EGE HOSPITAL

Nefroloq konsultasiyası
Xroniki Böyrək Çatışmazlığı və Ürək Çatışmazlığı

Uzm. Dr. Cəbrayıl Cəbrayılov

29.06.2024


Azərbaycan Kardiologiya Cəmiyyəti
ÜRƏK ÇATIŞMAZLIĞI
YENİLİKLƏR KONQRESİ
3-4 İyun 2022, Fairmont Hotel
Qeydiyyat üçün bizimlə əlaqə saxlayın
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Xroniki Böyrək Xəstəliyi

- GFR’dəki düşüş 90 gündən daha az davam edirsə kəskin böyrək xəstəliyi

- GFR’dəki düşüş 90 gündən daha uzun müddət davam edirsə xroniki böyrək xəstəliyidir

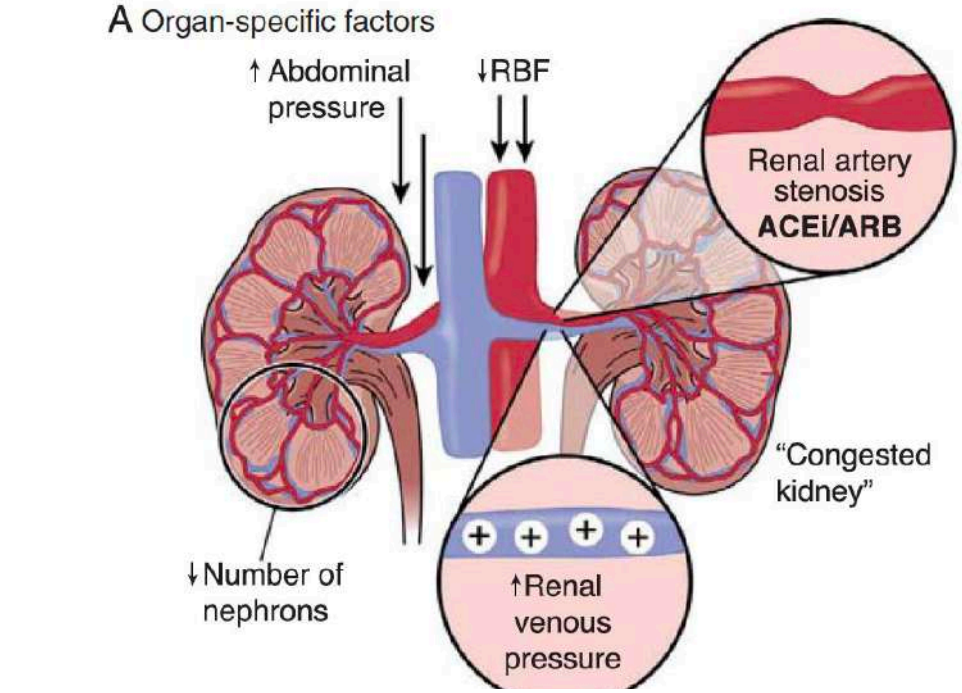
CKD is classified based on: • Cause (C) • GFR (G) • Albuminuria (A)				Albuminuria categories Description and range		
				A1	A2	A3
				Normal to mildly increased	Moderately increased	Severely increased
				<30 mg/g <3 mg/mmol	30–299 mg/g 3–29 mg/mmol	≥300 mg/g ≥30 mg/mmol
GFR categories (mL/min/1.73 m²) Description and range	G1	Normal or high	≥90	Screen 1	Treat 1	Treat and refer 3
	G2	Mildly decreased	60–89	Screen 1	Treat 1	Treat and refer 3
	G3a	Mildly to moderately decreased	45–59	Treat 1	Treat 2	Treat and refer 3
	G3b	Moderately to severely decreased	30–44	Treat 2	Treat and refer 3	Treat and refer 3
	G4	Severely decreased	15–29	Treat and refer* 3	Treat and refer* 3	Treat and refer 4+
	G5	Kidney failure	<15	Treat and refer 4+	Treat and refer 4+	Treat and refer 4+

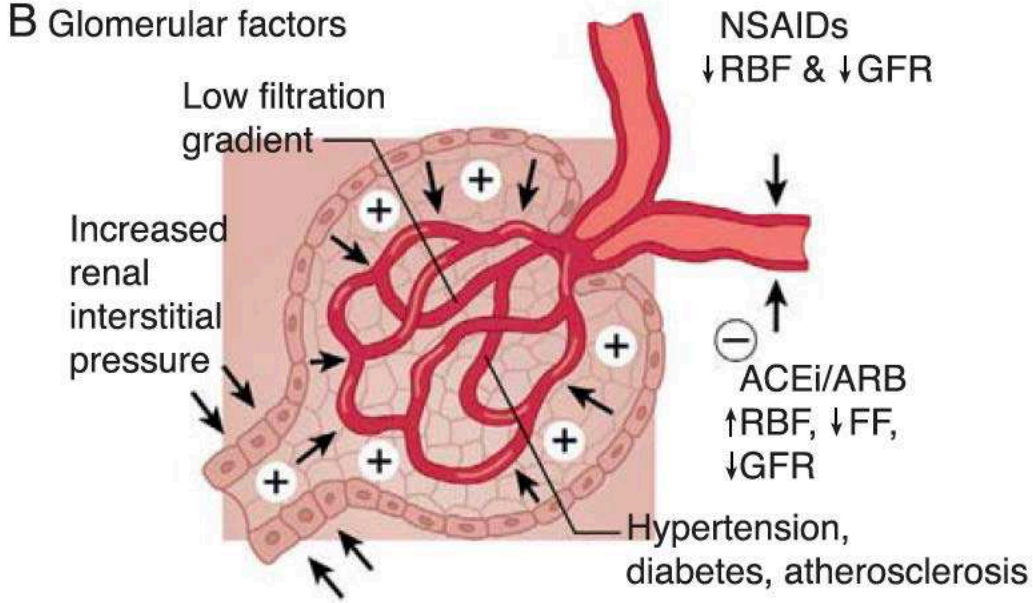
Low risk (if no other markers of kidney disease, no CKD)

