

# Pacientul cu HTA & echipa de ingrijire in pandemie



**Dr Emma Weiss**  
**Spitalul Clinic de**  
**Urgenta Bucuresti**

# Agenda

1

- Cazurile clinice

2

- Clasificare HTN de pandemie

3

- Diagnostic HTN de pandemie

4

- Optiuni terapeutice de pandemie

5

- Evaluarea hipertensivului
- Particularitati la vaccinare



# Trei hipertensivi, aceeași garda



F, 62 ani

- PR, Leflunomide
- Cefalee, tulburari de vedere, vertij
- TA 240/140 mmhg



M, 55 ani

- HTN, 5 ani
- Neglijat terapeutic de 3 saptamani
- Dispnee la efort mic de 3 zile
- TA 210/120 mmHg



F, 97 ani

- Cardiostimulare permanenta BAV III
- Dispnee efort progresiv mai mic
- TA 195/100 mmHg

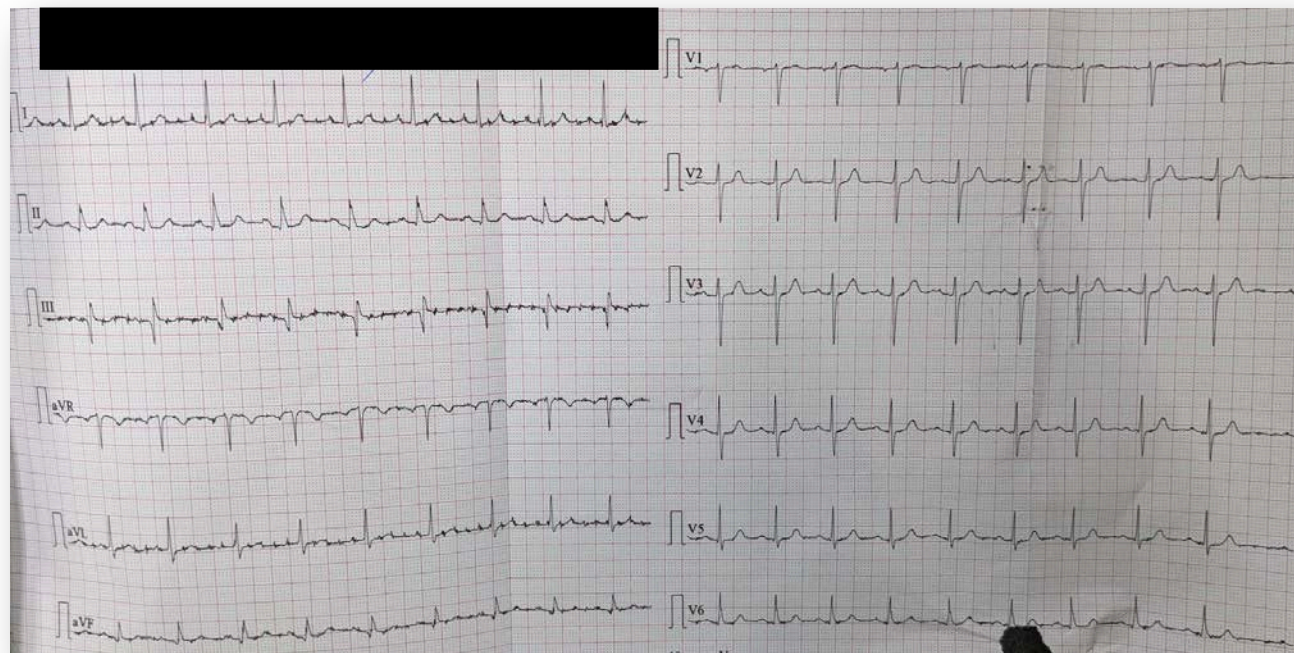


F, 61 ani, **TA 240/140 mmHg**

Psoriazis, PR, Leflunomide 200 mg/zi, 2 ani  
Cefalee, tulburari de vedere, vertij

Eco cord – VS nedilatat, nehipertrofiat;  
fara valvulopatii sau alte elemente  
patologice notabile

