Farmacotherapie: ins en outs

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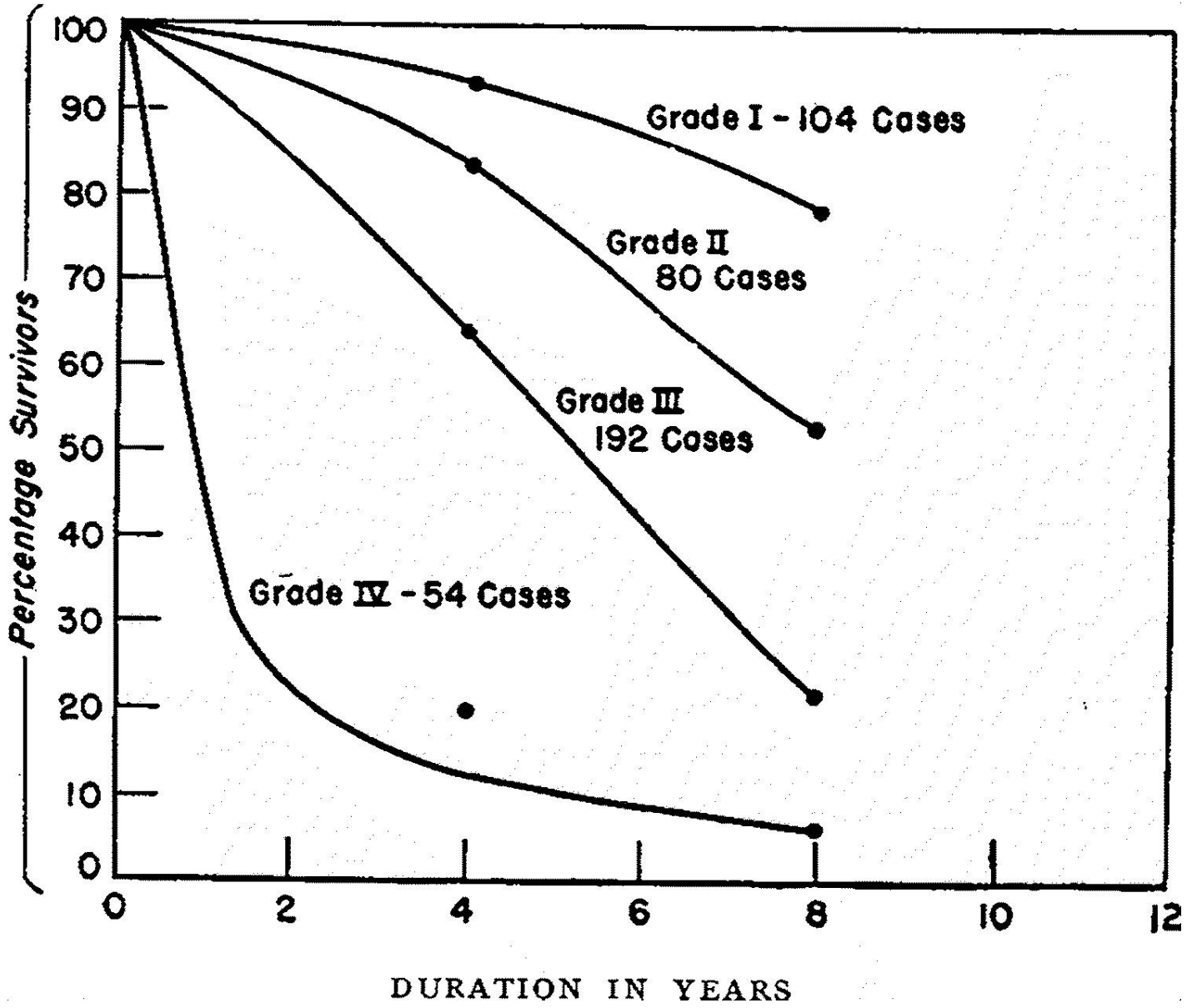
Nationaal Hypertensiecongres 18 juni 2021

Disclosure potential conflicts of interest

Geen (potentiële) belangenverstrengeling	

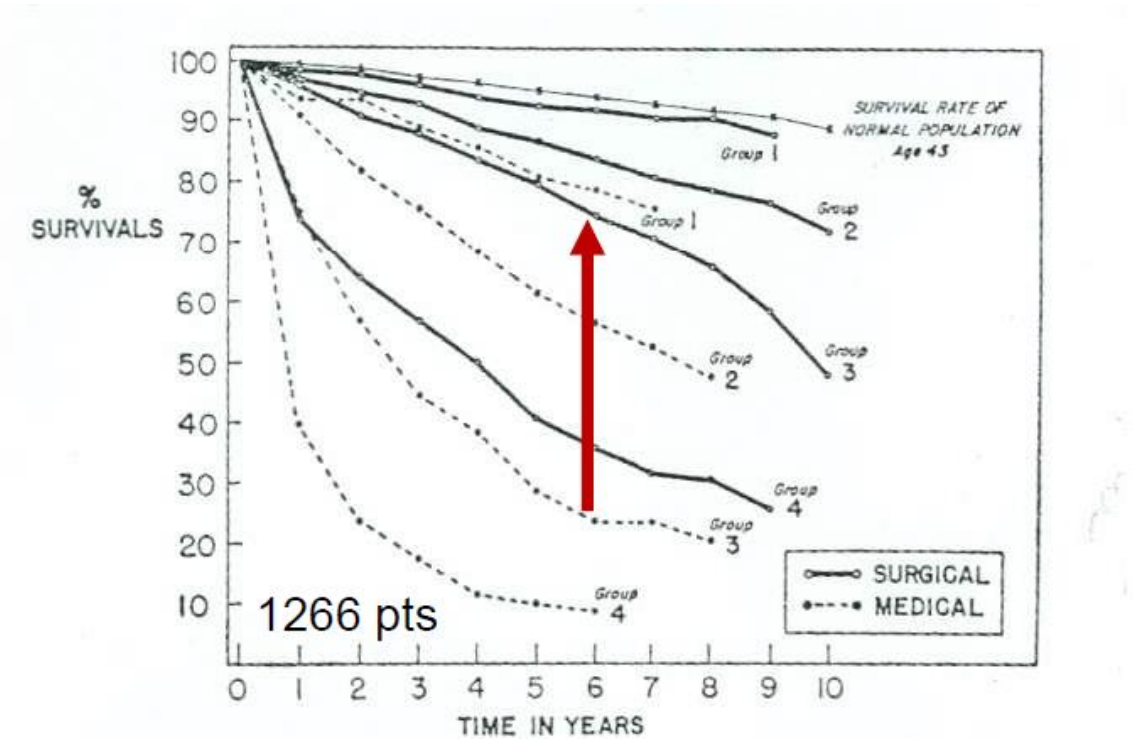
Wie ben jij?

