**UW Medicine - Pathology**

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Microtomy of Frozen Kidney Sections Procedure

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| Adopted Date: 09/22/93  Review Date: 12/03/08  Revision Date: 04/11/11 |

PURPOSE

Guidelines for sectioning kidney needle and wedge biopsies.

SCOPE

For all histotechnologists working on the renal service.

PROCEDURE

1. **Microtomy of Frozen Kidney Sections**:
   1. Sections of frozen kidney tissue are cut at 4 microns for immunofluorescence and placed on super-frost plus slides.
   2. Initial sectioning of frozen kidney tissue is examined to identify glomeruli to proceed with sectioning.
   3. Cut two levels of unstained for each slide with a total of 12 slides per case.
   4. Sections are fixed in cold Acetone for 5 minutes.
   5. Drain and give to IHC for staining.
   6. Two additional slides are needed for H&E staining. They are the first and last slides cut.
   7. Total slides per case of Kidney:
      * 12 slides unstained sections, 2 per slide
      * 2 slides H&E
2. **Stat H&E Staining for Frozen Kidney Sections**:
   1. Fix in 10% buffered formalin for 1 minute.
   2. Wash in H2O.
   3. Stain in Gill's 3 Hematoxylin for 45 seconds to 1 minute.
   4. Wash in H2O.
   5. One drip in acid alcohol, 0.5%.
   6. Wash in H2O.
   7. 15 seconds in Bluing.
   8. Wash in H2O.
   9. Dip in 80% alcohol.
   10. Eosin and Phloxine for 30-45 seconds
   11. Proceed thru 95%, 100% xylene
   12. Coverslip
3. **Routine H&E Staining:**
4. For paraffin kidney biopsies, cut all sections at 2 microns.
5. Kidney biopsies are sectioned at the following thickness:
   1. Jones stain - 2 microns
   2. PAS Hematoxylin stain - 2 microns
   3. MT stain - 2 microns
   4. H&E stain - 2 microns
6. Kidney biopsies embedded in plastic are sectioned as the following:
   1. Level 1

- Jones

- PAS

- H&E

1. Level 2

- Jones

- PAS

- H&E

1. Level 3

- Jones

- PAS

- MT

- H&E

1. The following sections are stained: Jones, PAS, and MT.
2. Paraffin kidney biopsies are cut in the following order at 2 microns:
   1. Level 1

- Jones

- PAS

- H&E

1. Level 2

- Jones

- PAS

- H&E

1. Level 3

- Jones

- PAS

- MT

- H&E

1. MT stain is only cut at level 3 for paraffin biopsies.

REFERENCE

Charles E. Alpers, MD, University of Washington Medical Center.

Written By: Director Approval:

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Histology Supervisor