

CNI in Vlaanderen

Jeremia, de struisvogel en de koekoek

Prof. Wim Van Biesen
Dr. M. Schurgers

Aalst 24.03.07

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(**de titel**)

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(**de rest**)

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IK ZEI JE NOG, DIE ROZE
PILLEN. NIET DIE **BLAUWE!**







Bijzonder Brugs
winkelstad vol souvenirs

**De schoonste kant
van Brugge...**

Table 2. Definition of Chronic Kidney Disease

Criteria

1. Kidney damage for ≥ 3 months, as defined by structural or functional abnormalities of the kidney, with or without decreased GFR, manifest by *either*:
 - Pathological abnormalities; or
 - Markers of kidney damage, including abnormalities in the composition of the blood or urine, or abnormalities in imaging tests
 2. GFR < 60 mL/min/1.73 m² for ≥ 3 months, with or without kidney damage
-

Abbreviation: GFR, glomerular filtration rate

Table 48. Abbreviated MDRD Study Equation

$$\begin{aligned} & \text{Estimated } GFR \text{ (ml/min/1.73m}^2\text{)} \\ & = 186 \times (S_{Cr})^{-1.154} \times (Age)^{-0.203} \times (0.742 \text{ if female}) \times (1.210 \text{ if African-American}) \\ & = \exp(5.228 - 1.154 \times \ln(S_{Cr}) - 0.203 \times \ln(Age) - (0.299 \text{ if female}) + (0.192 \text{ if African-American})) \end{aligned}$$

For explanation, see text and references 17,18.

Table 10. Stages of Chronic Kidney Disease

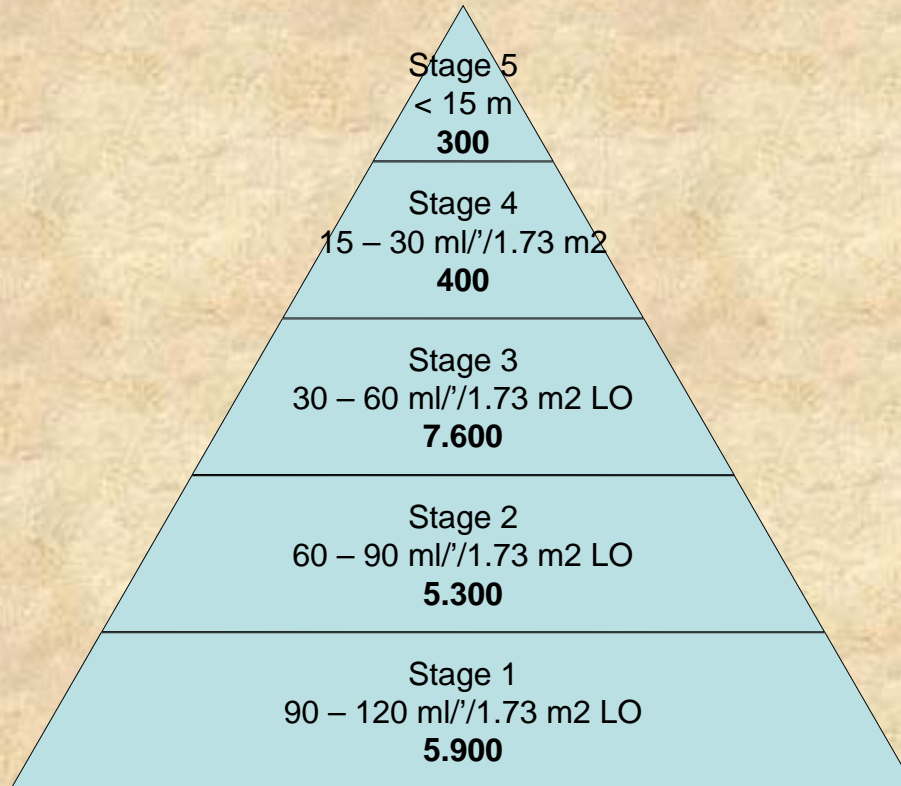
Stage	Description	GFR (mL/min/1.73 m²)
1	Kidney damage with normal or ↑ GFR	≥90
2	Kidney damage with mild ↓ GFR	60–89
3	Moderate ↓ GFR	30–59
4	Severe ↓ GFR	15–29
5	Kidney failure	<15 (or dialysis)