A. Internist (i.o.)
B. Cardioloog (i.o.)
C. Apotheker
D. Huisarts (i.o.)
E. Praktijkondersteuner
F. VS, PS of gespecialiseerd verpleegkundige
G. Doktersassistent
H. Overig



Palmer et al. NEJM 1948

Sympathectomy



Smithwick JAMA 1953 1501-1504

Sympathectomy

forms of current therapy. The results reported in this communication have not been influenced materially by "medical forms of sympathectomy" resulting from the use of adrenergic blocking drugs. It will be many years before it can be determined whether treatment by drugs of this general nature will be as effective as surgical treatment has been shown to be in significantly increasing the life expectancy of patients with the severer forms of hypertensive cardiovascular disease. It appears that in the

Introductie van antihypertensiva per decade

< 1950	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-2009
Kwikdiuretica	Pentolinium	Pronethalol	Prazosine	Amiloride	Doxazosine	Eplerenon
Thiocyanaat	Reserpine	Propranolol	Atenolol	Bumetanide	Losartan	Aliskiren
Rijstdieet	Guanetidine	Furosemide		Diltiazem	Valsartan	
Hexamethonium	Bretylium			Verapamil	Irbesartan	
	Hydralazine			Nifedipine	Perindopril	
	Chlorothiazide			Spironolacton	Amlodipine	
	Triamtereen			Chloortalidon		
	HCT			Carvedilol		
				Betablokkers		
				Captopril		
				Enalapril		
				Lisinopril		

