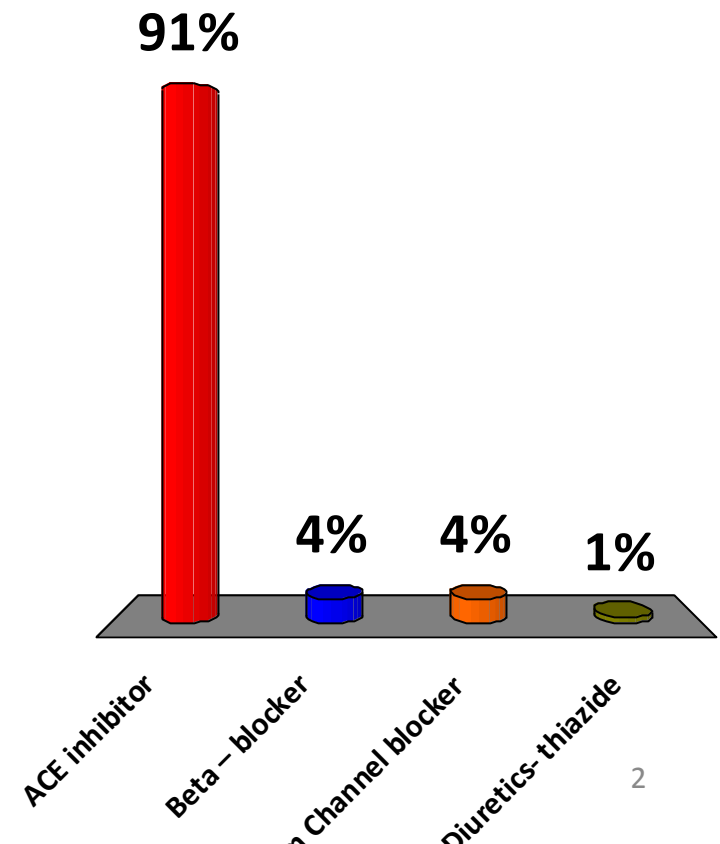



CKD - MCQs

A 30 year old man ,type 1 diabetes, hypertension.
disptick proteinuria .
eGFR is 50 mls/min.
1st line Rx for hypertension?

- A. ACE inhibitor
- B. Beta – blocker
- C. Calcium Channel blocker
- D. Diuretics- thiazide

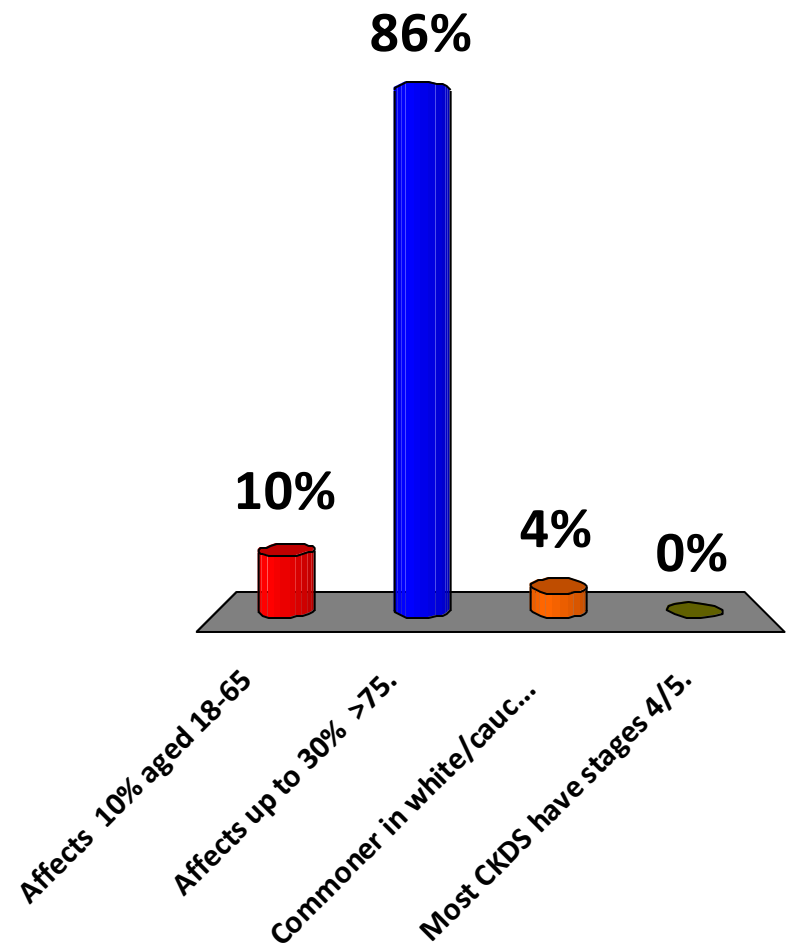


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disptick proteinuria .
eGFR is 50 mls/min.
1st line Rx for hypertension?