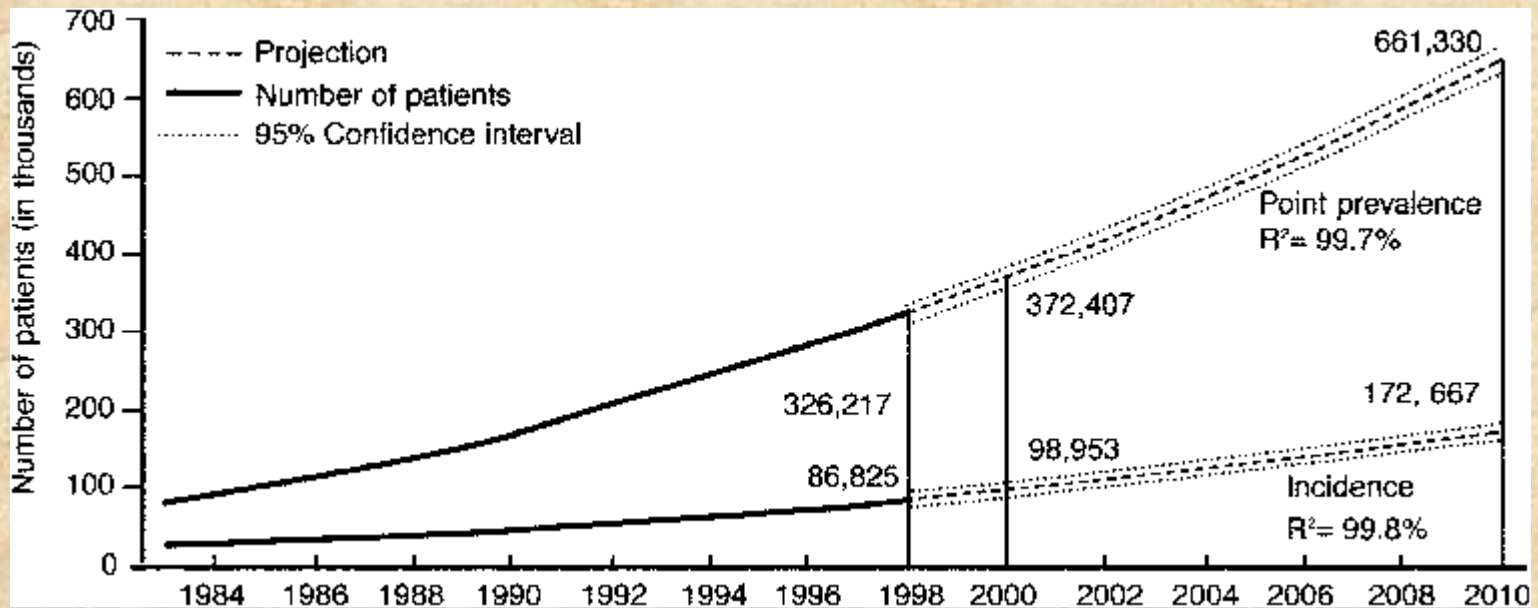
Chronic kidney disease is defined as either kidney damage or GFR <60 mL/min/1.73 m² for ≥3 months. Kidney damage is defined as pathologic abnormalities or markers of damage, including abnormalities in blood or urine tests or imaging studies.

Table 4. Stages and Prevalence of Chronic Kidney Disease (Age ≥ 20)

Stage	Description	GFR	Prevalence*	
		(mL/min/1.73 m ²)	N (1000s)	%
1	Kidney damage with normal or ↑ GFR	≥90	5,900	3.3
2	Kidney damage with mild ↓ GFR	60–89	5,300	3.0
3	Moderate ↓ GFR	30–59	7,600	4.3
4	Severe ↓ GFR	15–29	400	0.2
5	Kidney failure	<15 (or dialysis)	300	0.1

* Data for Stages 1–4 from NHANES III (1988–1994)¹. Population of 177 million adults age ≥20 years. Data for Stage 5 from USRDS (1998)² include approximately 230,000 patients treated by dialysis, and assume 70,000 additional patients not on dialysis. GFR estimated from serum creatinine using MDRD Study equation based on age, gender, race and calibration for serum creatinine. For Stages 1 and 2, kidney damage estimated by spot albumin-to-creatinine ratio >17 mg/g in men or >25 mg/g in women on two measurements.