Erasmus MC

HEEFT U VAAK LAST VAN KEUZESTRESS

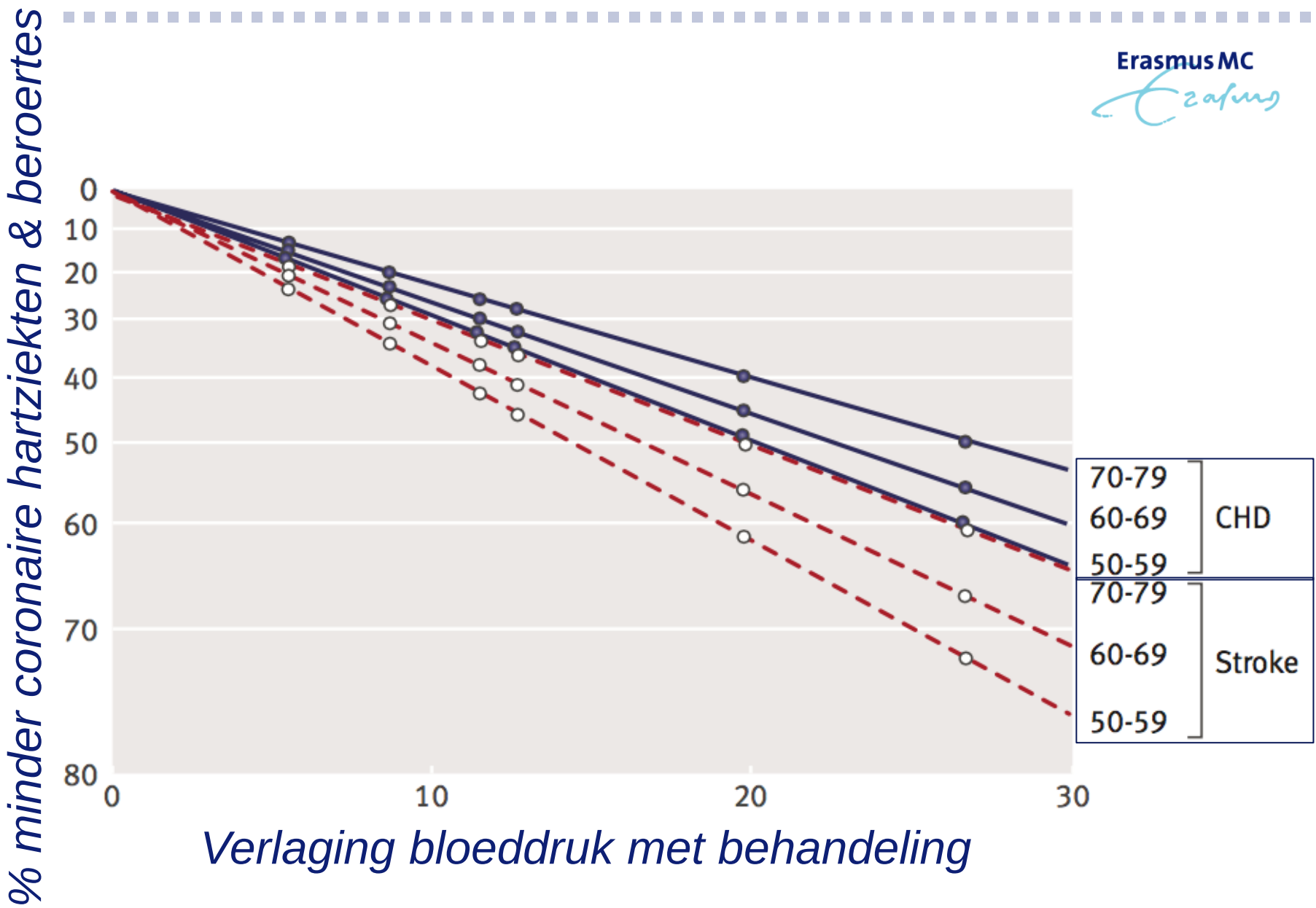
☐ JA

☐ NEE

☐ NU WEL

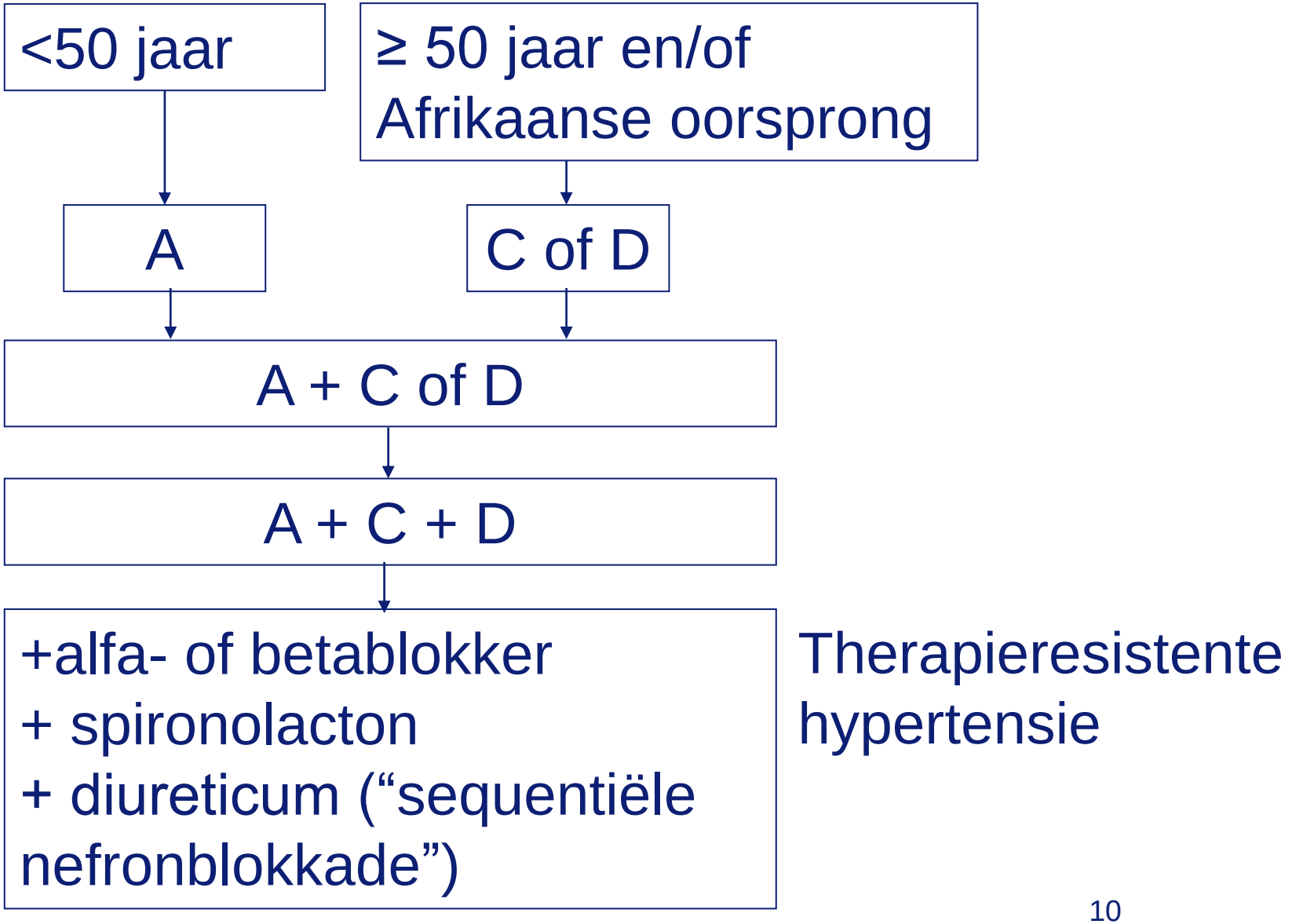
Loesje

Postbus 1045
6801 BA Arnhem www.loesje.nl



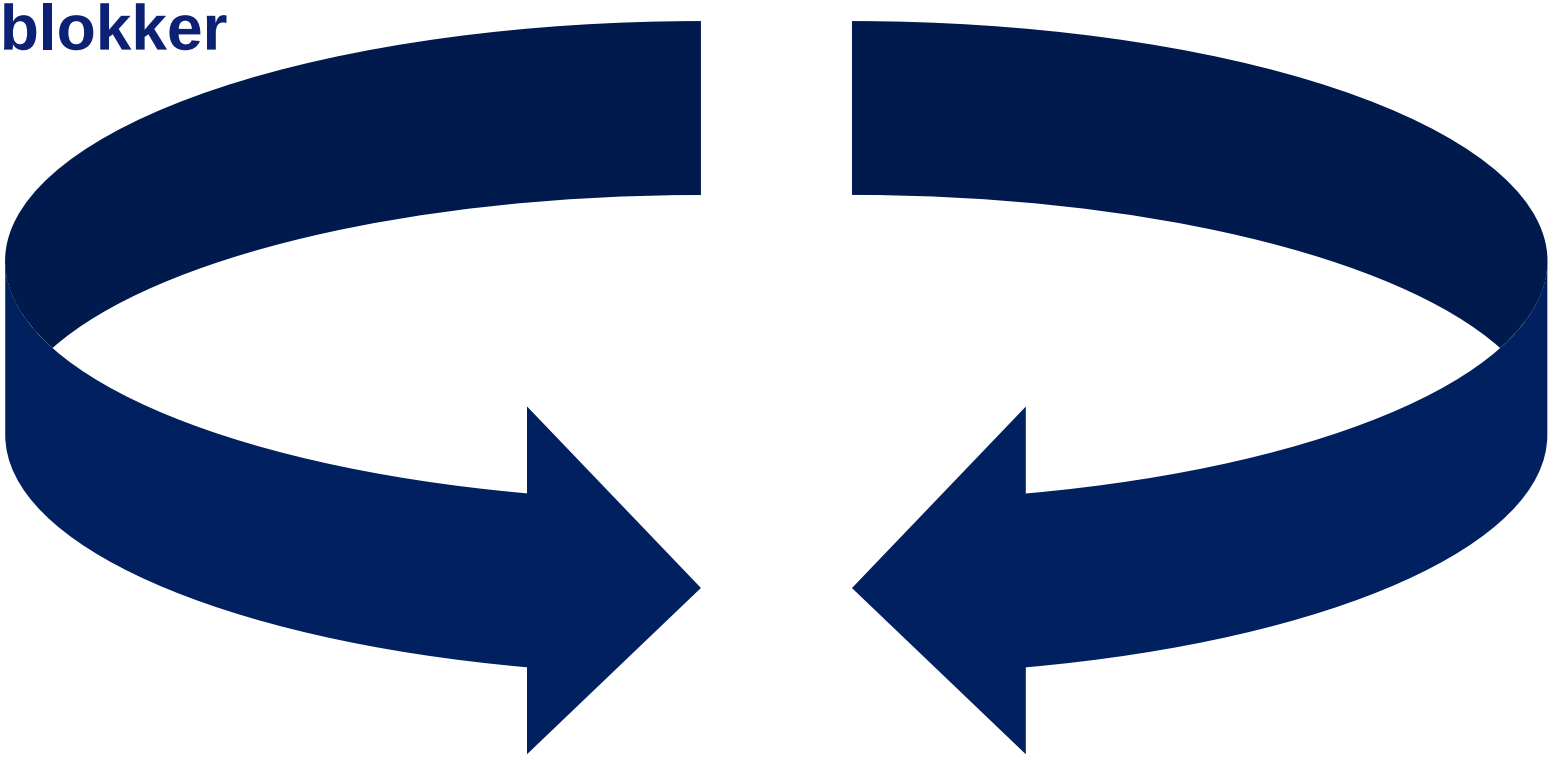
Law et al. 2009 BMJ b1665

Stappenplan (NHG/CVRM)



Stappenplan (handleiding CVRM 2020)

ACE-remmer of ARB
Calciumantagonist
Diureticum
Beta blokker



Specifieke situaties

Situatie	Geneesmiddel
Verhoogde albuminurie (› 3 mg/mmol albumine/creatinine)	ACE-R/ARB
Eerder MI/coronairlijden	Bètablokkers, ACE-R/ARB
Angina pectoris	Bètablokkers, calciumantagonisten
Hartfalen	ACE-R/ARB, bètablokkers, diuretica, aldosteronantagonisten
Atriumfibrilleren	Bètablokkers, non-dihydropyridine-calciumkanaalblokkers, ACE-R/ARB, aldosteronantagonisten
Perifeer arterieel vaatlijden	ACE-R
Diabetes mellitus	ACE-R/ARB
Zwangerschap	Methyldopa, labetalol, calciumantagonisten
Personen van West- of Zuid-Afrikaanse afkomst	Diuretica en calciumantagonisten

Erectiestoornissen bij betablokkers- maakt het nog uit welke?

