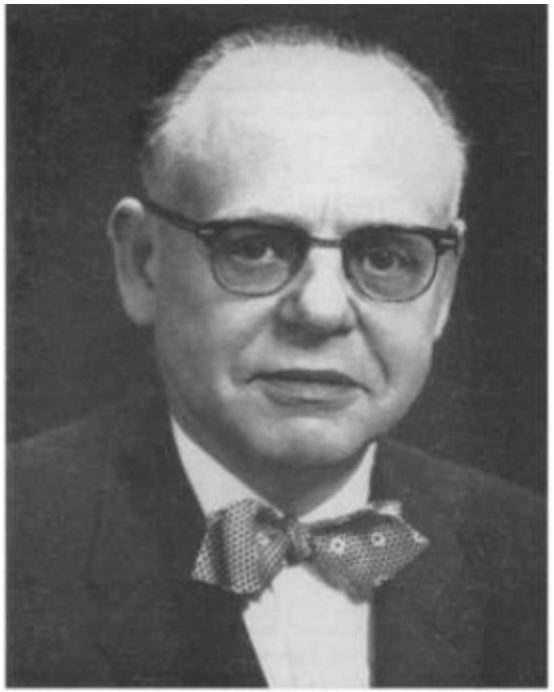
"NEFROPATIA DIABETICA"

Clifford Wilson

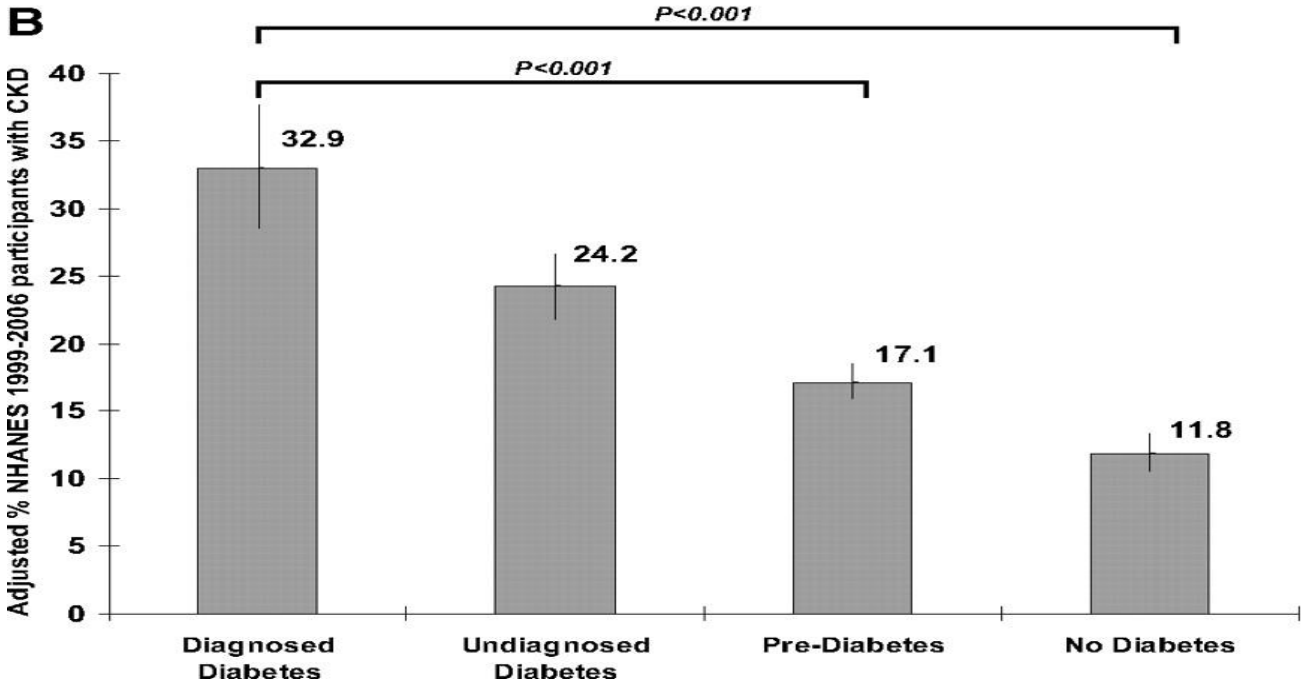


DR. KIMMELSTIEL

Una vecchia definizione : La “Sindrome di Kimmestiel-Wilson”

