



Heartland  
Pathology  
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## **NONGYNECOLOGICAL CYTOLOGY GASTROINTESTINAL SPECIMENS (Brushings, Washings and Bile Drainage)**

### **I. Purpose**

The adequacy of a gastrointestinal specimen is determined primarily by the presence of well-preserved epithelial cells indicative of the type of epithelium present at the gastrointestinal site sampled. All GI specimens will tend to deteriorate rapidly due to enzymatic activity, which is present throughout much of the GI tract. In addition, these specimens are easily contaminated by epithelial from sites proximal to that being sampled.

### **II. Specimen**

#### **General Information for all Specimens**

##### ***For Specimens Processed for Cytology (Non-Gynecological Specimens):***

Add 70% alcohol, as soon as possible, in a volume equal to the specimen collected. Label each container with the patient name, site source and the requisition peel-off number. Submit the specimen along with the completed Heartland Pathology Consultants requisition at room temperature.

##### ***For Specimens Processed for Microbiology or Clinical Analysis:***

Specimens intended for culture must be collected in a sterile container or in sterile saline (*without 70% alcohol or 10% neutral buffered formalin*) and *split* from the main Non-Gynecological specimen prior to transport with the proper requisition for microbiology culture or clinical testing. Consult the clinical lab test catalog for specific specimen requirements.

#### **A. Brushings (Esophageal, GE Junction, Gastric, Duodenal, Bile Duct, Other)**

##### **1. Indications**

For detection and characterization of endoscopically visible gastrointestinal lesions; for the identification of some microbiological pathogens (primarily Herpes, CMV and Candida).

##### **2. Specimen Required**

Endoscopically directed brushing sample of the identified lesion.

### 3. Supplies

Standard endoscopy equipment, one (or more if necessary) 5-10 mL vials of sterile saline, fixative (70% alcohol), frosted-end glass slides and spray fixative.

### 4. Collection Procedure

- a. Using standard endoscopy technique, identify the lesion in question and obtain a brushing sample of the lesion.

***NOTE:*** *It is important to brush the edges of an ulcer, as well as the floor, in order to obtain diagnostic material.*

- b. Upon withdrawing the brush, roll the brush onto clean slide labeled with patient's name. Spray fix immediately. Then, agitate the brush vigorously in a 5-10 mL vial of saline or fixative. If possible, detach the brush and leave it in the vial.
- c. Add 70% alcohol as soon as possible in a volume equal to the specimen collected. Label each container with the patient name, site source and requisition peel-off number.
- d. STORAGE AND TRANSPORT: Submit the specimen at room temperature along with the completed HPC requisition and copies of insurance card(s).

## **B. Washings (Esophageal, Gastric, Other)**

### 1. Indications

For detection and characterization of ill-defined or invisible gastrointestinal lesions; for the identification of some microbiologic pathogens (primarily Herpes, CMV and Candida).

### 2. Specimen Required

Endoscopically obtained washing (preferably at least 10 mL) of the region of the suspected lesion.

### 3. Supplies

Standard endoscopy equipment, 120 mL clean plastic specimen container(s) and fixative (70% alcohol)

#### 4. Collection Procedure

- a. Using standard endoscopy technique, lavage the area of interest using a physiologic solution. Aspirate the solution and place in a clean specimen container.
- b. Add 70% alcohol as soon as possible in a volume equal to the specimen collected. Label each container with the patient name, site source and requisition peel-off number.
- c. **STORAGE AND TRANSPORT:** Submit the specimen at room temperature along with the completed HPC requisition and copies of insurance card(s).

### C. Bile Drainage

#### 1. Indications

For the detection of malignant cells arising within the hepatobiliary system.

#### 2. Specimen Required

10 mL or more of collected bile drainage.

#### 3. Supplies

Standard transcutaneous or endoscopic biliary drainage equipment and clean plastic specimen container of appropriate size.

#### 4. Collection Procedure

- a. Using appropriate sterile technique, collect as much bile drainage through the drainage apparatus as possible, into a clean plastic container.
- b. Add 70% alcohol as soon as possible in a volume equal to the specimen collected. Label each container with the patient name, site source and requisition peel-off number.
- c. **STORAGE:** Submit the specimen at room temperature along with the completed HPC requisition and copies of insurance card(s).

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**NOTE:** *Bile specimens will degenerate very rapidly due to enzymatic activity and bile salts. Therefore, a 24-hour bile collection is not suitable for cytologic evaluation.*

## References

- A. Koss, Leopold G MD: *Diagnostic Cytology and its Histopathologic Basis*, Volume 2, JB Lippincott Company, 1992
- B. Lester, Susan C MD, PhD: *Manual of Surgical Pathology*, Churchill Livingstone, Philadelphia, 2001.