Meditsiini UPDATE 2019

KARDIOLOOGIA

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Põhja-Eesti Regionaalhaigla

5. detsember 2019
Swissôtel Tallinn konverentsikeskus

NELI LUGU

„Kui madalale veel saab?“ (madala tihedusega lipoproteiini kolesterool)

„Suhkur koos veega välja“ (diabeediravimid südamepuudulikkuse korral)

„Mõrad põhitõdedes“ (revaskulariseerimine krooniliste koronaarsündroomide korral)

„Kas väike auk on sama hea kui suur auk?“ (aordiklapi proteesi implanteerimise ning kirurgilise ravi võrdlused)

„Kui madalale veel saab?“

European Heart Journal (2016) 37, 2999–3058
doi:10.1093/eurheartj/ehw272

ESC/EAS GUIDELINES

2016 ESC/EAS Guidelines for the Management of Dyslipidaemias

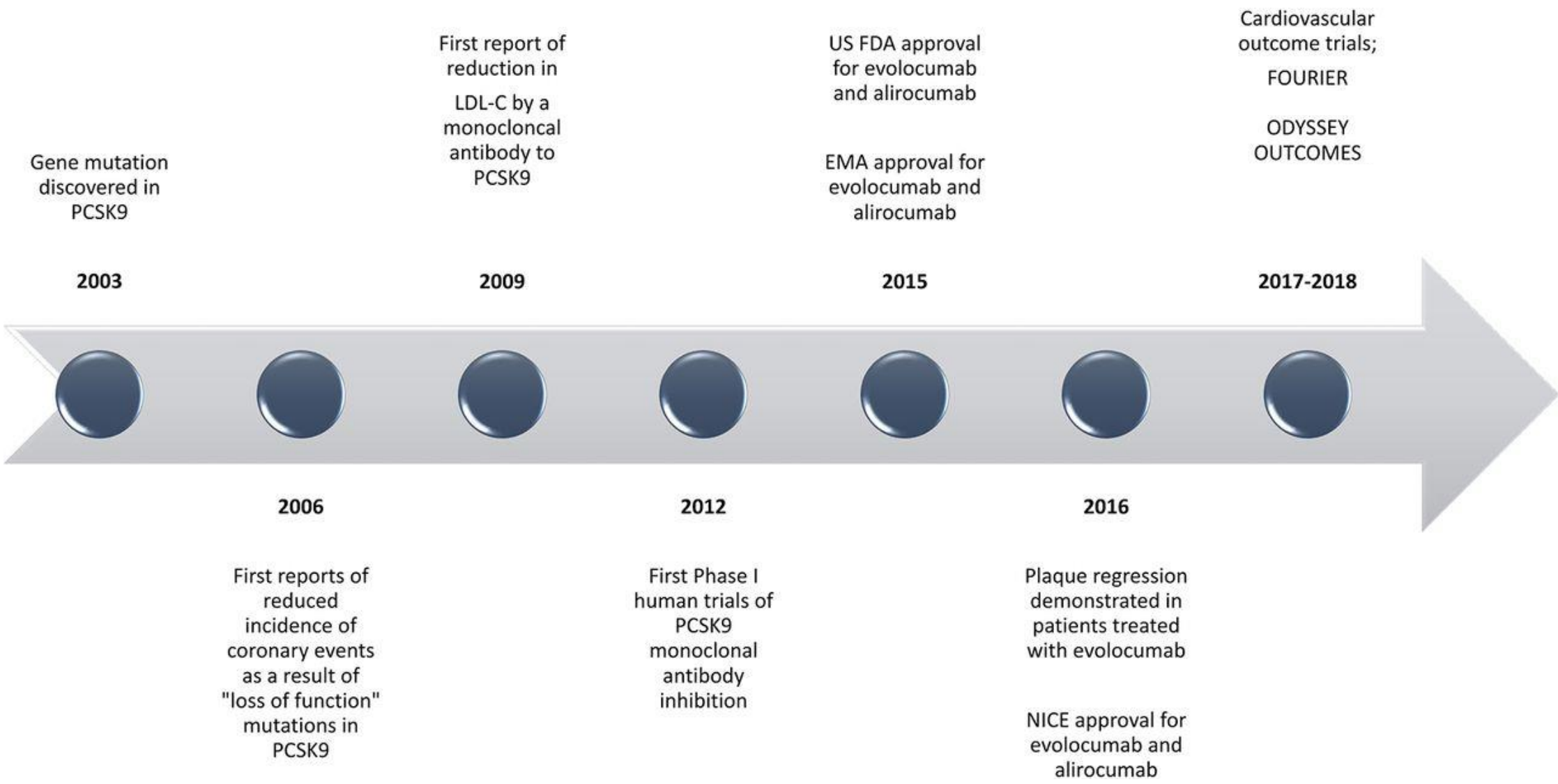
Recommendations	Class [a]	Level [b]
In patients at VERY HIGH CV risk[d], an LDL-C goal of <1.8 mmol/L (70 mg/dL) or a reduction of at least 50% if the baseline LDL-C[e] is between 1.8 and 3.5 mmol/L (70 and 135 mg/dL) is recommended.	I	B

ESC European Society of Cardiology
European Heart Journal (2019) 00, 1–78
doi:10.1093/eurheartj/ehz455

ESC/EAS GUIDELINES

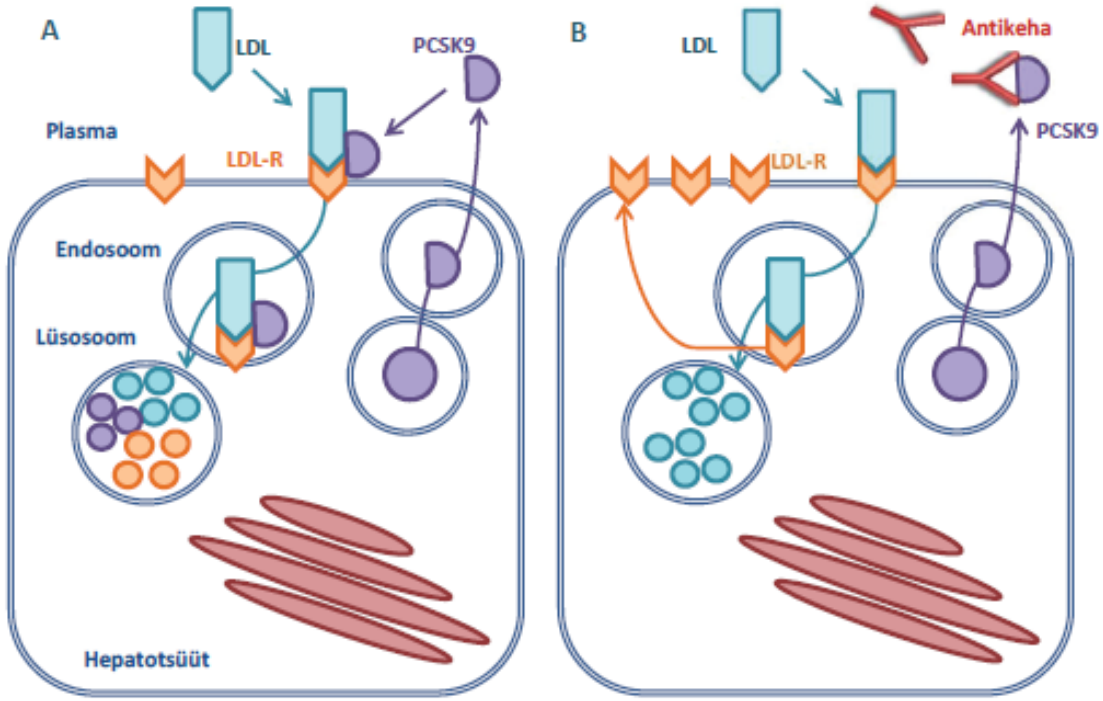
2019 ESC/EAS Guidelines for the management of dyslipidaemias: *lipid modification to reduce cardiovascular risk*

In secondary prevention patients at very-high risk, an LDL-C reduction of at least 50% from baseline and an LDL-C goal of <1.4 mmol/L (<55 mg/dL) are recommended.	I	A



Hadjiphilippou S, Ray K. BMJ Heart. PCSK9 inhibition and atherosclerotic cardiovascular disease prevention: does reality match the hype?

