West Herts Diabetes Renal Pathway

All patients with DM screened at primary care annually
U+Es, eGFR, microalbuminuria – see table 1

Exclude UTI

- Exclude Overt Proteinuria
  - Autoimmune screen ANA ANCA - if positive → Renal
- Exclude Myeloma (Protein Electrophoresis)
  - Bence Jones proteins in urine - if positive → Haematology

- Tighten Diabetes Control
  - BP 130/80 mmHg (140/90 if prone to falls, orthostatic hypotension) Preferably with ACE inh or ARBs
  - Lipid Management (follow NICE guidelines)
  - Smoking cessation

Check U+E’s 2 weeks after starting ACE or ARB (Expected decline in eGFR up to 25% and rise in K up to 5.9)
If > than that, query renal artery stenosis → Renal

- US KUB
  - If obstructed → Urology
  - If renal asymmetry? Renal Artery Stenosis → Renal for Renal Artery Angiogram
- If Haematuria and UTI excluded and autoimmune screen negative → Urology

Monitor eGFR as guidelines (see table 1)
Plot eGFR on ICE
if falling with increased steepness ie >5 ml/min/yr (advise fasting sample and good hydration before test)

- US KUB
- Autoimmune screen, if positive → Renal
- Myeloma Screen, if positive → Renal + Haematology
Monitoring renal function and screening for complications

If eGFR < 45ml/min when patient not acutely unwell

1. Screen for Anaemia (FBC) 6/12
   Exclude other causes
   B12, Folate, Ferritin and Iron Studies
   If TSAT <30% and Ferritin <50, will need iron replacement. Trial Oral if no improvement
   Renal for IV +/- EPO

2. Check Bone Profile Vit D and PTH
   If Phosphate High → Renal (dietician and phosphate binders)
   If Vit D deficient, treat with Vit D alone and no calcium supplements, doses per Vit D guidelines
   If PTH raised but normal phosphate + Vit D, check 6/12
   If rapid Rise > 3x upper limit of normal → Renal for 1-Alfa

Does Patient have significant retinopathy? If not, non-diabetic nephropathy to be considered.
**Diabetes Renal Pathway When & Where to refer**

**REFERAL EXCLUSIONS:**
- NH Residents
- Age >75
- Active cancer treatment (*if treatment includes steroids might still need DSN to help diabetes control)

**Indications to refer to Diabetes Clinic**
- Poor diabetes control (hypos or inappropriately high HbA1C) despite maximal oral management (list medication tried and results)
- Deterioration of diabetes control after metformin discontinuation in patients with eGFR below 30 ml/min
- Patients with DM treated medically on renal replacement therapy
- Patients with DM who had kidney/pancreas transplant

**Indications for referral to Renal Clinic**
- Linear decline in renal function increasing steepness (eGFR graph on ICE)
- K > 5.9 mmol/L on 2 consecutive samples
- Phosphate > 2.0 mmol/L on 2 consecutive samples
- Anaemia of chronic disease Hb< 110, requiring IV iron and/or EPO
- Suspicion of RAS
- eGFR<= 30 mL/min consistently and falling

**Diabetes and renal team will discuss investigations and F/U in MDT (not commissioned at present)**

Diabetes team will review dialysis patients with diabetes a month after starting on dialysis

Pts may be discharged from the clinic with instruction for further follow up in primary care
<table>
<thead>
<tr>
<th>GFR categories (ml/min/1.73 m²), description and range</th>
<th>A1 &lt;3 Normal to mildly increased</th>
<th>A2 3–30 Moderately increased</th>
<th>A3 &gt;30 Severely increased</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1 ≥90 Normal and high</td>
<td>≤1</td>
<td>1</td>
<td>≥1</td>
</tr>
<tr>
<td>G2 60–89 Mild reduction related to normal range for a young adult</td>
<td>≤1</td>
<td>1</td>
<td>≥1</td>
</tr>
<tr>
<td>G3a 45–59 Mild–moderate reduction</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>G3b 30–44 Moderate–severe reduction</td>
<td>≤2</td>
<td>2</td>
<td>≥2</td>
</tr>
<tr>
<td>G4 15–29 Severe reduction</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>G5 &lt;15 Kidney failure</td>
<td>4</td>
<td>≥4</td>
<td>≥4</td>
</tr>
</tbody>
</table>

Increasing risk

Abbreviations: GFR, glomerular filtration rate, ACR, albumin creatinine ratio

NB: ACR is an important indicator of cardiovascular risk and progression.