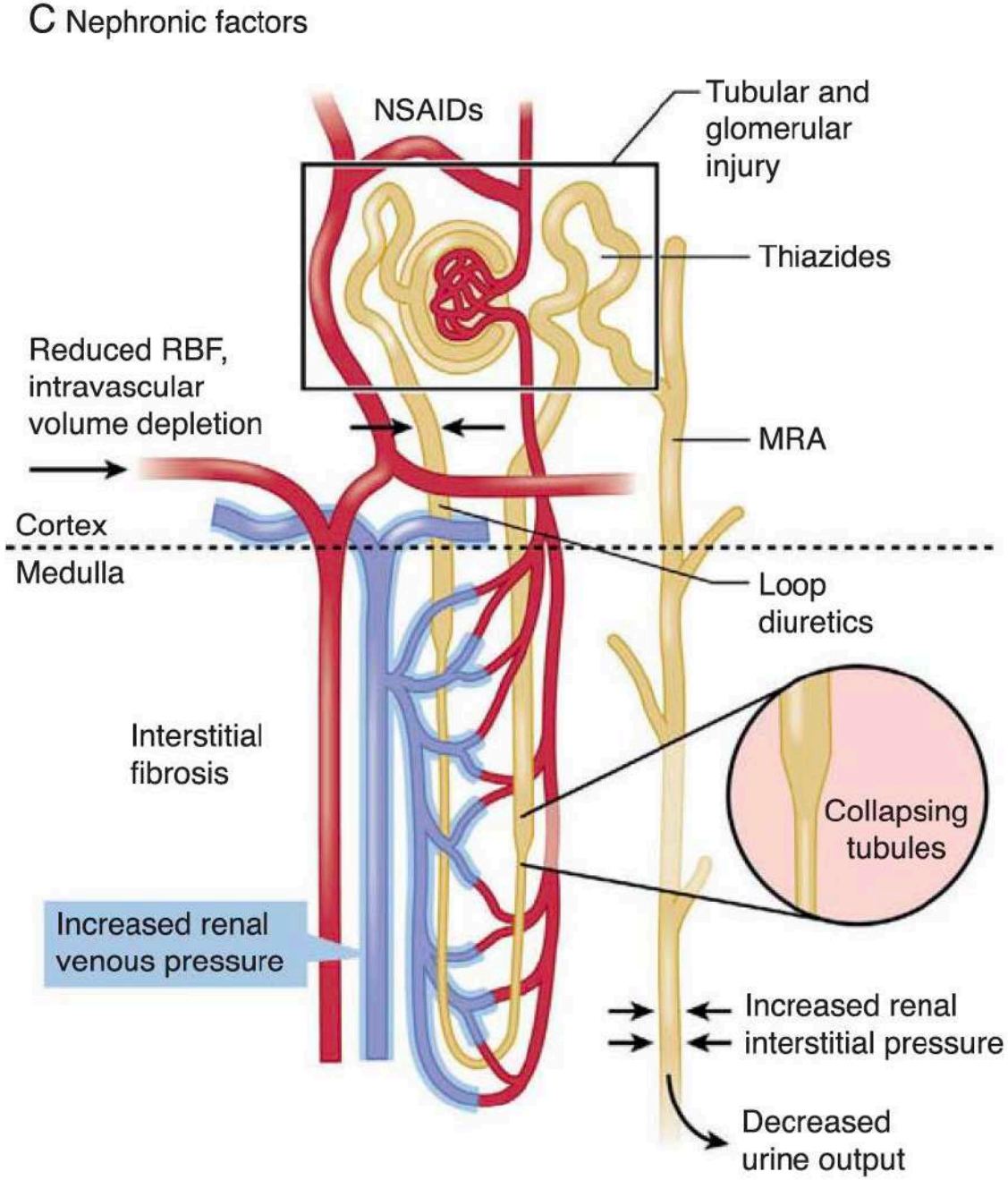
Moderately increased risk

High risk

Very high risk

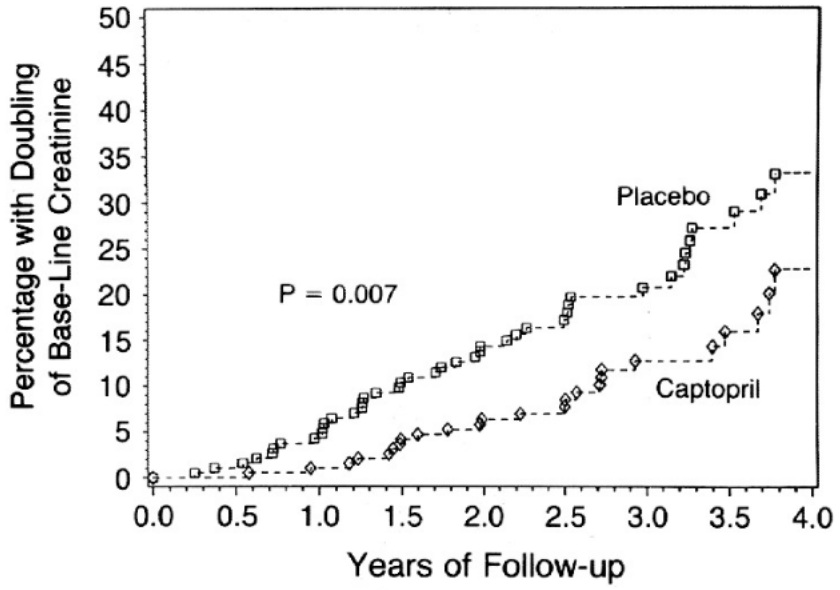

A Organ-specific factors
↑ Abdominal pressure
↓RBF
Renal artery stenosis
ACEi/ARB
"Congested kidney"
↓Number of nephrons
↑Renal venous pressure