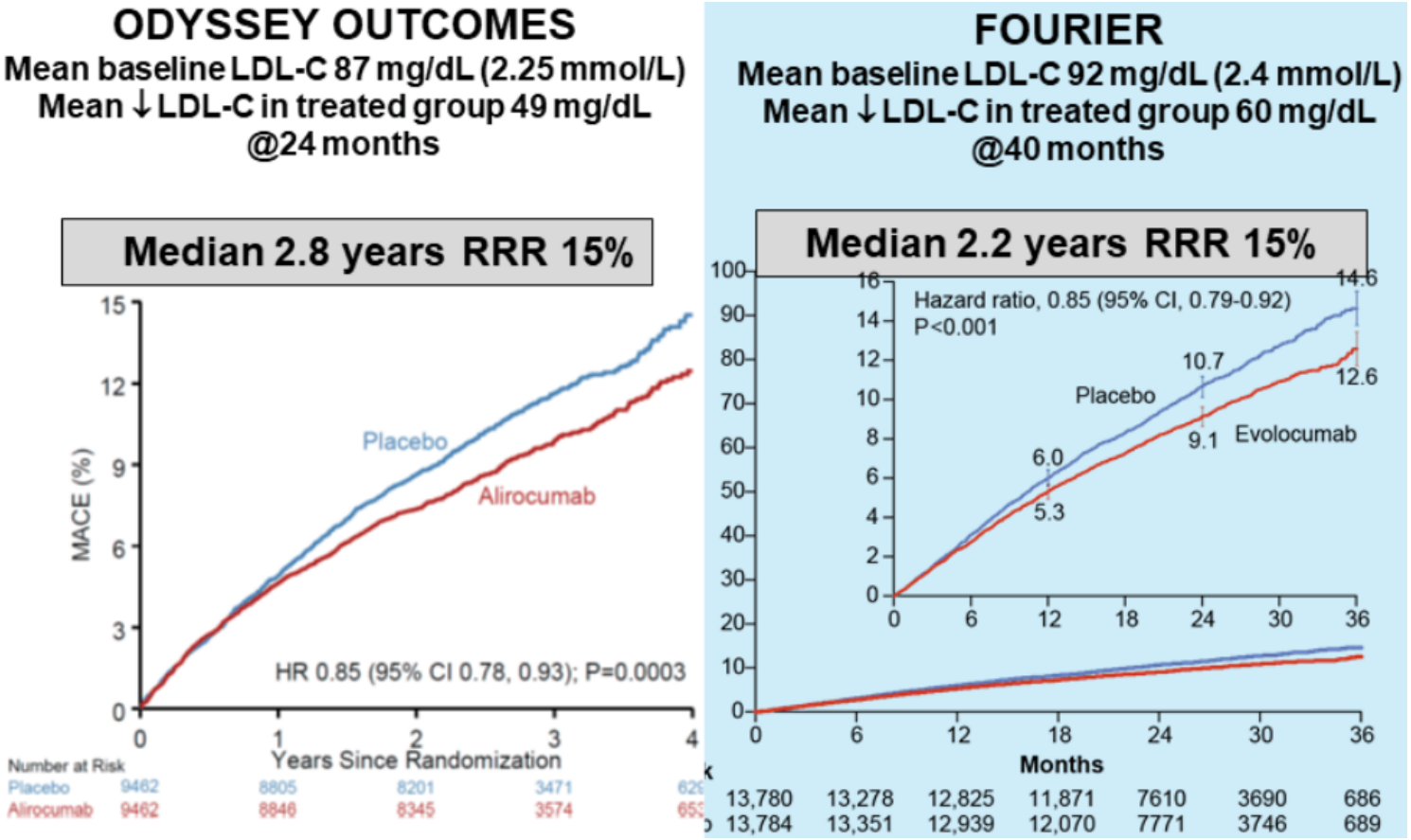
PCSK9 antikehade toimemehhanism



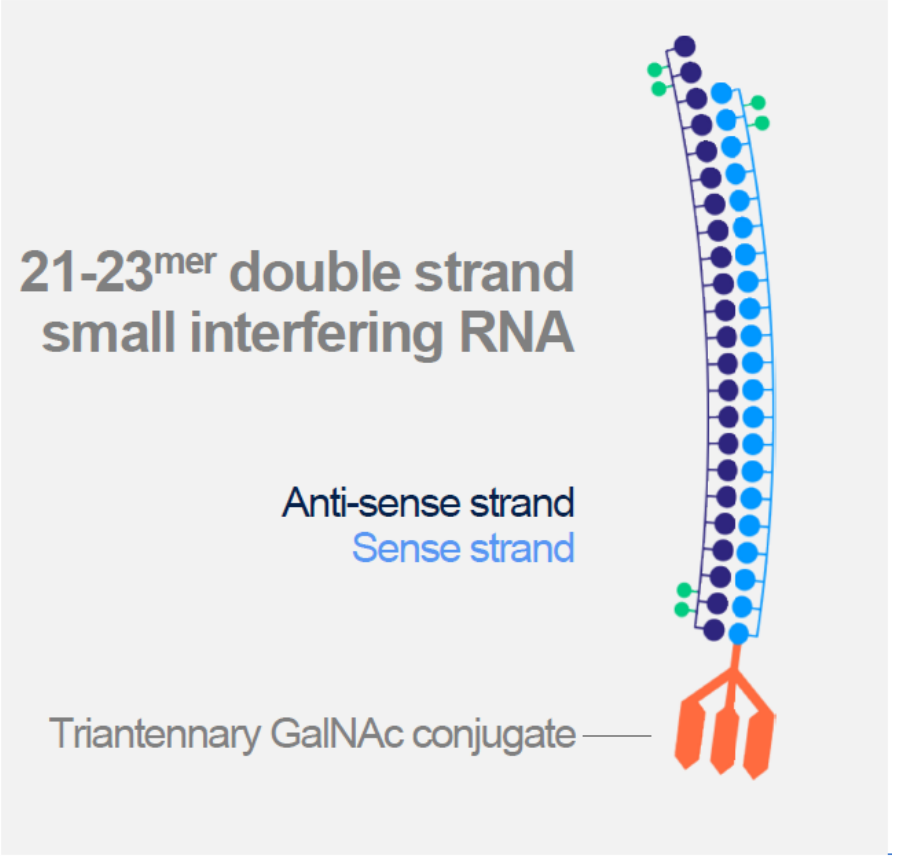
Joonis 2. PCSK9 antikehade toimemehhanism. A. Sünteesitud PCSK9 läbib autokatalüüsi ja sekreteeritakse. LDL, LDLi retseptor (LDL-R) ning PCSK9 moodustavad kompleksi, mis internaliseeritakse endotsütoosi teel ning PCSK9 signaali tulemusena lagundatakse kõik kompleksi komponendid lüsosoomis. B. Antikehad seovad sekreteeritud PCSK9, endosoomist vabanev LDLi retseptor taaskasutatakse, LDLi sidumine plasmast intensiivistub.

Irs A. PCSK9 monokloonsed antikehad düslipideemia raviks: evolokumab ja alirokumab. Eesti Arst 2015; 94(9):567–570

Alirokumabi ja evolokumabi toime kardiovaskulaarsetele sündmustele

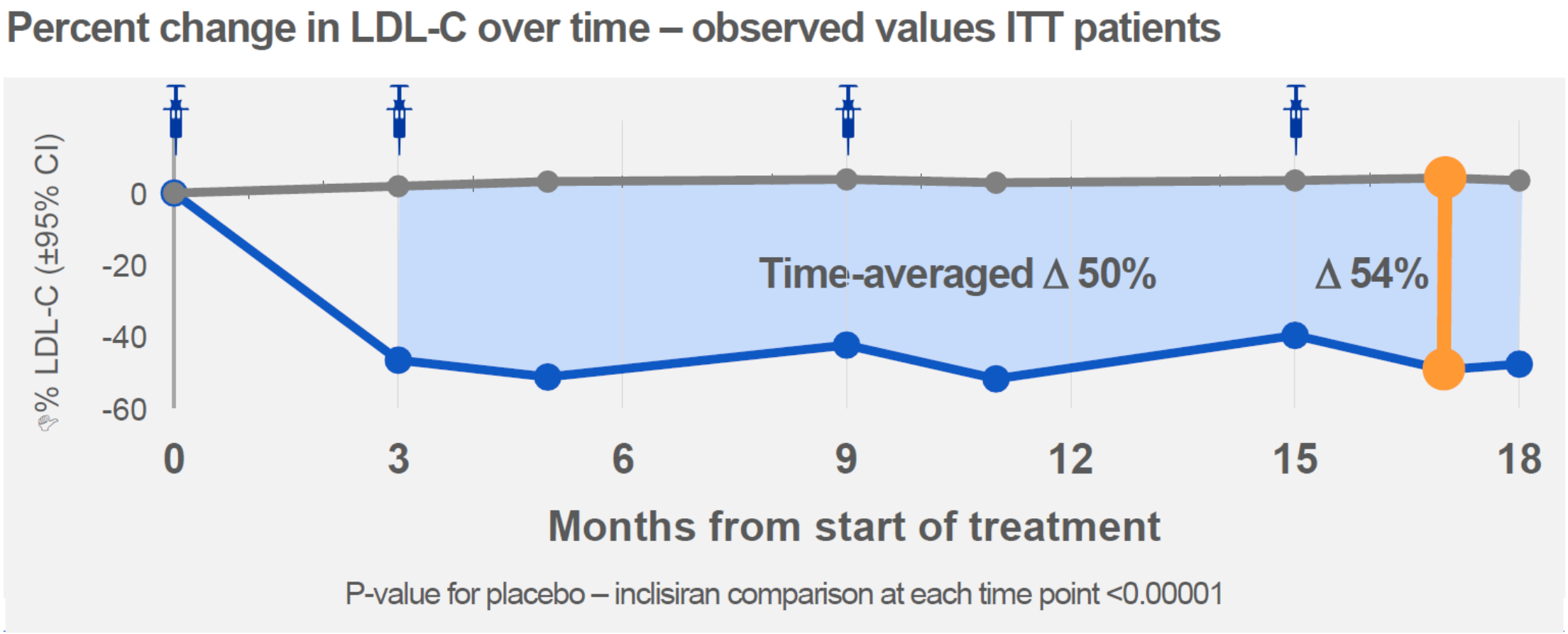


Inklisiraan ORION programmis



- Väike vahelesegav kaheahelaline stabiliseeritud RNA molekul
- Inhibeerib spetsiifiliselt ja pikaajaliselt PCSK9 valgusünteesi
- Manustatakse subkutaanselt 2 korda aastas

