Approach to cut up:

Upper GI

Marco Novelli
Overview

• General points

• Oesophagus
  – Oesophagectomy specimens
  – EMRs (+ ESDs)

• Stomach
  – Specimen handling
  – Recent changes in clinical practice

• TNM

• OGJ tumours

• Gastrointestinal Stromal Tumours
General points
General points

• Check in bottom of specimen pot.
  – Donuts, extra margin etc.

• Description.
  – Does specimen match clinical details?
  – Can you orientate specimen?
General points

• Check in bottom of specimen pot.
  – Donuts, extra margin etc.

• Description.
  – Does specimen match clinical details?
  – Can you orientate specimen?

→ IF NOT DO NOT CUT SPECIMEN
General points

Mega blocks:

– Pros
  • Good macro-micro correlation
  • Useful for tumour mapping (e.g. prostates)
  • Useful for photographs/talks

– Cons
  • Relatively labour intensive
  • Difficult to store
  • Difficult to stain (immunocytochemistry)

→ Check with lab staff before using
Oesophagus
Cadaver of 86-year-old woman
--Cadaver of 86-year-old woman

--Cadaver of 86-year-old woman

Figure 1. Drawings illustrate transthoracic esophagectomy through a right thoracotomy.


©2001 by Radiological Society of North America
Oesophagectomy

- Operative mortality 5%
- Immediate post operative morbidity
  - Respiratory complications 20 – 60%
  - Anastomotic leaks 0 – 50%
Oesophagectomy

• Longterm morbidity
  – Dysphagia
  – Reflux oesophagitis
  – Delayed gastric emptying
  – Dumping
  – Nausea
  – Diarrhoea
  – Vocal cord paralysis.
Oesophageal resections

- Vast majority are oesophagectomies/oesophagogastrectomies for adenocarcinoma.
- SCC oesophagus primarily treated by radical chemoradiotherapy.
- Increasing number of EMR specimens.
Oesophagectomy specimens

- Oesophagus shrinks 25% on removal from patient
- On fixation oesophagus may be 33% of original length
Oesophagectomy specimens

- Oesophagus shrinks 25% on removal from patient
- On fixation, oesophagus may be 33% of original length

→ Pin specimen fresh if you can
• Open gastric end (cut along staples) + pin on cork board
• Suboptimally pinned specimen
• Non-pinned specimen
Proximal margin assessment in non-pinned specimens
Proximal margin assessment in non-pinned specimens

- Mucosal/submucosal margin
- Muscularis propria/subserosal margin
• Ink circumferential margin
Circumferential margins

- Almost entire length of oesophagus. 
  (≈ 1cm intra-abdominal peritonealised)
- At OGJ for gastric tumours.
Systematic review and meta-analysis of the influence of circumferential resection margin involvement on survival in patients with operable oesophageal cancer.
Chan DS, Reid TD, Howell I, Lewis WG.

- Meta-analysis – 5 year mortality

- The College of American Pathologists (Tumour at CRM)
  - OR 4.02, 95% CI - 2.25 to 7.20; P < 0.001.

- The Royal College of Pathologists (Tumour <1mm from CRM)
  - OR 2.52, 95% CI - 1.96 to 3.25; P < 0.001.
CRM positivity rates

**RCPath <1mm: 74%**

**RCPath <1mm: 57.5%**
Blocks

- Proximal and distal margins (full thickness).
- Circumferential margin.
- Lymph nodes.
- Tumour (4+).
- Background oesophagus, stomach etc.
Handling and reporting EMRs
Endoscopic mucosal resection (EMR) + Endoscopic submucosal dissection (ESD)
Endoscopic mucosal resection (EMR)

- Resection not a biopsy.
- Treat like a cervical cone (do NOT bisect!).
- If received orientated – ink margins.
Endoscopic mucosal resection (EMR)

- Often multiple with site range (e.g. 32-36cm).
- Serially section, process all, ends in 1 cassette.
- Ideally no more than 2 sections a cassette.
Endoscopic mucosal resection (EMR)