B Glomerular factors
NSAIDs
↓RBF & ↓GFR
Low filtration gradient
Increased renal interstitial pressure
ACEi/ARB
↑RBF, ↓FF,
↓GFR
Hypertension, diabetes, atherosclerosis


C Nephronic factors
NSAIDs
Tubular and glomerular injury
Thiazides
Reduced RBF, intravascular volume depletion
MRA
Cortex
Medulla
Loop diuretics
Interstitial fibrosis
Collapsing tubules
Increased renal venous pressure
Increased renal interstitial pressure
Decreased urine output

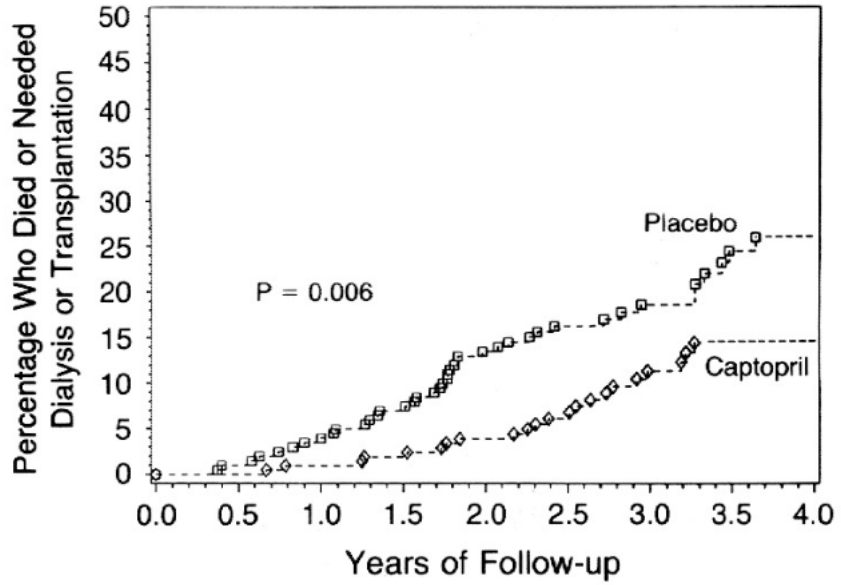
RAAS blokatorları

A



Placebo	202	184	173	161	142	99	75	45	22
Captopril	207	199	190	180	167	120	82	50	24

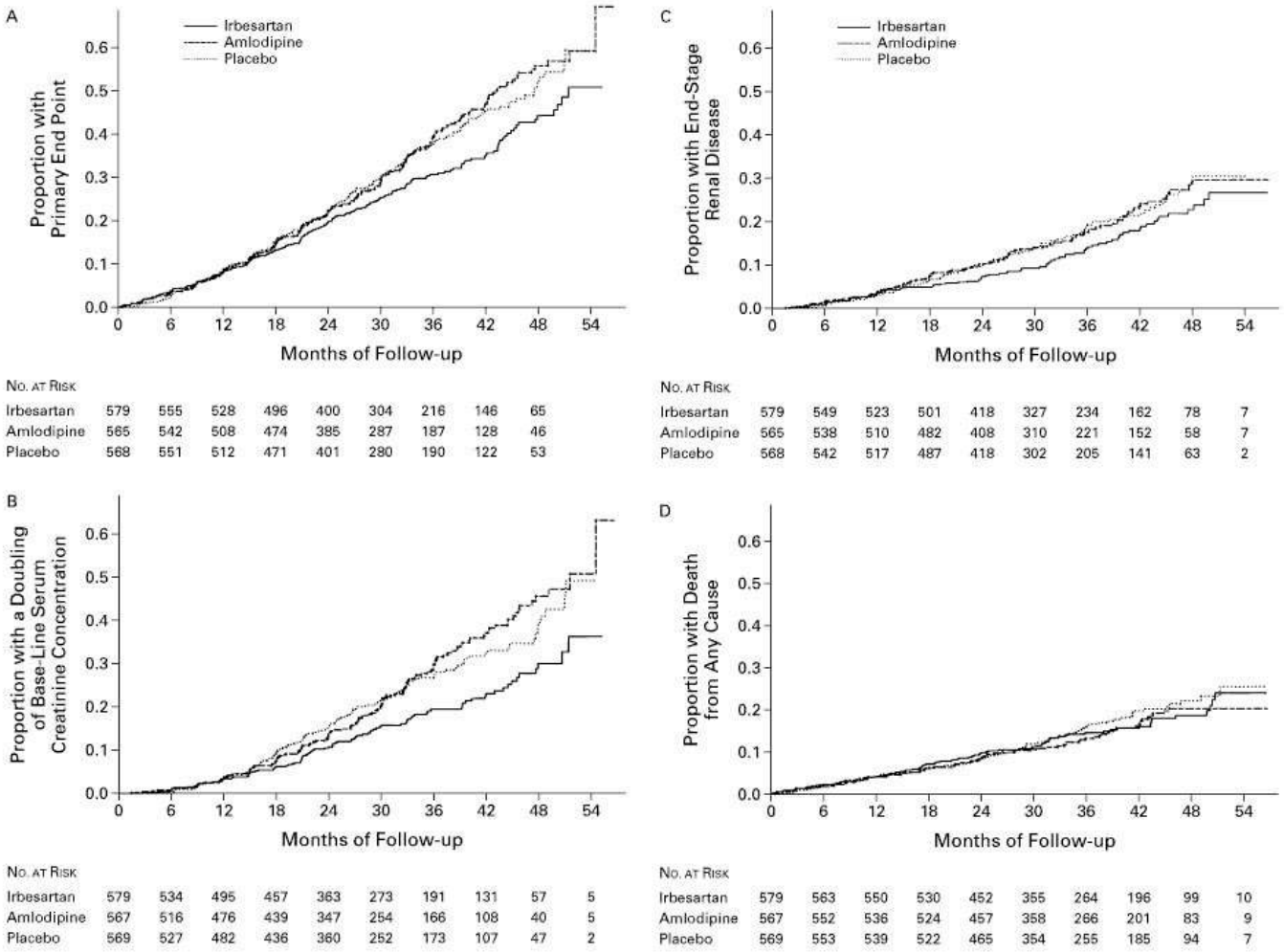
B



Placebo	202	198	192	186	171	121	100	59	26
Captopril	207	207	204	201	195	140	103	64	37