2019: inklisiraani toime LDL-kolesteroolile

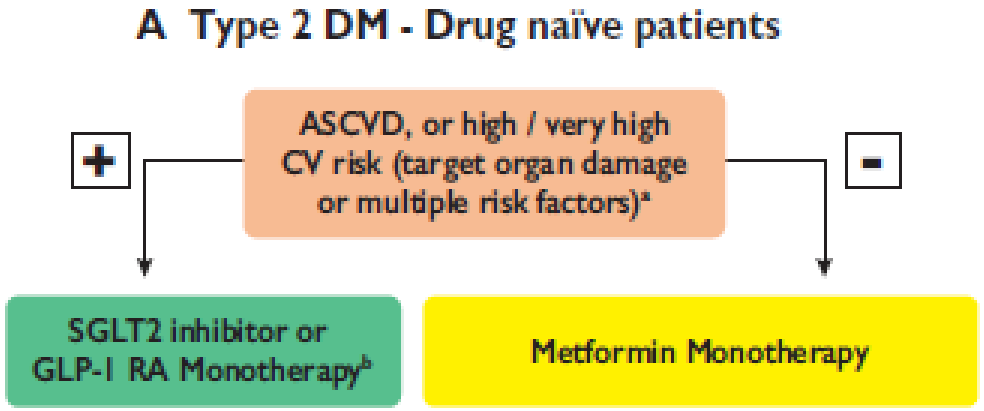


„Suhkur koos veega välja“

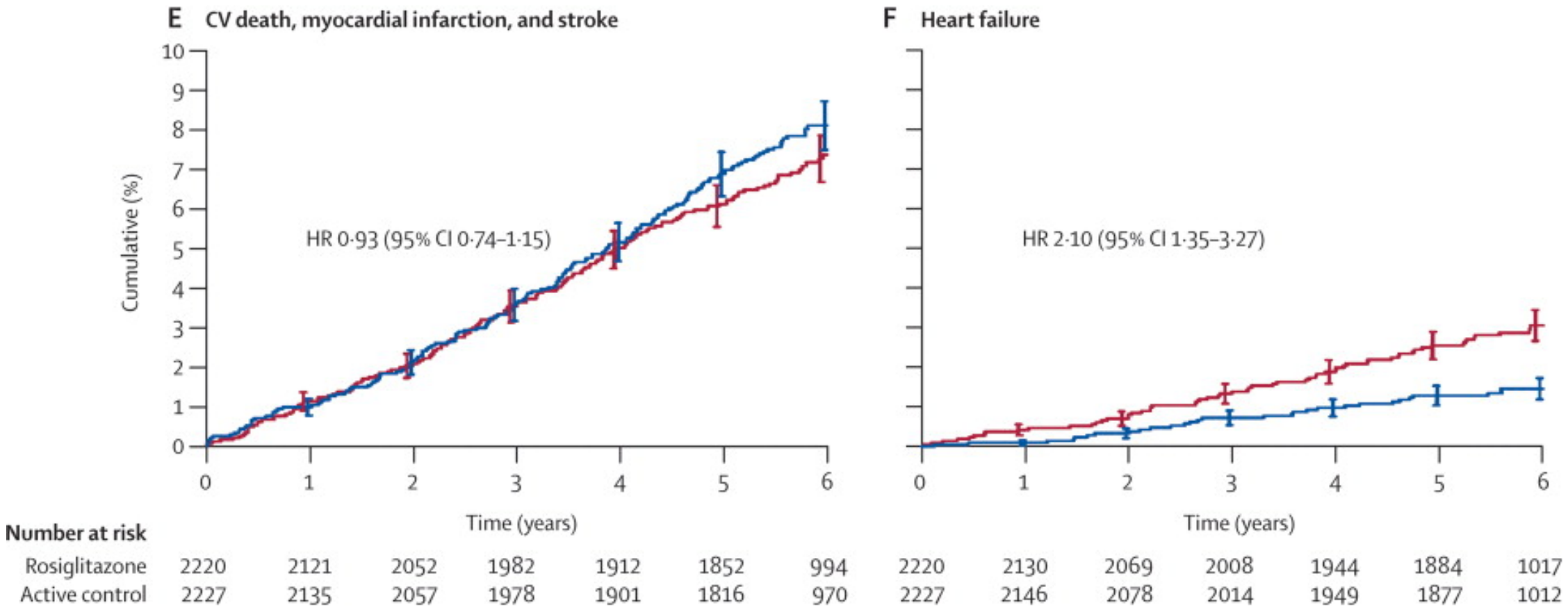
ESC European Society of Cardiology
European Heart Journal (2019) 00, 1–69
doi:10.1093/eurheartj/ehz486

ESC GUIDELINES

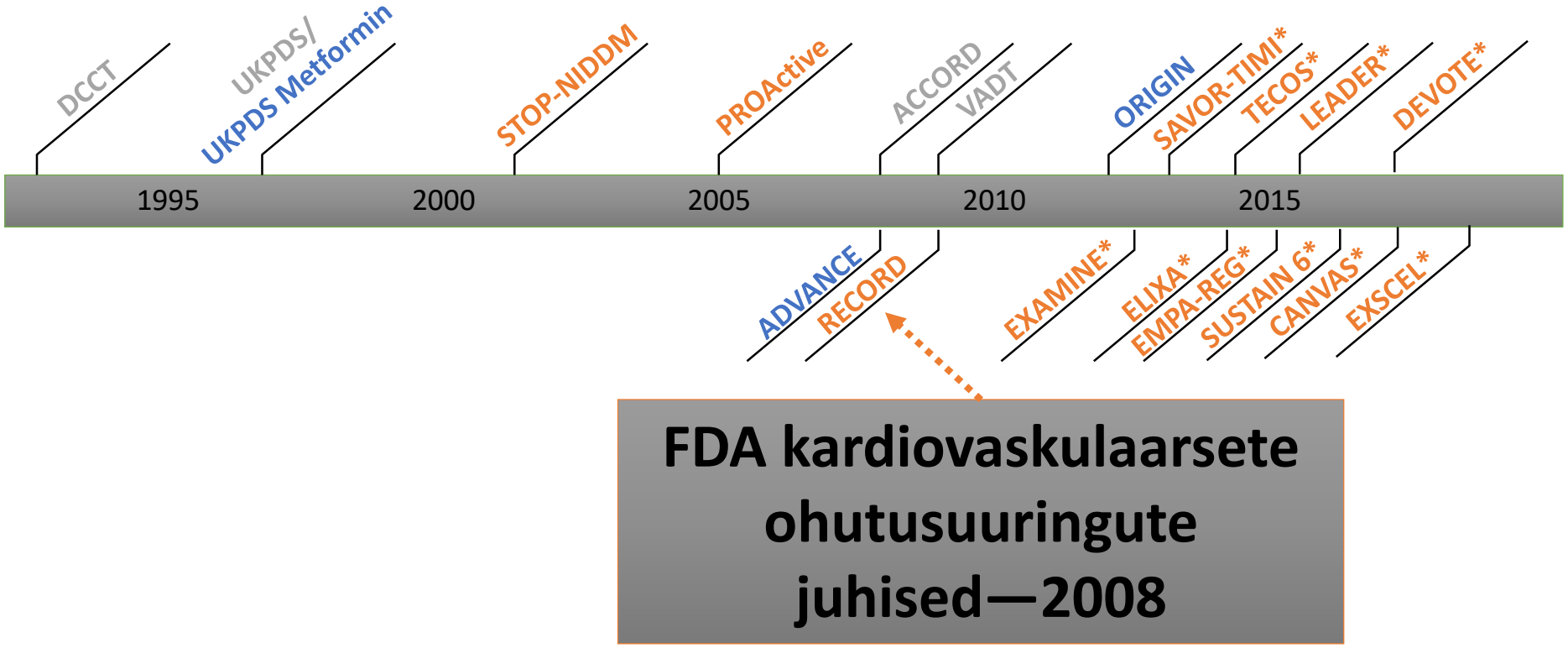
2019 ESC Guidelines on diabetes, pre-diabetes, and cardiovascular diseases developed in collaboration with the EASD