CT cerebral – fara leziuni



Enalapril iv

Furosemid iv

Urapidil iv bolus



**TA 120/80 mmHg**



**Confuzie, varsaturi**

**Internare  
Accident ischemic tranzitor**

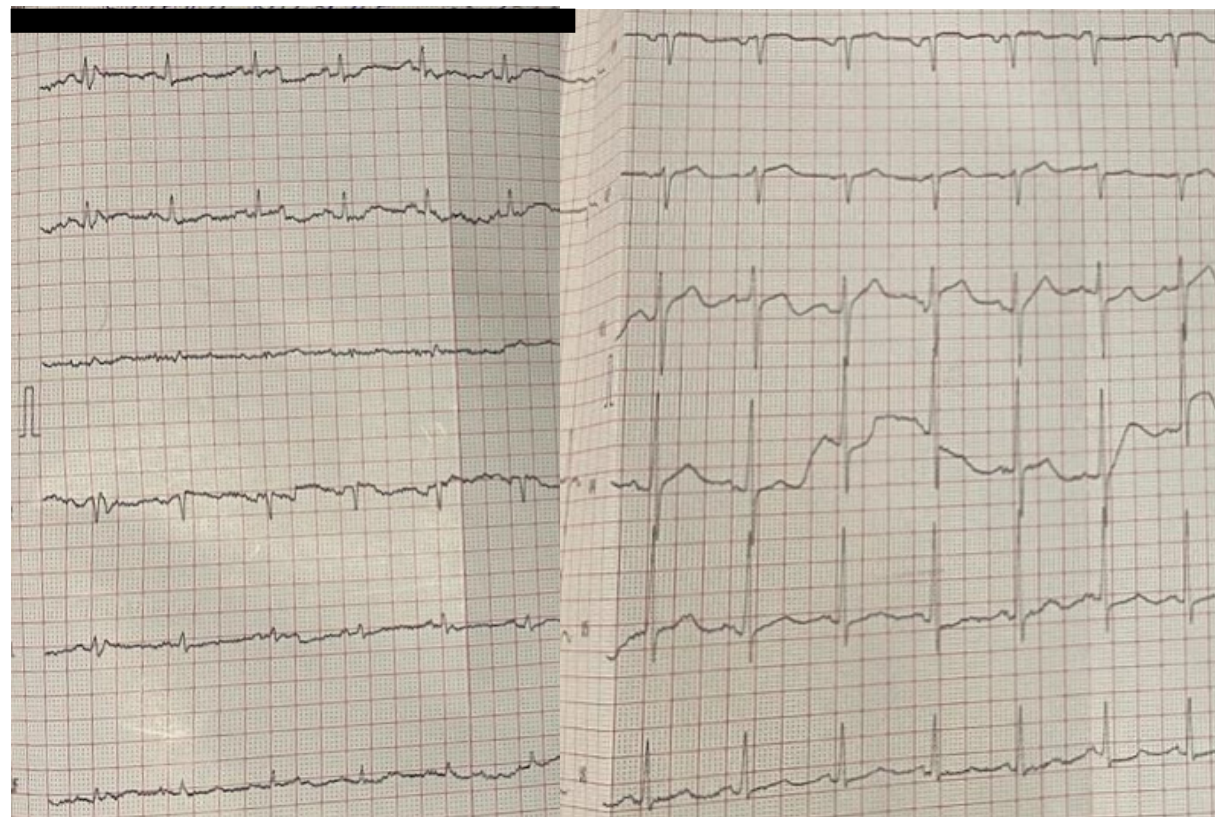


# M, 55 ani, **TA 210/120 mmHg**

HTN 5 ani, fara regim hiposodat  
Obez, fumator  
De 3 saptamani neglijat terapeutic

Eco cord – VS nedilatat, hipertrofie  
concentrica usoara; fara valvulopatii  
sau alte elemente patologice notabile

SpO2 92-94%; fara raluri pulmonare  
Rx pulmonar – fara leziuni



Enalapril iv

Furosemid iv

TA 175/95 mmHg

Ameliorare dispnee

La domiciliu – reluarea Tx

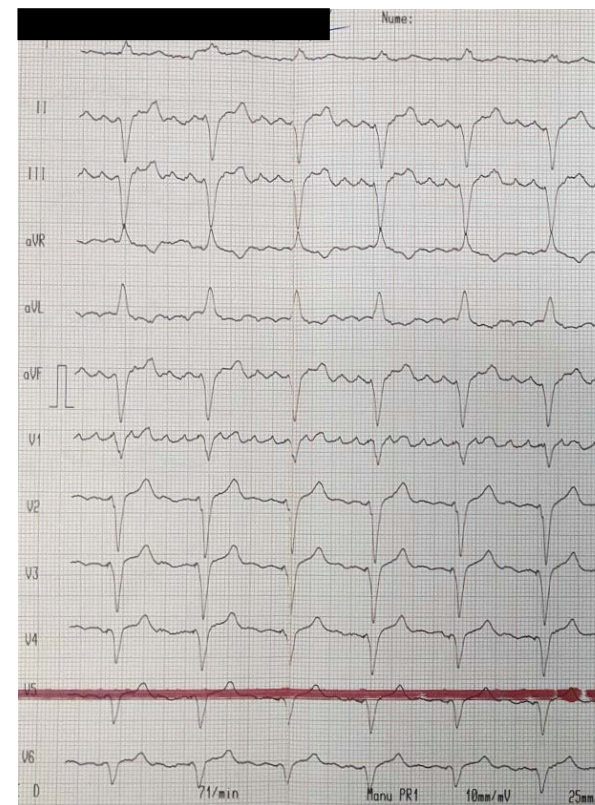


F, 97 ani, **TA 195/100 mmHg**

CS permanenta BAV III  
HTN > 10 ani, Telmisartan 80 mg/zi  
De 1 luna dispnee progresiva efort tot mai mic -> dispnee de decubit

Eco cord – VS nedilatat, hipertrofie concentrica usoara, FEVS 40%; stenoza aortica moderata; atrii sever dilatate

SpO2 88%;  
Raluri subcrepitante bazal bilateral  
Rx pulmonar – edem pulmonar



Digoxin iv

Furosemid iv

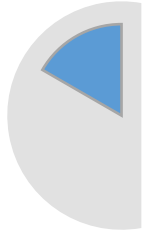
**TA 170/85 mmHg**

**Stationar**

**Internare  
Insuficienta ventriculara stanga tahiaritmica**



# Clasificarea HTN “de pandemie”



La domiciliu

Cand situatia clinica permite evaluarea la distanta, rol **Telemedicina**



La cabinet

Cand pacientul se poate deplasa – “**ambulator**”



La garda

Urgentele hipertensive **cu risc vital**



## Societatea Romana de Cardiologie

### PROGRAMUL DE AUTO-DIAGNOSTIC AL HIPERTENSIUNII ARTERIALE



Grupul de lucru de  
Hipertensiune Arteriala



[www.tensiuneamea.ro](http://www.tensiuneamea.ro)



# Dg HTN “de pandemie”

[Auto-masurare rapida](#) | [Monitorizari pe 7 zile](#) | [Notificari](#) | [Log out](#)

## Primul pas pentru a afla daca esti hipertensiv!

**Primul pas!** Măsurați-vă singuri tensiunea arterială, urmând indicațiile din filmul alăturat sau din textul de la rubrica “Reguli de masurare”. Faceți 3 măsurători la interval de 1-3 minute și introduceți rezultatele lor în tabelul de mai jos. Rezultatul va fi calculat automat.



