

CHRONIC KIDNEY DISEASE
QUICK REFERENCE GUIDE for the PRIMARY CLINICIAN
(derived from the National Kidney Foundation KDOQI Clinical Guidelines)



DIAGNOSE CKD:

Target Patients with Hypertension, DM, Family history of CKD

Screen by using GFR calculator to estimate GFR (eGFR)

CKD Diagnosis:

- eGFR < 60 (lasting more than 3 months)
- Microalbumin/creatinine ratio >30 mg/g

TAKE 7 ACTION STEPS (If eGFR <60):

1. REFER TO NEPHROLOGIST IF:

- eGFR <30ml/min
- Marked proteinuria out of proportion with decreased GFR. Albumin-creatinine ratio >250 mg/g
- Abnormal urinalysis (persistent hematuria and/or proteinuria)
- Uncontrolled hypertension
- Recurrent renal calculi
- PTH >100 or PO₄ >4.6

2. TAKE OFF UNSAFE MEDS:

- No NSAIDS and No Cox-2 inhibitors
- No METFORMIN
- Reduce Allopurinol dose to 100 mg/day in general dose adjust for kidney function.
- Be careful with Bisphosphonates. Do not use if GFR < 30
- No phosphate preps like Fleets for colonoscopy
- Be careful with IV contrast and gadolinium

3. START ACE inhibitor OR ARB unless contraindicated (see special cases)

4. START ASA (Acetylsalicylic acid) [81mg] daily unless contraindicated

5. BLOOD PRESSURE CONTROL < 130/80

6. GET LAB TESTS:

- CBC, CMP, Lipid profile
- HbA1C if DM
- Urine Microalbumin/Creatinine ratio (proteinuria)
- Calcium, PO₄, PTH and 25 OH Vitamin D.

WHAT TO LOOK FOR IN LAB TESTS

ANEMIA:

Hemoglobin < 12 (indicates anemia – see special cases)

DIABETES:

HBA1C > 7.0

LIPID CONTROL:

HDL < 40

LDL > 100 (CKD is a coronary artery disease CAD equivalent)

Triglycerides > 150

BONE DISEASE:

Ca⁺⁺ < 8.5

PO₄ > 4.6

PTH > 100

Vit. D < 30

7. “SAVE AN ARM” AVOID PICC LINES IF GFR < 45 (see Special Cases)

SPECIAL CASES

ACE inhibitor/ARB use

- These are safe and effective at preventing progression of CKD at least up to a creatinine of 3.5 or eGFR of 20ml/min (At this level, a nephrologist should definitely be involved in care)
- There may be a decrease of 25% in GFR after initiating ACEI/ARB. This is OK provided it stabilizes and actually portends a better prognosis.
- A decrease greater than 25% however requires a stoppage of ACEI/ARB and a work up for renal artery stenosis
- Stop if hyperkalemia (K > 5.5) occurs. (Particular care must be taken for the patient with CKD who is on an ACE and spironolactone, as both drugs may raise K⁺)

ANEMIA

- Get Iron/TIBC (Ferritin optional)
- If serum iron/TIBC < 20%, patient is iron deficient
- Rule out colon cancer by colonoscopy
- Replace iron until Iron/TIBC > 20
- If Hb is < 11, start erythropoietin
- For example, write a prescription for either Darbepoietin 40ug or Erythropoietin 20,000 units sub Q q 2 weeks
- Monitor CBC monthly and iron/TIBC every 3 months. Keep iron/TIBC > 20% and Hb between 11-13
- Avoid or hold erythropoietin if Hgb > 13.0

“SAVE AN ARM” and AVOID PICC LINES:

- “Fistula first, catheters last”
- Have all blood draws done from your dominant arm. If you are right handed, have it drawn you’re your right arm. PICC lines are placed to give long term antibiotics at home. Make sure a kidney specialist approves their use before getting one. This is done, because if you eventually do need dialysis, the arm will be used for access instead of the neck.

VITAMIN D DEFICIENCY

- Write prescription for Ergocalciferol 50,000 units monthly by mouth
- Recheck Vit D, Ca⁺⁺, PO₄ in 3 months
- If < 30, give Vit D 50,000 units weekly for 6 weeks; recheck Vit D
- Once > 30, continue 50,000 units monthly indefinitely