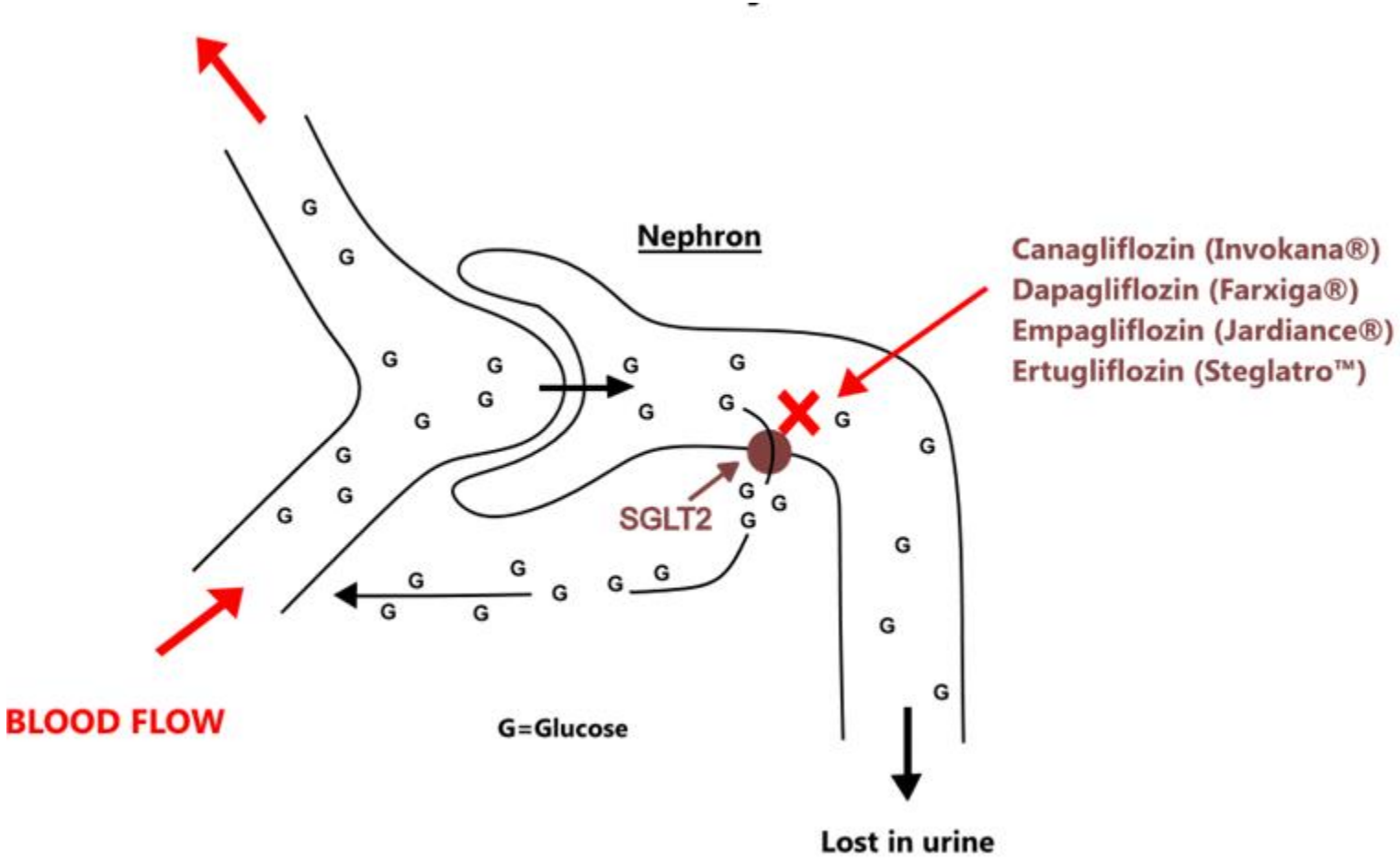
Kõik algas rosiglitasoonist aastal 2008



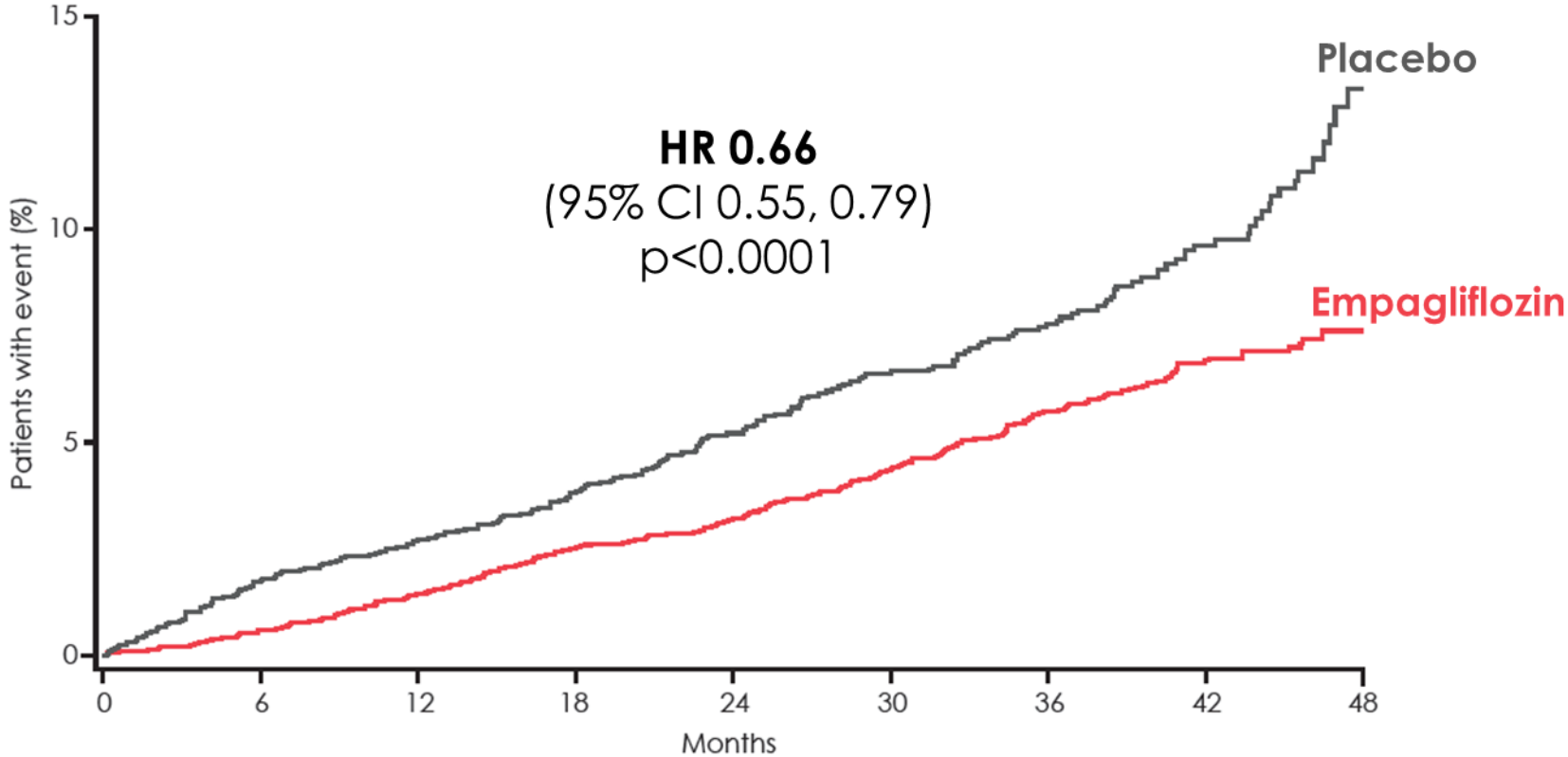
Diabeediravimite kardiovaskulaarse ohutuse uuringute lugu



SGLT2 inhibiitorid takistavad glükoosi tagasiimendumist neerudes



EMPA-REG 2015
Südamepuudulikkuse tõttu hospitaliseerimine või KV surm



No. of patients									
Empagliflozin	4687	4614	4523	4427	3988	2950	2487	1634	395
Placebo	2333	2271	2226	2173	1932	1424	1202	775	168

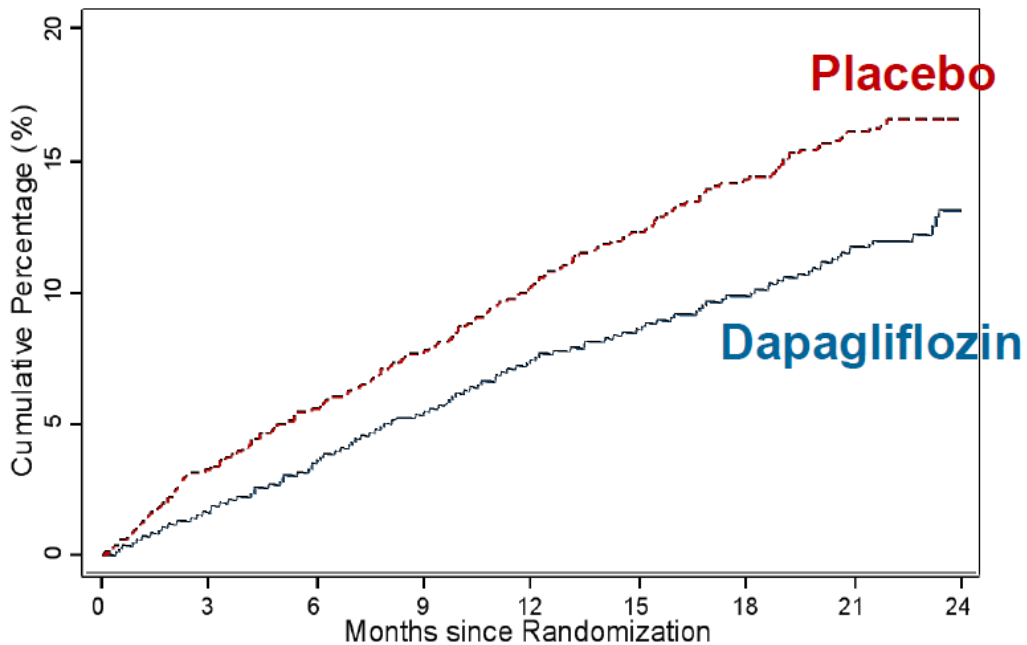
Zinman et al. N Engl J Med 2015; 373:2117-2128

EMPA-REG OUTCOME®

Dapagliflozin in Patients with Heart Failure and Reduced Ejection Fraction

Worsening HF event

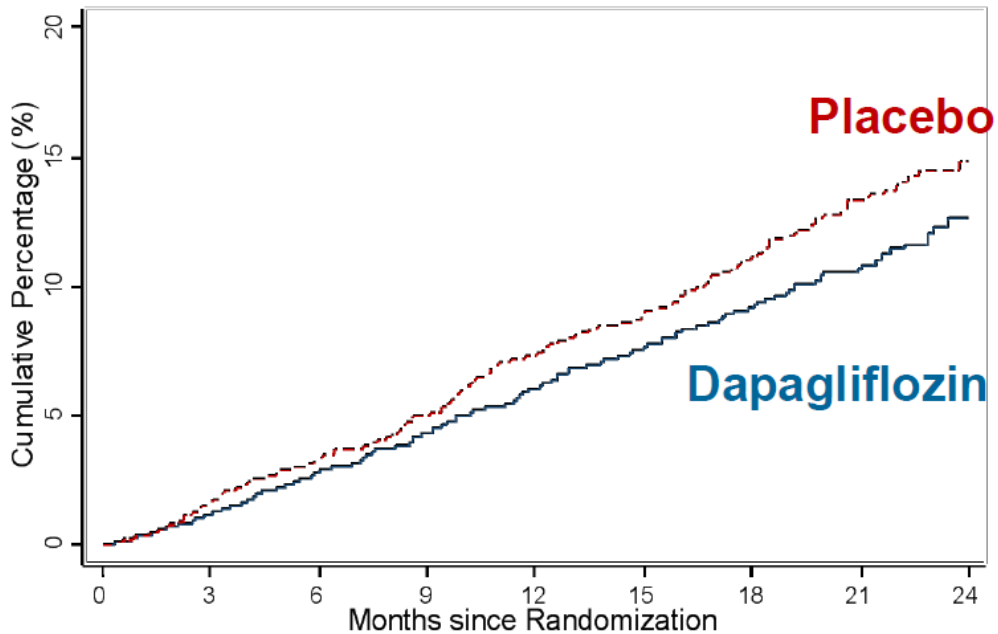
HR 0.70 (0.59, 0.83); p=0.00003



Number at Risk									
Dapagliflozin	2373	2305	2221	2147	2002	1560	1146	612	210
Placebo	2371	2258	2163	2075	1917	1478	1096	593	210

Cardiovascular death

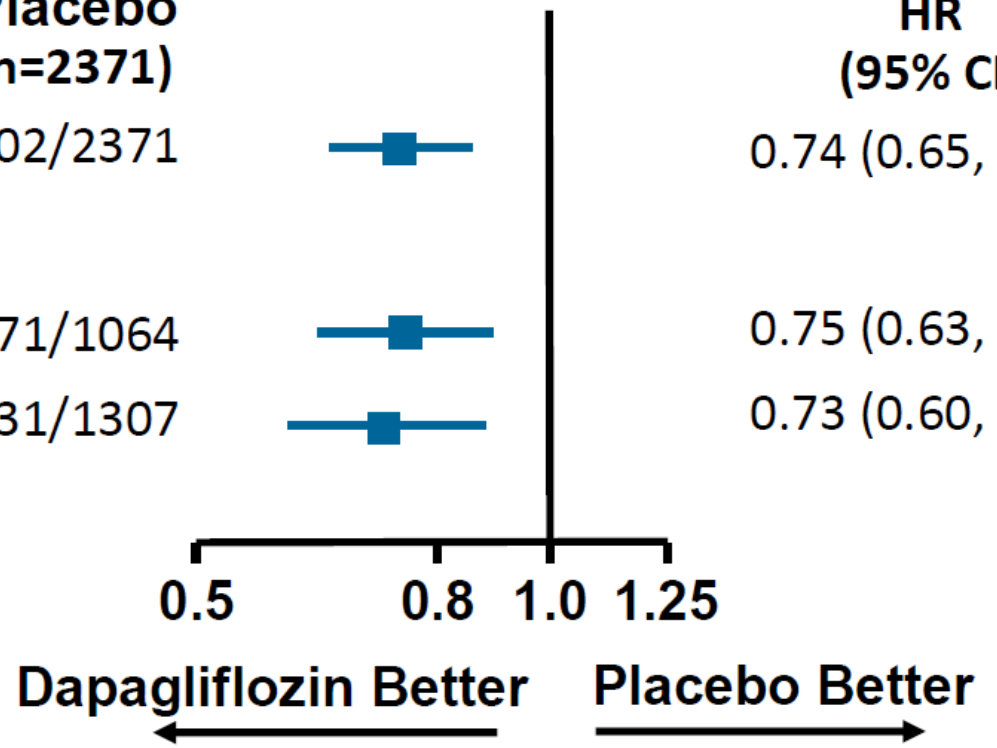
HR 0.82 (0.69, 0.98); p=0.029



	2373	2339	2293	2248	2127	1664	1242	671	232
	2371	2330	2279	2230	2091	1636	1219	664	234

