Urine Albumin Tests

1. Urine Albumin: Creatinine Ratio (UACR)
   - UACR measures Albumin excretion in: mg albumin/g creatinine.
   - Run on a spot urine sample; timed samples not necessary. This test accounts for variation in urine concentration.
   - Good at assessing any level of proteinuria
   - Values can be used for screening, diagnosing, and monitoring interventions, for guiding therapy.
   - Requires lab analysis; there is currently no POC test.

   The “gold standard” for urine albumin testing = UACR

Other urine protein tests

These tests are not recommended for assessing albuminuria

2. Urine Protein: Creatinine Ratio (UPCR)
   - Not sensitive for early detection; not standardized

3. 24 hour urine collection for protein
   - Labor intensive for patients and is difficult to get a complete and accurate sample; no more effective than simpler tests such as UACR for DM nephropathy

4. Test strips (e.g. Micral, Clinitek)
   - Test strip results may look like UACR results (mg albumin/g creatinine) but less accurate
   - Local lab test names vary widely; Talk with your lab on how to order a UACR (and not a test strip).
   - CLIA-waived POC test; but trade accuracy for convenience

5. UA dipstick
   - Only detects higher levels of proteinuria (>300mg/g)
   - Not precise and cannot be used to assess or monitor albuminuria in Type 2 Diabetes

The Diabetes Care and Outcomes Audit will count any type of urine protein screening, but UACR is preferred

Management of Albuminuria

The following strategies should be implemented to reduce albuminuria, prevent/slow nephropathy progression, and lower the risk of CVD:
- Maximize ACE Inhibitor/ARB
- Stop smoking
- Protein restriction (later stages)
- Glucose Control

Repeat UACR to monitor effectiveness of intervention; a decrease in urine albumin is therapeutically significant.

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