Descarca [aici](#) regulile de masurare sau mergi la pagina [Reguli de masurare](#)

Tot ce ai nevoie este un tensiometru electronic validat clinic pe care il poți procura de la orice farmacie. Lista tensiometrelor validate o găsești [AICI](#)

Exemplu

Tensiunea arteriala (mmHg)	
138	86
128	76
132	80

Tensiunea arteriala (mmHg)	
<input type="text" value="TA sistolica 1"/>	<input type="text" value="TA diastolica 1"/>
<input type="text" value="TA sistolica 2"/>	<input type="text" value="TA diastolica 2"/>
<input type="text" value="TA sistolica 3"/>	<input type="text" value="TA diastolica 3"/>

**Calculeaza**

Regulile de masurare  
& tensiometre validate





Ziua		Prima masuratoare		A doua masuratoare	
		Tensiunea sistolica(mmHg)	Tensiunea diastolica(mmHg)	Tensiunea sistolica(mmHg)	Tensiunea diastolica(mmHg)
1	Dimineata	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Seara	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
2	Dimineata	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Seara	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
3	Dimineata	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Seara	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
4	Dimineata	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Seara	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
5	Dimineata	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Seara	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
6	Dimineata	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Seara	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
7	Dimineata	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
	Seara	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Salveaza datele introduse

## Conform recomandarilor europene si internationale de practica medicala

Categorie	Sistolica		Diastolica
Cabinet (Office)	<b>≥140</b>	si	<b>≥90</b>
Ambulatoriu			
Diurn/awake	≥135	si/sau	≥85
Nocturn/asleep	≥120	si/sau	≥70
24h	≥130	si/sau	≥80
<b>La domiciliu (Home)</b>	<b>≥135</b>	<b>si/sau</b>	<b>≥85</b>

# Realitatea urgentelor hipertensive

## Hypertensive urgency

Urgenta hipertensiva fara risc vital

TAs > 180 mmHg sau TAd > 120 mmHg

Fara afectare acuta de organ tinta

Rareori usor simptomatica (cefalee, vertij)

## Hypertensive emergency

Urgenta hipertensiva cu risc vital

TAs > 180 mmHg sau TAd > 120 mmHg

Cu afectare acuta de organ tinta

Asociaza simptomatologia afectarii organului tinta

Encefalopatia hipertensiva

Hemoragia cerebrala

AVC ischemic

Sindrom coronarian acut

Edem pulmonar acut cardiogen

Disectia acuta de aorta

Insuficienta renala acuta

Pre-eclampsia / Eclampsia

Status hiperadrenergic



# Realitatea urgentelor hipertensive

- Previn evenimentele CV majore
- Ramificatiile legale...