- Ends in one cassette
Ideally only 2 sections a cassette to optimise orientation
Sectioning/fixation artefact
Sectioning/fixation artefact
Sectioning/fixation artefact
Sectioning/fixation artefact

Where / if possible do not access pT staging and invasion on end sections.
• Ink if orientated and large enough.
• Serially / cruciate section.
Endoscopic mucosal resection (EMR)

- Usually lots of diathermy artefact.
- Dysplasia often reaches circumferential margin.
- Diagnostic and “debulking” procedure!!
Pathological assessment of invasion
Colorectal adenocarcinoma with desmoplastic stroma
Benign glands in Barrett’s often extend in between bundles of smooth muscle
Early oesophageal adenocarcinoma often lacks a desmoplastic stroma
pT staging of adenocarcinoma
# Oesophageal adenocarcinoma T staging, TNM7

<table>
<thead>
<tr>
<th>Primary tumor (T)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX</td>
<td>Primary tumor cannot be assessed</td>
</tr>
<tr>
<td>T0</td>
<td>No evidence of primary tumor</td>
</tr>
<tr>
<td>Tis</td>
<td>High-grade dysplasia</td>
</tr>
<tr>
<td>T1</td>
<td>Tumor invades lamina propria, muscularis mucosae, or submucosa</td>
</tr>
<tr>
<td>T1a</td>
<td>Tumor invades lamina propria or muscularis mucosae</td>
</tr>
<tr>
<td>T1b</td>
<td>Tumor invades submucosa</td>
</tr>
<tr>
<td>T2</td>
<td>Tumor invades muscularis propria</td>
</tr>
<tr>
<td>T3</td>
<td>Tumor invades adventitia</td>
</tr>
<tr>
<td>T4</td>
<td>Tumor invades adjacent structures</td>
</tr>
<tr>
<td>T4a</td>
<td>Resectable tumor invading pleura, pericardium, or diaphragm</td>
</tr>
<tr>
<td>T4b</td>
<td>Unresectable tumor invading other adjacent structures, such as the aorta, vertebral body, and trachea</td>
</tr>
</tbody>
</table>
Significance of the Depth of Tumor Invasion and Lymph Node Metastasis in Superficially Invasive (T1) Esophageal Adenocarcinoma

T1a – lamina propria. T1b – muscularis mucosae. T1c – superficial submucosa. T1d – deep submucosa.

Double Muscularis Mucosae in Barrett’s Esophagus

Double Muscularis Mucosae in Barrett’s Esophagus

Double muscularis mucosae in 87.5% Barrett’s patients!!

Endoscopic mucosal resection (EMR)

- Stage invasive carcinoma.
  - Mostly pT1
  - Submucosal invasion?
  - May be difficult to assess as splaying/reduplication of muscularis mucosa)

- Measure depth of invasion beyond muscularis mucosae.

- Circumferential margins

- Deep resection margin
Endoscopic mucosal resection (EMR)

- Stage invasive carcinoma.
  - Mostly pT1
  - Submucosal invasion?
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  - Submucosal invasion?
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- Measure depth of invasion beyond muscularis mucosae.

- Circumferential margins
- Deep resection margin

- Desmin staining can be very helpful in delineating the lower border of the muscularis mucosae
Desmin staining
0.8mm invasion beyond muscularis mucosae
→ pT1b, SM2
Staging of mucosal invasion I

Fig. 1. Subclassification of the depth of superficial esophageal cancer (number of patients). ep, carcinoma in situ; lpm, lamina propria mucosa, mm, muscularis mucosa; m, mucosa; sm, submucosa; mp, muscularis propria.

Shimada 2006 Am J Surg
Staging of EMRs

**pT1a**

- **M1** – Limited to the epithelial layer (HGD).
- **M2** – Invades the lamina propria.
- **M3** – Invades into but not through the muscularis mucosa.