La prevalenza della malattia renale nel diabete è alta

Clin J Am Soc Nephrol. 2010 Apr;5(4):673-82

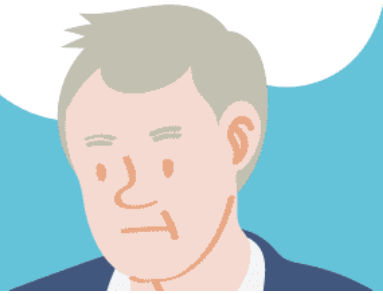


diabetes

hypertension

glomerulonephritis

polycystic kidney disease



Nefropatia Diabetica

Incidenza

- 35-40% nel Diabete Tipo I

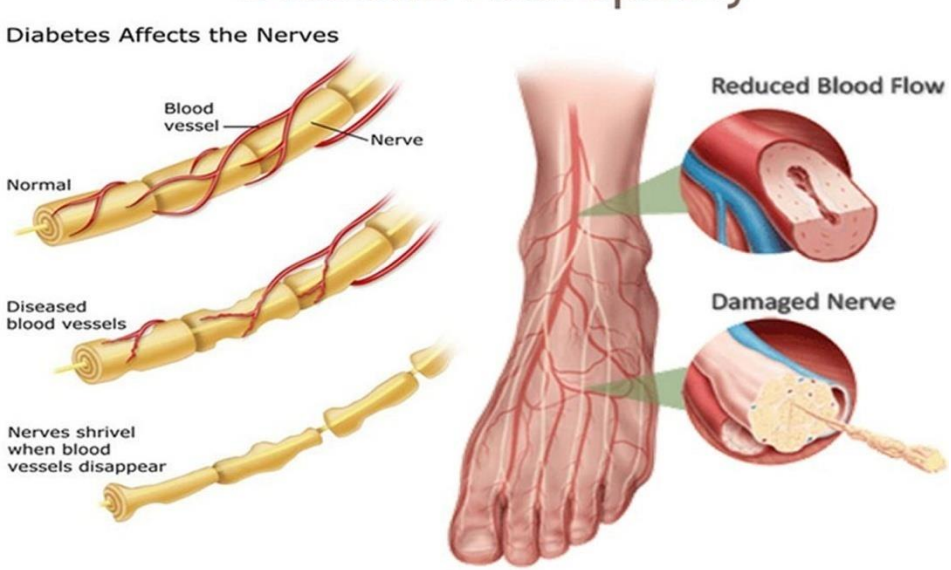
- 20-30% nel Diabete Tipo II

Nefropatia Diabetica

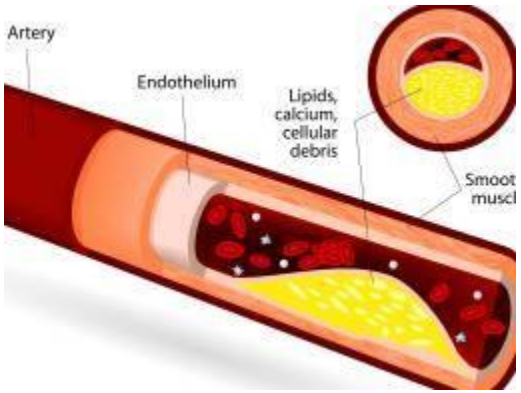
Principali Fattori di Rischio

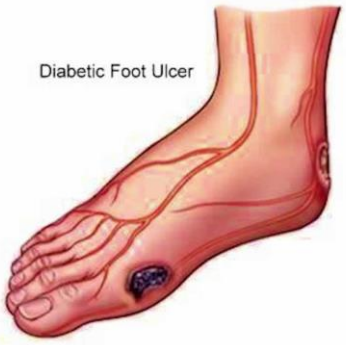
- Familiarità
- Tipo I diagnosticato prima dei 20 aa
- Scarso controllo glicemico
- Non adeguato controllo della pressione arteriosa

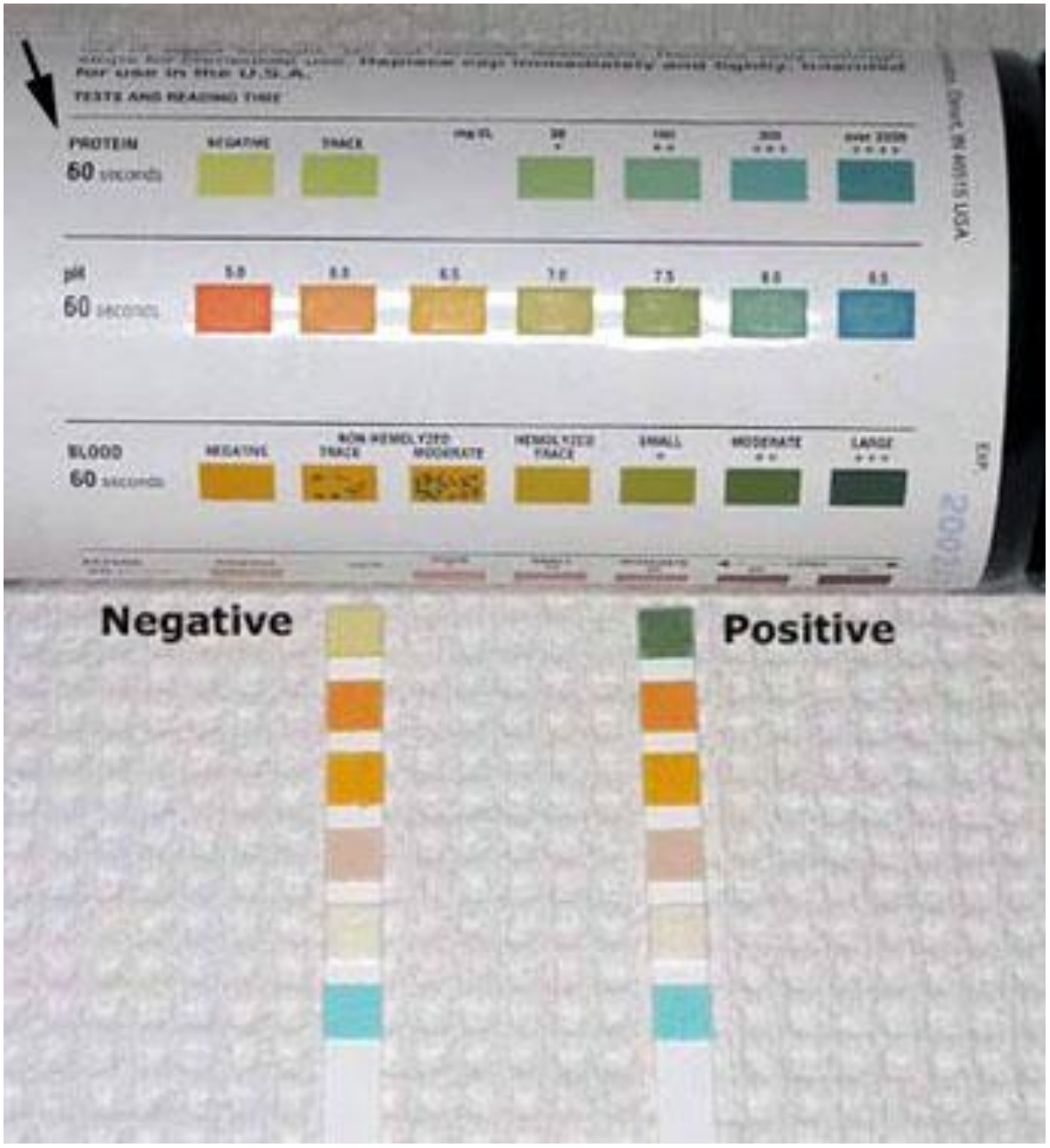
Complicanze microvascolari



Complicanze macrovascolari






PROTEIN
60 seconds
NEGATIVE
TRACE
pH
60 seconds
BLOOD
60 seconds
NEGATIVE
LARGE
Negative
Positive