Fara risc vital



- Salvez viata
- Amelioresz prognosticul

Cu risc vital



In ore...zile  
Tratament oral

In minute...ore  
Tratament iv

Urgency –  
fara risc vital

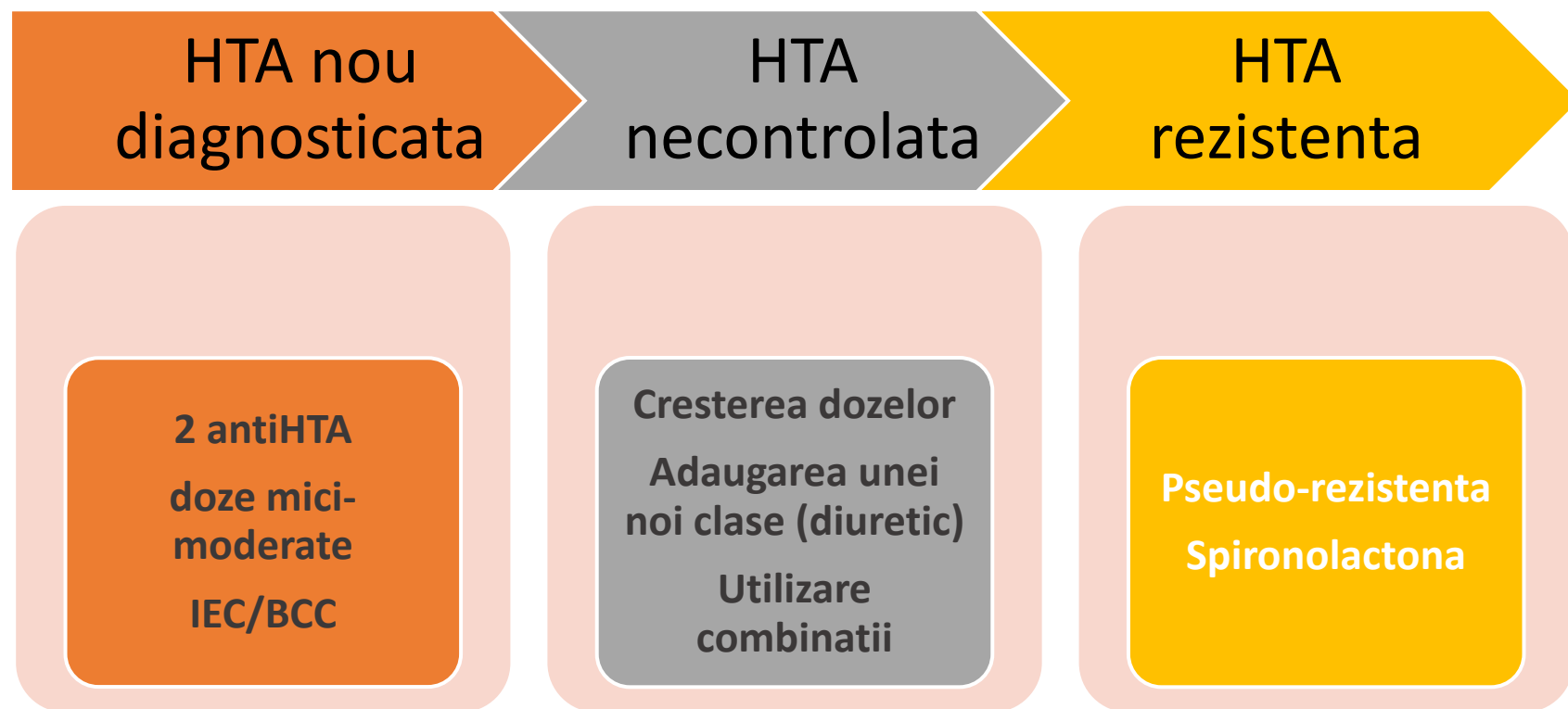
Emergency –  
cu risc vital

SCOP  
control termen lung

SCOP  
salvarea vietii

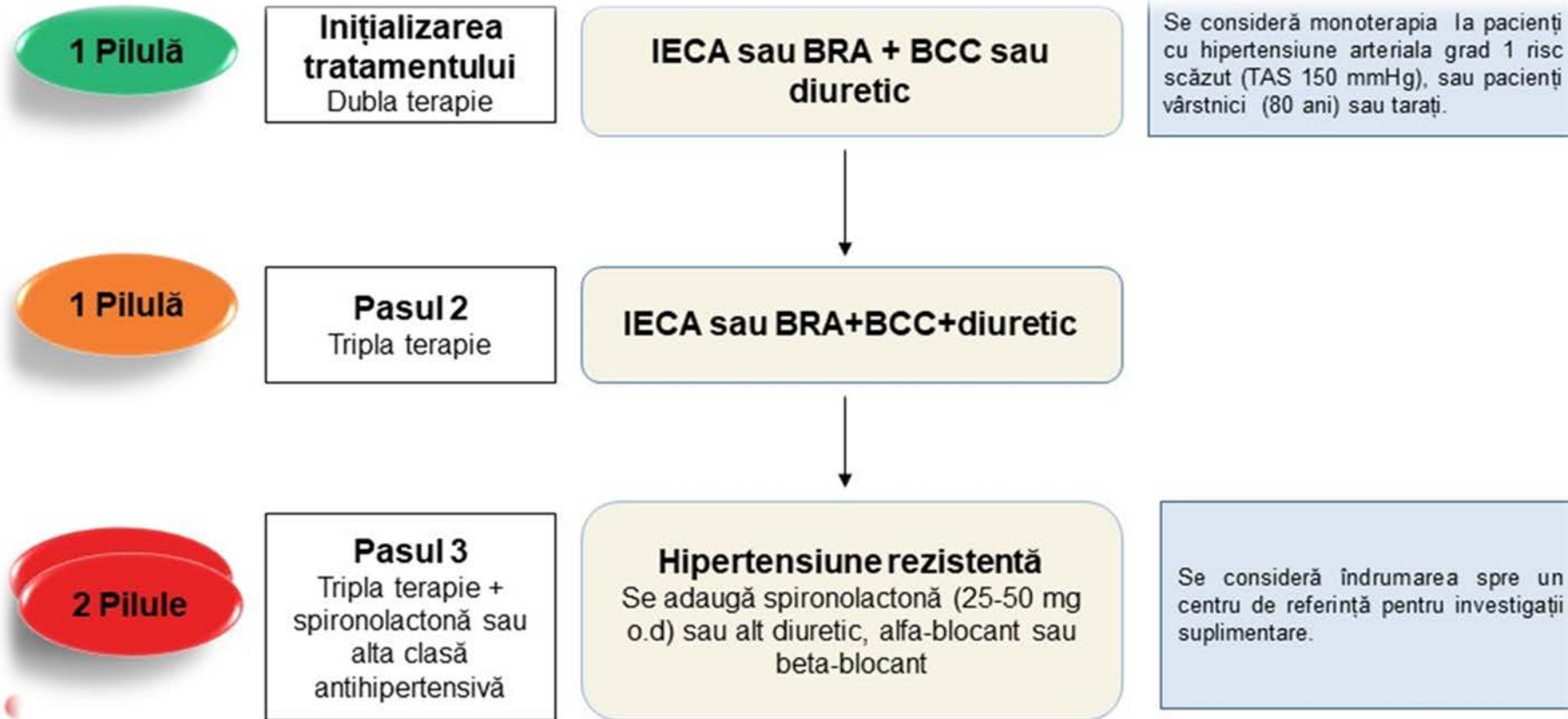


# Hipertensiunea, mai practic



# Quintesenta farmacoterapiei in Ghidul HTA ESC/ESH 2018

**Algoritmul este potrivit pentru majoritatea pacientilor cu AOTMH, boala cerebrovasculara, diabet, boala arteriala periferica**



SOCIETATEA ROMÂNĂ DE CARDIOLOGIE



**Beta-blocanții**  
Se consideră beta-blocanții la oricare pas în terapia hipertensiunii arteriale dacă există indicație specifică pentru utilizarea lor ex. Insuficiență cardiacă, angină, post-IM, fibrilație atrială sau femei însărcinate sau care planifică o sarcină.