**pT1b**

- **SM1** – Infiltrates submucosa <500 microns.
- **SM2** – Infiltrates submucosa <1000 microns.
- **SM3** – Infiltrates submucosa ≥1000 microns.
Stomach
Gastric resections

• Variety of operations:
  • Oesophagogastrectomy
  • Proximal gastrectomy
  • Distal gastrectomy
  • Subtotal/total/extended gastrectomy
  • Sleeve gastrectomy
Gastric resections

- Open specimen and pin out where possible.
- Identify OGJ (if present).
- Lymph nodes (lesser curve, greater curve etc).
- Margins
  - Proximal
  - Distal
  - Circumferential (OGJ)
- Serosal involvement.
Oesophagogastric junction

Mucosal aspect

Top of rugal folds

Serosal aspect

Peritoneal reflection
Nodal stations of the stomach.

Figure 1. Diagram of the abdomen: gastro-oesophageal (black); hepatic artery (aqua); splenic (pink); gastro-omental (light purple); left gastric (blue); hepatoduodenal ligament (orange).

Figure 2. Diagram of the abdomen: left gastric (green); coeliac (yellow); diaphragmatic (red); paraoesophageal (blue); lesser curvature (aqua).
• Margins:
  – Where possible sample entire margin.

• Nodes:
  – OGJ, proximal lesser curve, distal lesser curve, proximal greater curve, distal greater curve.
Measure tumour
(3 dimensions)
• Bread-slice tumour, lay our slices and photograph
• 3+ blocks of tumour (+/- megablock).
• Sample:
  – Extension into perigastric connective tissue.
  – Circumferential margin at OGJ.
  – Serosal involvement.
Bariatric sleeve gastrectomy

- Open specimen with scissors.
- Wash and examine mucosa.
- Sample any focal lesions.
- 1-2 random blocks.
Changes in clinical practice
Nodal stations of the stomach.

Figure 1. Diagram of the abdomen: gastro-oesophageal (black); hepatic artery (aqua); splenic (pink); gastro-omential (light purple); left gastric (blue); hepatoduodenal ligament (orange).

Figure 2. Diagram of the abdomen: left gastric (green); coeliac (yellow); diaphragmatic (red); paraoesophageal (blue); lesser curvature (aqua).

Gastric cancer surgical resections

• D1 lymphadenectomy
  – Traditional nodal dissection taking nodes directly adjacent to stomach.
  – Used in palliative cases.

• D2 lymphadenectomy
  – Typical UK surgical practice (?).
  – Lymph nodes from coeliac axis, left gastric, common hepatic and splenic arteries.

• D3 lymphadenectomy
  – Radical nodal dissection commonly practiced in Far East.
  – Lymph nodes from hepatoduodenal ligament, SMV, aorta/vena cava to IMA and retropancreatic area.

- 221 patients randomised to D1 or D3 surgery.
- 5.9% 5-year survival advantage for D3 surgery.
MAGIC study: peri-operative Epirubicin, cisplatin and infused 5-FU (ECF).

- 5 year survival: 23% surgery vs 36% surgery + neoadjuvent chemo.

TNM
• Until recently UK insistence on using TNM5 for colorectal dataset.

• With TNM8 most datasets should be ‘aligned’
APPENDIX D

NATIONAL DATASET FOR
OESOPHAGEAL CARCINOMA HISTOPATHOLOGY REPORTS

Surname .............................................. Forenames ........................................ Date of birth .................................
Hospital ............................................. Hospital no ........................................ NHS no ........................................
Date of receipt ...................................... Date of reporting .................................. Report no ........................................
Pathologist .......................................... Surgeon .............................................. Sex .............................................

Shaded data items = ‘non core’ data

GROSS DESCRIPTION
Maximum length of specimen: ........................................ mm
Length of oesophagus: ........................................ mm
Length of stomach: ........................................ mm
Length of tumour: ........................................ mm
Width of tumour: ........................................ mm
Tumour edge to nearest distal margin: ............................ mm
Tumour edge to nearest proximal margin: ........................ mm
Type of tumour  □ Polypoid  □ Other
□ Pinned  □ Not pinned
Siewert tumour type (cardiac cancers only)  □ 1  □ 2

HISTOLOGY
Type of tumour
□ Squamous  □ Adenocarcinoma
□ Other (specify) ...........................................
Differentiation by worst area
□ Well □ Moderately □ Poorly differentiatied
Depth of invasion
□ Tis high-grade dysplasia
□ T1 invasion of lamina propria/submucosa
□ T2 invasion of muscularis propria
□ T3 invasion beyond muscularis propria
□ T4 invasion of adjacent structures
□ Yes □ No – serosal involvement:

Proximal margin
□ Normal □ Dysplasia □ Carcinoma □ Barrett’s
Distal margin
□ Normal □ Dysplasia □ Carcinoma

Circumferential margin
Involvement (<1 mm):  □ Yes □ No □ N/A
(If no: distance of carcinoma to nearest circumferential margin  ........................................ mm)

Other features
Vascular invasion  □ Yes □ No
□ Barrett’s metaplasia □ Yes □ No
adjacent to tumour
Lymph nodes
Number examined ............ Number positive ...........
(N0 if no nodes positive, otherwise N1)

Distant metastases
Celiac axis node positive  □ Yes □ No
(M1a if lower thoracic carcinoma, otherwise M1b)
Cervical node positive  □ Yes □ No
(M1a if upper thoracic carcinoma, otherwise M1b)
Other distant metastasis (M1b)  □ Yes □ No

COMMENTS

PATHOLOGICAL STAGING
Complete resection  □ Yes(R0) □ No(R1 or R2)
(y) pT...... pN...... pM...... TNM 5th edition

Signature .............................................. Date ....../.../...... SNOMED codes T .......... / M ...............

The Royal College of Pathologists
Pathology: the science behind the cure

Standards and Datasets for Reporting Cancers

Dataset for the histopathological reporting of
oesophageal carcinoma (2nd edition)

February 2007
Coordinator: Dr Nicholas P Mapstone, Royal Lancaster Infirmary
# NATIONAL DATASET FOR GASTRIC CARCINOMA HISTOPATHOLOGY REPORTS

<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
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<tbody>
<tr>
<td>Surname</td>
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</tr>
<tr>
<td>Forenames</td>
<td></td>
</tr>
<tr>
<td>Date of birth</td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
</tr>
<tr>
<td>Hospital no</td>
<td></td>
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<td>Date of receipt</td>
<td></td>
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<tr>
<td>Date of reporting</td>
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<td>Report no</td>
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</tr>
<tr>
<td>Pathologist</td>
<td></td>
</tr>
<tr>
<td>Surgeon</td>
<td></td>
</tr>
<tr>
<td>Sex</td>
<td></td>
</tr>
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**GROSS DESCRIPTION**

<table>
<thead>
<tr>
<th>Type of specimen</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Oesophago-gastrectomy</td>
<td></td>
</tr>
<tr>
<td>Distal gastrectomy</td>
<td></td>
</tr>
<tr>
<td>Total gastrectomy</td>
<td></td>
</tr>
<tr>
<td>Local resection</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of tumour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Polypoid, ulcerating or fungating</td>
<td></td>
</tr>
<tr>
<td>Diffusely infiltrating</td>
<td></td>
</tr>
</tbody>
</table>

**HISTOLOGY**

<table>
<thead>
<tr>
<th>Type of tumour</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Adenocarcinoma</td>
<td></td>
</tr>
<tr>
<td>Other (specify)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Lauren classification</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Intestinal</td>
<td></td>
</tr>
<tr>
<td>Diffuse/mixed</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Differentiation by worst area</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Well/moderately</td>
<td></td>
</tr>
<tr>
<td>Poorly</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Local invasion</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>T0</td>
<td></td>
</tr>
<tr>
<td>No tumour identified</td>
<td></td>
</tr>
<tr>
<td>Ts</td>
<td></td>
</tr>
<tr>
<td>Carcinoma in situ</td>
<td></td>
</tr>
<tr>
<td>T1</td>
<td></td>
</tr>
<tr>
<td>Invasion of lamina propria/submucosa</td>
<td></td>
</tr>
<tr>
<td>T2a</td>
<td></td>
</tr>
<tr>
<td>Invasion of muscularis propria</td>
<td></td>
</tr>
<tr>
<td>T2b</td>
<td></td>
</tr>
<tr>
<td>Invasion into subserosa</td>
<td></td>
</tr>
<tr>
<td>T3</td>
<td></td>
</tr>
<tr>
<td>Invasion of serosa</td>
<td></td>
</tr>
<tr>
<td>T4</td>
<td></td>
</tr>
<tr>
<td>Invasion of adjacent structures</td>
<td></td>
</tr>
</tbody>
</table>