- ACE- Inhibitor 
- Calcium Channel Blocker
- Beta blocker
- Thiazide diuretic

With regards to the prevalence of CKD the following statements are TRUE?

- A. Affects 10% aged 18-65
- B. Affects up to 30% >75.
- C. Commoner in white/caucasians?
- D. Most CKDS have stages 4/5.



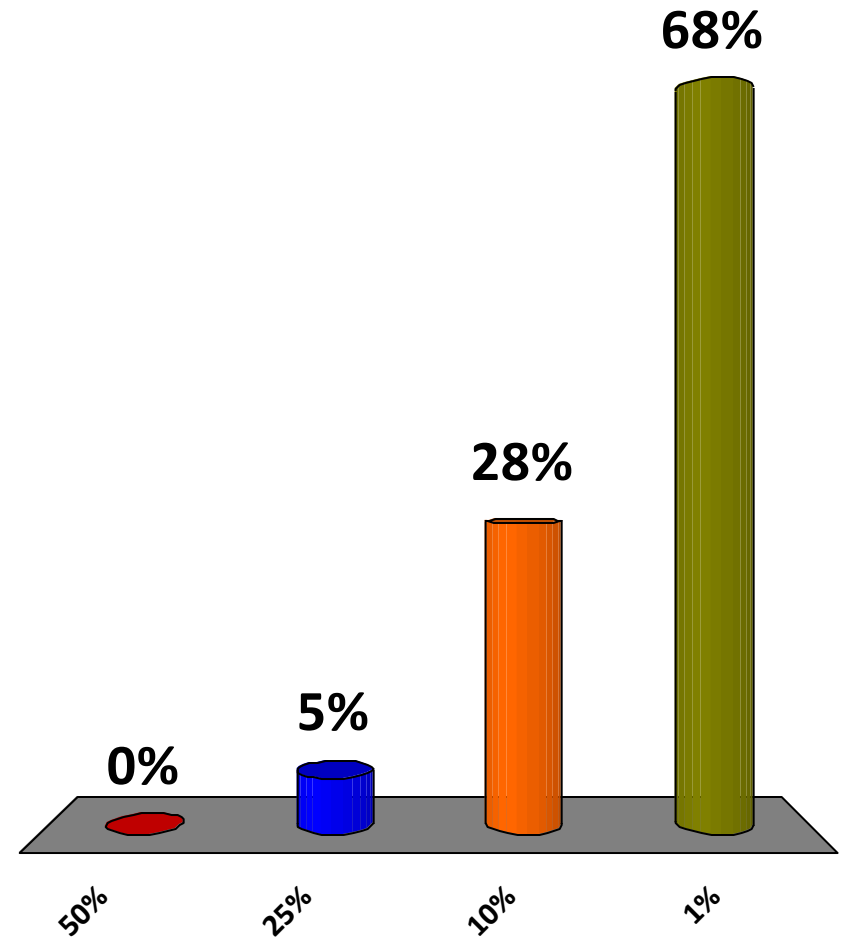
With regards to the prevalence of CKD the following statements are true?

- Affects about 10% of the population between the ages of 18 and 65
- Can affect upto 30% of the population over the age of 75
- Is commoner in the white, caucasian population
- Most people with CKD have CKD stages 4/5



If you take a 100 patients with CKD3,
what percentage will need
dialysis/transplant within 5 years

- A. 50%
- B. 25%
- C. 10%
- D. 1%



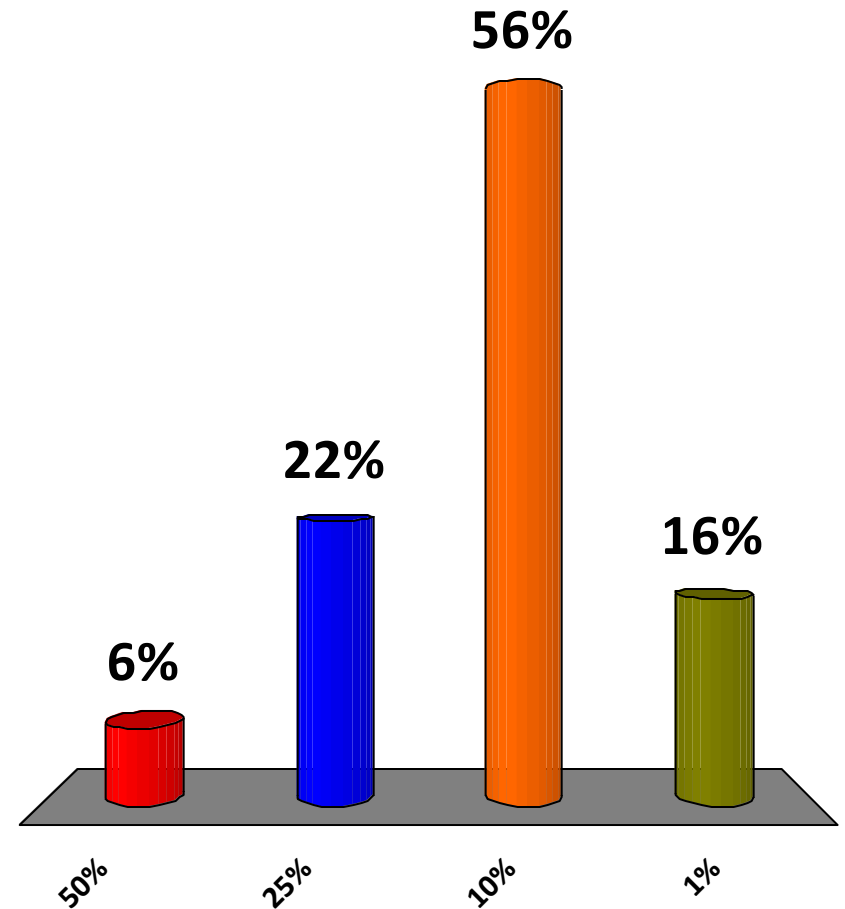
If you take a 100 patients with CKD3, what percentage will need dialysis/transplant within 5 years