Dapagliflosiini toime HFrEF korral ei sõltunud diabeedi olemasolust

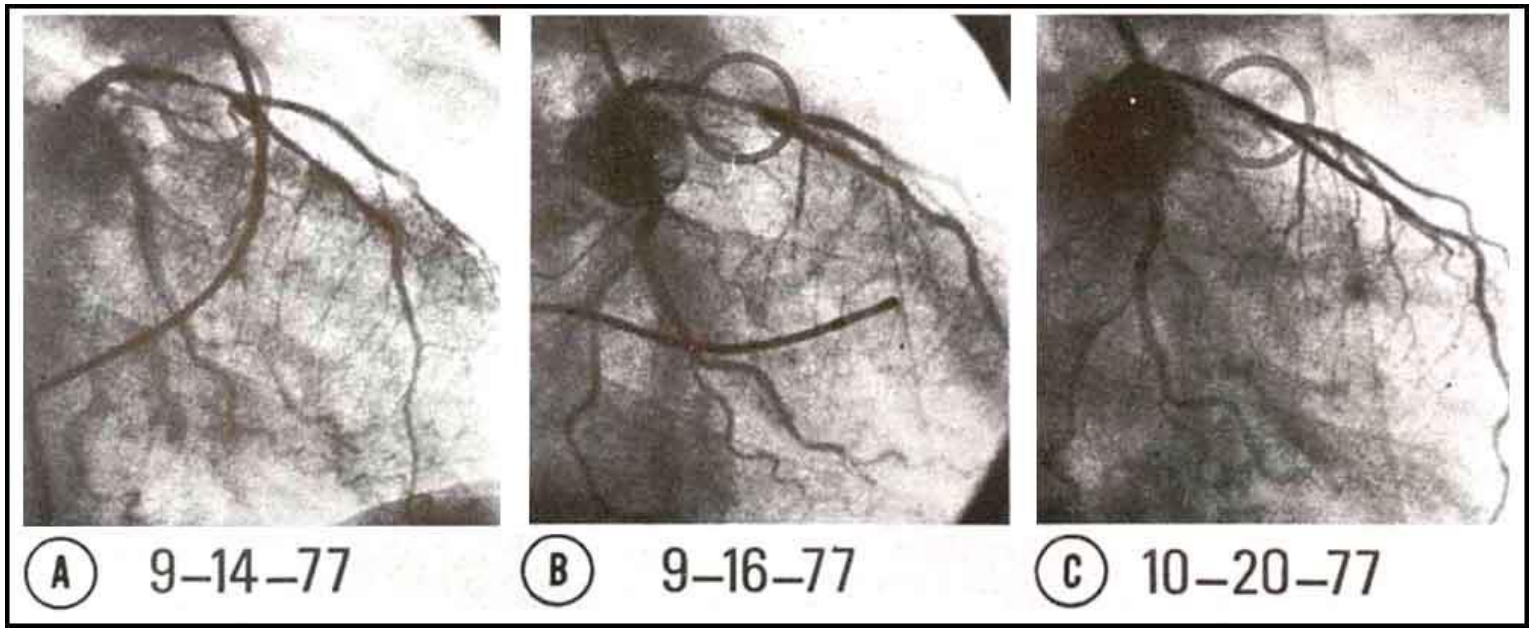
	Dapagliflozin (n=2373)	Placebo (n=2371)	HR (95% CI)
All patients	386/2373	502/2371	0.74 (0.65, 0.85)
Type 2 diabetes at baseline*			
Yes	215/1075	271/1064	0.75 (0.63, 0.90)
No	171/1298	231/1307	0.73 (0.60, 0.88)

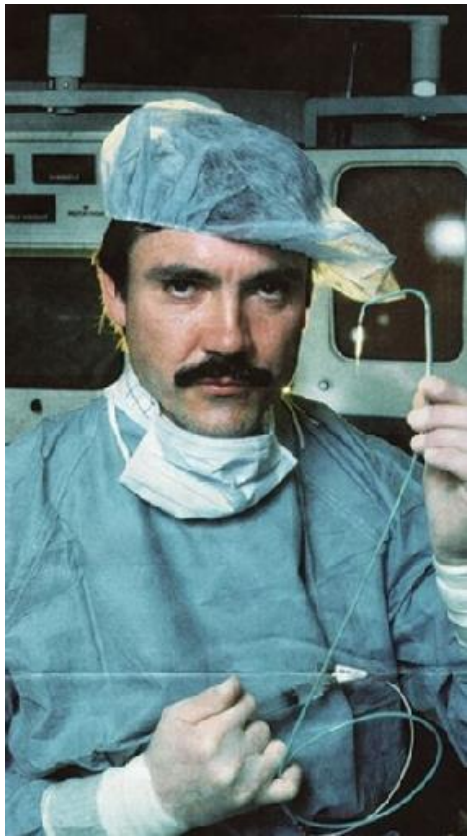


„Mõrad põhitõdedes“

Kas revaskulariseerimine parandab stabiilse koronaarhaiguse ning stenokardiaga patsientidel prognoosi?

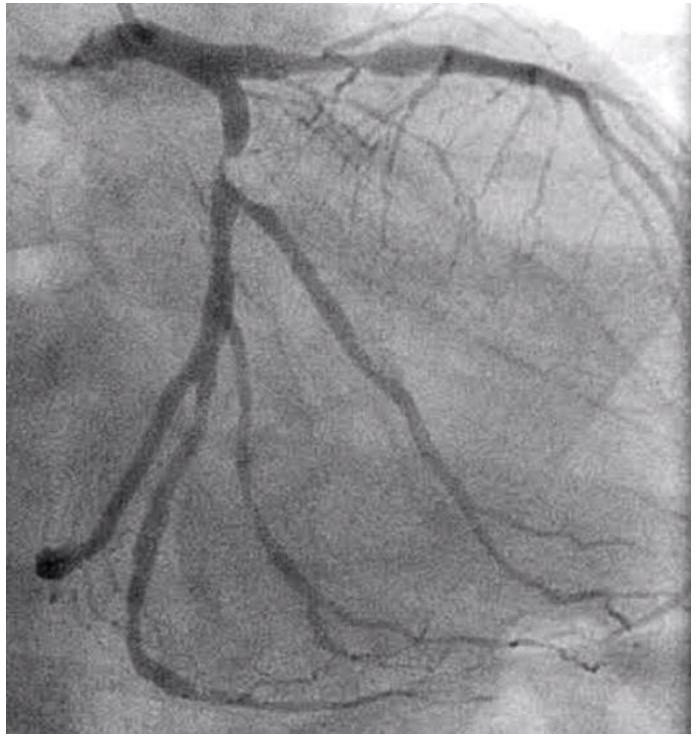
Esimene koronaarangioplastika 1977, dr Andreas Gruentzig





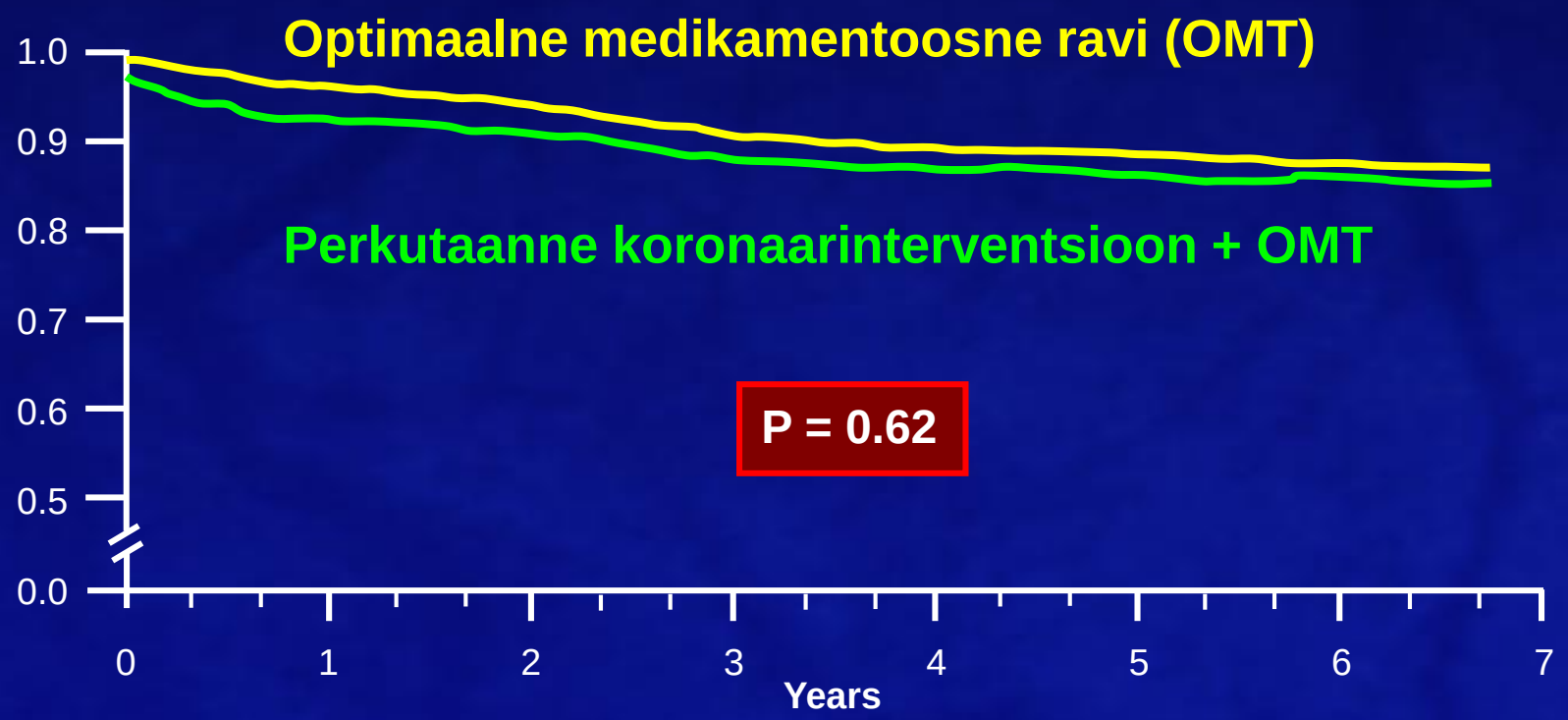
Enne angioplastikat (A), koheselt pärast (B) ning üks kuu pärast balloonlaiendust (C)