Lewis EJ et al N Engl J Med 1993;329:1456–1462.

RAAS blokatorları



Lewis EJ İDNT Study N Engl J Med. 2001;345(12):851

RAAS blokatorları

- RAAS blokatorları icazə verilən və xəstənin tolere edəbiləcəyi maksimal dozada verilməlidir.

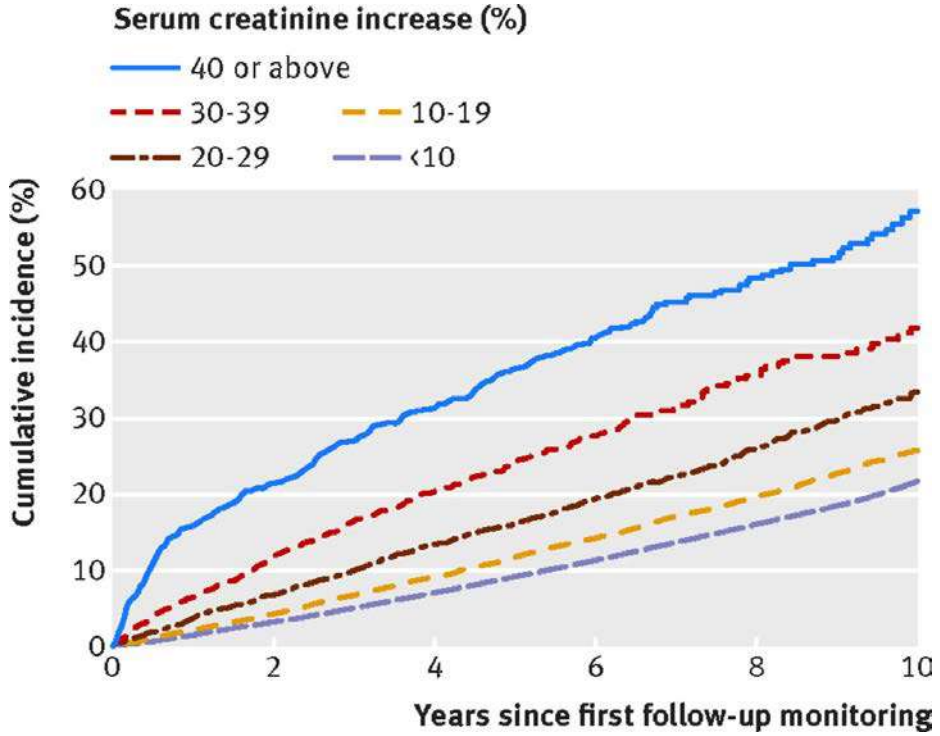
- Müalicə başlandıqdan 2-4 həftə sonra xəstənin qan kalium və kreatinin səviyyəsi kontrol edilməlidir

- Hiperkalemiyanın tənzimlənməsi üçün– RAAS doz azaldılması deyil başqa müalicə strategiyaları tətbiq edilməlidir

Clase CM et al Kidney Int. 2017;91: 683–690
Clase CM et al Kidney Int. 2020;97:42–61..