- 50%
- 25%
- 10%
- 1%



If you take a 100 patients with CKD3, what percentage will die before needing dialysis/transplant within 5 years

- A. 50%
- B. 25%
- C. 10%
- D. 1%



If you take a 100 patients with CKD3, what percentage will die before needing dialysis/transplant within 5 years

- 50%

- 25%

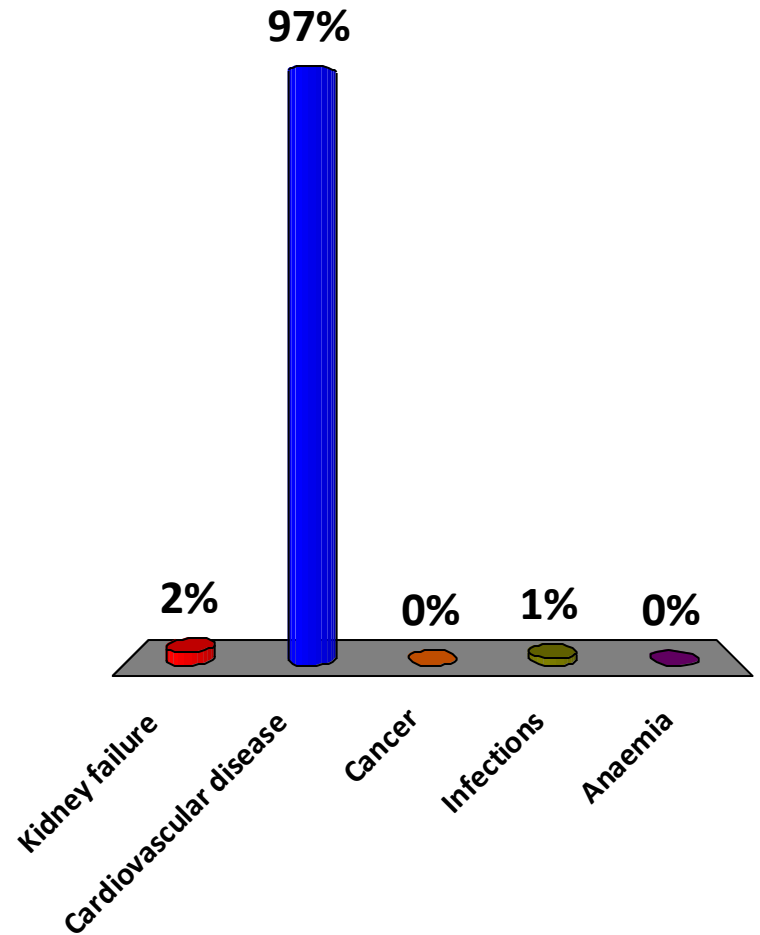


- 10%

- 5%

Which ONE of the following is the commonest cause of death in patients with CKD

- A. Kidney failure
- B. Cardiovascular disease
- C. Cancer
- D. Infections
- E. Anaemia