**Proximal margin involved** | Yes [ ] No [ ]

**Distal margin involved** | Yes [ ] No [ ]

**Circumferential margin lower oesophagus**

<table>
<thead>
<tr>
<th>Involvement (&lt; 1 mm)</th>
<th>Yes [ ] No [ ] N/A [ ]</th>
</tr>
</thead>
</table>

(If no, distance of tumour to nearest circumferential margin: _________ mm)

**Lymphatic/vascular invasion** | Yes [ ] No [ ]

**Lymph nodes**

<table>
<thead>
<tr>
<th>Number examined</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Number positive</td>
<td></td>
</tr>
<tr>
<td>N0 (0 nodes)</td>
<td></td>
</tr>
<tr>
<td>N2 (7–15 nodes)</td>
<td></td>
</tr>
<tr>
<td>N1 (1–6 nodes)</td>
<td></td>
</tr>
<tr>
<td>N3 (&gt;15 nodes)</td>
<td></td>
</tr>
</tbody>
</table>

**Distant metastases**

| Unknown (MX)               | Yes (M1) [ ]   |

**PATHOLOGICAL STAGING**

<table>
<thead>
<tr>
<th>Complete resection</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes (R0)</td>
<td></td>
</tr>
<tr>
<td>No (R1 or R2)</td>
<td></td>
</tr>
</tbody>
</table>

| History of neoadjuvant therapy | Yes [ ] No [ ]   |

<table>
<thead>
<tr>
<th>TNM (y)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>pT</td>
<td></td>
</tr>
<tr>
<td>N</td>
<td></td>
</tr>
<tr>
<td>M</td>
<td></td>
</tr>
</tbody>
</table>

**Signature**

Signature: ____________________________

Date: __/__/____

SNOMED codes T: ________ / M: ________
Current RCPath datasets for oesophagus and stomach (2\textsuperscript{nd} Edition).

- Oesophageal dataset (2\textsuperscript{nd} edition):
  - pT and pN - TNM 5

- Gastric dataset (2\textsuperscript{nd} edition):
  - pT - TNM 6
  - pN - TNM 5

- New dataset will be combined oesophagogastric and use TNM8 – due out imminently.

- In meantime use TNM7 or 8 but state which in report.
OGJ tumours

- Siewert classification
- Gastric versus oesophageal dataset?
Classification of adenocarcinoma of the oesophagogastric junction

J. R. Siewert
H. J. Stein

"We have defined and described adenocarcinomas of the oesophagogastric junction as tumours that have their centre within 5 cm proximal and distal of the anatomical cardia and have differentiated the following three distinct tumour entities within this area\textsuperscript{1,3}:

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type I tumour</td>
<td>Adenocarcinoma of the distal oesophagus which usually arises from an area with specialized intestinal metaplasia of the oesophagus (i.e. Barrett’s oesophagus) and which may infiltrate the oesophagogastric junction from above.</td>
</tr>
<tr>
<td>Type II tumour</td>
<td>True carcinoma of the cardia arising from the cardiac epithelium or short segments with intestinal metaplasia at the oesophagogastric junction; this entity is also often referred to as ‘junctional carcinoma’.</td>
</tr>
<tr>
<td>Type III tumour</td>
<td>Subcardial gastric carcinoma which infiltrates the oesophagogastric junction and distal oesophagus from below.</td>
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British Journal of Surgery 1998, 85, 1457–1459
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</tr>
</thead>
<tbody>
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</table>

*British Journal of Surgery 1998, 85, 1457–1459*
Siewert Classification of OGJ Tumours