Tavapärased veendumused



- Sümptomaatilise stenokardiaga patsientidel ei saa jätta hemodünaamiliselt olulisi stenoose revaskulariseerimata
- Stabiilses seisundis revaskulariseerimine vähendab müokardiinfarkti tekke tõenäosust tulevikus

2007 COURAGE
Tulemusnäitaja: elulemus ja müokardiinfarkti mitteesinemine

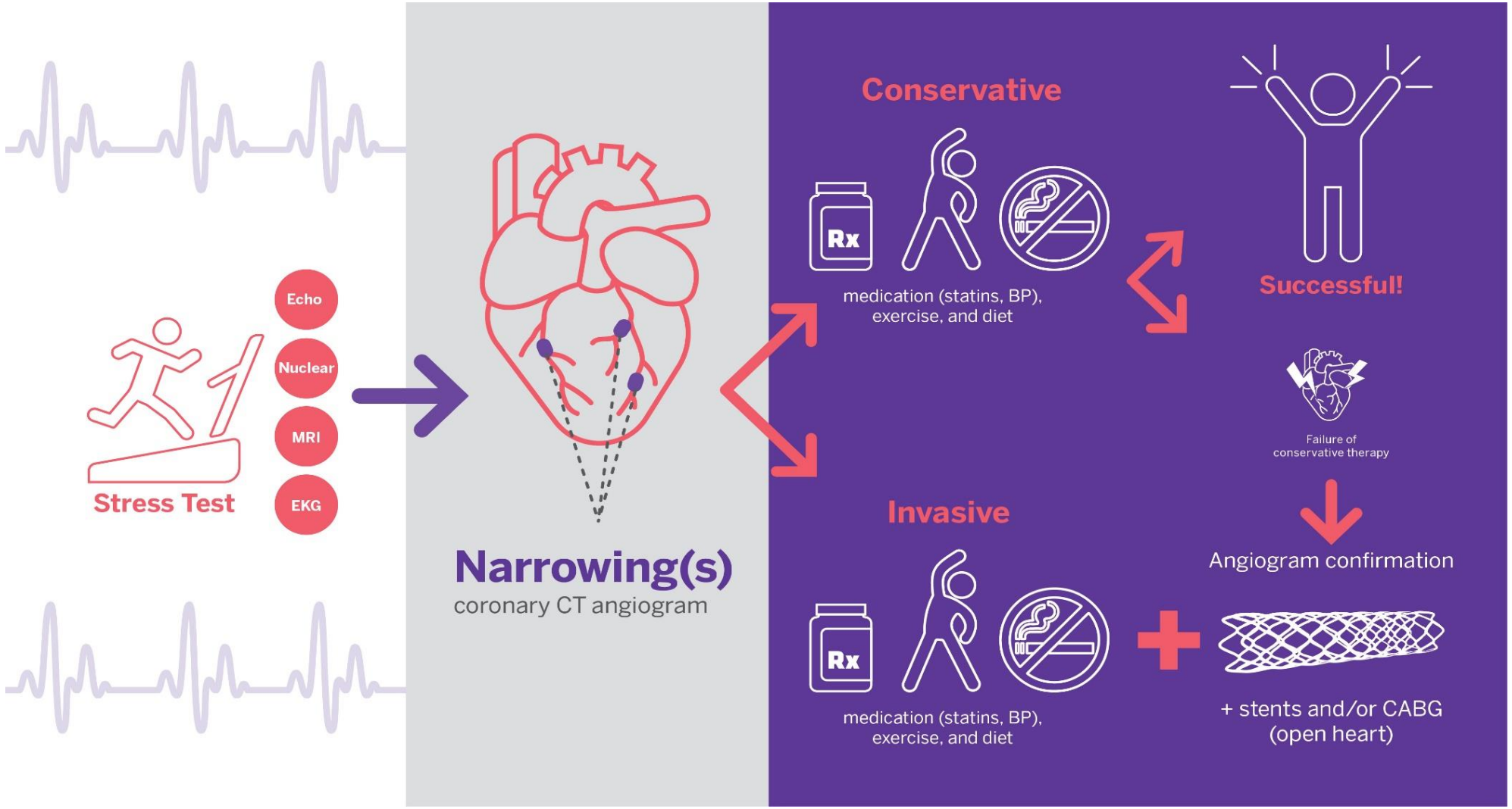


Arv								
Medik. ravi	1138	1017	959	834	638	408	192	30
PCI	1149	1013	952	833	637	417	200	35

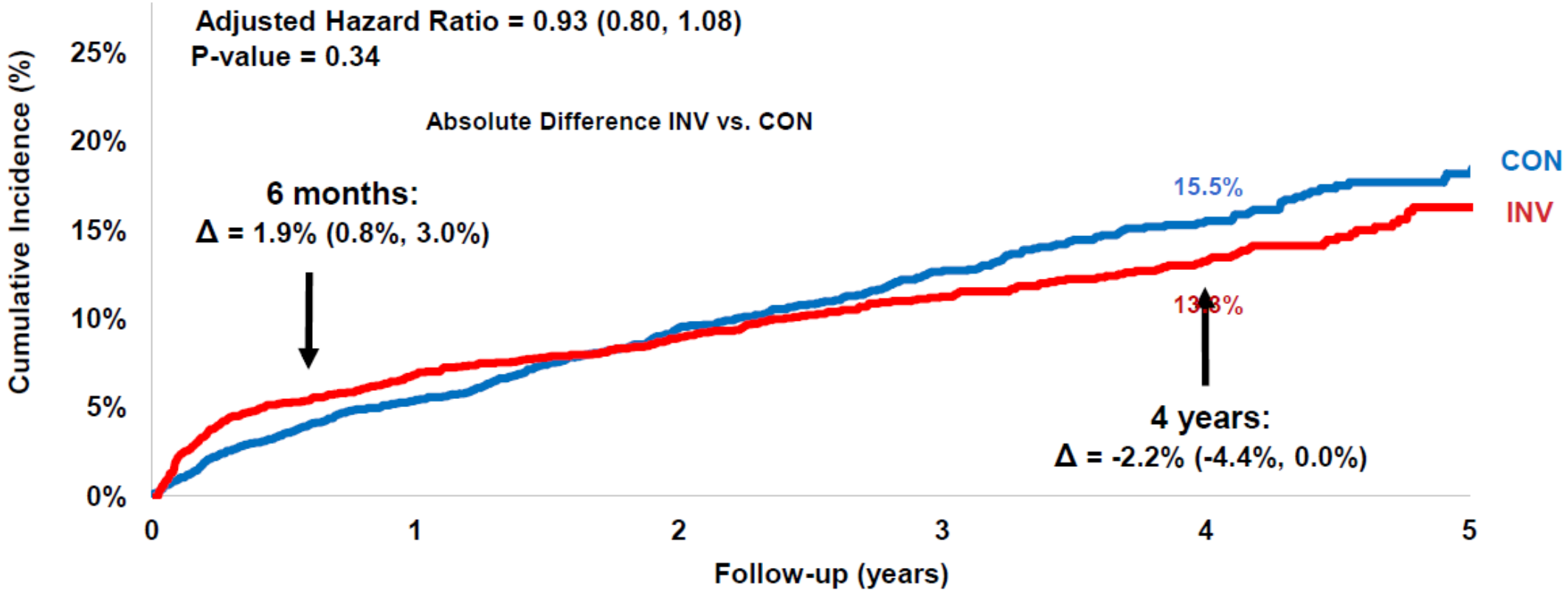
International Study Of Comparative Health Effectiveness With Medical And Invasive Approaches (ISCHEMIA)

Rahastaja: National Heart, Lung, and Blood Institute

ISCHEMIA uuringu ülesehitus



Esmane tulemusnäitaja: KV surm, MI, ebastabiilse stenokardia tõttu hospitaliseerimine, südamepuudulikkus või taaselustamine südame seiskusest

