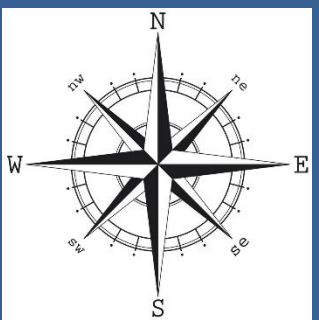
Field Guide to the Kidney



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THE RENAL BIOPSY

A. PREPARING FOR RENAL BIOPSY
1. Maintain platelets >50K, INR <1.5; Avoid antiplatelet agents and anticoagulants.
2. Control blood pressure to <150/95.
3. For patients with profound renal insufficiency consider giving DDAVP 0.3mcg/kg IV 15-30min prior to biopsy.

B. SYSTEMATIC APPROACH TO RENAL BIOPSY INTERPRETATION
1. Light Microscopy-
   a. Overview:
      - Determine the stain
      - Describe the glomerular compartment
        - Are there alterations in matrix or basement membranes?
        - Is there hypercellularity? If so, in which compartment (mesangial, endocapillary, or extracapillary)?
        - Is there microangiopathy?
        - What is the distribution of the above lesions (diffuse/focal and segmental/global)?
      - Describe the extraglomerular vascular compartment
      - Describe the tubulointerstitial compartment
   b. Determine the stain (Included examples reveal normal histology):
      - Hematoxylin and eosin (H and E)-

Used for gross impression. Hematoxylin is violet and is basic (+), binding negatively charged DNA/RNA. Eosin is pink and acidic (-), binding to most positively charged cytoplasmic proteins (cytoplasms is pink, collagen is pale pink, and erythrocytes are cherry red)