**Purpose**

The esophagus is usually removed with the proximal stomach for severe dysplasia or for adenocarcinoma arising in a background of Barrett’s esophagus. Many specimens will be resected after chemo/radiation therapy. In such cases, no gross tumor may be apparent. Instead, there may be a broad, shallow ulcer or a depression in the mucosa where the tumor used to be.

**Procedure**

This specimen is likely to come in 2 parts:

1. The main specimen (including most of the esophagus and the proximal stomach). Both ends of this specimen are likely to be stapled.

2. A 1-2 cm long cuff or doughnut of upper or “cervical esophagus” which is the proximal resection margin. See below for how to identify the true margin and how to submit this specimen.

On occasion, a third specimen, the gastric margin of resection, may be submitted.

As soon as the main specimen is received, open it longitudinally from one end to the other, trying to cut on the side opposite the tumor or ulcer if there is no tumor. When part of the stomach is included, open next to the staple line marking the resection line and then continue the cut across the gastroesophageal junction to the resection margin.

Localize the tumor or ulcer in relation to the GE junction, identified as the uppermost point of the most proximal gastric fold. If the folds are flattened, define the junction as that point when the tubular esophagus flares and the lumen becomes larger.

1. In the esophagus: specifically, where?

2. Crossing the GE junction: where is the center of the lesion?

3. In the proximal stomach: how far below the junction is the center of the lesion?

4. No gross lesion: photograph in the fresh state.

Ink the adventitia/serosa radial margin

Open the specimen longitudinally and try to avoid cutting through any lesions. Fix the specimen overnight.

Dissect the periesophageal adipose and look for lymph nodes.

**Description**

Length and diameter (or circumference) of specimen. Is the proximal stomach included? If so, what is its length along the lesser and greater curvature?

Tumor: site (as mentioned above), size, appearance (fungating? polypoid? rolled edges? ulcerated?). Estimate how much of the circumference is involved. Depth of invasion; extension into stomach and adjacent organs. Distance from both lines of resection.

In cases of tumors treated by preoperative radiation and/or chemotherapy, is any residual tumor apparent, or is there just a big ulcer or no lesion at all? Describe location, length and width of the ulcer.

Mucosa: appearance of non-neoplastic mucosa. Is there recognizable white to grey squamous esophageal mucosa distal to the tumor: Is the lumen dilated proximal to the tumor? Does the peritumoral mucosa look like Barrett's mucosa (resemble gastric mucosa)?

Wall: thickened? If thickened, measure the thickness.

Stomach, if present: features of gastroesophageal junction and of gastric mucosa.

Periesophageal lymph nodes: number, size of largest. Do they appear grossly involved by the tumor?

**Sections for Histology**

Tumor: four longitudinal sections, one including non-neoplastic mucosae proximal and distal to the tumor. Include the deepest point of invasion.

If there is no obvious tumor, but only an ulcer, take at least 6 sections of the ulcer, including at least 2 from its center.

If there is no gross lesion, use MiChart to determine the cause for the resection. Usually it will be for biopsy-proven high-grade dysplasia in Barrett’s mucosa. If this is the case, and if there is gross Barrett’s mucosa, send through the entire Barrett’s segment.

If adenocarcinoma arising in a Barrett's mucosa is suspected, take continuous longitudinal sections from just proximal to the tumor distally through the gastroesophageal junction, noting specifically the location of each section.

A section across the gastroesophageal junction, if not covered in the samples listed above. If the tumor extends into the stomach, take one longitudinal section from the spot where the tumor most closely approaches the gastric resection margin.

In most cases, the proximal margin of resection is in the separately submitted segment of proximal esophagus, not in the main specimen.

Lymph nodes: 15 lymph nodes are required for staging and accreditation. If it is suspected that not enough lymph nodes are identified, submit up to 8 sections of peri-esophageal or peri-gastric adipose.

FOR SEPARATELY SUBMITTED PROXIMAL OR CERVICAL MARGIN, SHAVE AND SUBMIT THE OPEN END EN FACE. THE OPEN END IS THE TRUE MARGIN, NOT THE STAPLED END (STAPLED END IS FALSE AND DOES NOT NEED TO BE SUBMITTED! Submit any other abnormalities.

**Sample Dictation**

A. "Esophagus" Received in formalin in a large container is a distal esophagectomy (4.3 cm long x 4.0 cm internal circumference), attached proximal gastrectomy specimen (7.5 x 5.0 x 3.2 cm) and attached periesophageal/perigastric adipose tissue. Gross photographs taken.

A tan, depressed and focally hemorrhagic scar (1.7 x 1.1 cm) is centered at the gastroesophageal junction approximately 3.5 cm from the proximal margin and 3.0 cm from the distal margin. The scar is up to 0.6 cm in depth with no residual tumor grossly appreciated. The corresponding intact adventitia is slightly roughened but otherwise unremarkable. The remaining esophageal and gastric mucosa is unremarkable. Multiple possible lymph nodes are identified within the adipose tissue, up to 0.6 cm.

Cassette Summary:

A1-6. Entire scar, longitudinal sections, submitted sequentially. (1ns each)

A7. Five possible lymph nodes. (5ns)

A8. Three possible lymph nodes. (3ns)

A9. Four possible lymph nodes. (4ns)

B. "Cervical esophageal margin” Received in formalin in a small container is a 0.4 cm strip of esophagus, stapled at one margin. The adventitia and mucosa are unremarkable. The open end is shaved and submitted en face.

B1. Cervical esophageal margin. (1ns, staple line retained)

**Sample Photograph of Treated Adenocarcinoma arising within GE Junction**