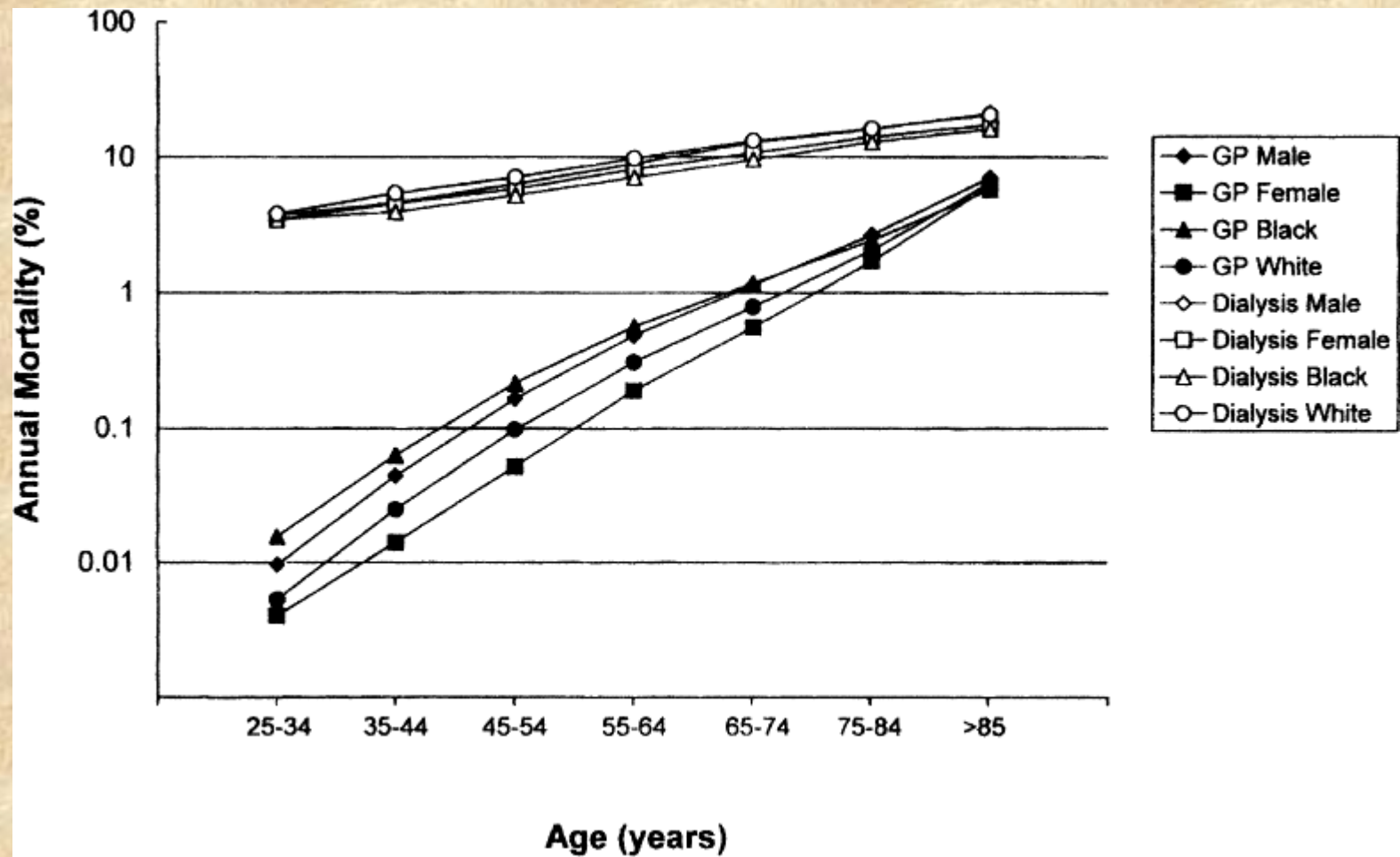


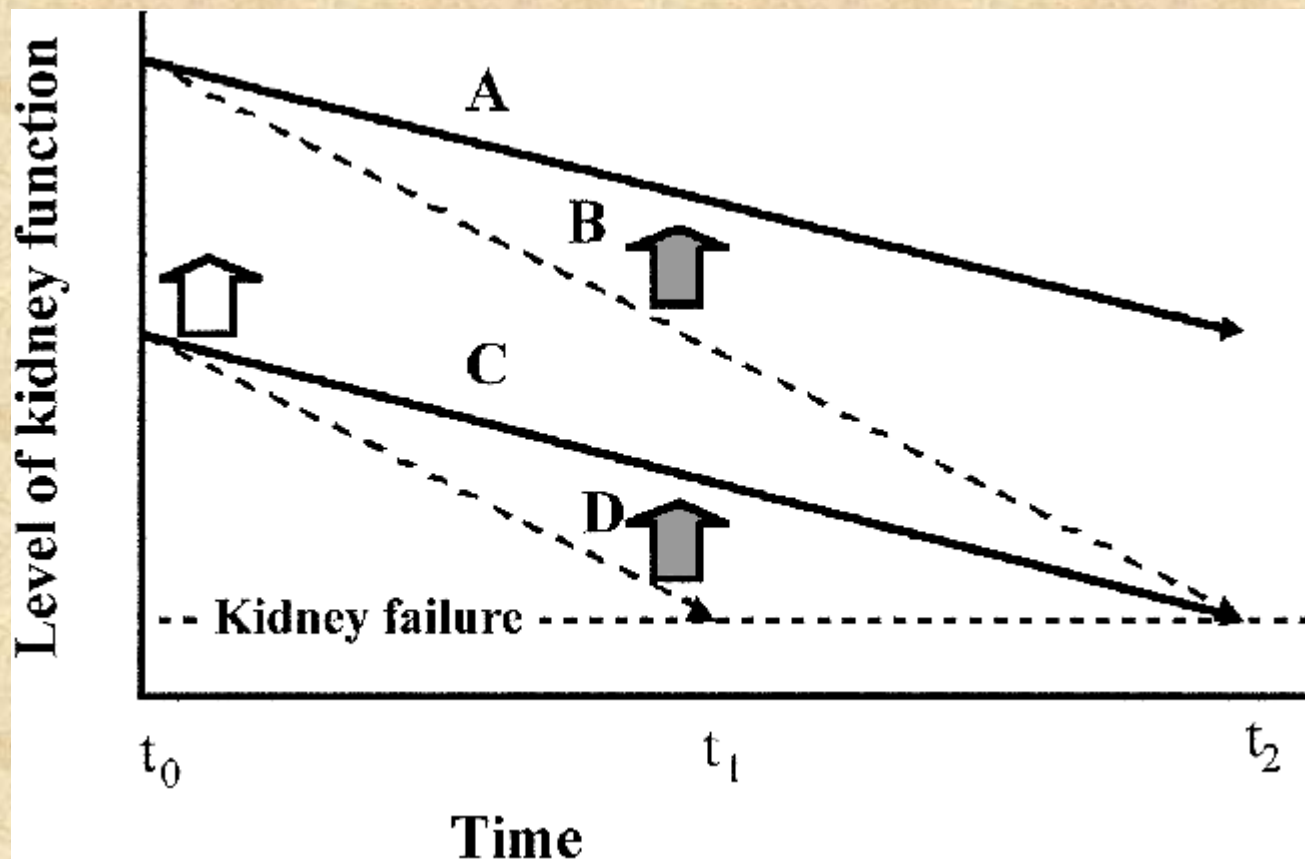
Table 3. Chronic Kidney Disease: A Clinical Action Plan