# Adaptare de pandemie

## Blocantele canalelor de calciu

Optiunea “safe”, neutra metabolic & electroliti

## IEC/BRA spironolactona

Creatinina, Na, K – inainte & la 1-2 saptamani

## Betablocant

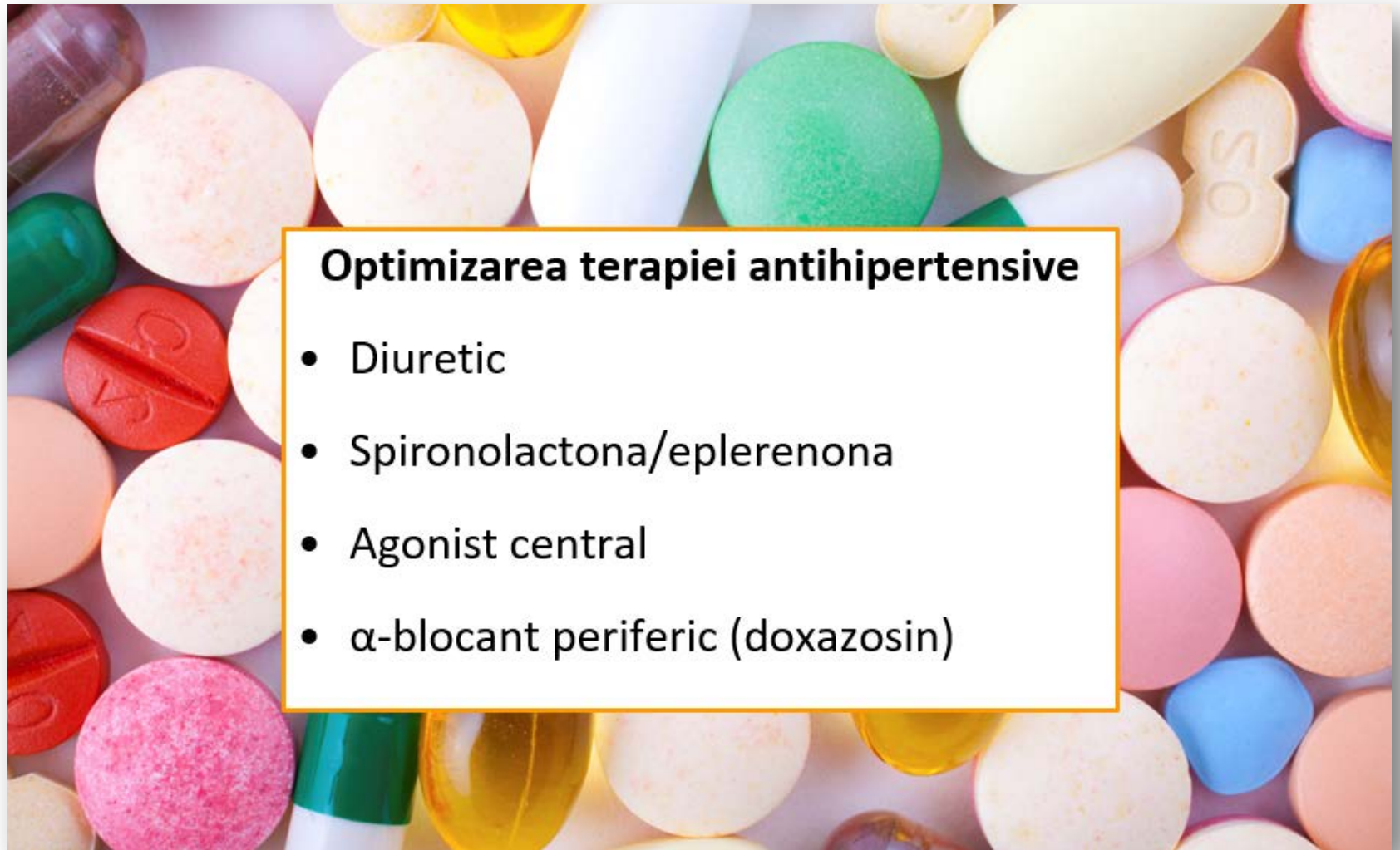
ECG – inainte & 1-2 saptamani  
Urmarire AV



# HTN necontrolata

## Optimizarea terapiei antihipertensive

- Diuretic
- Spironolactona/eplerenona
- Agonist central
- $\alpha$ -blocant periferic (doxazosin)



# HTN rezistenta

Confirma rezistenta

- Masurare corecta la cabinet
- ABPM/24h & **HBPM/7 zile**

- HTA izolata de cabinet
- HTA rezistenta mascata

Excluce  
pseudorezistenta

- Complianta scazuta
- Tratament suboptimal

- aderenta & persistenta
- doze maxime tolerate

Stilul de viata

- **Sedentarism/Obezitate**
- **Aport crescut de sare (Na)**
- **Alcool, "binge drinking"**