AZIENDA PROVINCIALE PER I SERVIZI SANITARI - TRENTO
DIPARTIMENTO DI LABORATORIO E SERVIZI
Ospedale "Santa Maria del Carmine" - Piazzale S.Maria, 6 - Rovereto
LABORATORIO DI PATOLOGIA CLINICA
Direttore: dott. Patrizio Caciagli

- URINE E FECI -

U-ESAME CHIMICO FISICO DELLE URINE

Colore	nella norma		

ESAME CITOFLUORIMETRICO

Leucociti	9	num./microl	0-20
Eritrociti	2	num./microl	0-18

U-ESAME CHIMICO FISICO DELLE URINE

Peso Specifico	1017		1007-1035
pH	5		4.5-7.5
Glucosio	0	mg/dL	0-10
Proteine	0	mg/dL	0-10
Emoglobina	0	mg/dL	0.00
Esterasi Leucocitaria	0	Leu/µL	0-25
Corpi Chetonici	0	mg/dL	0
Albumina/Creatinina	<30	mg/g Cr	0-29
Proteine/Creatinina	<0.15	g/g Cr	0-0.14

Albuminuria categories in CKD

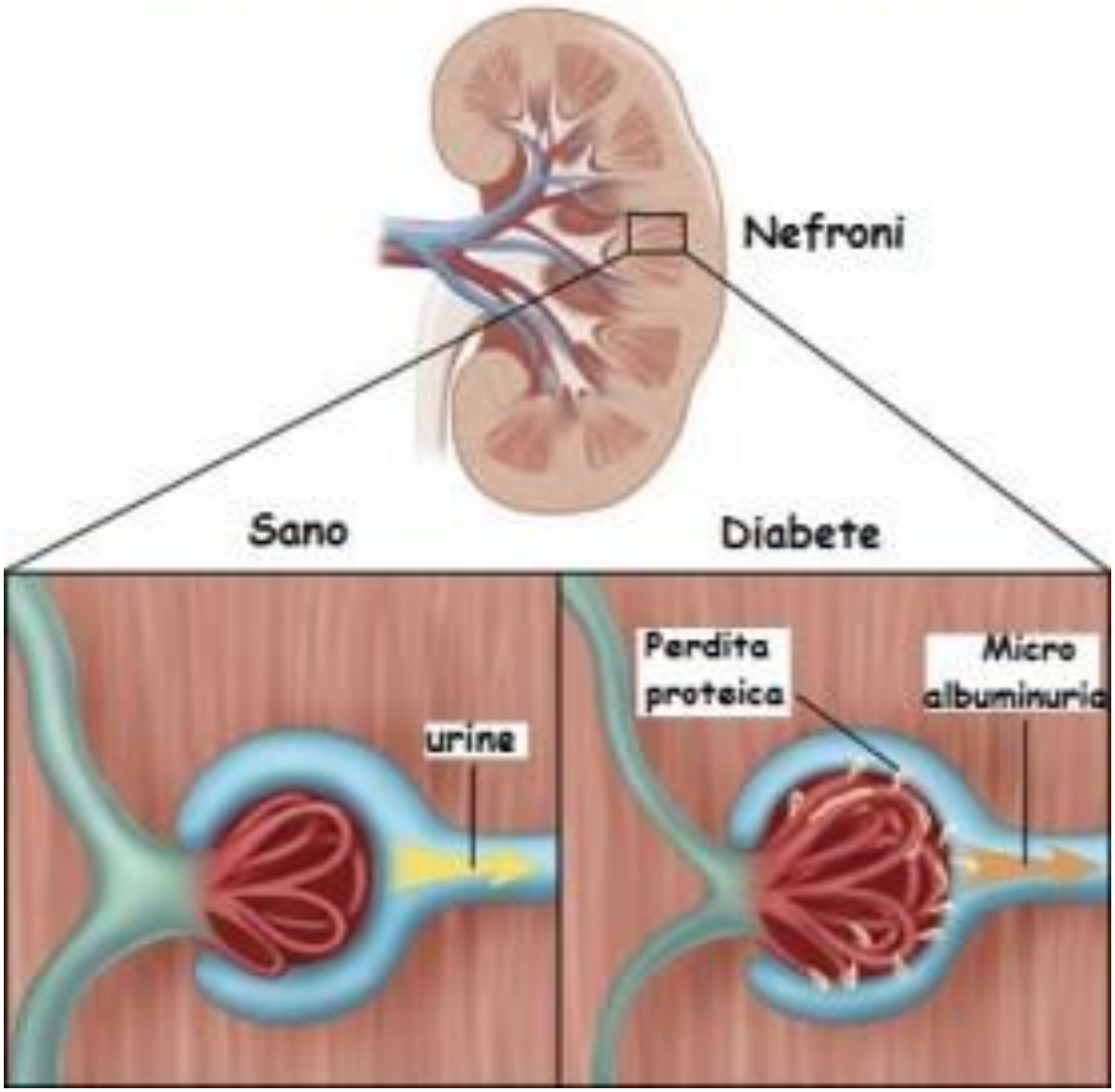
Category	ACR (mg/g)	Terms
A1	< 30	Normal to mildly increased
A2	30-300	Moderately increased*
A3	> 300	Severely increased**