Stage	Description	GFR (mL/min/1.73 m ²)	Action*
	At increased risk	≥90 (with CKD risk factors)	Screening, CKD risk reduction
1	Kidney damage with normal or ↑ GFR	≥90	Diagnosis and treatment, Treatment of comorbid conditions, Slowing progression, CVD risk reduction
2	Kidney damage with mild ↓ GFR	60–89	Estimating progression
3	Moderate ↓ GFR	30–59	Evaluating and treating complications
4	Severe ↓ GFR	15–29	Preparation for kidney replacement therapy
5	Kidney failure	<15 (or dialysis)	Replacement (if uremia present)

Shaded area identifies patients who have chronic kidney disease; unshaded area designates individuals who are at increased risk for developing chronic kidney disease. Chronic kidney disease is defined as either kidney damage or GFR <60 mL/min/1.73 m² for ≥3 months. Kidney damage is defined as pathologic abnormalities or markers of damage, including abnormalities in blood or urine tests or imaging studies.

* Includes actions from preceding stages.

Abbreviations: GFR, glomerular filtration rate; CKD, chronic kidney disease; CVD, cardiovascular disease



Associatie CKD - CVD

- Risico op overlijden > risico op dialyse

- 30.000 patiënten – op 5 jaar

	% dialyse	% overlijden
stage 2	1.1	19.5
stage 3	1.3	24.3
stage 4	19.9	45.7

Keith et al, Arch Int Med, 2004; 164:659

Cardiovascular Mortality

- Without CKD 0.4 % /100 person yrs
- GFR 45-59 ml'/ ' 3.5 % 100 person yrs
- GFR 30-44 ml'/ ' 7.4 % /100 person yrs
- GFR < 30 ml'/ ' 10.1 %/100 person yrs

BMJ, Nov 2006, HUNT study



Are **your kidneys** **OK**?

1 out of 10 adults
in the world
has some form
of kidney damage

Find out if you are at risk:
www.worldkidneyday.org



World Kidney Day is an initiative of
the International Society of Nephrology and
the International Federation of Kidney Foundations



WORLD KIDNEY DAY

08.03.07

kidney disease is :

- **common**

- » 10 % of adult population

- **harmful**

- » progress to ESRD

- » CV complications & CV death

- (premature death (CV) x 100 versus risk ESRD)

- **treatable**

- » detection, altering life style, aggressive RR control
slow or halt progression

- & reduce CV disease and death

WORLD KIDNEY DAY

08.03.07

- “***early detection (and prevention) programs***” focused on the kidney can identify large number of patients, who may be spared from other health complications or even premature death by simple interventions ...
- ... a moral and ethical imperative to advocate for the implementation of such programs ...
- ... such programs can be successful and cost effective ...

WORLD KIDNEY DAY

08.03.07

- ignorance about the kidneys
 - < 5 % of population provide accurate answers
 - ESRD is an orphan disease, affecting < 0.2 % of population
 - invisible disease
- discoveries of last decade can have a major impact on global public health
- www.worldkidneyday.org

