

What can you find in the esophagus?

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BSGIE
Belgian Society of Gastrointestinal Endoscopy

UZA

A systematic esophageal examination

A consistent report

Location in cm from incisors, approx. size in mm, extent and luminal caliber.

Mucosal description

Color, surface, focal lesions and vascular pattern.

Standardized terminology

Name the classification and record its components. Add representative photographs.

The gastroesophageal junction

Three separate landmarks

Z-line, top of gastric folds (GEJ), diaphragmatic impression. Record all in cm.

Sliding hiatal hernia

Report the axial separation between GEJ and diaphragm in cm.
A distance of 2 cm or greater indicates hiatal hernia.

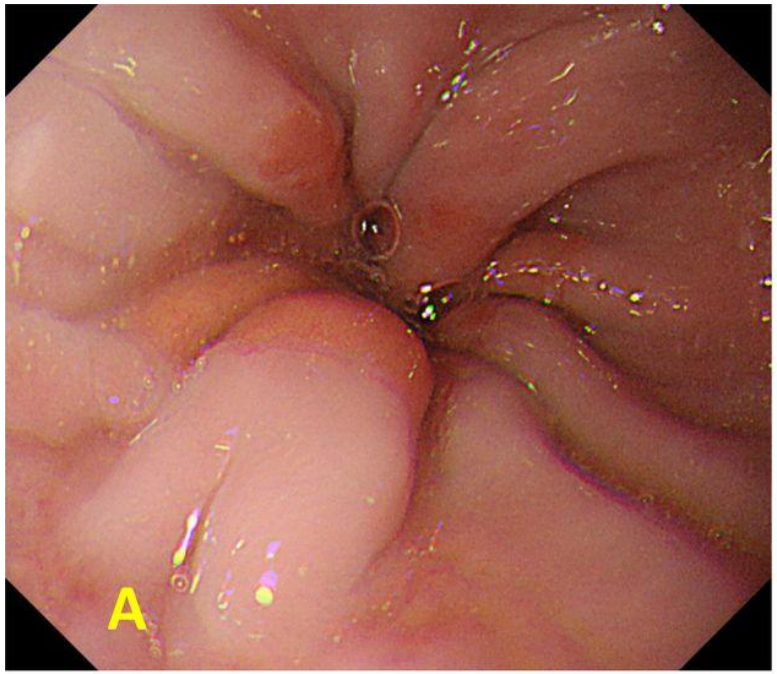
Example report

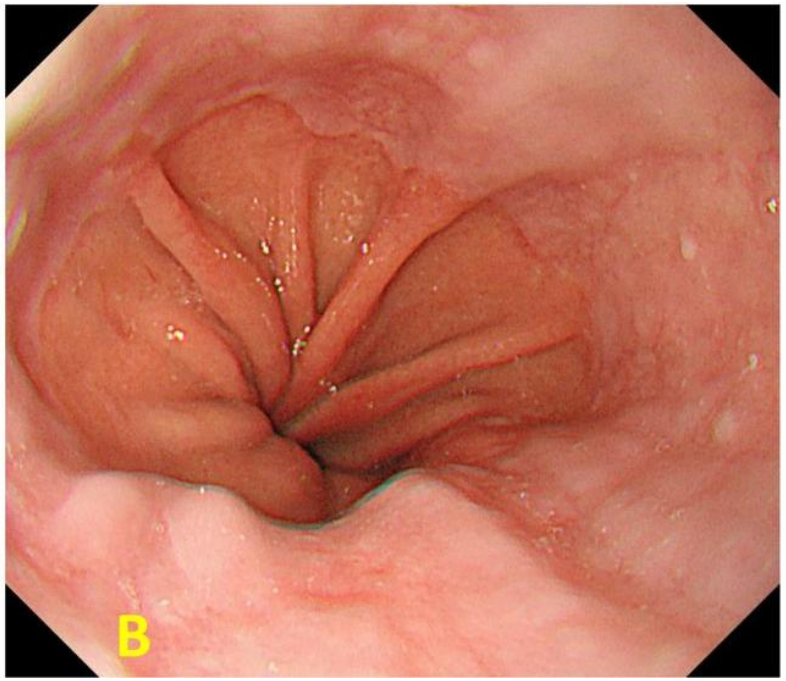
Z-line and gastric folds at 38 cm. Diaphragmatic impression at 41 cm. Sliding hiatal hernia, 3 cm.