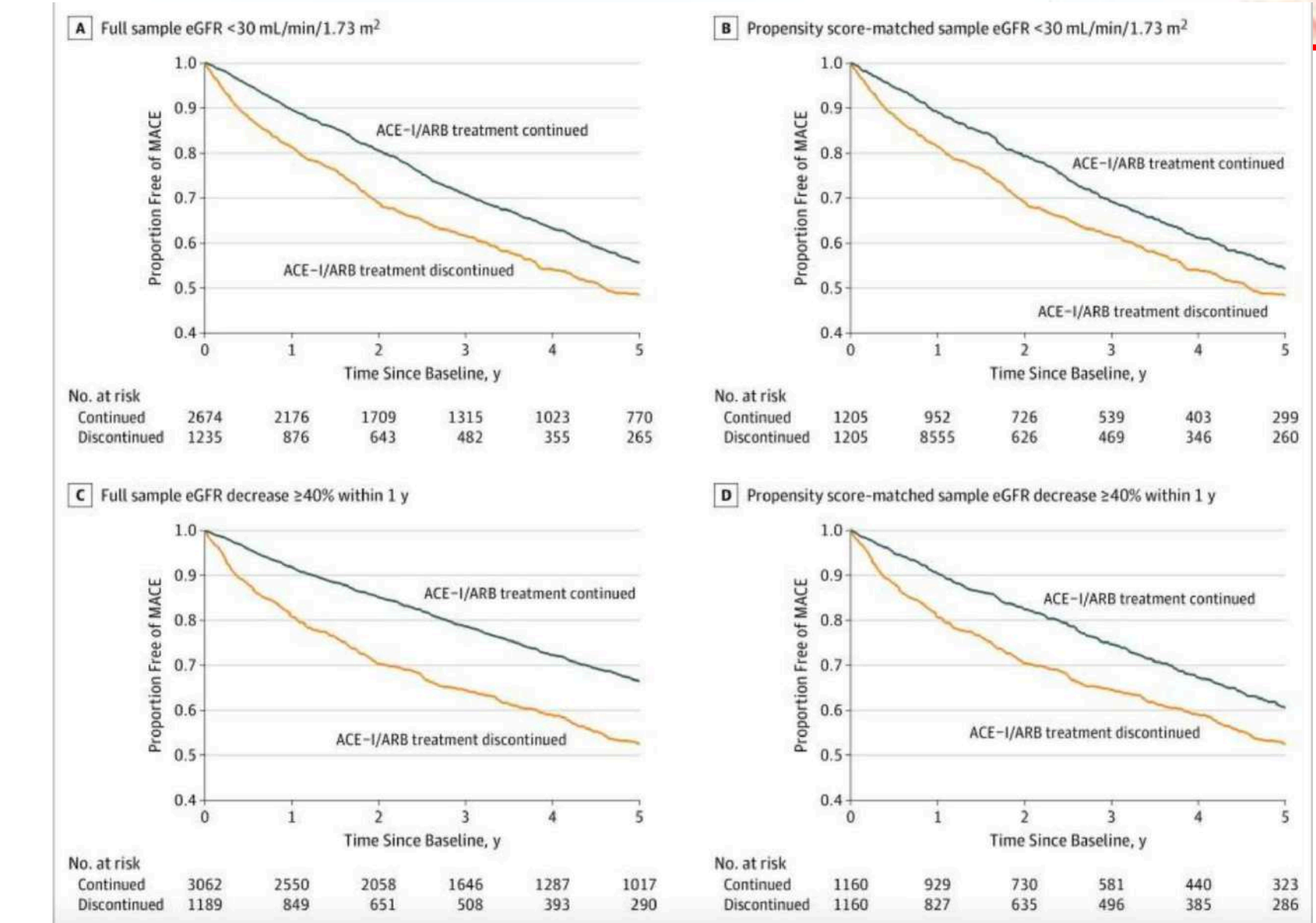
RAAS blokatorları

- Serum kreatinin səviyyəsi <30% artan xəstələrdə RAAS blokatorlarının istifadəsinə davam edilməlidir



Smidt M et al BMJ. 2017;356:j791

RAAS blokatorları



Qiayo et al JAMA Intern Med. 2020;180:718–726.

Sacubitril/Valsartan

ESC HEART FAILURE
ESC Heart Failure 2020; **7**: 3487–3496
Published online 22 September 2020 in Wiley Online Library (wileyonlinelibrary.com) **DOI:** 10.1002/ehf2.13002

REVIEW

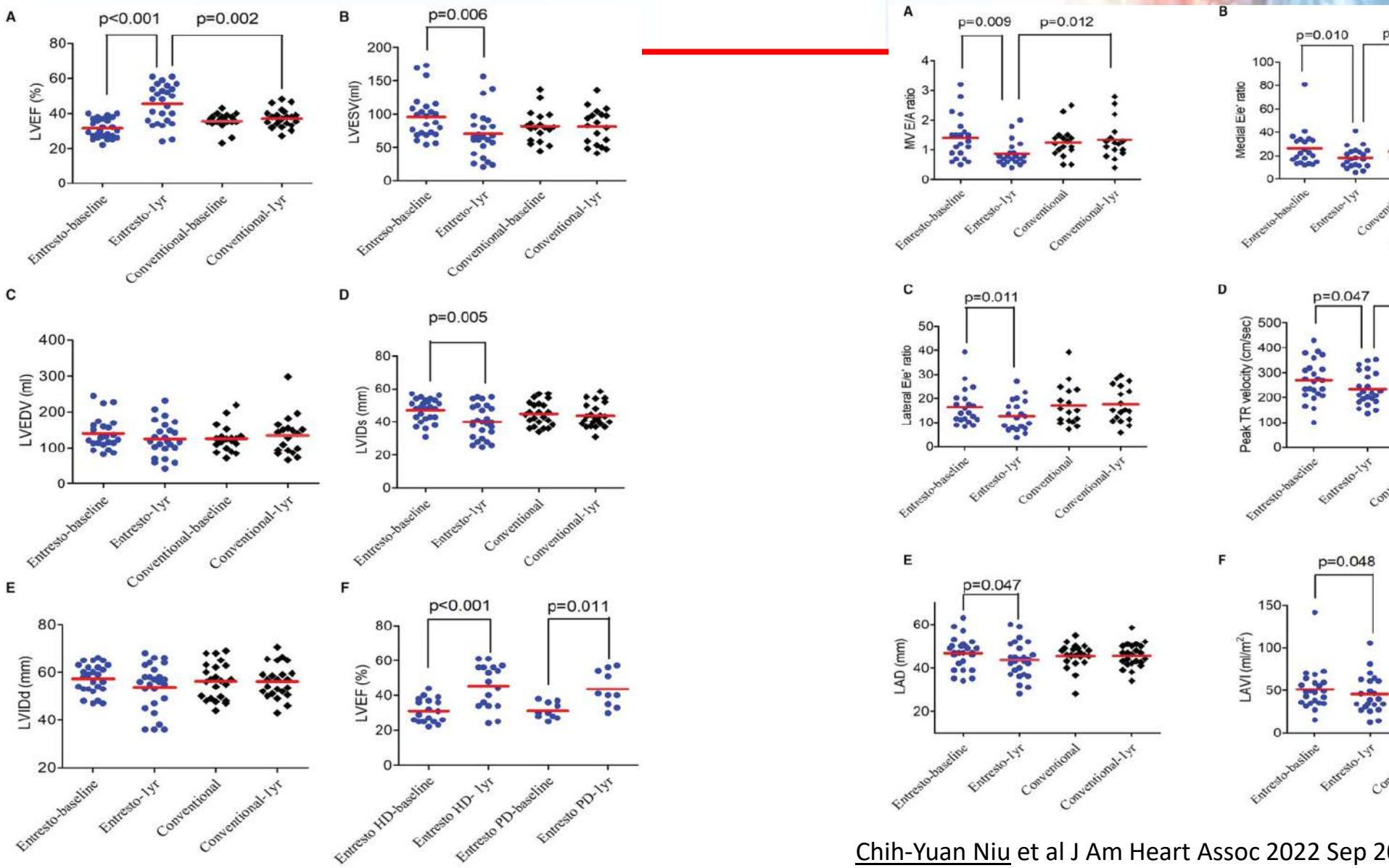
Effect of sacubitril/valsartan on renal function: a systematic review and meta-analysis of randomized controlled trials