Medicatia

- |   |  |
|---|--|
| <ul style="list-style-type: none"><li>• <b>AINS &amp; AIS</b></li><li>• Contraceptive orale</li><li>• Simpatomimetice</li><li>• Droguri</li></ul> | <ul style="list-style-type: none"><li>• Anorexogene</li><li>• Licorice (lemn dulce)</li><li>• Ciclosporine, EPO, inhibitori angiogeneza</li><li>• "Suplimente"</li></ul> |
|---|--|

Cauze identificabile  
HTA secundara

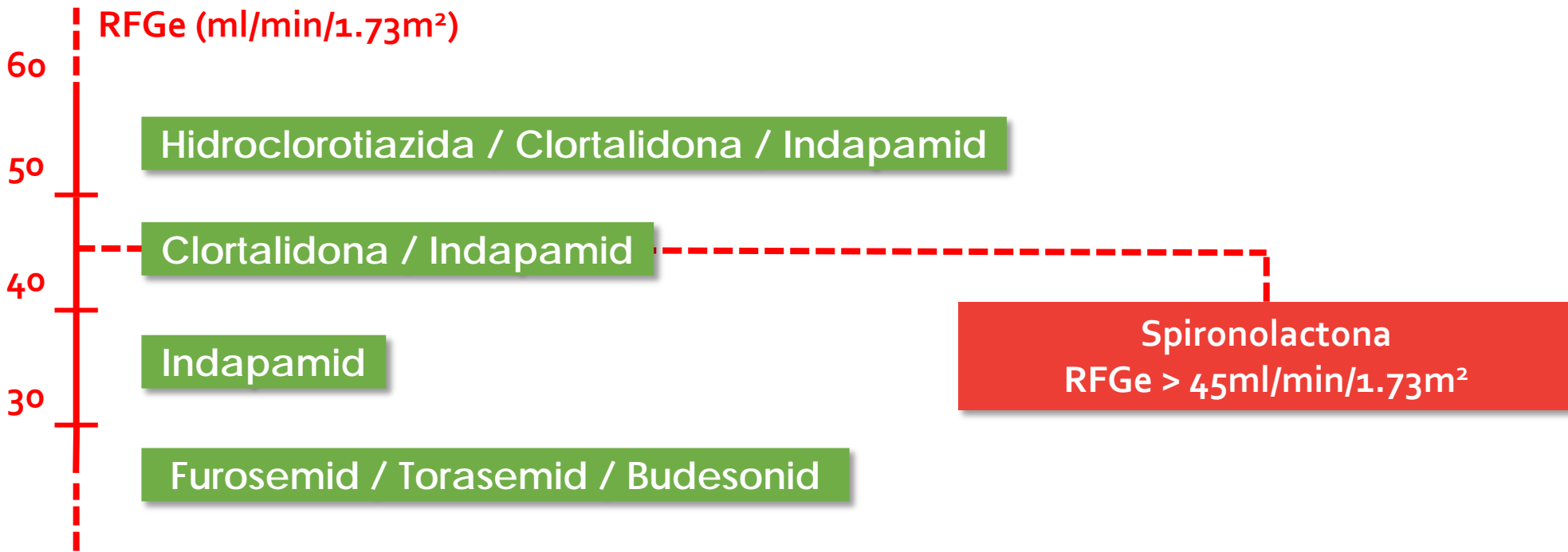




HTA rezistentă

Interventie asupra TA

Retentie de Na /  
hipervolemie



HTA rezistenta

Interventie asupra TA

SRAA

SNS

↓↓↓ TA 😊  
↑↑↑ Reactiile adverse ☹️

IEC/BRA + β-blocant + BCC

Bisoprolol / Carvedilol / Nebivolol

+ / inlocuieste β-blocant

Doxazosin

+ α1-blocant

Clonidina / Rilmenidina / Moxonidina

+ α2-agonist  
+ agonist rcpt imidazolinici

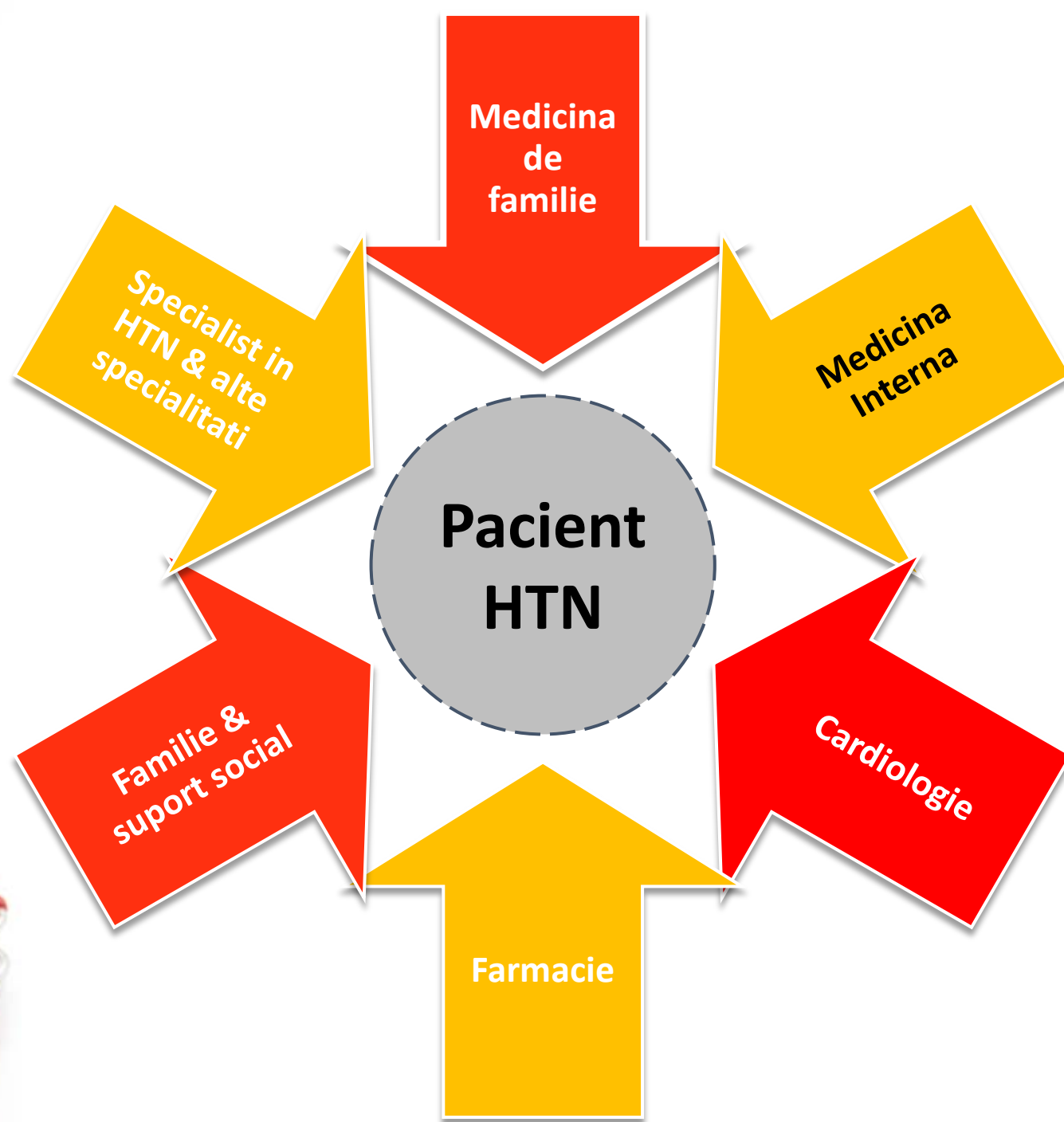
Metildopa

+ inh DOPA decarboxilaza

Hidralazina

+ vasodilatator periferic





## Guidance

### **COVID-19: the green book, chapter 14a**

Coronavirus (COVID-19) vaccination information for public health professionals.

From: [Public Health England](#)  
Published: 27 November 2020  
Last updated: 12 February 2021, [see all updates](#)

## Documents



### [COVID-19: the green book, chapter 14a](#)

Ref: PHE gateway number 2020300  
PDF, 434KB, 24 pages

This file may not be suitable for users of assistive technology.

► [Request an accessible format.](#)

## Details

This chapter includes information on:

- the coronavirus (COVID-19) vaccines
- the dosage and schedule for the UK
- recommendations for the use of the vaccine

