

Rämö, 2024

10.1161/CIRCULATIONAHA.124.07

ASOCIACE VZÁCNÝCH GENETICKÝCH VARIANT LDLR, APOB, A PCSK9 S AS



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10.1161/CIRCULATIONAHA.124.01

C.24

75 AMERICAN COLLEGE OF CARDIOLOGY



C.24

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PATIENT PERSPECTIVE: LIVING WITH AORTIC STENOSIS



PATIENT LISTENING SESSION

IMPACT & TREATMENT DECISIONS

Sharing your Story

TEAM of DOCTORS
NURSES (N.P.)
ENGAGE WITH PATIENTS & FAMILY / CAREGIVERS
FAMILY MEMBERS NOTICE SYMPTOMS

WORKING TOGETHER

EDUCATION
PATIENT SUPPORT GROUPS
MENTAL HEALTH SUPPORT
GET INFORMATION EARLIER

AWAWARENESS

BUILD TRUST WITH YOUR DOCTORS

- ASK QUESTIONS
- FEEL COMFORTABLE

GETTING THE MOST INFORMATION EARLY IS CRUCIAL

FORUMS OF DISCUSSION WITH STAKEHOLDERS

PATIENTS SUPPORTING PATIENTS IS SO IMPORTANT

FEARS
PATIENTS WANT THEIR DOCTORS' VALIDATION

THE MODERN PATIENT

SPouses, CAREGIVERS 24/7 IMPACT

TRANSPIRENCY
DOES IT LEAK? WHAT CAN WE DO?
WHAT COMES NEXT?
HOW LONG DOES IT LAST?

WHAT HAPPENS AFTER THE PROCEDURE?
SHARE THE PATIENT JOURNEY

WHAT IS A MURMUR?
FEELING EMPOWERED & PREPARED

THE LIFETIME JOURNEY of the VALVE

CLASSES **PREPAREDNESS** **PATIENT'S HISTORY** **MENTAL PART**

CHANGE OF ATTITUDE, BEHAVIOR, MOODINESS

ARTERY BLOCKAGE

DOCTOR Education
EASY TO UNDERSTAND, COMPREHENSIVE BROCHURES
TRUSTED SOURCES
RELATIONSHIP BETWEEN MEDICATION SIDE EFFECTS AND VALVE ISSUES

PATIENT Education
WE HAVE A LOT TO LEARN FROM SHARED DECISION MAKING

SHARED DECISION MAKING
Emotional toll for patient and families
50% OF PATIENTS WITH A.S. DO NOT RECEIVE TREATMENT

LISTEN TO THE PATIENT GOALS

SELF-ADVOCATE IS KEY

CARDIOLOGY TEAM IS A LIFELONG NEED

HOW TO REACH THEM?
COMMUNITY MEETINGS HELD IN CHURCHES
ADVERTISMENT
TV / NEWSPAPER
SOCIAL MEDIA
PATIENT'S TESTIMONIALS

UNDERSERVED COMMUNITIES, PEOPLE OF COLOR

WHAT SHOULD I ASK?
LET'S LOOK AT MY MEDICATION SOMETHING NEW? STOP? START

NEW OPTIONS
BEING TESTED for AORTIC STENOSIS

IS THERE SOMETHING NEW OUT THERE THAT COULD HELP ME?

DID NOT RECEIVE A GOOD, SOLID ANSWER?
GO FOR A SECOND OPINION

FUTURE
NURSE PRACTITIONERS
PHYSICIANS' ASSISTANTS
CARING, LISTENING PROFESSIONALS

WORKING TOGETHER WITH PHYSICIANS

IMPORTANT TO REMEMBER THAT THIS IS NOT A ONE TIME FIX, IT'S A MATTER OF LIFETIME MANAGEMENT AND FOLLOW UP

EXERCISE
DAILY IS SO IMPORTANT