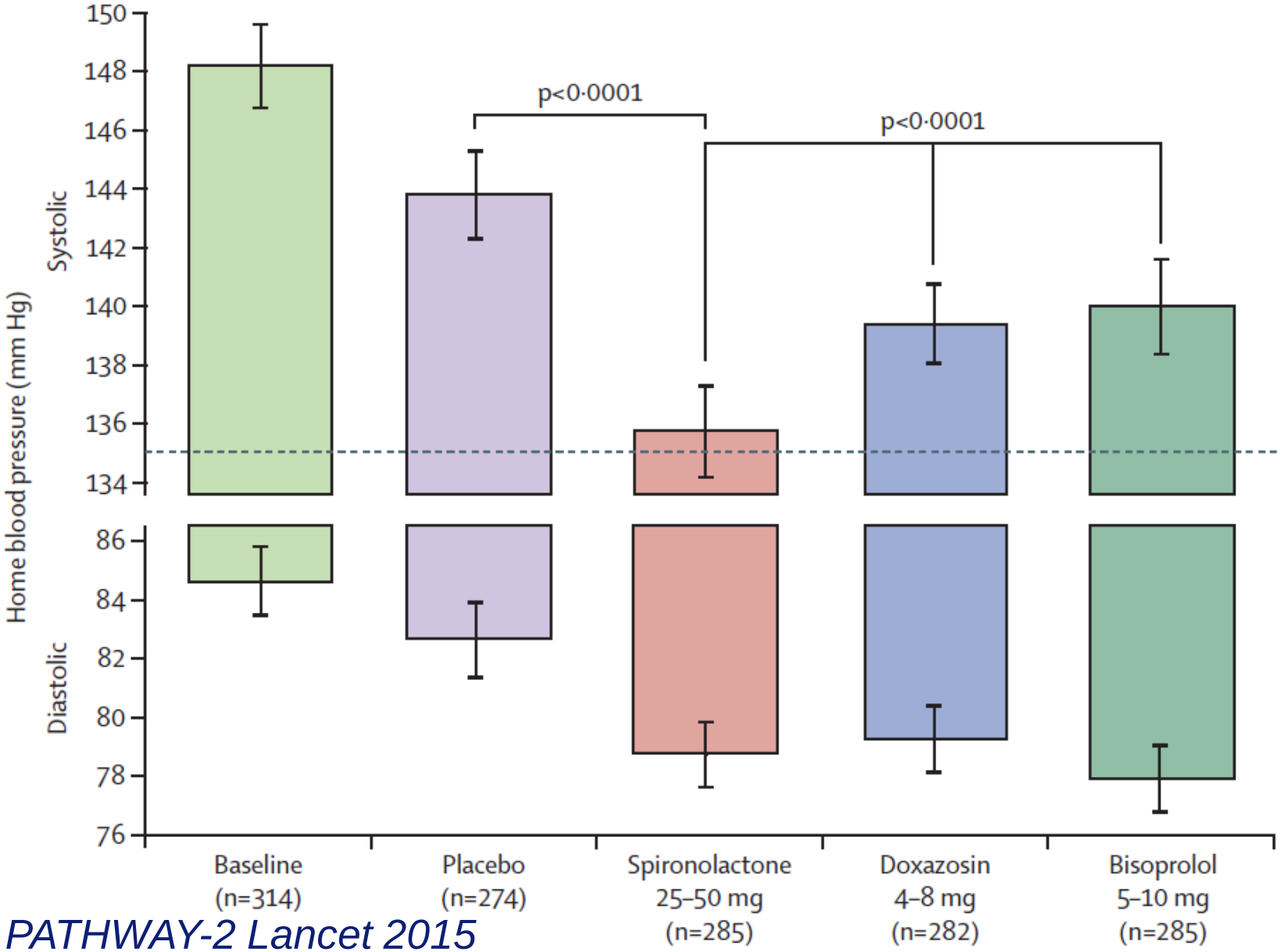
A. Nee

B. Ja, voorkeur metoprolol

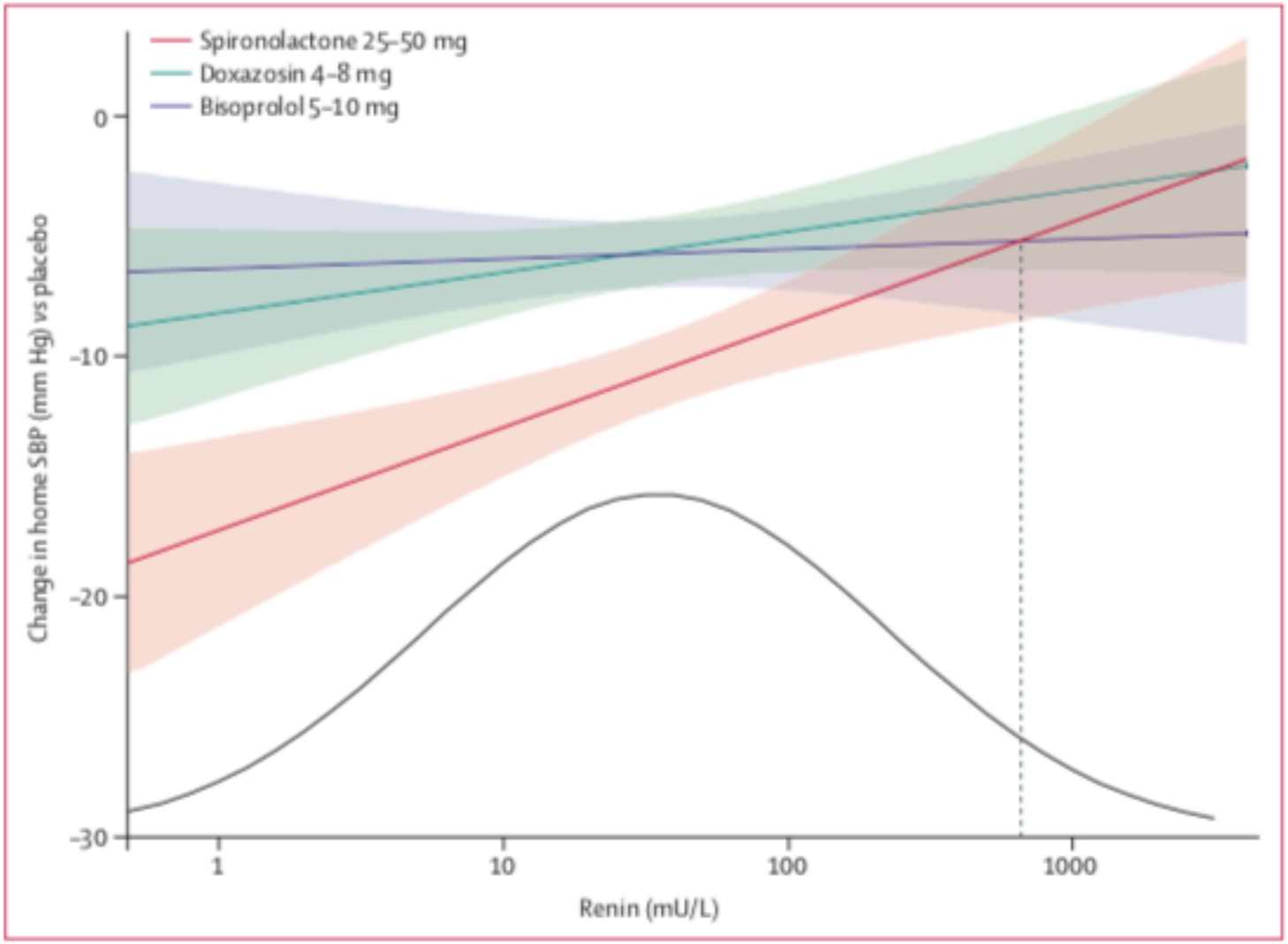
C. Ja, voorkeur nebivolol

D. Dit is niet onderzocht

Combineren
+spironolacton en/of verwijzen



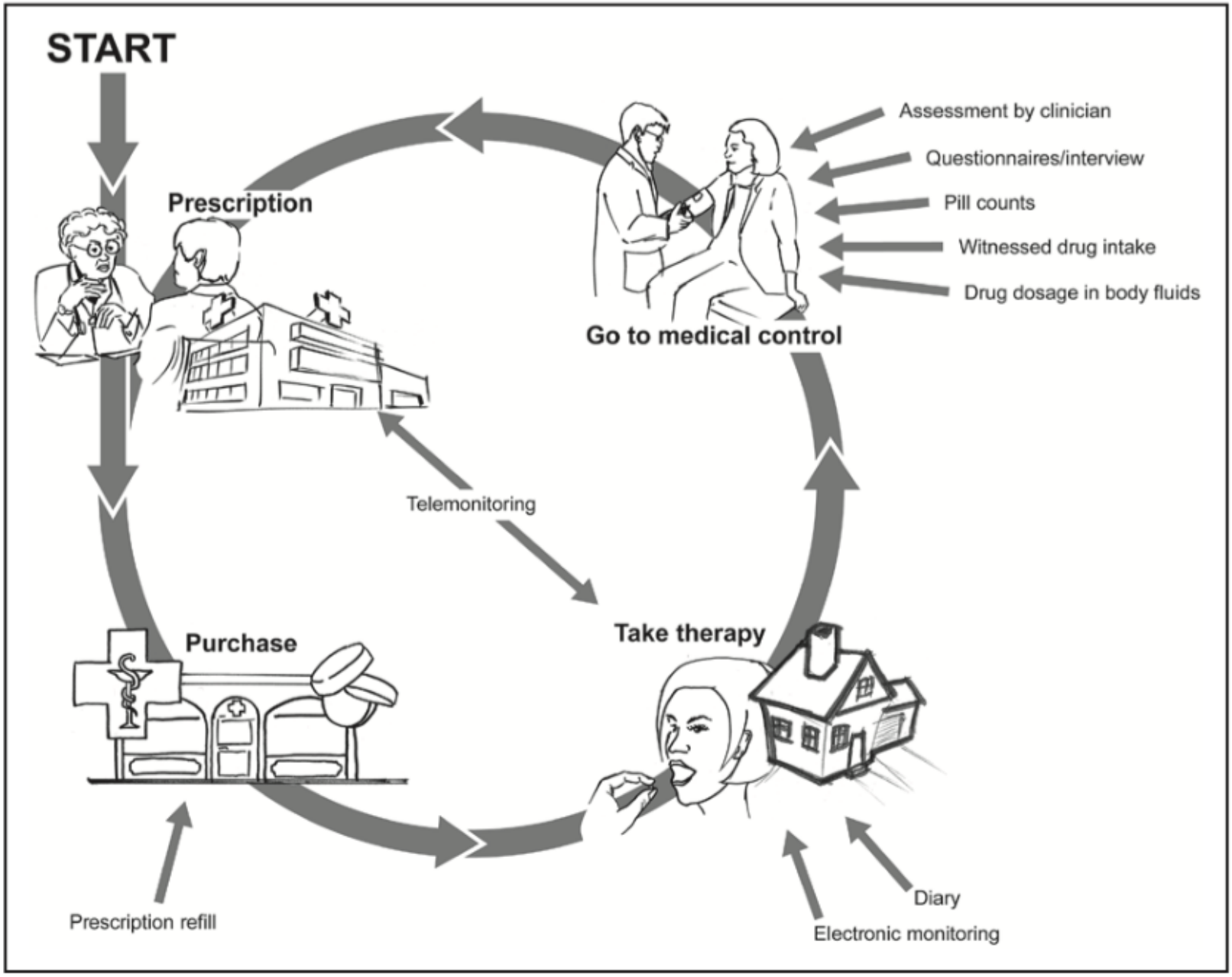
PATHWAY-2 Lancet 2015


Spironolactone 25–50 mg
Doxazosin 4–8 mg
Bisoprolol 5–10 mg
0
-10
-20
-30
Change in home SBP (mm Hg) vs placebo
1
10
100
1000
Renin (mU/L)

Wat is de meest voorkomende en moeilijkst te behandelen oorzaak van therapieresistente hypertensie?

A. Niet erkende secundaire oorzaken
B. Therapieontrouw
C. Middelengebruik

“Geneesmiddelen werken niet in hun die ze niet innemen”