Individuals on stable anticoagulation therapy, including individuals on warfarin who are up-to-date with their scheduled INR testing and whose latest INR is below the upper level of the therapeutic range, can receive intramuscular vaccination. A fine needle (23 or 25 gauge) should be used for the vaccination, followed by firm pressure applied to the site without rubbing for at least 2 minutes (ACIP 2019).

The patient or family should be given information on the risk for hematoma from the injection. Patients receiving anticoagulation therapy presumably have the same bleeding risk as patients with clotting factor disorders and should follow the same guidelines for intramuscular administration. If possible, vaccination could be scheduled prior to the use of these medications, so that the patients' risk of bleeding is not increased by their therapeutic action.



*Avem impresia că  
că viețile noastre  
sunt puse  
“în așteptare”  
în timpul  
pandemiei -  
este însă periculos  
să credem că  
putem putem  
spune stop inimii!*

**Inima nu  
așteaptă!**



## **INIMA NU AȘTEAPTĂ!**

Sănătatea inimii tale este esențială, chiar și în timpul pandemiei. Nu neglija niciodată simptomele dacă știi că ai o problemă cardiacă. Dacă crezi că ai simptomele unui infarct, cere ajutor medical de urgență, sună imediat la 112!





# DESIGN OF BRACE CORONA TRIAL

Continuing versus Suspending angiotensin-converting enzyme inhibitors and angiotensin receptor blockers and its impact on adverse outcomes in hospitalized patients with coronavirus infection (SARS-CoV2)

## STUDY POPULATION

National registry on suspected and confirmed cases of COVID-19



Confirmed diagnosis of COVID-19

and



Chronic use of renin-angiotensin system blockers (ACEI/ARB)