Francesco Spannella[1,2], Federico Giulietti[1,2], Andrea Filipponi[1,2] and Riccardo Sarzani[1,2]*

[1]*Internal Medicine and Geriatrics, IRCCS INRCA, Via della Montagnola 81, Ancona, Italy;* [2]*Department of Clinical and Molecular Sciences, University 'Politecnica delle Marche', Via Tronto 10/a, Ancona, Italy*

- Tək başına RAAS blokartorları ilə müalicə ilə qarşılaşdırıldığında sacubitril/valsartanın böyrək funkiyalarını qoruyuculuğu daha üstündür

Sacubitril/Valsartan



Chih-Yuan Niu et al J Am Heart Assoc 2022 Sep 20;11(18):e026407

Diüretiklər

- GFR < 30 ml/dəq altına düşdüyündə tiyazid və tiyazid bənzəri diüretiklərin kəsilməsi

- İlgək diüretiklərinin – furosemid və torasemid – istifadə olunması

Nefroloqa nə zaman xəbər edək?

- Kontrol edilə bilinməyən hipervolemiyalar
- Hiperurisemiya
  - Qan ürik asit səviyyəsi > 10 mg/dL
- Kontraksiyon alkalozu
  - pH > 7.55 HCO_3> 26 mmol/L
- Üremiya
  - UREA >200 mg/dL
- Hipokalemiya və ya hiperkalemiya
- Hiponatremiya
- Hiperfosfatemiya

Kalium Tutucu Diüretiklər

[Intervention Review]

Aldosterone antagonists for preventing the progression of chronic kidney disease

Davide Bolignano[1], Suetonia C Palmer[2], Sankar D Navaneethan[3], Giovanni FM Strippoli[4,5,6,7,8,9]

Aldosteron antoqonistləri yalnızca Diyabetik Nefropatiyada deyil digər səbəbli Xroniki Böyrək Çatışmazlığının irəliləmə sürətində və proteinuriyada azalmaya səbəb olur

Spironolaktonun məsləhət görülən dozası 25-50 mg/gün

Kalium Tutucu Diüretiklər

Ölüm riskində azalma (RR = 0.42, P < 0.0001),
Kardiovaskulyar risklərdə azalma (RR = 0.54, P = 0.008)

Qan kalium konsentrasiyaları nisbi yüksək olsa da müalicə olunmayan qrupla müayisədə hiperkalima riskində artış yoxdur (RR = 1.21, P = 0.31)

frontiers in Medicine

SYSTEMATIC REVIEW
published: 17 March 2022
doi: 10.3389/fmed.2022.828189

Check for updates

Safety and Efficacy of Spironolactone in Dialysis-Dependent Patients: Meta-Analysis of Randomized Controlled Trials

Jing Liu[1], *WanYu Jia*[2] *and Chen Yu*[1]*

[1] *Department of Nephrology, Tongji Hospital, Tongji University School of Medicine, Shanghai, China,* [2] *Department of Pediatrics, Clinical Center of Pediatric Nephrology of Henan Province, The First Affiliated Hospital of Zhengzhou University, Zhengzhou, China*

SGLT2 inhibitorları

ORIGINAL ARTICLE

Empagliflozin, Cardiovascular Outcomes, and Mortality in Type 2 Diabetes

Bernard Zinman, M.D., Christoph Wanner, M.D., John M. Lachin, Sc.D., David Fitchett, M.D., Erich Bluhmki, Ph.D., Stefan Hantel, Ph.D., Michaela Mattheus, Dipl. Biomath., Theresa Devins, Dr.P.H., Odd Erik Johansen, M.D., Ph.D., Hans J. Woerle, M.D., Uli C. Broedl, M.D., and Silvio E. Inzucchi, M.D., for the EMPA-REG OUTCOME Investigators

ORIGINAL ARTICLE

Canagliflozin and Cardiovascular and Renal Events in Type 2 Diabetes

Bruce Neal, M.B., Ch.B., Ph.D., Vlado Perkovic, M.B., B.S., Ph.D., Kenneth W. Mahaffey, M.D., Dick de Zeeuw, M.D., Ph.D., Greg Fulcher, M.D., Ngozi Erondu, M.D., Ph.D., Wayne Shaw, D.S.L., Gordon Law, Ph.D., ai, M.D., and David R. Matthews, D.Phil., B.M., B.Ch., the CANVAS Program Collaborative Group*