Berra et al. Hypertension 2016

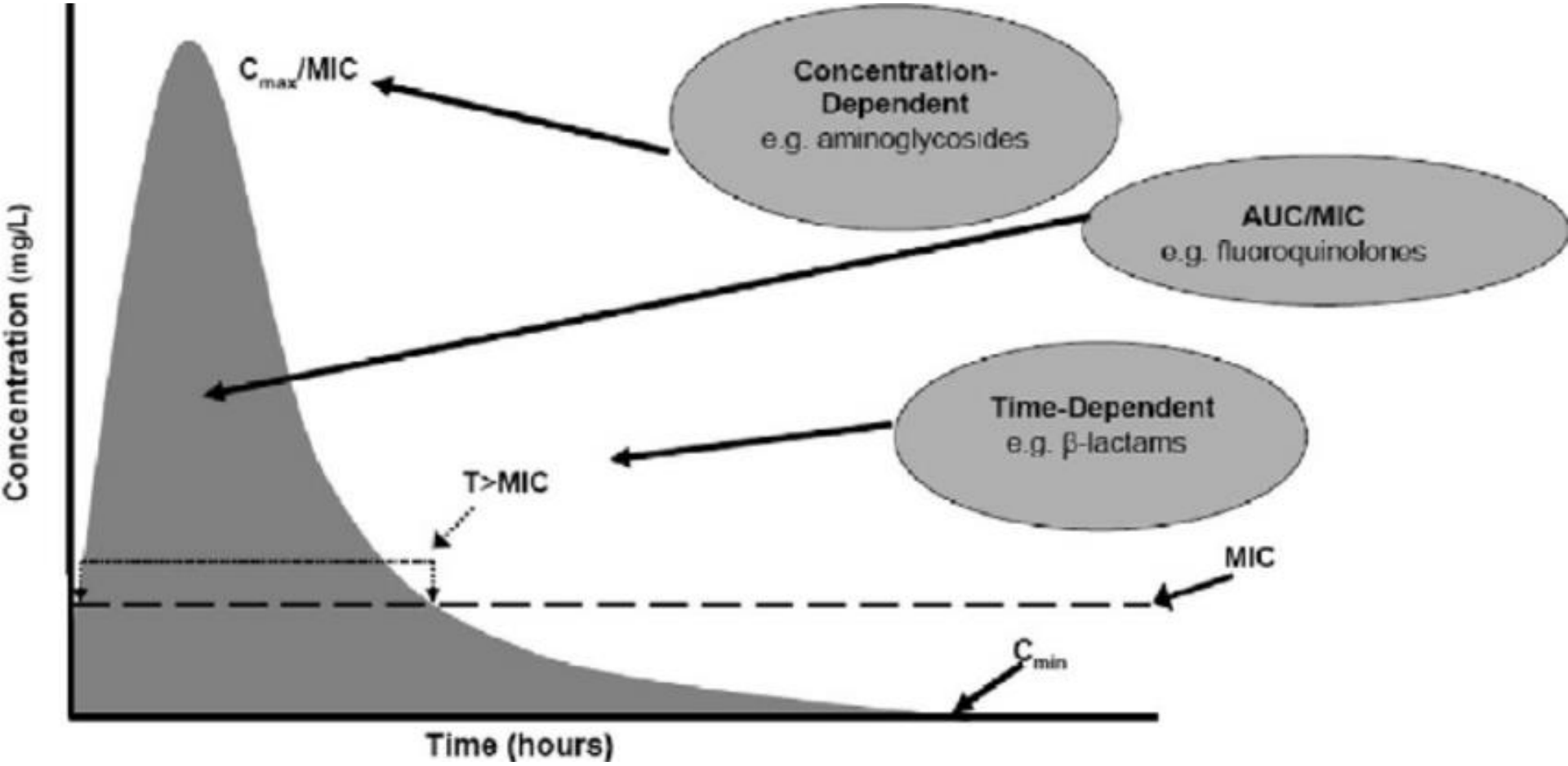
Therapeutic drug monitoring

- Relation drug level en pharmacological effect

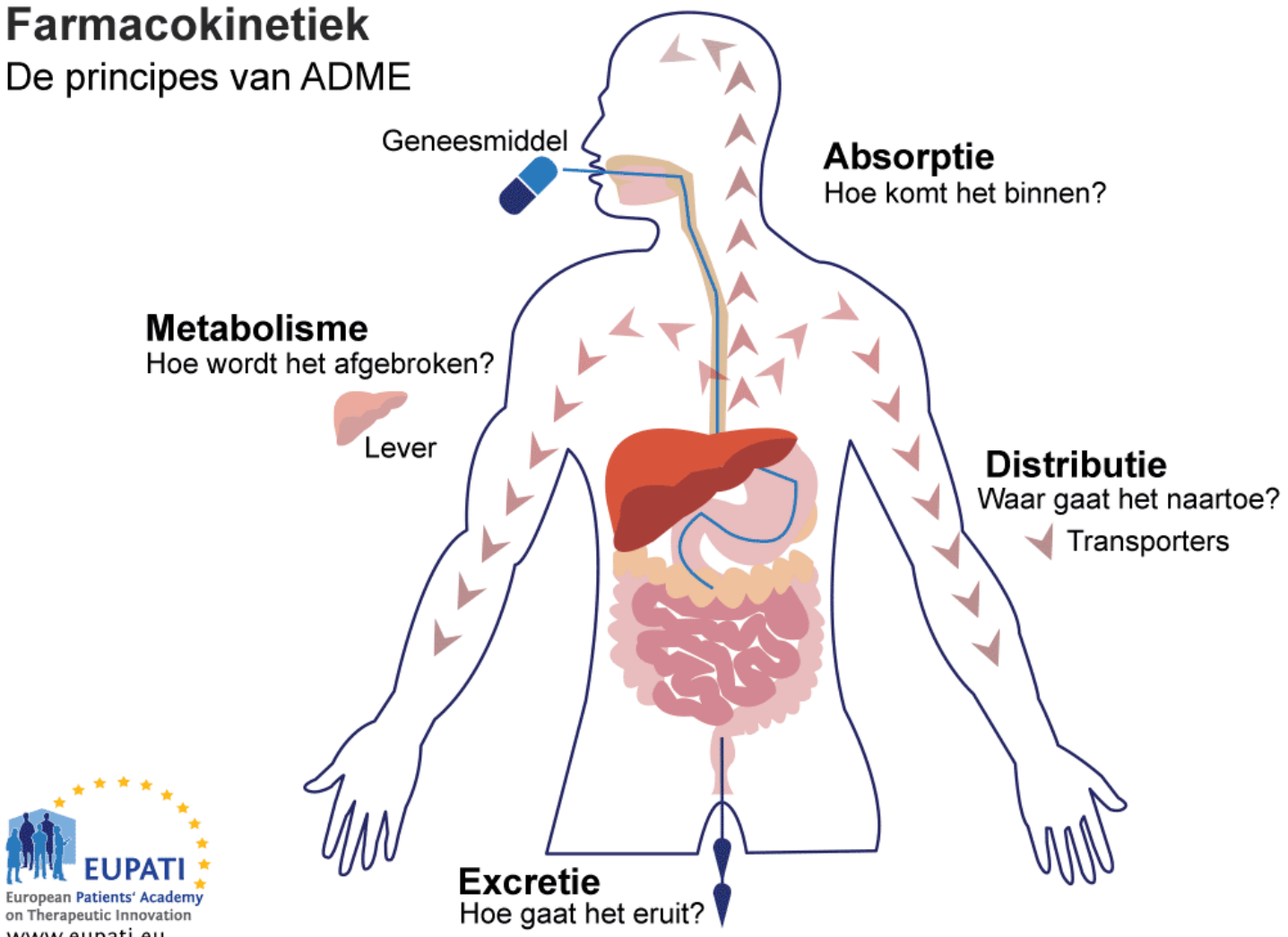
- Mean steady state= $\frac{\text{Dosing rate}}{\text{Clearance}}$

- Narrow therapeutic range
- When clinical effect only is insufficient information
- Adherence

Antibiotics



Wat gebeurt er in de patiënt?



SHREK

SHREK

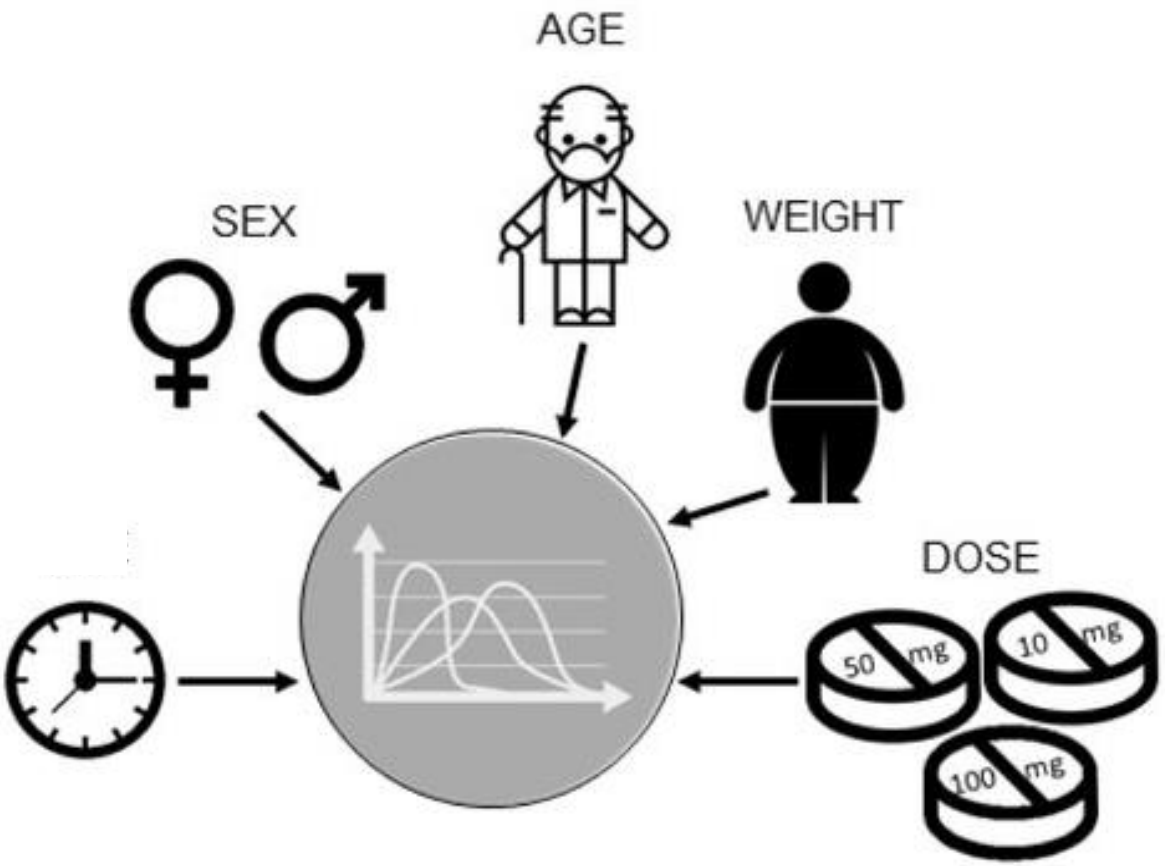
Erasmus MC

Original Article

Clinical Applicability of Monitoring Antihypertensive Drug Levels in Blood

Laura E.J. Peeters, Lida Feyz, Eric Boersma,
Joost Daemen, Teun van Gelder, Birgit C.P. Koch, Jorie Versmissen

Hypertension Juli 2020 80-86



Large variation in plasma concentrations of AHDs

Middel	T1/2 (hours)	C max
Enalapril	11 (enalaprilate)	4
Perindopril	17-25 (perindoprilate)	3-4
Losartan	2/6-9 (carboxylate)	1/3.5
Valsartan	6	2-4
Amlodipine	35-50	6-12
Nifedipine	2-5/6-11	0.5-2/1.5-4
HCT	5.6-14.8	4
Spironolactone	canrenon tot 35	1-2 (canrenon 2-4)