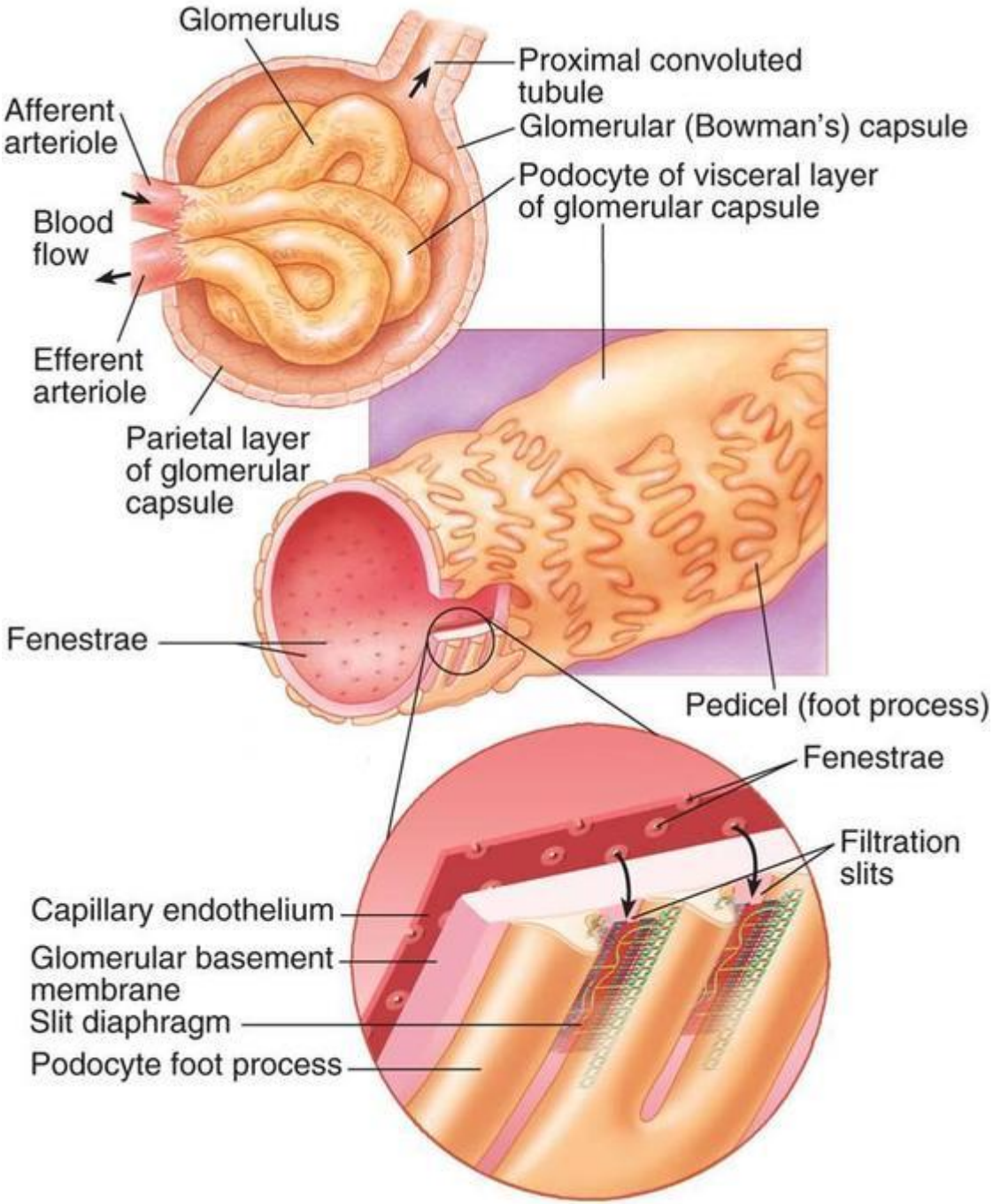
*Relative to young adult level. **ACR 30-300 mg/g for > 3 months indicates CKD.**

