

# 15 Appendix

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## Simple Appendectomies

The appendix is a common specimen in the surgical pathology laboratory. The dissection of these specimens is not complex, since most appendectomies are performed for simple acute appendicitis. Even so, the appendix is all too often not examined appropriately. cursory examination of the appendix is a pitfall to be avoided. Instead, develop the habit of thoroughly examining every appendix. Regard every appendiceal specimen as an opportunity to uncover unsuspected pathologic processes.

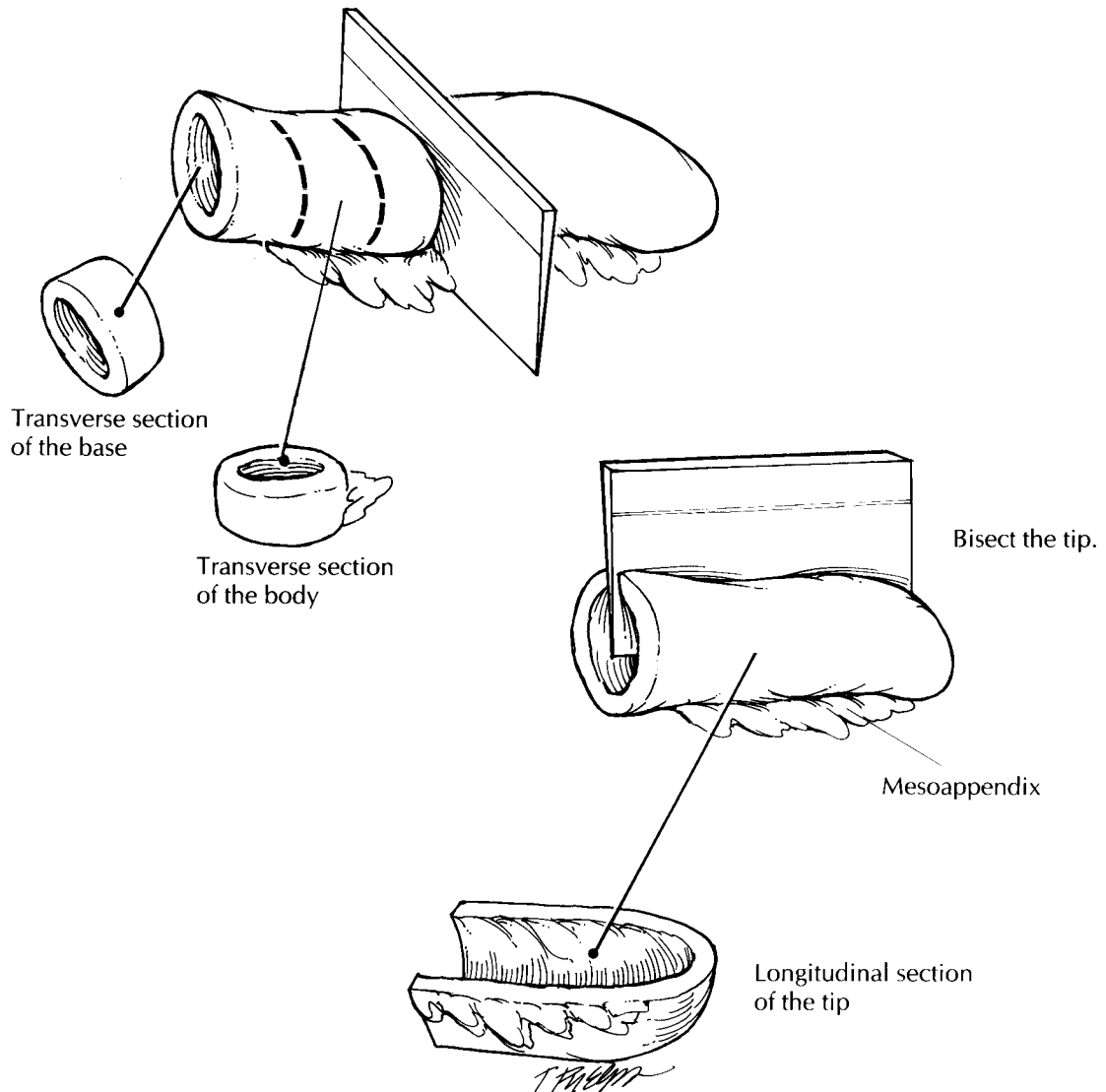
The major objectives in dissecting the simple appendectomy specimen are to document the presence or absence of inflammation and to search for incidental neoplasms. These objectives are met by examining each component of the appendix—the serosa, wall, mucosa, and lumen—in a sequential manner. Begin by inspecting the outer surface of the appendix and the attached mesoappendix. Inflammatory processes often convert the glistening, smooth, tan serosa into a surface that is dull, shaggy, and discolored. Carefully look for perforations. Small transmural perforations that are not easily seen can sometimes be demonstrated by gently infusing formalin into the lumen of the appendix using a syringe. Document the dimensions of the specimen, and then section the appendix so that the wall, the mucosa, and the lumen can be evaluated. As illustrated, bread-loaf the body of the appendix using thin transverse sections, and bivalve the distal 2-cm tip of the appendix using a longitudinal section. Inspect the wall for masses, strictures, edema, and other inflammatory changes. Finally, evaluate the mucosa and the luminal contents for fecaliths, pus, and collections of mucus. If a

neoplasm is present, submit a shave margin from the base of the appendix, and be sure to document the size of the tumor, the distance from the tumor to the surgical margin, and the layers of the appendix that are involved. When the lumen is obstructed, attempt to identify the nature of the obstruction, keeping in mind that most tumors of the appendix are discovered in specimens resected for other reasons.

Sections for histologic evaluation should include a transverse section through the base and body and a longitudinal section of the tip. Include a portion of the attached mesoappendix. For a normal-appearing appendix removed by incidental appendectomy, one section each from the base, body, and tip placed into a single tissue cassette will suffice. For an inflamed appendix, additional sections may be required to demonstrate points of perforation or luminal obstruction. If a mass or mucocele is present, the entire appendix should be submitted in a sequential fashion. The most proximal section from the base of the appendix represents the margin of resection.

## Important Issues to Address in Your Surgical Pathology Report on Appendectomies

- What procedure was performed, and what structures/organs are present?
- What are the nature and extent of any inflammatory processes present (e.g., acute appendicitis, abscess formation, gangrene)? Be sure to mention the presence or absence of perforations and peritonitis.
- What are the type, grade, size, location, and extent of any incidental neoplasms identified? Is the tumor present at the resection margin?



### Appendectomy

1. Orient and measure the appendix. Carefully look for perforations.
2. Serially section the body of the appendix using transverse sections. Bivalve the tip using a longitudinal section.
3. Describe and measure any tumors.
4. Submit sections of the base, body, and tip of the appendix for histologic evaluation. The entire appendix should be submitted for all tumors and mucocèles.