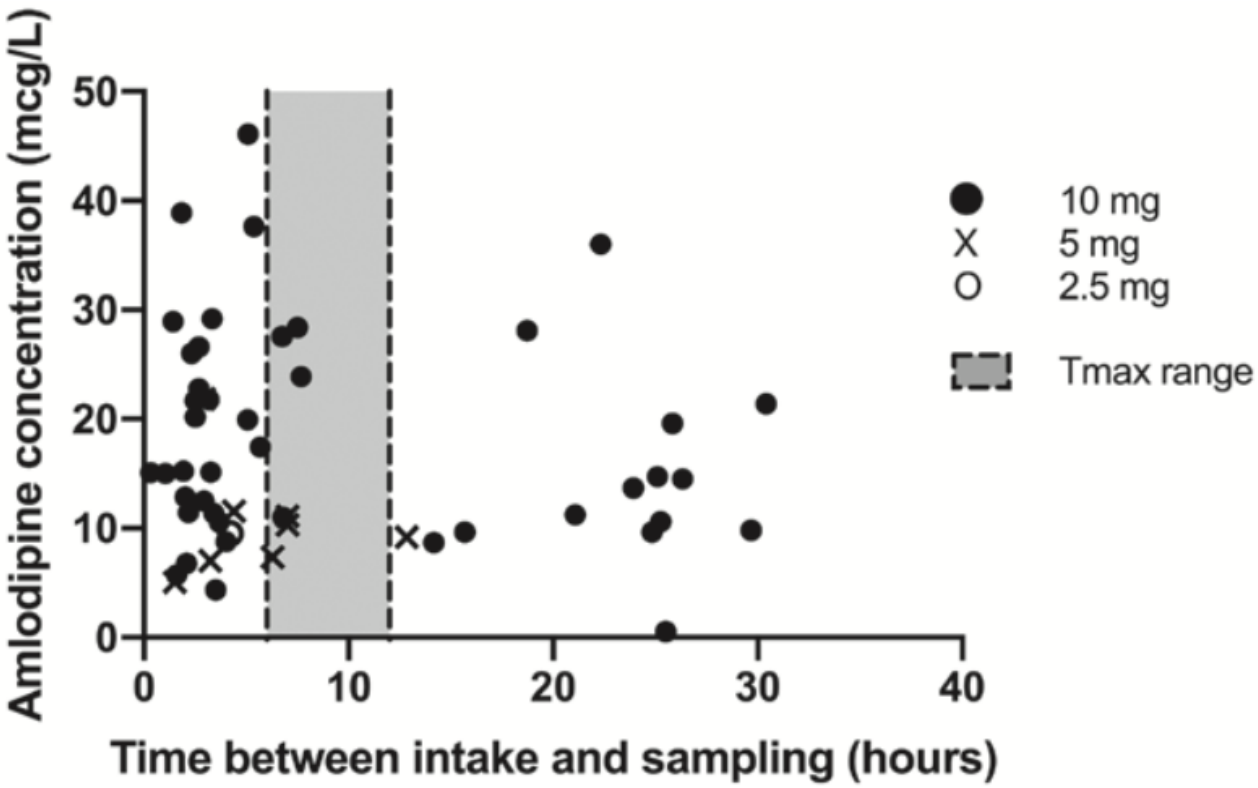
In welke orde van grootte is de variabiliteit in amlodipinespiegels?

