INDIANA NEPHROLOGY & INTERNAL MEDICINE, P.C.

Items Needed for Referrals

We prefer that all patients be referred by a physician.

- Demographic face sheet
- Last 1-2 years of blood work and urine studies
- Last 1-2 office visit notes
- Any Abdominal or Renal Ultrasounds, and/or CT Abdomen/Pelvis

When to Refer Patients

We recommend referral to a nephrologist in the following circumstances, even if the primary care doctor has done an extensive workup:

- Acute kidney injury or abrupt sustained fall in GFR
- GFR <30 ml/min/1.73m2
- Persistent proteinuria (Protein to Creatinine Ratio >0.5mg/mg or 24 hour protein urine >500mg/24 hours or Albumin to Creatinine Ratio >300mg/g or 24 hour Albumin urine >300mg/24 hours)
- Progression of CKD (A decline in GFR category accompanied by 25% or greater drop in eGFR from baseline and/or rapid progression of CKD defined as a sustained decline in eGFR or more than 5ml/min/1.73m2/year)
- Nephrotic Syndrome (heavy proteinuria, edema, hypoalbuminemia, hyperlipidemia, and/or hypertension)
- Patients with a combination of proteinuria and hematuria
- Urinary red cell casts, RBC > 20 per high power field sustained and not readily explained
- Severe or uncontrolled hypertension in a person on 4 or more antihypertensive medications
- Persistent abnormalities of serum potassium
- Persistent abnormalities of serum sodium
- Recurrent or extensive nephrolithiasis
- Incidental diagnosis of polycystic kidney disease on Ultrasound, CT or MRI
- Patients with a history of nephrectomy and/or a solitary kidney who have any degree of kidney insufficiency
- Pregnant woman with any degree of kidney disease

There are some common conditions that generally do not require Nephrology consultation:

- Solitary simple renal cysts
- Controlled hypertension in the absence of diabetes and/or abnormal calculated GFR

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CLASSIFY patients with chronic kidney disease (CKD) based on Cause (C), GFR (G), and Albuminuria (A).

CONSULT the "CKD Risk Map" to help evaluate patients by GFR and albuminuria categories.

- **Colors:** Represent the risk for progression, morbidity, and mortality 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

  Dark Red Highest risk

- **Numbers:** Represent a recommendation for the number of times per year the patient should be monitored.
- **Refer:** Indicates that nephrology referral and services are recommended.

KNOW that the "CKD Risk Map" reflects general parameters only based on expert opinion and must take into account underlying comorbid conditions and disease state, as well as the likelihood of impacting a change in management for any individual patient.

CKD Risk Map

Prognosis of CKD by GFR and Albumininuria Category

GFR categories (ml/min/1.73 m²) Description and range				Albuminuria categories Description and range		
				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
	G1	Normal or high	≥90	Monitor 1	Monitor 1	Refer* 2
	G2	Mildly decreased	60-89	Monitor 1	Monitor 1	Refer* 2
	G3a	Mildly to moderately decreased	45-59	Monitor 1	Monitor 2	Refer 3
	G3b	Moderately to severely decreased	30-44	Monitor 2	Monitor 3	Refer 3
	G4	Severely decreased	15-29	Refer* 3	Refer* 3	Refer 4+
	G5	Kidney failure	<15	Refer 4+	Refer 4+	Refer 4+

Adapted with permission from KDIGO 2012 Clinical Practice Guideline for the Evaluation and Management of Chronic Kidney Disease. *Kidney Int.* 2013;Suppl.3:1-150.

*Referring clinicians may wish to discuss with their nephrology service depending on local arrangements regarding monitoring or referral.

Abbreviations: ACE-I, angiotensin-converting-enzyme inhibitor, **ACR**, albumin-to-creatinine ratio; **AKI**, acute kidney injury; **CKD**, chronic kidney disease; **CKD-MBD**, chronic kidney disease mineral and bone disorder; **eGFR/GFR**, estimated glomerular filtration rate; **iPTH**, intact parathyroid hormone.

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