ORIGINAL ARTICLE

Dapagliflozin and Cardiovascular Outcomes in Type 2 Diabetes

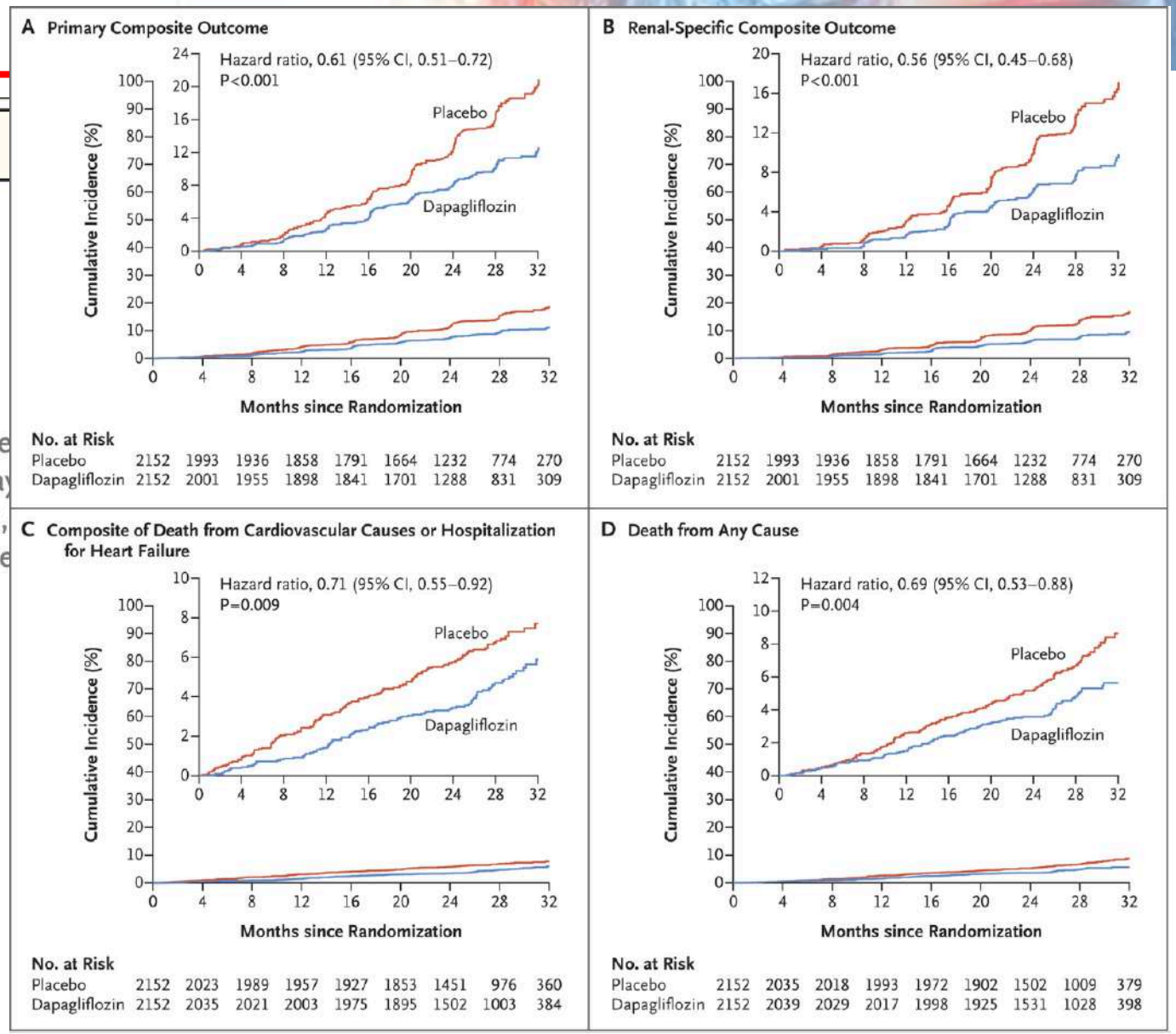
S.D. Wiviott, I. Raz, M.P. Bonaca, O. Mosenzon, E.T. Kato, A. Cahn, M.G. Silverman, T.A. Zelniker, J.F. Kuder, S.A. Murphy, D.L. Bhatt, L.A. Leiter, D.K. McGuire, J.P.H. Wilding, C.T. Ruff, I.A.M. Gause-Nilsson, M. Fredriksson, P.A. Johansson, A.-M. Langkilde, and M.S. Sabatine, for the DECLARE–TIMI 58 Investigators*

SGLT2 inhibitorları

ORIGINAL ARTICLE

Dapagliflozin in Patients with Chronic Kidney Disease

Hiddo J.L. Heerspink, Ph.D., Bergur V. Stefánsson, M.D., Ricardo Correa-Rotter, M.D., Glenn M. Chertow, M.D., Tom Greene, Fan-Fan Hou, M.D., Johannes F.E. Mann, M.D., John J.V. McMurray, Magnus Lindberg, M.Sc., Peter Rossing, M.D., C. David Sjöström, Roberto D. Toto, M.D., Anna-Maria Langkilde, M.D., and David C. Wheeler for the DAPA-CKD Trial Committees and Investigators*



SGLT2 inhibitorları

Recommendation 4.2.1: We recommend treating patients with T2D, CKD, and an eGFR ≥30 ml/min per 1.73 m^2 with an SGLT2i *(1A)*.

Practice Point 4.2.7: Once an SGLT2i is initiated, it is reasonable to continue an SGLT2i even if the eGFR falls below 30 ml/min per 1.73 m^2, unless it is not tolerated or kidney replacement therapy is initiated.

Consensus Statement

- An SGLT2i with proven kidney or cardiovascular benefit is recommended for patients with T2D, CKD, and eGFR ≥20 mL/min/1.73 m^2. Once initiated, the SGLT2i can be continued at lower levels of eGFR.