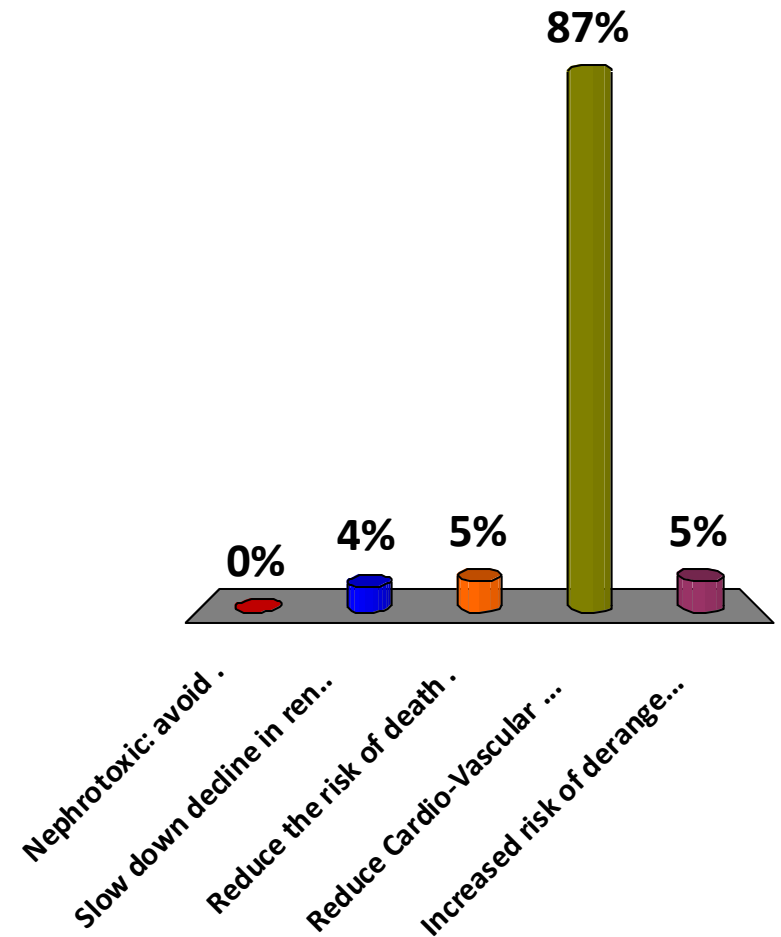
Which ONE of the following is the commonest cause of death in patients with CKD

- Kidney failure
- Cardiovascular disease
- Cancer
- Infections



Which of the following statements regarding STATINS are TRUE in CKD ?

- A. Nephrotoxic: avoid .
- B. Slow down decline in renal function
- C. Reduce the risk of death .
- D. Reduce Cardio-Vascular events
- E. Increased risk of deranged LFT



Which of the following statements regarding statins are true?

- Are nephrotoxic and should be avoided in CKD patients
- Help slow down the decline of kidney function in CKD
- Reduce the risk of death in CKD patients
- Reduce the risk of cardiovascular events in CKD patients
- Increase the risk of liver dysfunction if used in CKD patients

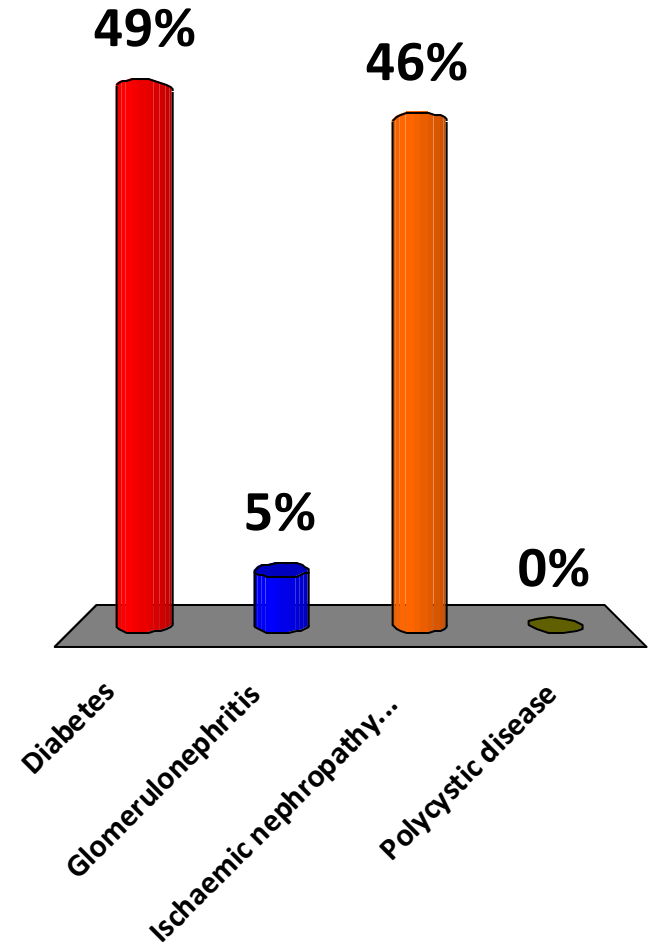


A 70 year old man diabetic + smoker +PVD+H.T
CKD 4 + microalbuminuria.

Urine dipstick NO haematuria NO proteinuria.

What is the likeliest cause of his CKD?