A. Factor 2

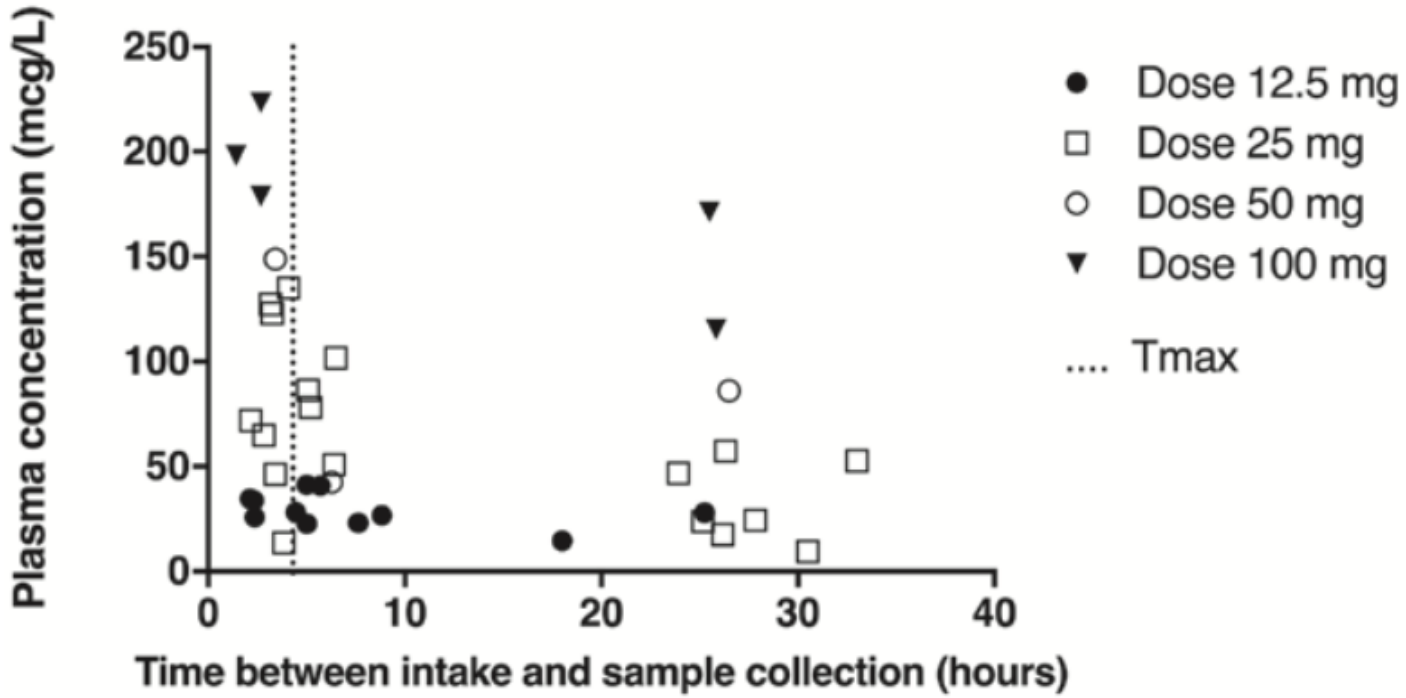
B. Factor 5

C. Factor 10

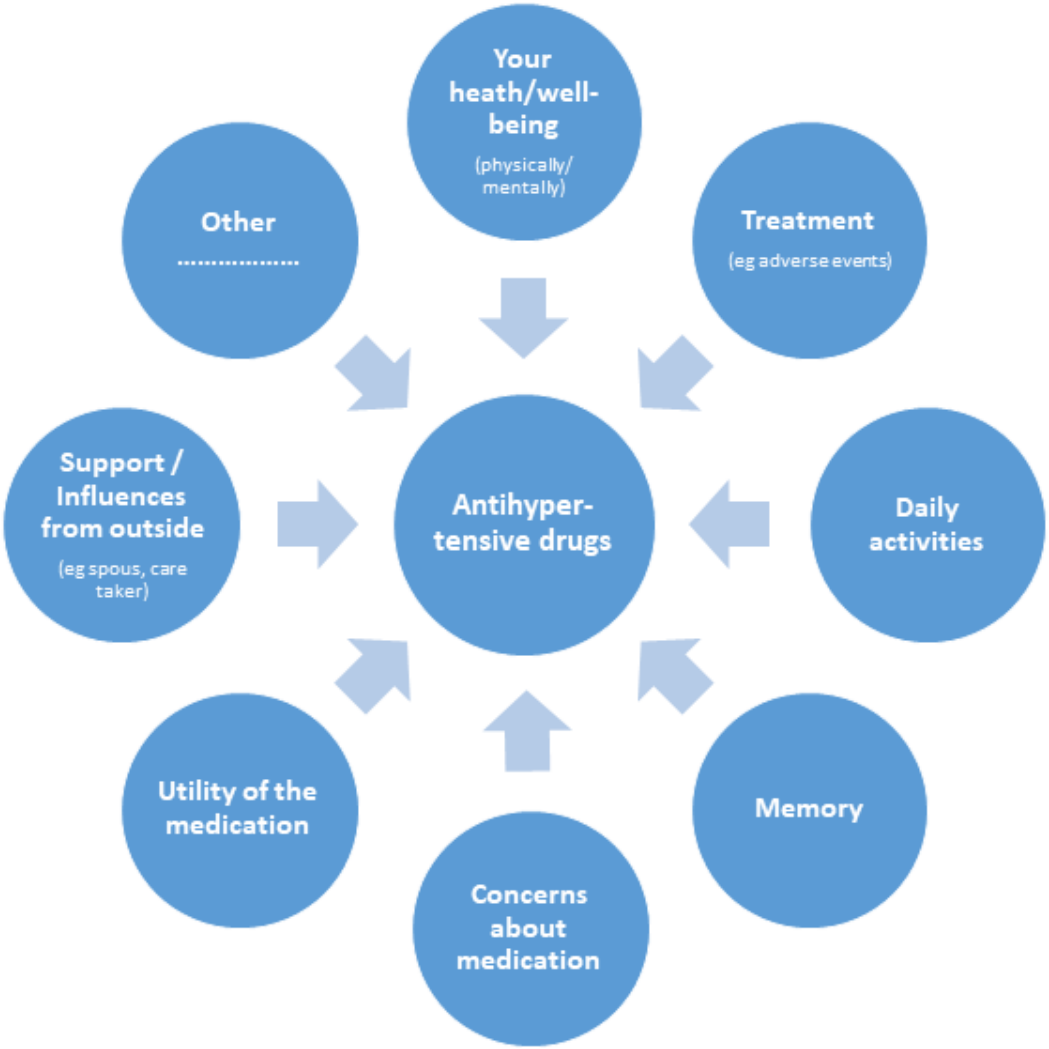
Example variability-amlodipine



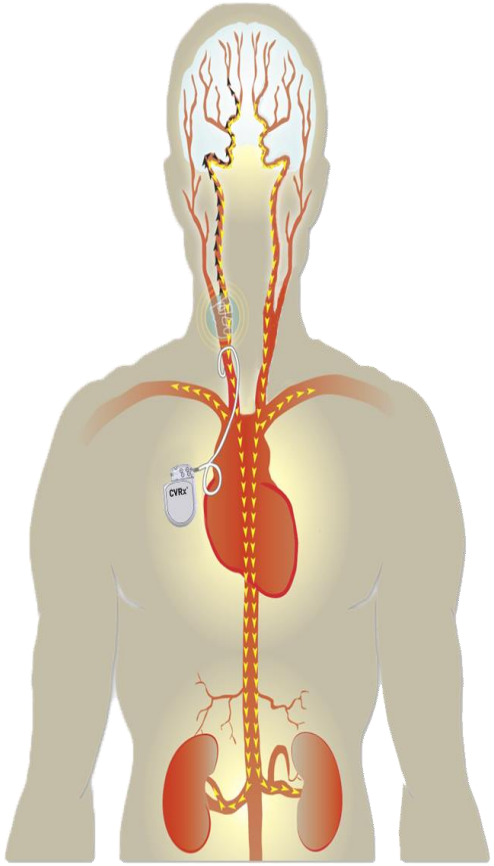
Example variability-canrenon (spironolactone)

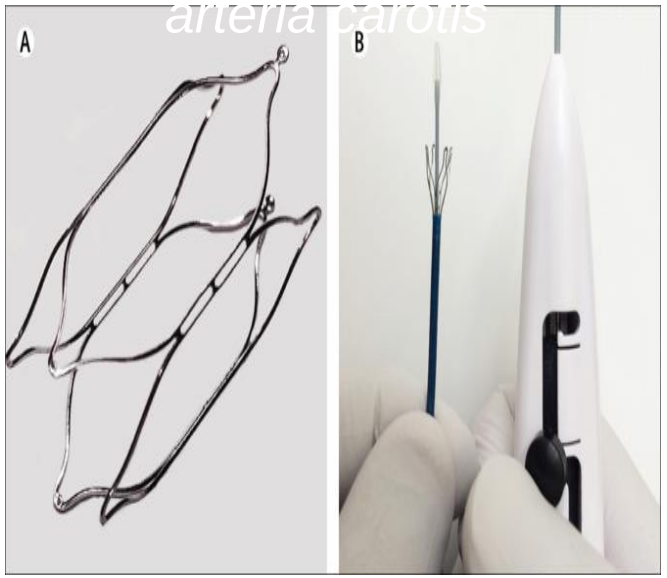


Therapieontrouw- waarom?


Your heath/well-being
(physically/ mentally)
Treatment
(eg adverse events)
Daily activities
Memory
Concerns about medication
Utility of the medication
Support / Influences from outside
(eg spous, care taker)
Other
.....
Antihyper-tensive drugs

Device-gebaseerde behandeling van hypertensie





Indicaties device therapie (studie verband)

- Therapieresistente hypertensie
  - Cave therapietrouw
- Multipele intoleranties
- Voorkeur patiënt

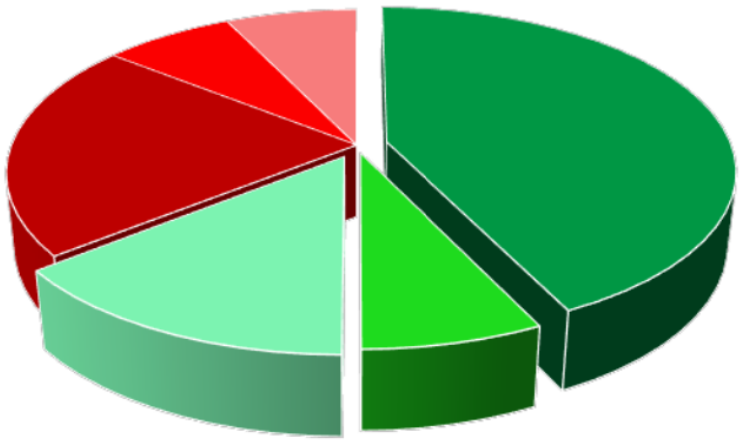
Lida Feyz

Dimokrat Hassan

SPRINT
Orthostatiche hypotensie

Bijwerkingen?!
Polyfarmacie

Verdeling afgebouwde medicatie en klachten



- Afgebouwd en geen klachten
- Dosering gehalveerd en geen klachten
- Niet afgebouwd en geen klachten
- Afgebouwd nog wel klachten
- Dosering gehalveerd nog wel klachten
- Niet afgebouwd en nog klachten

Conclusies

- Veel keus
- Therapietrouw belangrijkste overgebleven probleem
- PK van geneesmiddelen kan extreem variëren
- Ouderen: niet te hoog en misschien ook een keer stoppen?