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ENQUETE COLLEGE

College van geneesheren

**Centrum chronische
nierziekten**

April-juli 2005

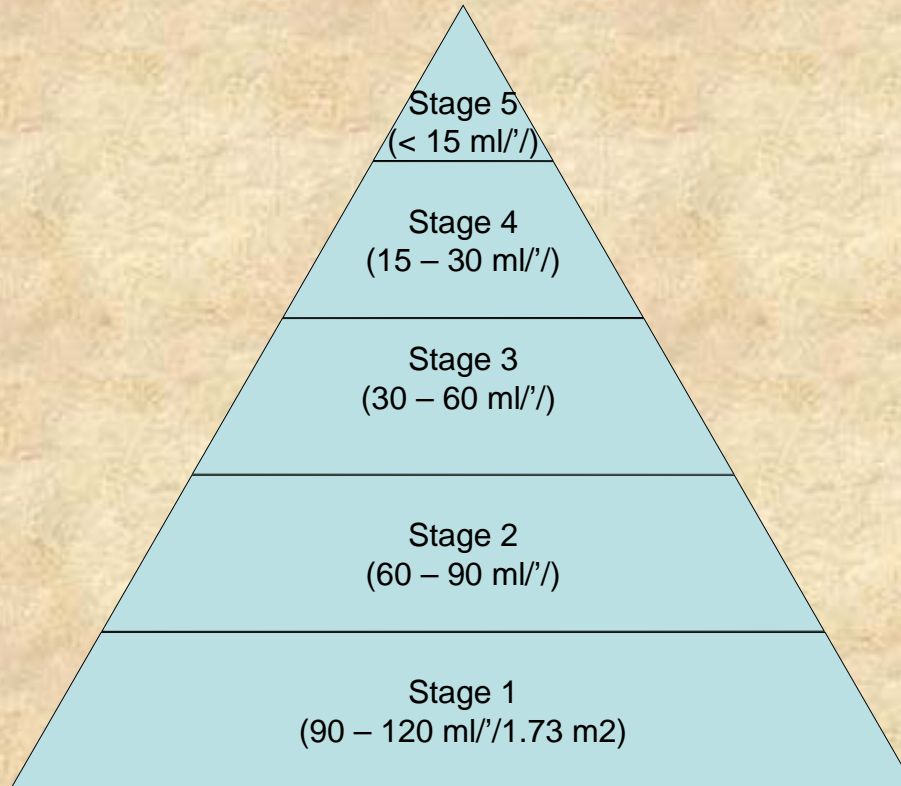
Inclusie

- **Wie ?**

Alle nieuwe consultatie patiënten met een MDRD < 60 ml/min/1.73 m²

- **Wanneer ?**

Gedurende 4 maanden van 01/04/05 tot en met 31/07/05



Populatie

- **1628 nieuwe patiënten CNZ (836 in Vlaanderen en 792 in Wallonie)**
- **136 nefrologen hebben geantwoord**
- **12 nieuwe patiënten per nefroloog**
- **Lengte werd niet vermeld in 25% van de patiënten.**

Incidentie op jaarbasis

- $1628 \times 3 = 4884$
- Correctie voor de non-responders
 $4884 \times 10/6 = 8140$ patienten
- Ter vergelijking incidentie ESRD
in 2003 = **1773**

Incidentie CNZ vs ESRD

	Incidentie CNZ 2005	Incidentie ESRD 2003
Vasculair	37.7 %	26.1 %
Diabetes	22.3 %	21.7 %
CGN	5.1 %	9.7 %
onbekend	12.2 %	5.1 %

Conclusies

- 36 nieuwe gevallen / jaar / nefroloog
- 8000 gevallen par jr in België.
- Oude populatie (60 % > 70 jaar)
- Vasculaire en diabetes nefropathie
- 50 % verwezen door huisarts
- Geen spontane consultaties

Aanpak van CKD

- (1) Opheffen van reversiebele oorzaken
- (2) Progressie afremmen
- (3) Behandeling van complicaties
- (4) Behandeling van complicaties van ESRD
- (5) Voorbereiding en start nierfunctievervangende therapie

(1) Opheffen van reversiebele oorzaken

- Verminderde renale perfusie
 - Hypovolemie (braken,diarrhee, diuretica..)
 - Hypotensie
 - Infectie met sepsis
 - NSAID, ACE-I
- Nefrotoxische medicatie
 - Aminoglycosiden
 - NSAID
 - Contrast
- urinewegobstructie

(2) Progressie nierlijden afremmen

- Vroeg (serum creatinine 1.5 à 2 mg %)
- ACE-I of ARB
- Reductie proteinurie
 - < 500 à 1000 mg/24 uur
 - Minimaal reductie van 60 %
- Reductie bloeddruk
 - < 130/80 mmHg

Reductie bloeddruk

< 130/80 mmHg*

- Nog lager zo proteinurie > 1000 mg/24 uur**
- Niet < 110 mmHg systolisch

* JNC 7 & K/DOQI

** MDRD, AASK, AIPRD

Reductie bloeddruk

ACE-I of ARB

- + diureticum
- + diltiazem, verapamil of beta blokker
- + ARB of ACE-I

- Niet proteïnurisch nierlijden
 - RR controle

(2) Progressie nierlijden afremmen

- Eiwit beperking
 - 0.5 tot 1 g/kg LG
- Behandeling hyperlipemie
- Behandeling metabole acidose