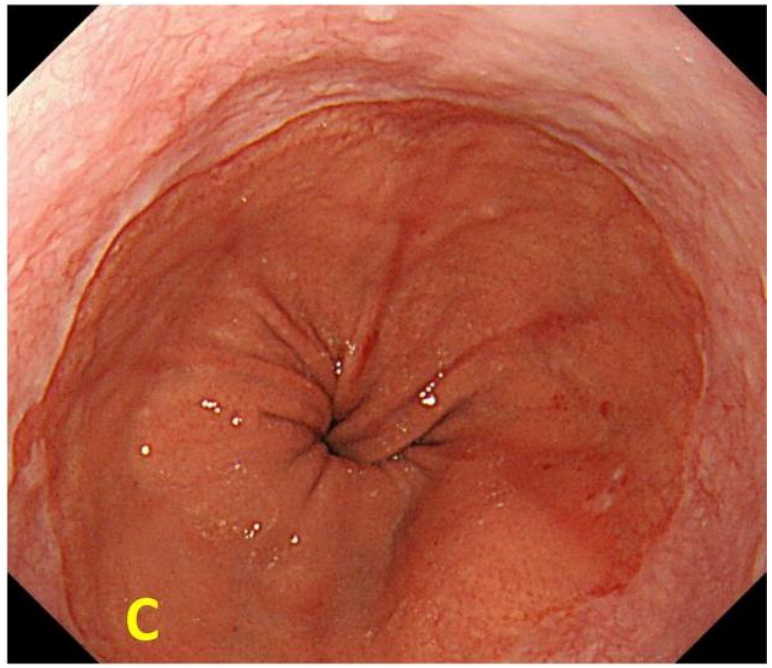
Measurement pitfall

Overinsufflation can flatten gastric folds. Reassess with partial deflation.

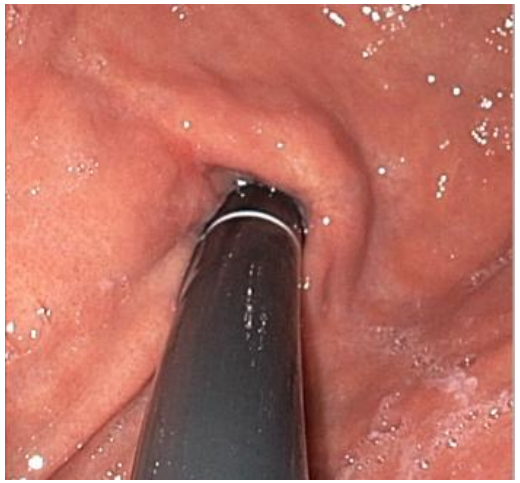
The gastroesophageal junction





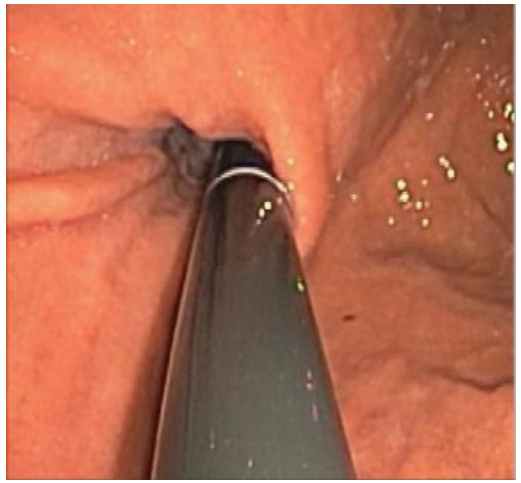


Hill classification: retroflexed flap valve



Hill I

Prominent fold. Tight grip around scope.



Hill II

Less prominent fold. Opens with respiration.



Hill III

Minimal fold. No tight closure.