**Including nephrotic syndrome (albumin excretion ACR > 2220 mg/g)

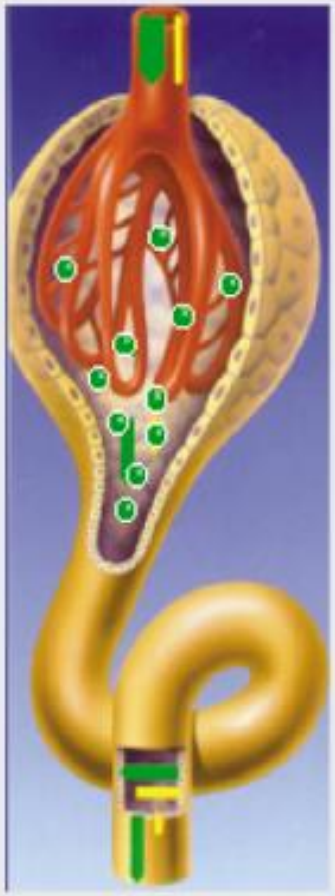
Proteinuria delle 24 ore

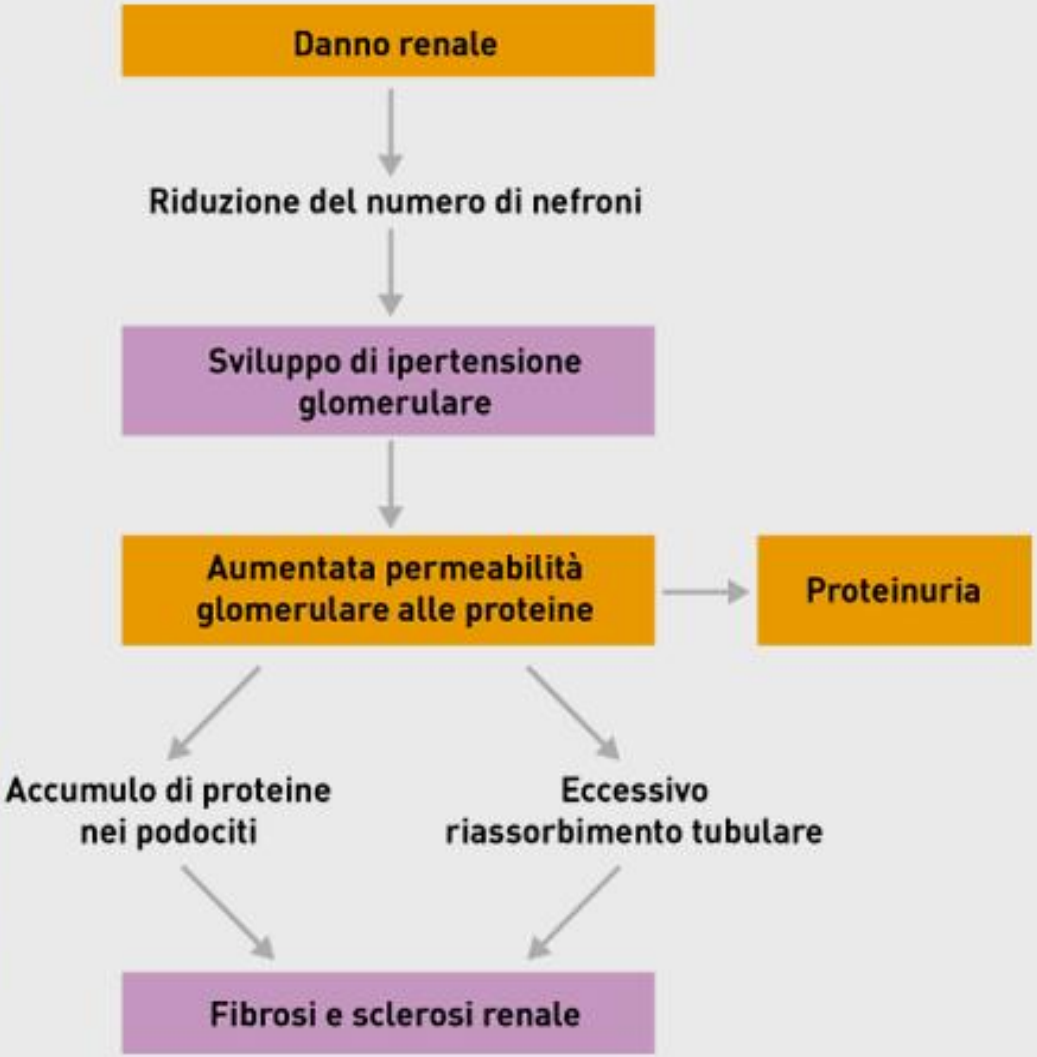
EFFETTI DEL DIABETE SUL RENE




Glomerulus
Proximal convoluted tubule
Afferent arteriole
Glomerular (Bowman's) capsule
Podocyte of visceral layer of glomerular capsule
Blood flow
Efferent arteriole
Parietal layer of glomerular capsule
Fenestrae
Pedicel (foot process)
Fenestrae
Filtration slits
Capillary endothelium
Glomerular basement membrane
Slit diaphragm
Podocyte foot process

30. LA PROTEINURIA COME MECCANISMO DI DANNO RENALE NELLE NEFROPATIE CRONICHE





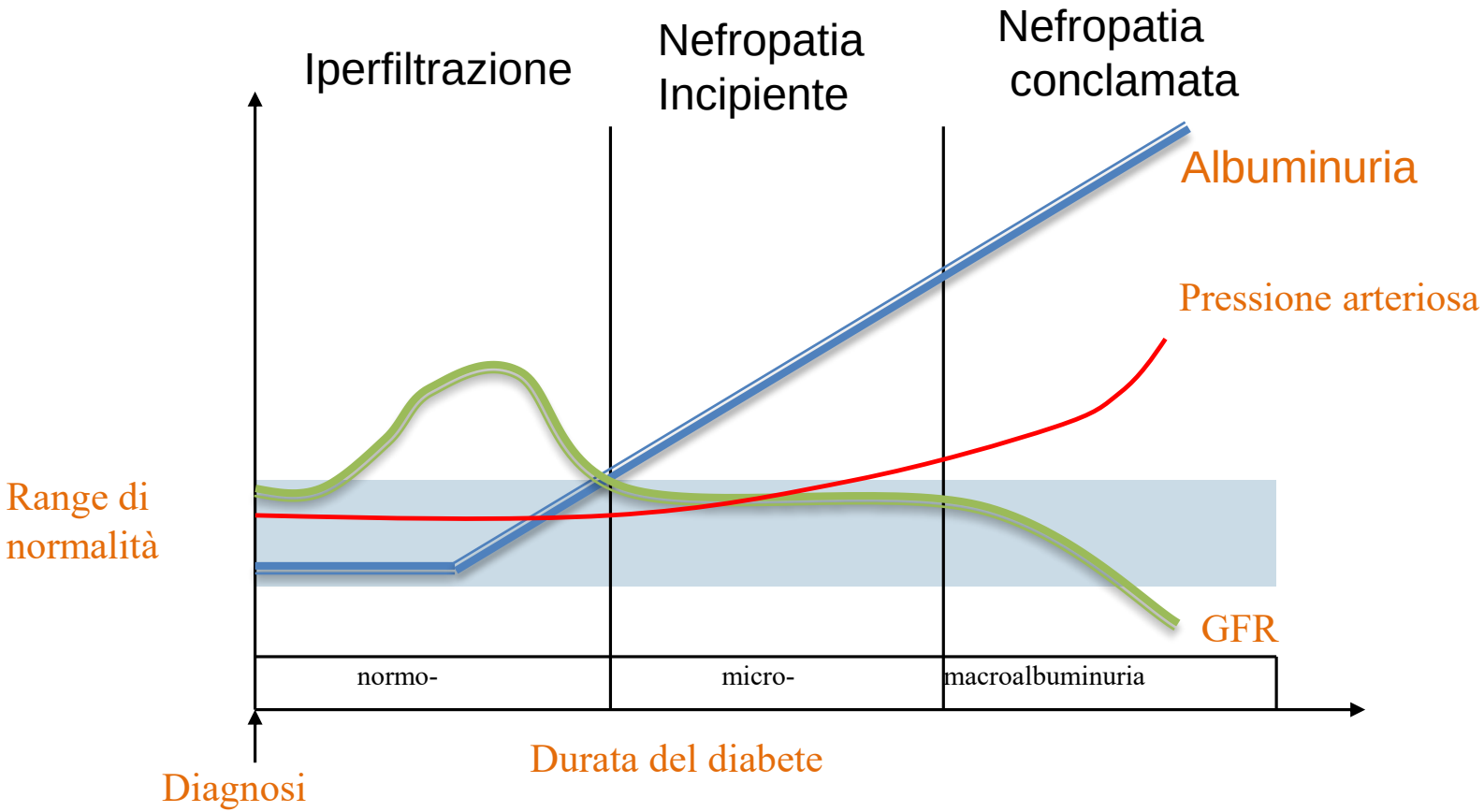
				Albuminuria categories		
				A1	**A2**	**A3**
				Normal to mildly increased	Moderately increased	Severely increased
				<30 mg/g <3 mg/mmol	30-299 mg/g 3-29 mg/mmol	≥300 mg/g ≥30 mg/mmol
GFR Stages	**G1**	Normal or high	≥90			
	G2	Mildly decreased	60-90			
	G3a	Mildly to moderately decreased	45-59			
	G3b	Moderately to severely decreased	30-44			
	G4	Severely decreased	15-29			
	G5	Kidney failure	<15			

