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## SMALL INTESTINE

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- I. Purpose**  
To provide a procedure for the dissection of a small intestine for a pathologic process.
- II. Principle**  
To take histologic sections to demonstrate the pathologic process so that a diagnosis can be made microscopically by a Pathologist.
- III. Equipment**
  - 1. Ruler
  - 2. Forceps
  - 3. Scalpel
  - 4. Scissors
  - 5. Large Knife
- IV. Safety**
  - 1. PPE should be worn.
  - 2. FORMALIN is a known carcinogen.
- V. Supplies and Reagents**
  - 1. 10% NEUTRAL BUFFERED FORMALIN (pH range 6.9 – 7.2)
  - 2. Black Ink
  - 3. Blue Ink
  - 4. White Distilled Vinegar
- VI. Quality Control**  
All remaining tissue should be retained.
- VII. Limitations/ Notes**  
The following may influence the validity of test results:
  - 1. The specimen should be fixed in formalin.

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### **VIII. Procedure**

1. If possible, orient the specimen.
2. Identify all components of the specimen and measure each. Include a length and a diameter or an internal circumference.
3. Describe the specimen using a systematic approach (ex: outside to inside). Carefully inspect the serosa and the mucosa.
4. Describe the pathologic process or abnormality (size, shape, color, & consistency) and its relationship to the margins.
5. If a rupture site is present, measure, describe, and document the relationship to the surgical margins.
6. If an ischemic process is present, serially section through the mesenteric adipose tissue looking for any obvious vascular abnormalities.
7. If a tumor is identified within the wall of the specimen, the serosa opposite the mass should be inked and the mass should be serially sectioned. The cut surfaces involved by the mass should be thoroughly described including the layers involved and the thickness.
8. Use vinegar as a mordant for the ink.
9. Measure the thickness of the uninvolved wall of the specimen.
10. Other attached structures should be described and sampled (ex: attached diverticula).
11. If the pathologic process warrants a lymph node dissection (i.e. for tumor), all identifiable lymph nodes should be found and submitted.
  - Measure all lymph nodes by giving a range in size (from smallest to largest). If a lymph node is larger than 0.5 cm, bisect, trisect, or serially section it and describe the cut surfaces.
  - If less than 5 lymph nodes are found, submit an additional 5 cassettes of adipose tissue.
  - According to the CAP protocol for the examination of small intestine specimens for carcinoma (v. 4.2.0.0.) and well-differentiated neuroendocrine tumors (v. 2.0.0.0), a minimum number of lymph nodes that predicts regional node negativity has not been defined.
12. Submit shave sections of all margins. If the pathologic process or tumor approaches the margin, take perpendicular sections at that margin which may also include the pathologic process or tumor.
13. If a tumor is present, submit a shave section of the closest radial margin.
14. Submit sections of the pathologic process or tumor including sections that demonstrate the deepest point of invasion and the adjacent uninvolved tissue.
15. Sample any other grossly identifiable abnormalities.
16. Submit full thickness representative sections of the uninvolved wall.
17. Load all cassettes on the appropriate large tissue processor to allow for adequate fixation.

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### **IX. References**

Hruban RH, Westra, WH, Phelps, PH, & Isacson, C: Surgical Pathology Dissection An Illustrated Guide, New York, NY, Springer-Verlag Inc., 1996.

Lester, SC: Manual of Surgical Pathology, New York, NY, Churchill Livingstone, 2001.

### **X. Authorized Reviewers**

1. Medical Director, Anatomic Pathology
2. Chief, Surgical Pathology

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### Document Control

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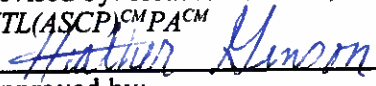

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Reviewed by: (Signature)	Date	Revision #	Modification	Related Documents Reviewed/Updated
<i>Ali-Reza Armin, MD</i>	10/10/2008	r00		
<i>Anne R. Tranchida, PA(ASCP)</i>	10/20/2009	r00		
<i>Ali-Reza Armin, MD</i>	10/20/2011	r00		
<i>Ali-Reza Armin, MD</i>	4/3/2013	r00		
<i>Mitual B. Amin, MD</i>	2/14/2015	r00		
<i>Zhenhong H. Qu, MD</i>	3/19/2015	r00		
<i>Kurt Bernacki, MD</i>	10/27/2017	r00		
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<i>Jawwad Arshad, MD</i>	3/20/2023	r00		
Revised by: <i>Heather Genson, HTL(ASCP)<sup>CM</sup> PA<sup>CM</sup></i> 	10/11/2024	r01	Added wording to include minimum number of lymph nodes	
Approved by:  <i>MD</i>	11/15/24	r01		