
삼성의료원 내과 이준행
JGCA classification
- Japanese Gastric Cancer Association -

- **Type 0** – superficial polypoid, flat/depressed, or excavated tumors
- **Type 1** – polypoid carcinomas, usually attached on a wide base
- **Type 2** – ulcerated carcinomas with sharply demarcated and raised margins
- **Type 3** – ulcerated, infiltrating carcinomas without definite limits
- **Type 4** – nonulcerative, diffusely infiltrating carcinomas
- **Type 5** – unclassifiable advanced carcinomas
West vs East

- Western endoscopists consider the Japanese classification to be a botanical hobby, too complex for practical use.
- Japanese endoscopists have found that endoscopic classification of a lesion can be an important determinant when endoscopic therapy is considered.
- The East and West points of view are now much closer.
Superficial neoplastic lesions

Type O

Polypoid

Non-polypoid

elevated 0-I (Ip, Is)

flat 0-IIa

depressed 0-IIb

evacuated 0-IIc

0-III
Superficial neoplastic lesions

- Semi-pedunculated (Isp) polyps should be managed as sessile polyps.
What is polypoid and what is flat?

- In the operative specimen, the height of polypoid lesion is more than double the thickness of the adjacent mucosa.
- During endoscopy, the height of the closed cups of the biopsy forceps (2.5 mm) is the discriminating point.
Type O-II lesions
IIc + IIa lesions
IIa + IIc lesions with two variants

Depressed area

Relatively depressed area
Type O-III lesions

- In the stomach, the bottom of the lesion is non-neoplastic.
- In Barrett’s esophagus, the neoplastic area covers the entire surface of the lesion.
Various combinations: *is it really useful?*
Updated Paris (2005)
Update on the Paris classification of superficial neoplastic lesions in the digestive tract

- The endoscopic morphology of superficial lesions can be assessed with a standard video endoscope after spraying of a dye - an iodine-potassium iodide solution for the stratified squamous epithelium, or an indigo carmine solution for the columnar epithelium.
- In 2002, a workshop was held in Paris to explore the relevance of the Japanese classification.
- The conclusions were revised in 2003 in Osaka in relation to the definition of the subtypes used in endoscopy and the evaluation of the depth of invasion into the submucosa.
Update on the Paris classification of superficial neoplastic lesions in the digestive tract

The cut-off limit is **2.5 mm** in the columnar epithelium and **1.2 mm** in the stratified epithelium of the esophagus.
Update on the Paris classification of superficial neoplastic lesions in the digestive tract

The cut-off limit is 1.2 mm in the columnar epithelium and 0.5 mm in the stratified epithelium of the esophagus.
Update on the Paris classification of superficial neoplastic lesions in the digestive tract

Endoscopic appearance of a superficial neoplastic lesion on the surface of the digestive-tract mucosa: excavated type (0 - III). An ulcer is seen.
Update on the Paris classification of superficial neoplastic lesions in the digestive tract

- Micrometer measurement should be generally used to allow comparison of outcomes after either surgery or endoscopic mucosal resection (EMR).
- With regard to the depth of invasion into the submucosa, the empirical cut-off limit adopted in Japan for safety after mucosectomy (EMR) varies depending on the site of the lesion.
  - It is estimated as less than 200 µm in the esophagus, 500 µm in the stomach, and 1000 µm in the large bowel.
  - In the large bowel, this cut-off value only applies to sessile lesions.

Endoscopy 2005;37:570-578
Update on the Paris classification of superficial neoplastic lesions in the digestive tract

In stomach

In colon

Endoscopy 2005;37:570-578
<table>
<thead>
<tr>
<th>Japanese</th>
<th>Western</th>
<th>Vienna classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>normal and benign lesion with no atypia</td>
<td>negative for dysplasia</td>
<td>1. negative for neoplasia/dysplasia</td>
</tr>
<tr>
<td>benign no neoplastic lesion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>borderline lesion*</td>
<td>indefinite for dysplasia</td>
<td>2. indefinite</td>
</tr>
<tr>
<td></td>
<td>low grade adenoma/dysplasia</td>
<td>3. noninvasive low grade neoplasia</td>
</tr>
<tr>
<td></td>
<td>high grade adenoma/dysplasia</td>
<td>4.1. high grade adenoma/dysplasia</td>
</tr>
<tr>
<td>lesions strongly suspected of carcinoma</td>
<td></td>
<td></td>
</tr>
<tr>
<td>carcinoma</td>
<td></td>
<td>4.2. carcinoma in situ</td>
</tr>
<tr>
<td>suspicious for invasive carcinoma</td>
<td></td>
<td>4.3. suspicion of invasive carcinoma</td>
</tr>
<tr>
<td>invasive carcinoma</td>
<td></td>
<td>invasive carcinoma</td>
</tr>
</tbody>
</table>

* borderline lesion: adenoma, lesions difficult to decide as regenerative or neoplastic
Endoscopic staging

• The less than perfect reliability of endoscopic staging can be improved by EUS, particularly with high frequency proves (20 MHz).

• _Endoscopy tends to understage superficial lesions, and EUS tends to overstage them._

• When the two methods agree, the predictive value is high. (Yanai. GE 1997;46:212-216)