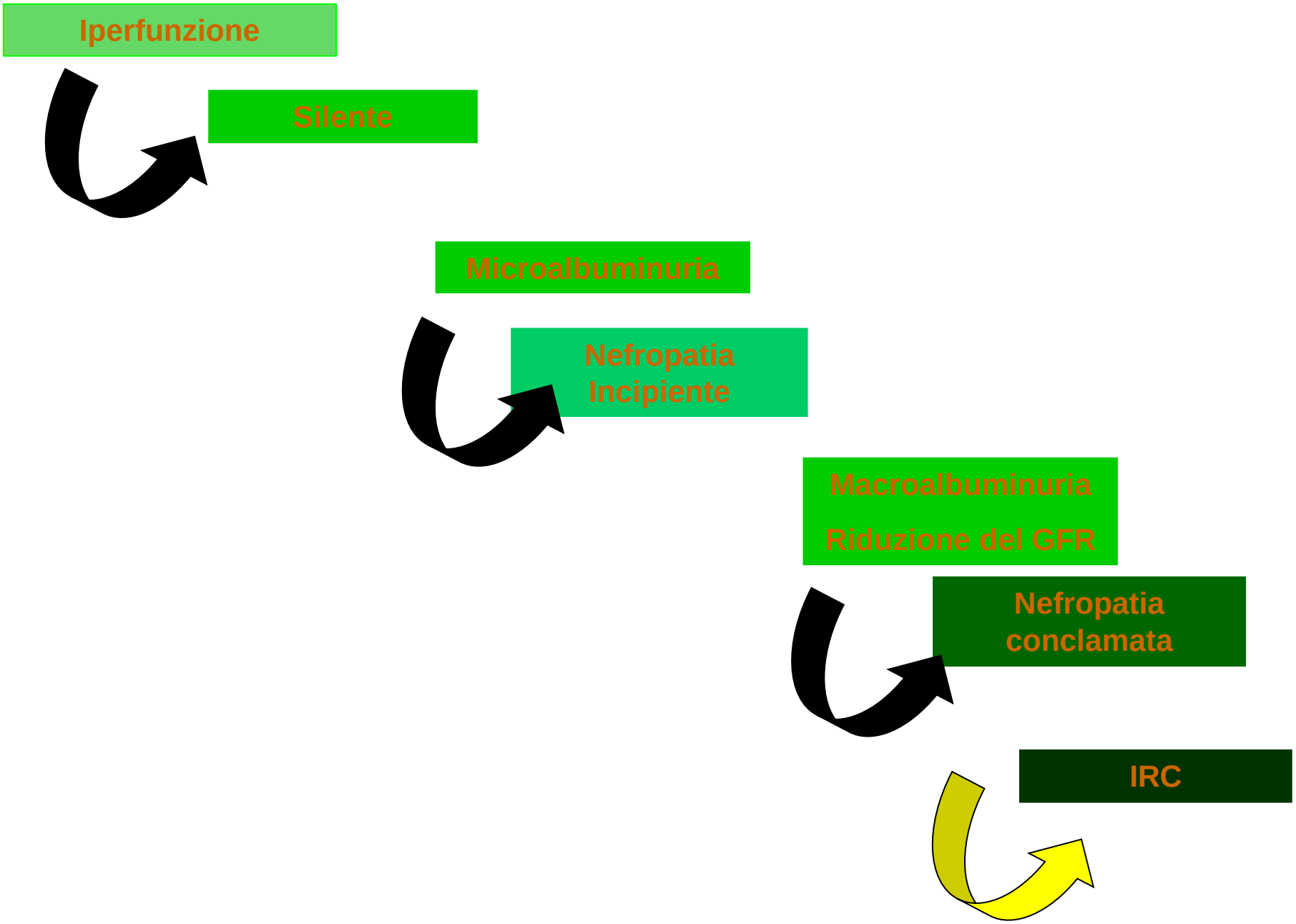
Key to Figure:

Colors: Represents the risk for progression, morbidity and mortality by color from best to worst.