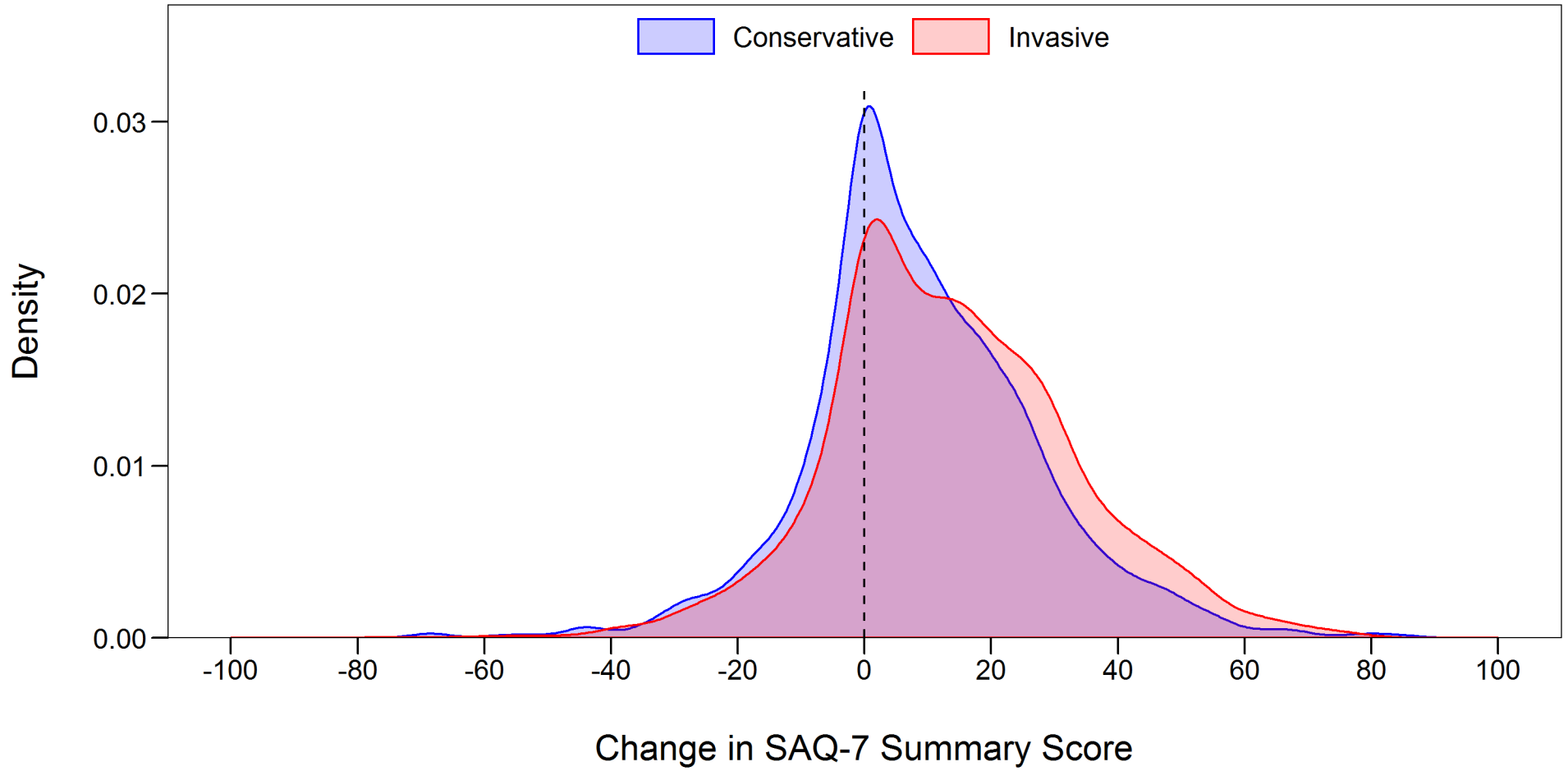


Subjects at Risk

CON	2591	2431	1907	1300	733	293
INV	2588	2364	1908	1291	730	271

ISCHEMIA

Elukvaliteedis saavutati mõningane paranemine



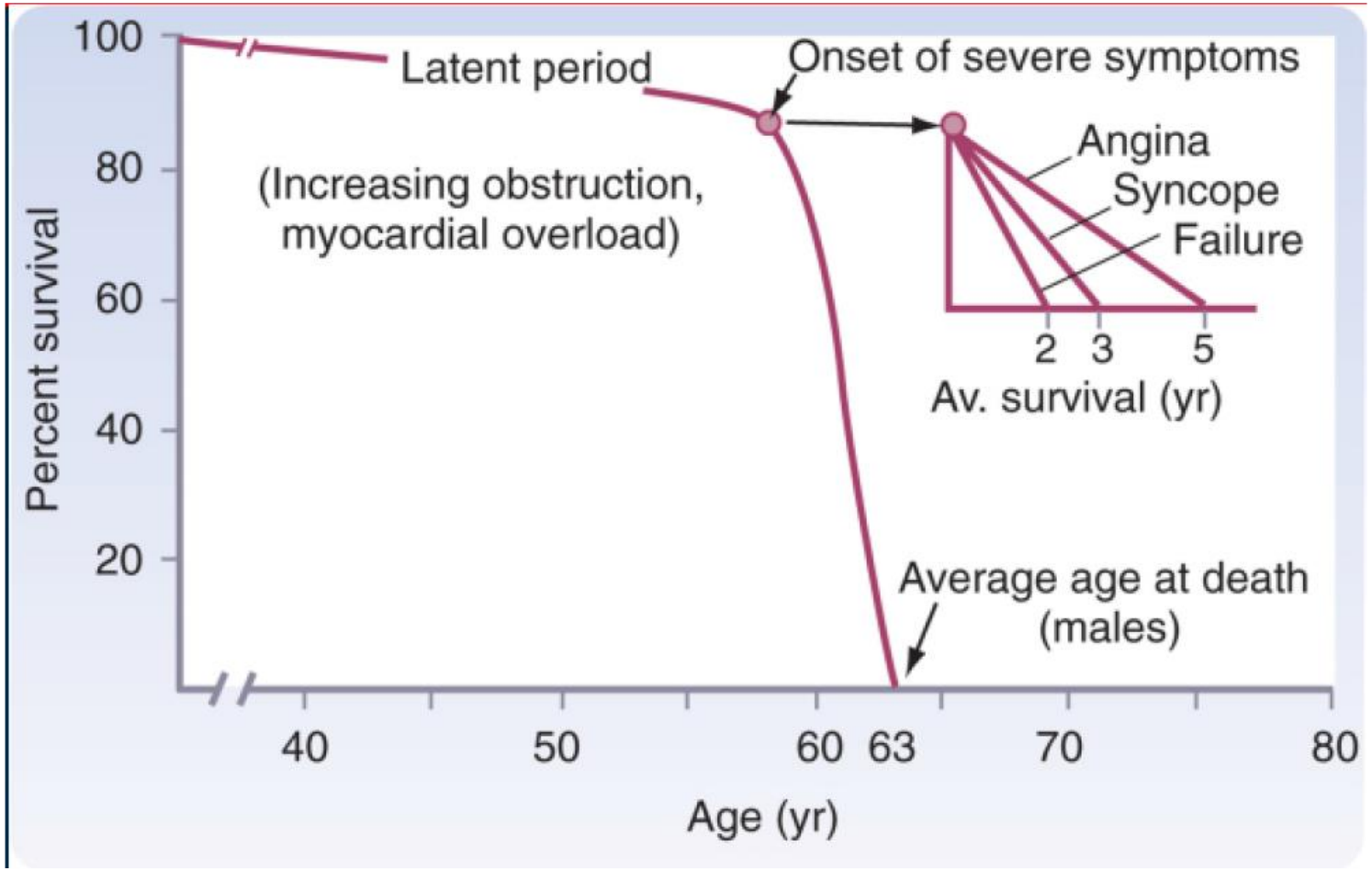
Eelnev ei kehti:

- Südamepuudulikkusega ja halvenenud vasaku vatsakese funktsiooniga patsientidele (LVEF<35%)
- Vasaku koronaararteri peatüve kahjustusega patsientidele
- Ägeda koronaarsündroomiga patsientidele
- Ägeda koronaarsündroom viimase 2 kuu jooksul anamneesis
- Raskelt sümptomaatilised patsiendid

„Kas väike auk on sama hea kui suur auk?“

Aordiklapi stenoosi raviks proteesklapi implanteerimise ning kirurgilise ravi võrdlused 2019