KLINISCH PAD CKD

- HUISARTS
- NEFROLOOG
- VERPLEEGKUNDIGE
- DIETIST
- SOCIAAL WERKER

- ROL VOOR VERENIGING

Samenwerking huisarts - nefroloog

- 1° verwijzing :
serum creatinine 1.5 à 2 mg %
- Follow-up (arbitrair) CKD
 - Stadium 1 jaarlijks
 - Stadium 2 6 maand tot jaarlijks
 - Stadium 3 4 à 6 maandelijks
 - Stadium 4 2 à 3 maandelijks
 - Stadium 5 dialyse of transplantatie

Richtlijnen voor behandeling van patiënten met chronische nierziekten

- www.nbvn.be
 - PDF file « Richtlijnen »
 - Hardcopy tel 0800 933 77

GUIDELINES

- UK DM-AHT-CVD--LUT Sy-AID
- US KDOQI DM-AHT-Age > 60yrs-AID
- ISN Everyone
- HUNT DM-AHT-Age > 55yrs

What is already known on this topic

Knowledge of the disease, the test, and effectiveness are important for screening programmes, but this information is partly missing for chronic kidney disease

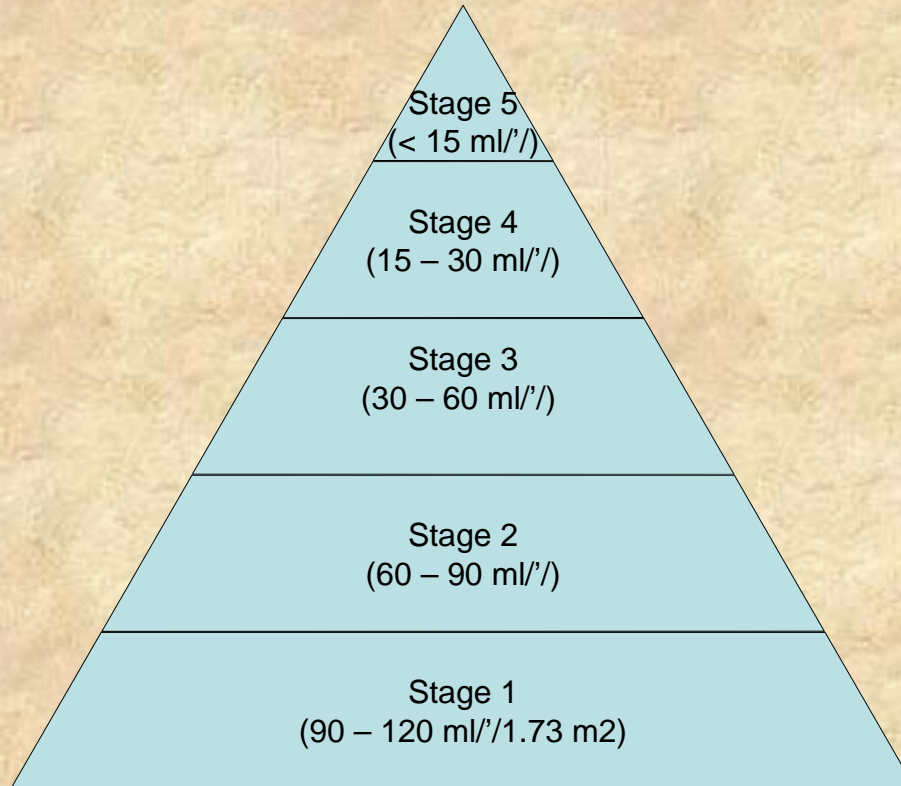
Currently, screening for chronic kidney disease is established for patients with hypertension or diabetes, but UK and US guidelines recommend expanding these criteria

What this study adds

A simple screening strategy targeting people with diabetes, hypertension, or age >55 had the highest detection rate for chronic kidney disease combined with a low number needed to screen

Most patients detected had a low risk of progression to end stage renal disease

Whether screening is cost effective needs further research, and extending screening to people without diabetes or hypertension cannot yet be recommended



CNI in Vlaanderen

- Jeremia ?
- Struisvogel ?
- Koekoek ?



- Samen handen uit de mouwen