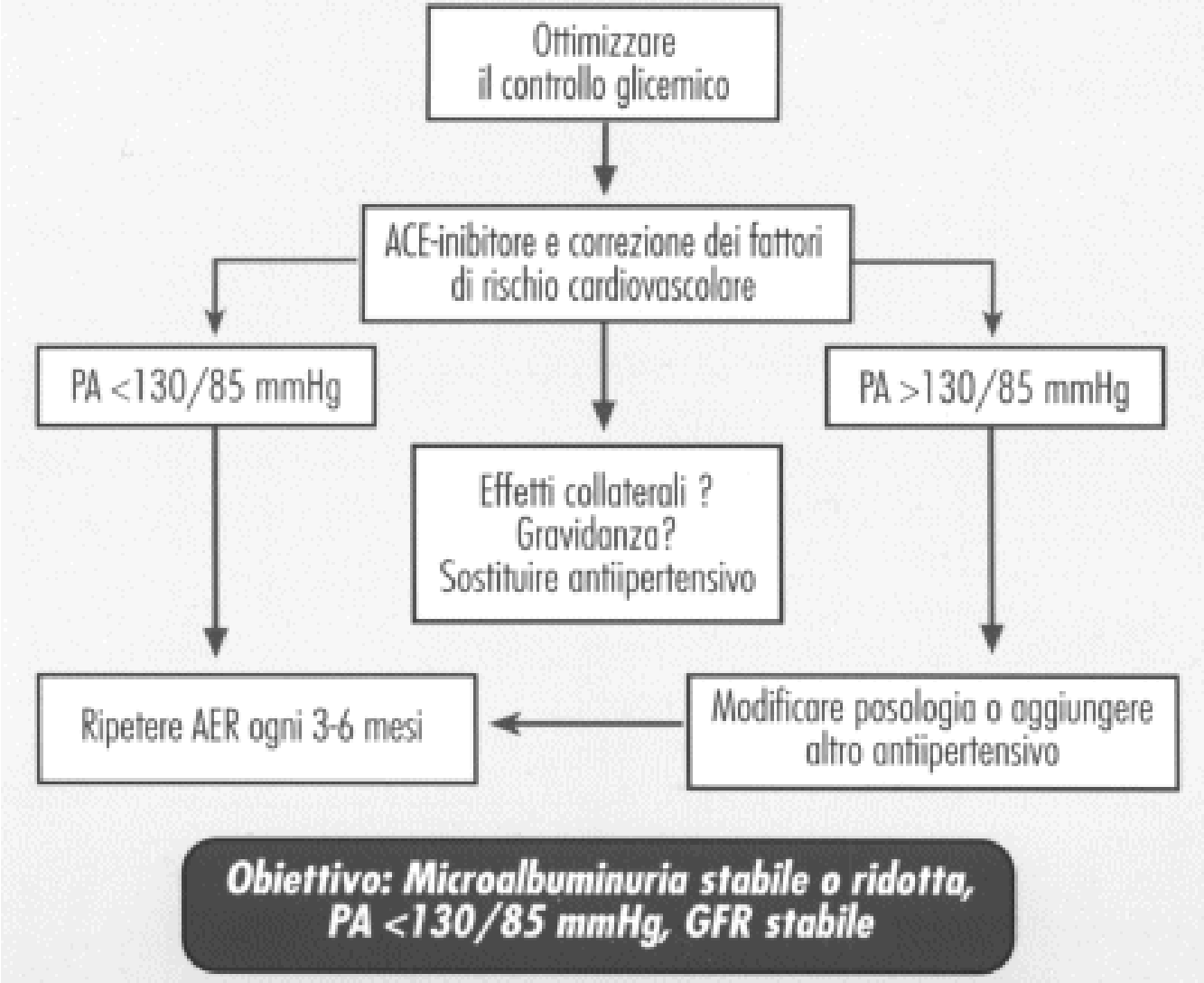
Green: Low Risk (if no other markers of kidney disease, no CKD)
Yellow: Moderately Increased Risk
Orange: High Risk
Red: Very High Risk
Deep Red: Highest Risk