- A. Diabetes
- B. Glomerulonephritis
- C. Ischaemic nephropathy(renovascular disease)
- D. Polycystic disease



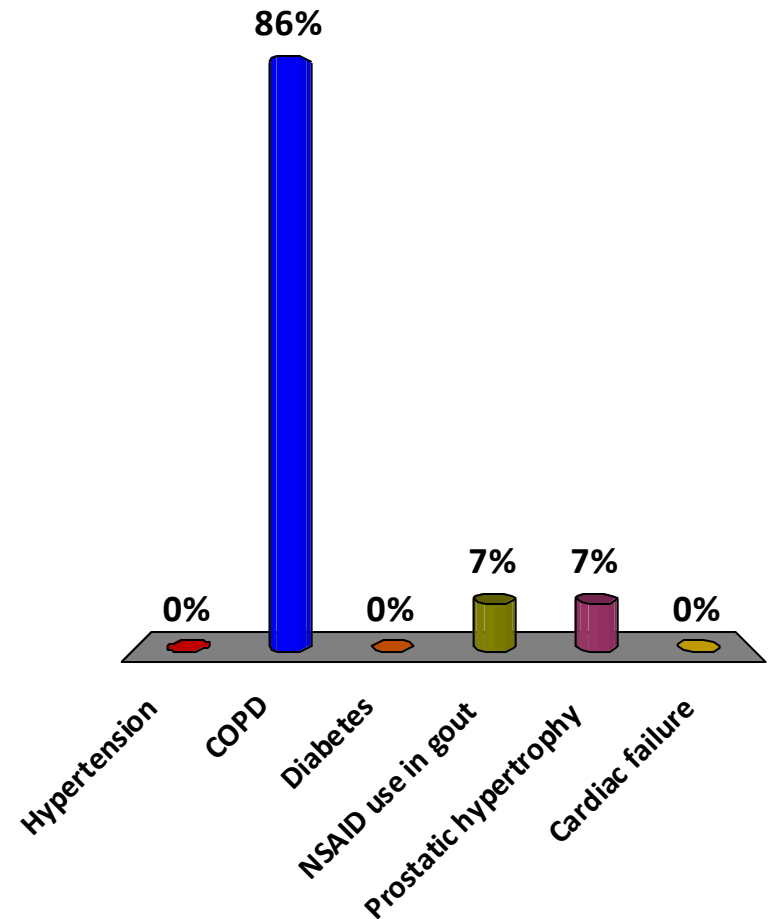
A 70 year old man has stable CKD 4 and microalbuminuria. He is diabetic and a smoker and has hypertension and peripheral vascular disease. Urine dipstick shows no haematuria or proteinuria. What is the likeliest cause of his CKD?

- Diabetes
- Glomerulonephritis
- Ischaemic nephropathy (renovascular disease)
- Polycystic Kidney Disease



Which of the following conditions does NOT need regular CKD surveillance?

- A. Hypertension
- B. COPD
- C. Diabetes
- D. NSAID use in gout
- E. Prostatic hypertrophy
- F. Cardiac failure



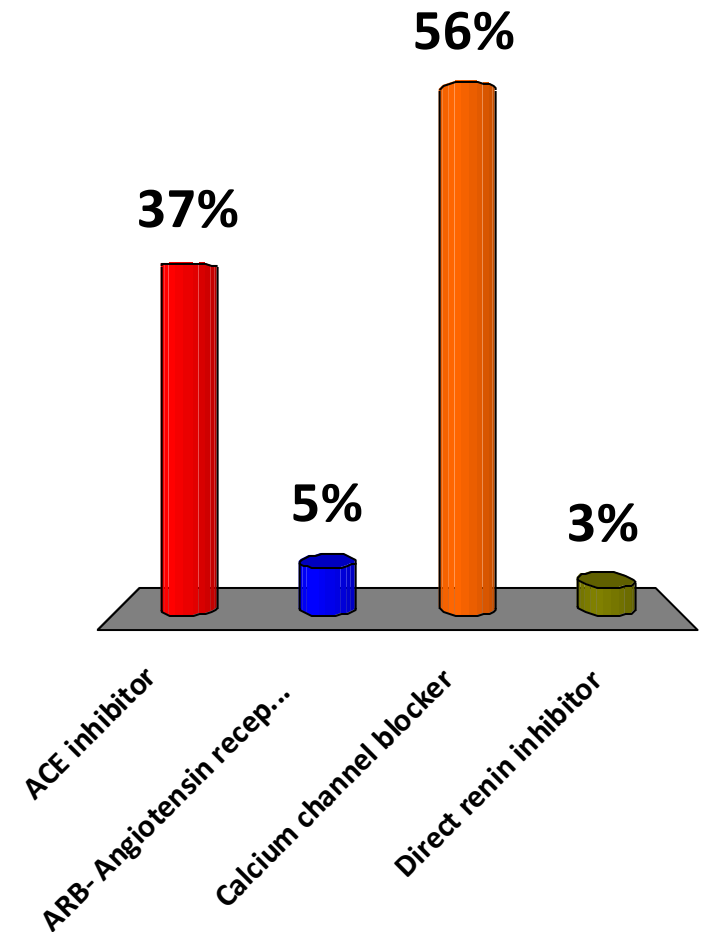
Patients with which of the following diseases DO NOT have regular surveillance for CKD in primary care

- Hypertension
- Chronic Obstructive Pulmonary Disease
- Diabetes
- NSAID use for gout
- Prostatism/ benign prostatic hypertrophy
- Cardiac failure



A 60 year man -stable CKD 3 (eGFR 35mls/min).
Smokes/ angina/ gout and PVD
. Which ONE - best first line drug for
Hypertension?