Statinlər

2.1.1: In adults aged ≥50 years with eGFR<60 ml/min/1.73 m^2 but not treated with chronic dialysis or kidney transplantation (GFR categories G3a-G5), we recommend treatment with a statin or statin/ezetimibe combination. (*1A*)

2.1.2: In adults aged ≥50 years with CKD and eGFR≥60 ml/min/1.73 m^2 (GFR categories G1-G2) we recommend treatment with a statin. (*1B*)

2.2: In adults aged 18–49 years with CKD but not treated with chronic dialysis or kidney transplantation, we suggest statin treatment in people with one or more of the following (*2A*):

- known coronary disease (myocardial infarction or coronary revascularization)
- diabetes mellitus
- prior ischemic stroke
- estimated 10-year incidence of coronary death or non-fatal myocardial infarction >10%

2.3.1: In adults with dialysis-dependent CKD, we suggest that statins or statin/ezetimibe combination not be initiated. (*2A*)

2.3.2: In patients already receiving statins or statin/ezetimibe combination at the time of dialysis initiation, we suggest that these agents be continued. (*2C*)

2.4: In adult kidney transplant recipients, we suggest treatment with a statin. (*2B*)

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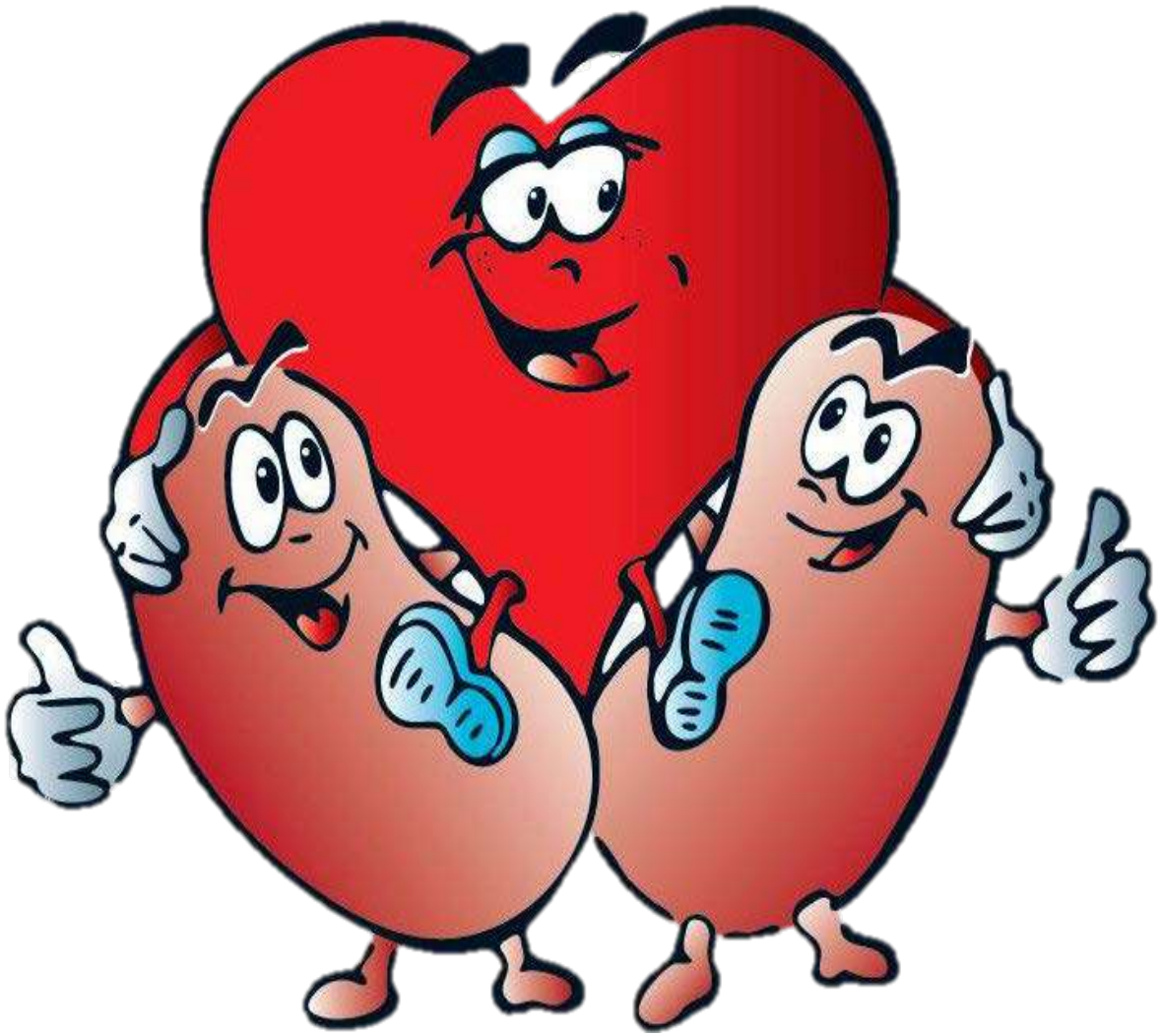
Statinlər

Study	4D 2005[8]	AURORA 2009[9]	SHARP 2011[10]	Jung 2020[11]
Study type	RCT	RCT	RCT	Retrospective cohort study
Patients	1255 ESRD diabetic patients receiving MHD randomly assigned to atorvastatin 20 mg daily or placebo	2776 ESRD patients aged 50 to 80 years undergoing MHD randomly assigned to rosuvastatin 10 mg daily or placebo	9270 CKD patients (3023 on MHD and 6247 not) with no history of MI or CR randomly assigned to simvastatin 20 mg + ezetimibe 10 mg daily or placebo	65,404 ESRD patients on MHD, aged ≥30 years; 41,549 (73.2%) were on statin (statin-ezetimibe/statin)
Primary endpoint	Composite of CV death, nonfatal MI, and stroke	Combined primary CV death, nonfatal MI, or nonfatal stroke	First major atherosclerotic event	All-cause mortality
Secondary endpoint	All-cause mortality and all cardiac and	All-cause mortality and individual CV events		
Conclusion	Atorvastatin had no effect on the composite endpoint	Rosuvastatin had no significant effect on composite endpoint	Simvastatin + ezetimibe safely reduced the incidence of major atherosclerotic events	Statin therapy, preferably combined with ezetimibe, was associated with a lower risk of all-cause mortality



Səbriniz üçün təşəkkür edirəm