Aordiklapi stenoos

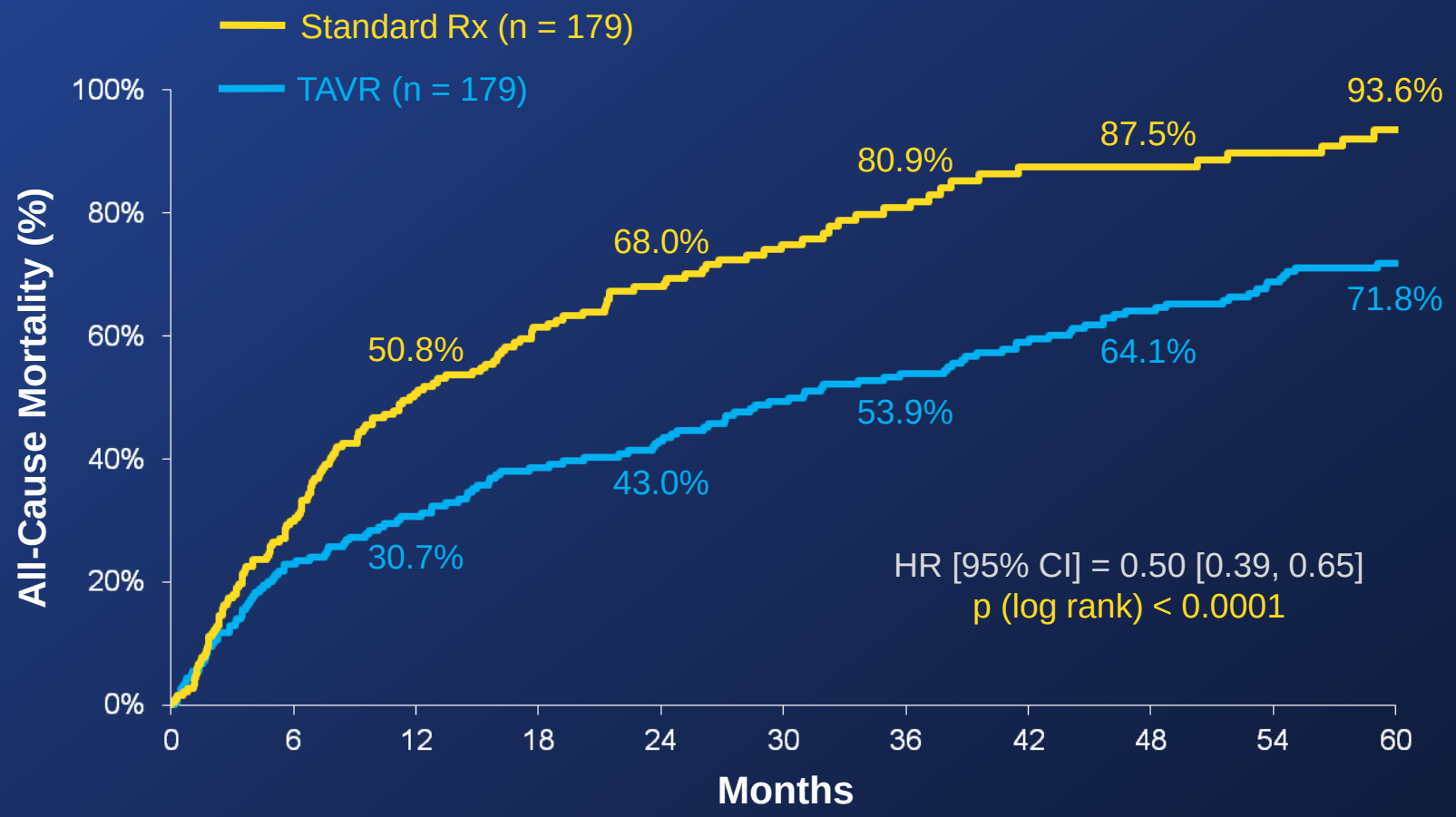


TAVI - *Transcatheter aortic valve implantation*

- Kateetrikaudne aordiklapi implanteerimine

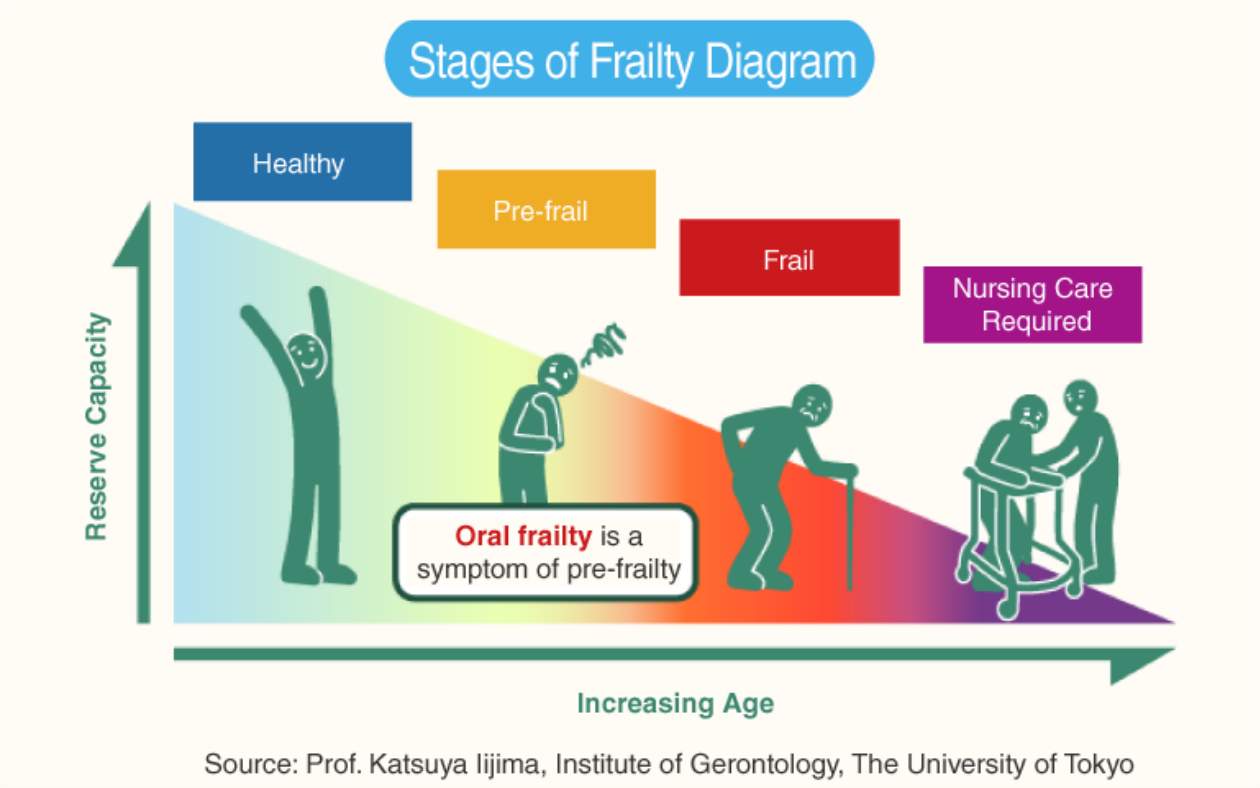
Dr Alain Cribier 2002

Mitteopereeritavate patsientide 5- aasta elulemus TAVI vs standardravi



** In an age and gender matched US population without comorbidities, the mortality at 5 years is 40.5%.*

Põdurus



Source: Prof. Katsuya Iijima, Institute of Gerontology, The University of Tokyo

Aga tervemad ja nooremad patsiendid?

TAVI vs kirurgia madala riski patsientidel

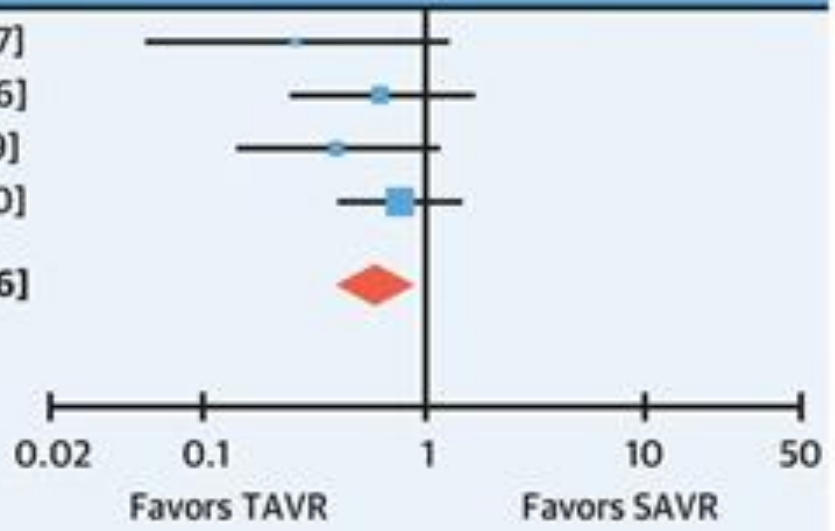
CENTRAL ILLUSTRATION: All-Cause and Cardiovascular Death at 1 Year After TAVR Versus SAVR in Low-Risk Patients

A

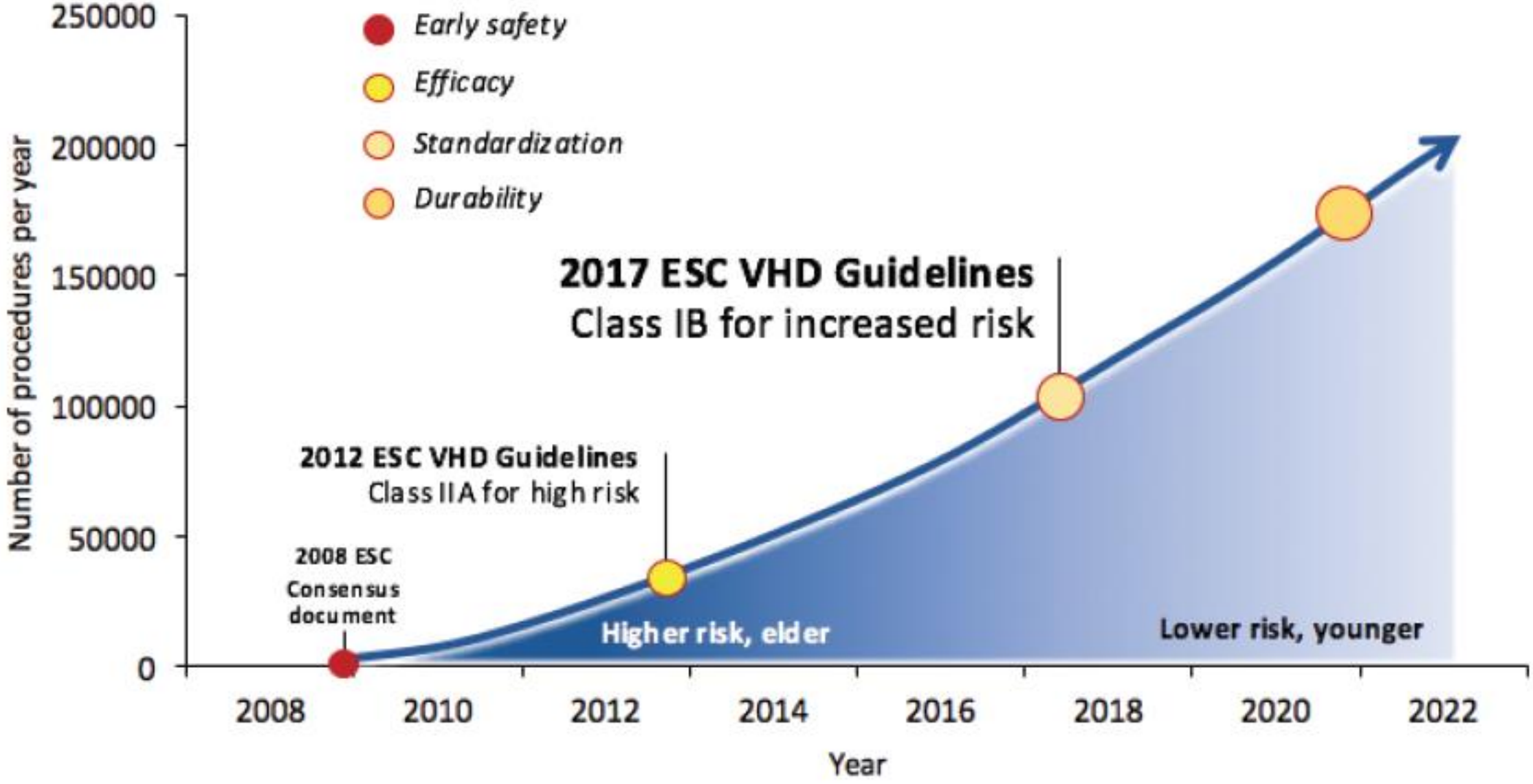
Study or Subgroup	TAVR Events	TAVR Total	SAVR Events	SAVR Total	Weight	Risk Ratio M-H, Random, 95% CI
SURTAVI (STS Below 3%)	2	131	7	123	8.4%	0.27 [0.06, 1.27]
NOTION	7	145	10	135	23.2%	0.65 [0.26, 1.66]
PARTNER 3	5	496	11	454	18.5%	0.42 [0.15, 1.19]
Evolut Low Risk	17	725	20	678	49.9%	0.79 [0.42, 1.50]
Total (95% CI)		**1,497**		**1,390**	**100.0%**	**0.61 [0.39, 0.96]**
Total events	31		48			

Heterogeneity: $Tau^2 = 0.00$; $Chi^2 = 2.28$, df = 3 (p = 0.52); $I^2 = 0\%$

Test for overall effect: Z = 2.12 (p = 0.03)



Kolte, D. et al. J Am Coll Cardiol. 2019;74(12):1532-40.


250000
200000
150000
100000
50000
0
Number of procedures per year
Early safety
Efficacy
Standardization
Durability
2017 ESC VHD Guidelines
Class IB for increased risk
2012 ESC VHD Guidelines
Class IIA for high risk
2008 ESC
Consensus
document
Higher risk, elder
Lower risk, younger
2008
2010
2012
2014
2016
2018
2020
2022
Year


A
B
C
D
E
F
G
H

Tänan tähelepanu eest!

Dr Eno-Martin Lotman

Põhja-Eesti Regionaalhaigla