- A. ACE inhibitor
- B. ARB- Angiotensin receptor blocker
- C. Calcium channel blocker
- D. Direct renin inhibitor



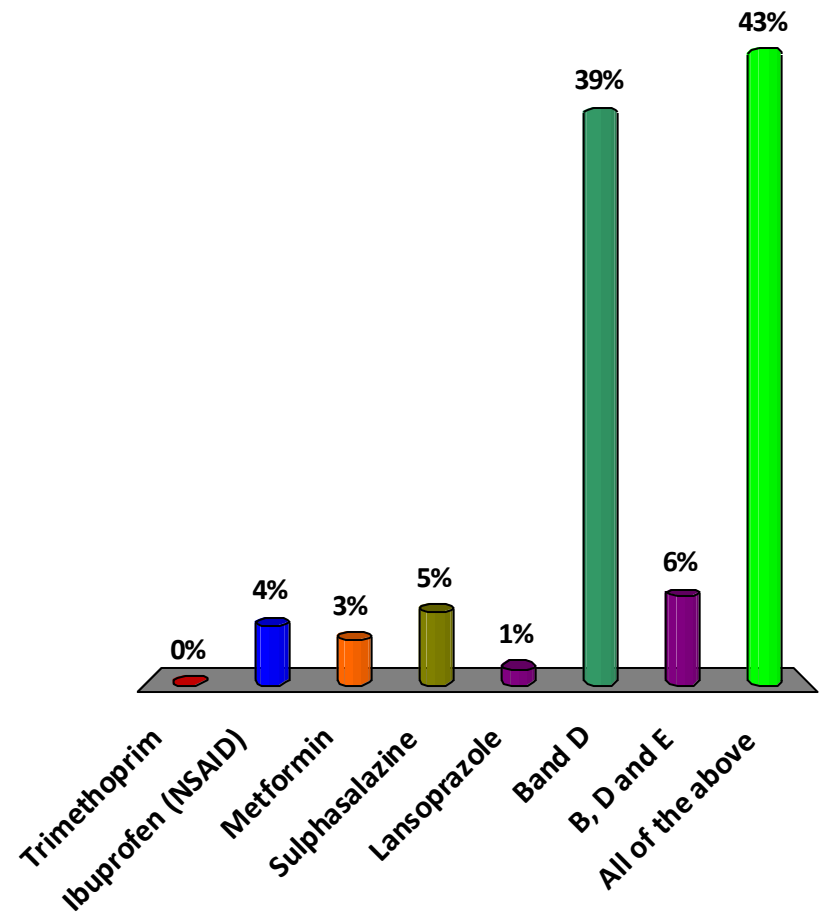
A 60 year old man has stable CKD 3 (eGFR 35mls/min). He smokes, has a history of angina, gout and peripheral vascular disease. Which ONE of the following would be the best first line drug to use for treatment of his hypertension?

- ACE-Inhibitor
- Angiotensin Receptor Blocker
- Thiazide diuretic
- Calcium Channel Blocker
- Direct Renin Inhibitor



Which of the following can be nephrotoxic?

- A. Trimethoprim
- B. Ibuprofen (NSAID)
- C. Metformin
- D. Sulphasalazine
- E. Lansoprazole
- F. Band D
- G. B, D and E
- H. All of the above



Which 3 of the following drugs can be nephrotoxic?

- Trimethoprim

- Ibuprofen (NSAID) 