500 participants at 34 sites in Brazil



Continue to use ACEI/ARB treatment



1:1 RANDOMIZATION



Temporarily discontinue ACEI/ARB treatment for 30 days

PRIMARY OUTCOME

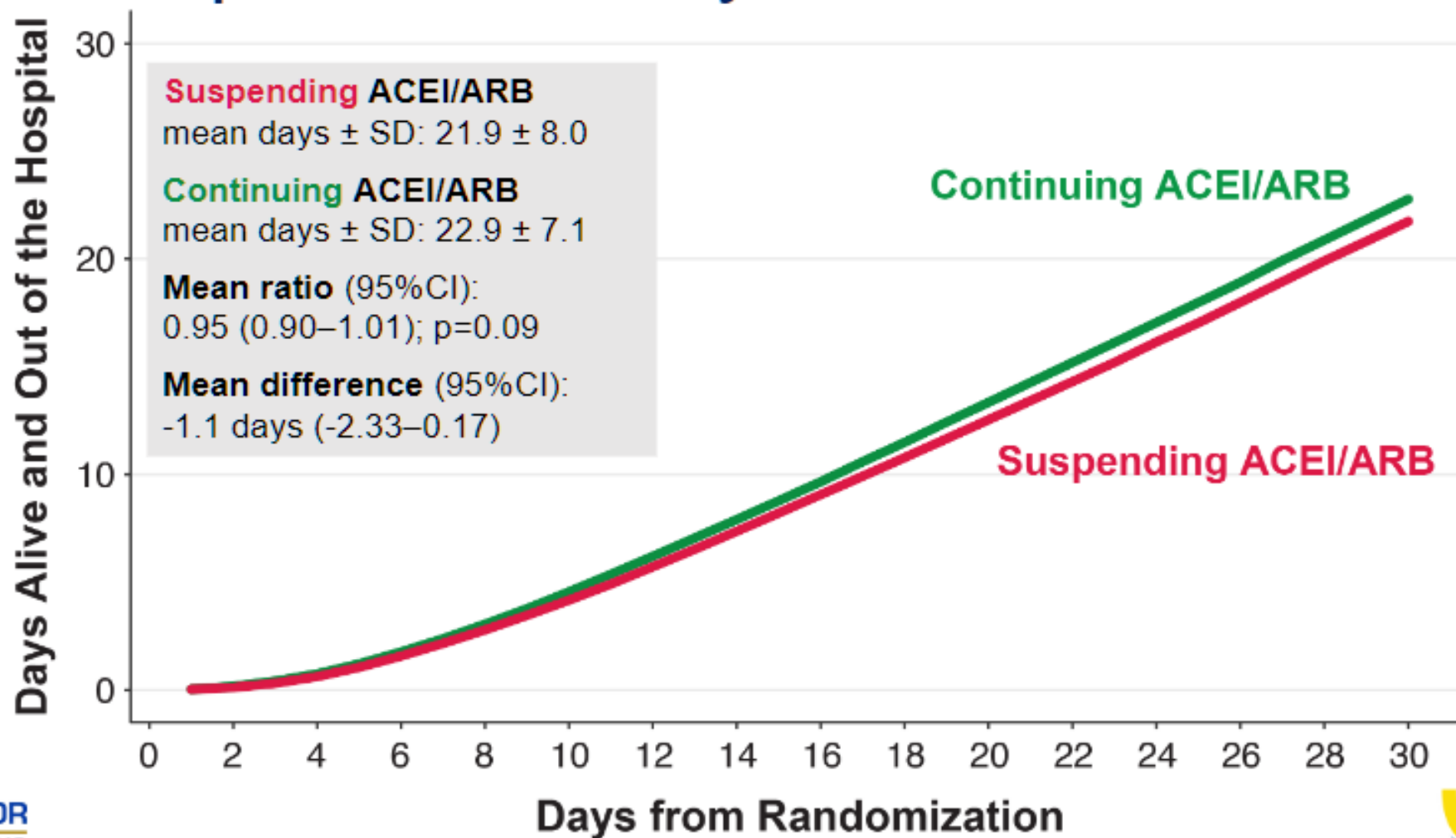


Median days alive and out of the hospital at 30-days

SECONDARY OUTCOMES

- Progression of COVID-19 disease
- All cause mortality
- Cardiovascular death
- Acute myocardial infarction
- New or worsening heart failure
- Stroke, transient ischemic attack
- Myocarditis, pericarditis
- Arrhythmias that need treatment
- Thromboembolic phenomena
- Respiratory failure, renal failure
- Hemodynamic decompensation
- Sepsis, hypertensive crisis
- Level of troponin, NT-ProBNP, BNP, and D-dimer

# Primary Outcome: Days Alive and Out of Hospital at 30 Days



# Renin–Angiotensin–Aldosterone System Blockers and the Risk of Covid-19

Giuseppe Mancia, M.D., Federico Rea, Ph.D., Monica Ludergnani, M.Sc.,  
Giovanni Apolone, M.D., and Giovanni Corrao, Ph.D.

**Table 4. Adjusted Odds Ratios for Covid-19 Associated with Use of RAAS Blockers and Other Antihypertensive Drugs.**

Variable	Odds Ratio for Covid-19 (95% CI)*				
	ACE Inhibitors	ARBs	Calcium-Channel Blockers	Diuretics	Beta-Blockers
Severity of clinical manifestations					
Mild to moderate					0.98 (0.89–1.07)
Critical or fatal					1.07 (0.84–1.37)
Sex†					
Female					1.04 (0.91–1.20)
Male	0.98 (0.87–1.11)	0.98 (0.86–1.11)	1.00 (0.90–1.11)	1.02 (0.91–1.15)	0.97 (0.87–1.08)
Age at diagnosis§					
<60 Yr	0.94 (0.71–1.25)	0.89 (0.67–1.18)	1.13 (0.88–1.46)	0.99 (0.75–1.31)	1.00 (0.78–1.29)
≥60 Yr	0.97 (0.87–1.08)	0.95 (0.85–1.06)	1.01 (0.93–1.11)	1.07 (0.97–1.19)	0.99 (0.90–1.08)

The present study does not provide evidence that the use of ACE inhibitors or ARBs is independently associated with the risk of Covid-19.