- Type I
- Type II
- Type III
Siewert Classification of OGJ Tumours

Type I

Type II

Type III

Mediastinal nodes

Abdominal nodes

5 cm
<table>
<thead>
<tr>
<th>Siewert Type</th>
<th>I</th>
<th>II</th>
<th>III</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mediastinal stations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Paratracheal</td>
<td>4%</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>2. Carinal</td>
<td>10%</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>3. Left bronchial</td>
<td>15%</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>4. Right bronchial</td>
<td>19%</td>
<td>0%</td>
<td>-</td>
</tr>
<tr>
<td>5. Para-aortic</td>
<td>20%</td>
<td>2%</td>
<td>-</td>
</tr>
<tr>
<td>6. Middle and</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Lower paraoesophageal</td>
<td>55%</td>
<td>5%</td>
<td>3%</td>
</tr>
<tr>
<td><strong>Abdominal stations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Right paracardial</td>
<td>41%</td>
<td>46%</td>
<td>-</td>
</tr>
<tr>
<td>9. Left paracardial</td>
<td>32%</td>
<td>50%</td>
<td>-</td>
</tr>
<tr>
<td>10. Left gastric</td>
<td>60%</td>
<td>65%</td>
<td>24%</td>
</tr>
<tr>
<td>11. Lesser curve</td>
<td>14%</td>
<td>65%</td>
<td>41%</td>
</tr>
<tr>
<td>12. Common hepatic</td>
<td>3%</td>
<td>16%</td>
<td>17%</td>
</tr>
<tr>
<td>13. Splenic artery</td>
<td>6%</td>
<td>30%</td>
<td>28%</td>
</tr>
<tr>
<td>14. Coeliac axis</td>
<td>5%</td>
<td>30%</td>
<td>-</td>
</tr>
</tbody>
</table>
Gastric versus oesophageal dataset?
Oesophagogastric junction

Top of rugal folds

Peritoneal reflection

Mucosal aspect

Serosal aspect
> 50% tumour in oesophagus

Oesophageal dataset

> 50% tumour in stomach

Gastric dataset

TNM6
TNM-7
Oesophagogastric junction tumours

A tumour the epicenter of which is within 5 cm of the esophagogastric junction and also extends into the oesophagus is classified and staged according to the oesophageal scheme.

All other tumours with an epicenter in the stomach greater than 5 cm from the oesophagogastric junction or those within 5 cm of the EGJ without extension into the oesophagus are staged using the gastric carcinoma scheme.
Most tumours which involve the OGJ are classified under oesophageal dataset in TNM7.
TNM-8  Oesophagogastric Junction

Oesophagus and Gastric Carcinomas

- A tumour the epicenter of which is within 2 cm of the oesophagogastric junction and also extends into the oesophagus is classified and staged using the oesophageal scheme. Cancers involving the oesophagogastric junction (OGJ) whose epicenter is within the proximal 2 cm of the cardia (Siewert types I/II) are to be staged as oesophageal.

- Cancers whose epicenter is more than 2 cm distal from the OGJ will be staged using the Stomach Cancer TNM and Stage even if the OGJ is involved.
TNM8

- Oesophageal dataset
- Gastric dataset

Type I

Type II

Type III

cm

5

1

0

-2

-5
There are no changes in the definitions of the T, N and M categories.

Note there are pathological prognostic groups available for squamous cell carcinoma and clinical and pathological prognostic groups available for adenocarcinoma.

The AJCC also publish post preoperative therapy prognostic groups for adenocarcinoma and squamous cell carcinoma.
TNM Classification: extra codes

• y Symbol
  • classification during or following multimodality therapy (e.g. neoadjuvant chemotherapy).
  • ypT3 N0 Mx

• R codes – residual tumour (after treatment)
  Rx - Presence of tumour cannot be assessed
  R0 - No residual tumour
  R1 - Microscopic residual tumour
  R2 - Macroscopic residual tumour
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Gastrointestinal stromal tumour (GIST) resections

- Sleeve resections – full gastrectomies.
- Resection margins.
- Absence/presence of serosal involvement.
- 1 tumour block per cm diameter
- Lymph nodes NOT so important
  (<2% GISTs have LN metastases)
Gastrointestinal stromal tumours
National Guidelines for Gastrointestinal Stromal Tumour Reporting

(New dataset coming!)
Thank you for your attention