Storia naturale della nefropatia diabetica

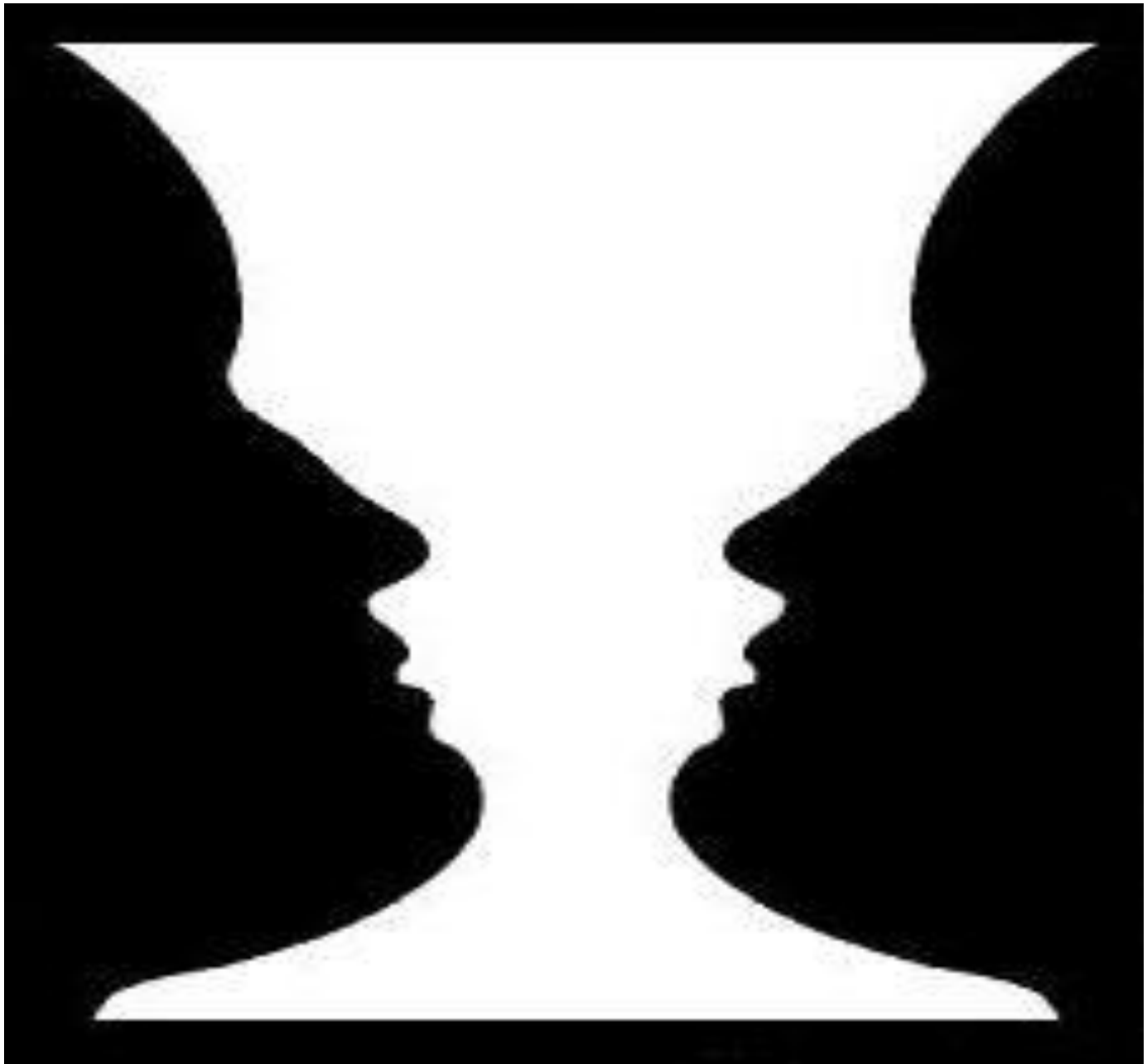



Iperfunzione
Silente
Microalbuminuria
Nefropatia
Incipiente
Macroalbuminuria
Riduzione del GFR
Nefropatia
conclamata
IRC

Approccio terapeutico della MICROALBUMINURIA



Nefropatia diabetica o altro?



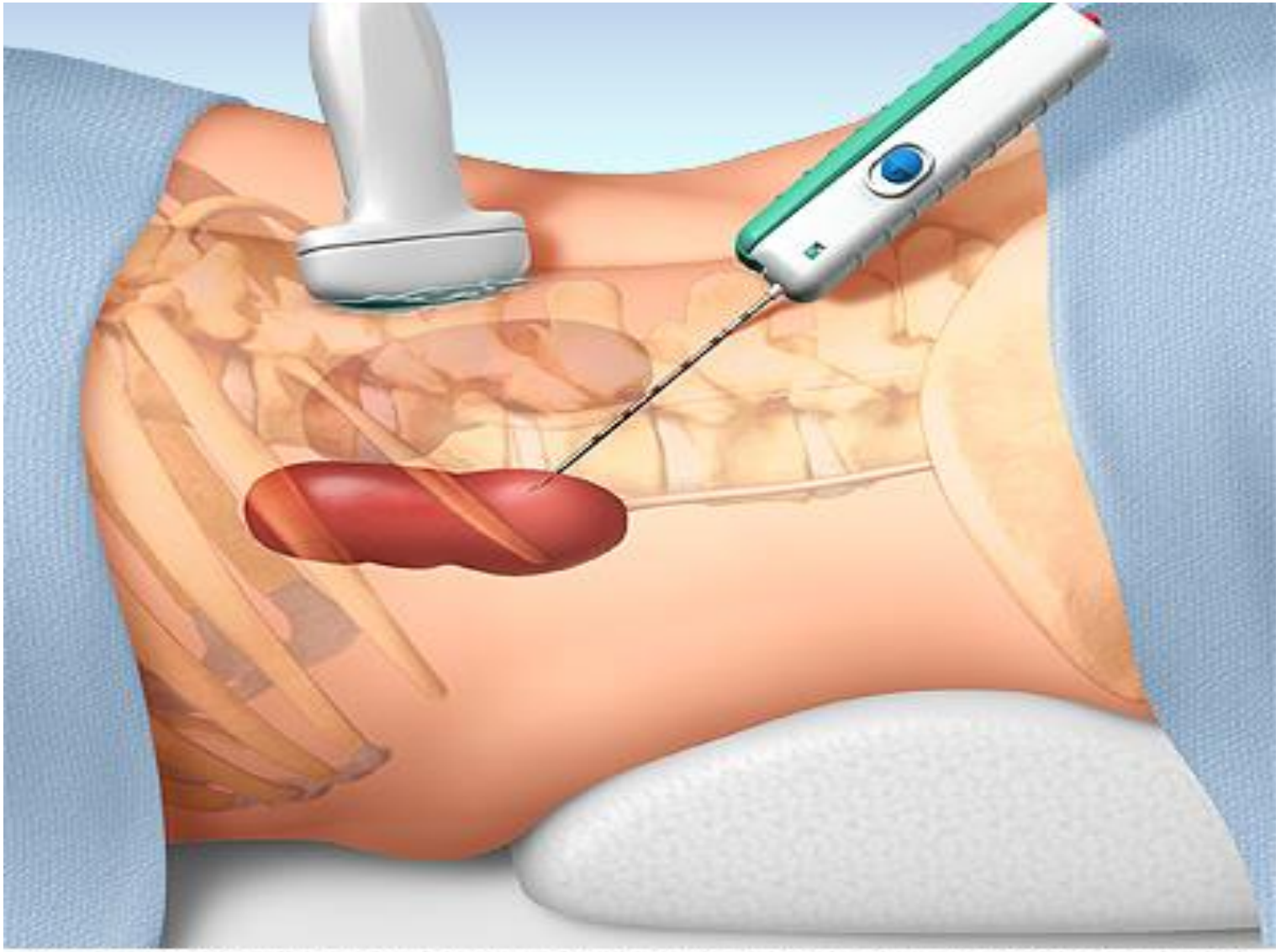
- Diagnosi di diabete da meno di 5 anni

- Anamnesi positiva per mallatie renali familiari
- Evidenza di malattie sistemiche che possono coinvolgere il rene
- Non sono presenti altre complicazioni diabetiche

- Proteinuria in veloce aumento o sindrome nefrosica

- Microematuria o macroematuria persistente o Sedimento urinario attivo
- Funzione renale che si deteriora molto rapidamente
- GFR basso in assenza di proteinuria

BIOPSIA RENALE



Conclusioni