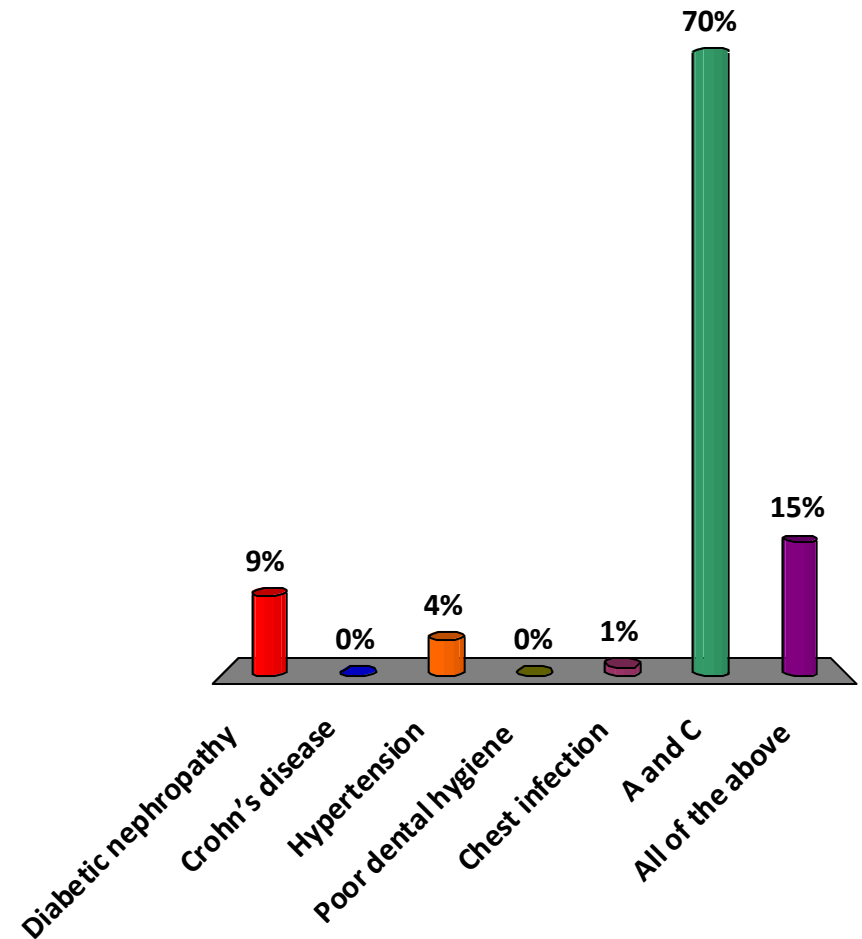
- Metformin

- Suphasalazine 

- Lansoprazole 

Which of the following can cause microalbuminuria?

- A. Diabetic nephropathy
- B. Crohn's disease
- C. Hypertension
- D. Poor dental hygiene
- E. Chest infection
- F. A and C
- G. All of the above

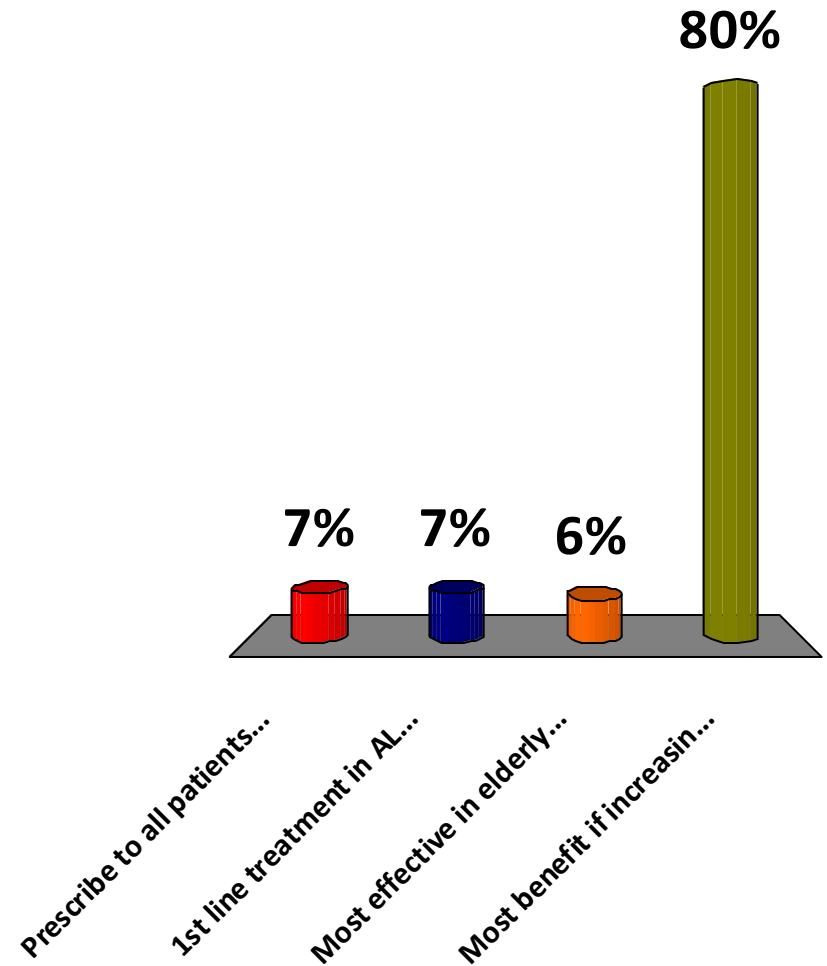


Which of the following can cause/ be associated Microalbuminuria

- Diabetic Nephropathy
- Crohns Disease
- Hypertension
- Poor oral dental hygiene
- Chest infection
- **ALL ASSOCIATED WITH MICROALBUMINURIA**

Which of the following statements re:ACE inhibitors is TRUE?

- A. Prescribe to all patients with CKD
- B. 1st line treatment in ALL hypertensives.
- C. Most effective in elderly and Afro-Caribbean .
- D. Most benefit if increasing proteinuria.



Which of the following statements regarding ACE-Inhibitors are true?

- Should be prescribed to all patients with CKD
- Should be first line treatment in all hypertensives
- Are most effective in the elderly and black population
- Help protect patients with CKD against acute kidney injury (acute renal failure)
- Are most beneficial in those with increasing proteinuria



Talk Outline

- eGFR and CKD staging
- Approach to CKD
- Cardiovascular risk
- Management of Diabetic Nephropathy
- Clinical cases- 5-10 minutes to look at the cases .

Case Study 1

- 75 year old man with hypertension and congestive cardiac failure
- On Aspirin, atorvastatin, amlodipine and ramipril
- eGFR 38mls/min – stable
- Urine dipstick negative but ACR 20mg/mmol – elevated
- Under the new NICE classification system what category of CKD does he have?

CKD KDIGO/NICE Classification- 2013/14

Prognosis of CKD by GFR and Albuminuria Categories: KDIGO 2012

				Persistent albuminuria categories Description and range		
				A1	A2	A3
				Normal to mildly increased	Moderately increased	Severely increased
				<30 mg/g <3 mg/mmol	30-300 mg/g 3-30 mg/mmol	>300 mg/g >30 mg/mmol
GFR categories (ml/min/1.73m ²) Description and range	G1	Normal or high	≥90			
	G2	Mildly decreased	60-89			
	G3a	Mildly to moderately decreased	45-59			
	G3b	Moderately to severely decreased	30-44			
	G4	Severely decreased	15-29			
	G5	Kidney failure	<15			

- A2 equivalent to the old term of microalbuminuria
- Based on CKD-EPI equation rather than MDRD
- Categories rather than stages

CKD – Case study 2

- 75 year old female, diabetic, hypertensive ,smoker
- recently moved to your practice.
- BP= 150/90.
- Routine bloods -creatinine 180 umol/l eGFR 26.
- Report says 'Severe Kidney Disease – refer to CKD guidelines'
- Creatinine =150 in 2007.

- What would you do next?

CKD – Case study 2

- Tell the patient she has stable CKD
- Focus on better BP control (140/90)
- If proteinuria try ACEI/ARB with electrolyte monitoring
- If not sure write to nephrologist re further advice

CKD – Case study 3

- 93 year old lady diabetic. Frail, lives in nursing home. Recent UTI.
- Creatinine 130 (eGFR = 35).
- 3 mths later Creatinine 170 (eGFR=26).
- BP =140/70.
- Cant get urine dipstick

- What would you do next?

CKD – Case study 3

- Talk to patient and family about kidney disease
- Review medications
- Depending on patient wishes –ultrasound kidneys, check MSU

Case Study 4

- 78 year old female, hypertensive, diabetic, ex-smoker and peripheral vascular disease.
- Urine dipstick was negative for protein and blood.
- BP 150/90.
- Last year eGFR 35mls/min.

- Now eGFR 28mls min.

- In view of progression of kidney disease please can you see.

- Rx: Asprin, Simvastatin, Ramipril, Bendrofluazide

Case Study 4- suggested management

- No nephrological indication for ACEI as no proteinuria and high risk of renovascular disease. Therefore stop ACEI
- High risk of cardiovascular death - already on aspirin/statin
- Control BP 140/90- loop diuretic may be better than BDZ
- If GFR continues to deteriorate despite stopping ACE - refer nephrology

Case Study 5

- Well 75 year old gentleman type 2 diabetic. Non smoker
- Kidney function has deteriorated significantly in the last 3 months.
- His eGFR was 60mls/min and is now 48 mls/min.
- Urine dipstick is negative for blood and has 1+ protein.
- ACR =25.
- Treatment: Simvastatin 40mg, Aspirin 75mg and Amlodipine 5mg.
- BP 137/82.
- I am not sure why his kidney function has deteriorated and would be grateful if you could see the patient

Case 5- Questions to ask yourself

- **Is this progression?**
- NICE guidelines suggest minimum of 3 eGFR measurements required
- Is the patient ill?

Case 5 - Suggested Management

- Repeat serum creatinines to establish whether this is fluctuation or progression
- If eGFR persistently deteriorated by:
5-10mls/min per year
a **renal ultrasound** will exclude obstruction.
- CKD management as per protocol –
 - BP control and
 - kidney function monitoring.

Case Study-6

- 72 yr old female. History of type 2 diabetes, ischaemic heart disease and diabetic retinopathy.
- Last 2 eGFRs 29mls/min and 36mls/min.
- Last year eGFR 47 mls/min. ACR=150.
- BP=158/88.
- Treatment: aspirin, simvastatin, gliclazide, metformin, ramipril and doxazosin

Case Study 6

- Likely diagnosis – diabetic nephropathy – in view of retinopathy
- High risk of progression to end-stage disease – proteinuria, diabetes, poor BP.
- Therefore tertiary referral appropriate
- Stop Metformin – lactic acidosis

CKD – Case study 7

- 71 year old obese male.
- Hypertensive. Insulin treated diabetic.
- BP=170/90.

- eGFR =50mls/min. Creatinine=130.

- ACR=180.

- Please could you see with regard to proteinuria.
- Started Ramipril 2.5 mg od.
- On Aspirin, simvastatin, insulin

Case study 7 - suggested management

- Control BP

- hypertension, diabetes and obesity can all cause proteinuria

- If $ACR > 70$ despite BP control discuss with nephrologist if any further investigations are required