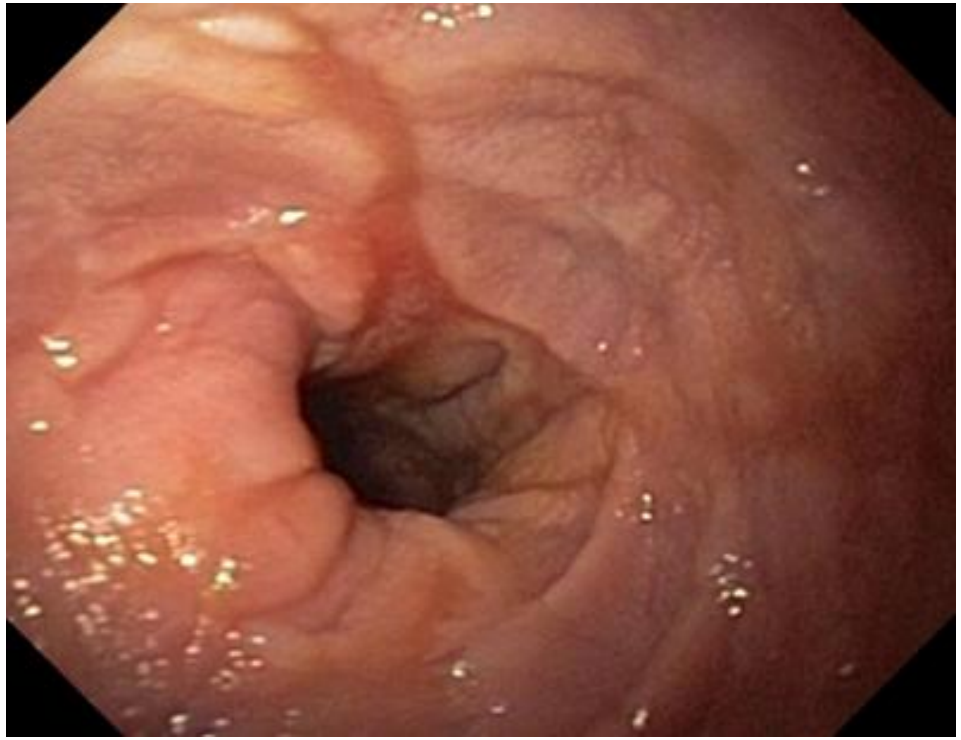
Hill IV

Absent fold. Persistently open junction.

Report axial hernia length separately from the Hill grade.

Photos: Endoscopy Campus, F. Seyfried & J. May — Hill classification (cropped photographic panels)

Reflux esophagitis



Recognition

Distal mucosal breaks, often along the folds.

What determines the grade?

Length of each break, bridging between fold tops and circumferential extent.

Example report

Distal mucosal breaks up to 8 mm, without bridging between folds: LA grade B.

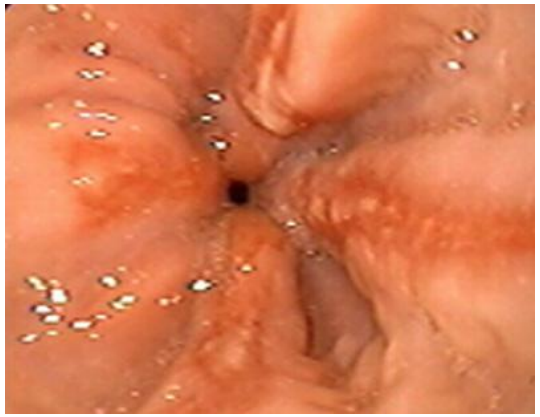
Photo: Endoscopy Campus — Reflux esophagitis / Los Angeles classification

Los Angeles classification



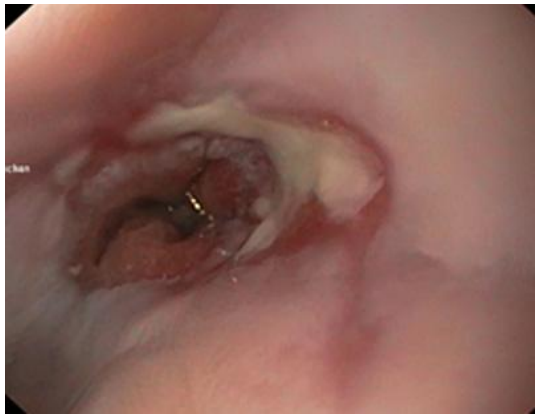
LA A

Breaks ≤5 mm. No bridging of fold tops.



LA B

Breaks >5 mm. No bridging of fold tops.



LA C

Bridging of fold tops. <75% circumference.

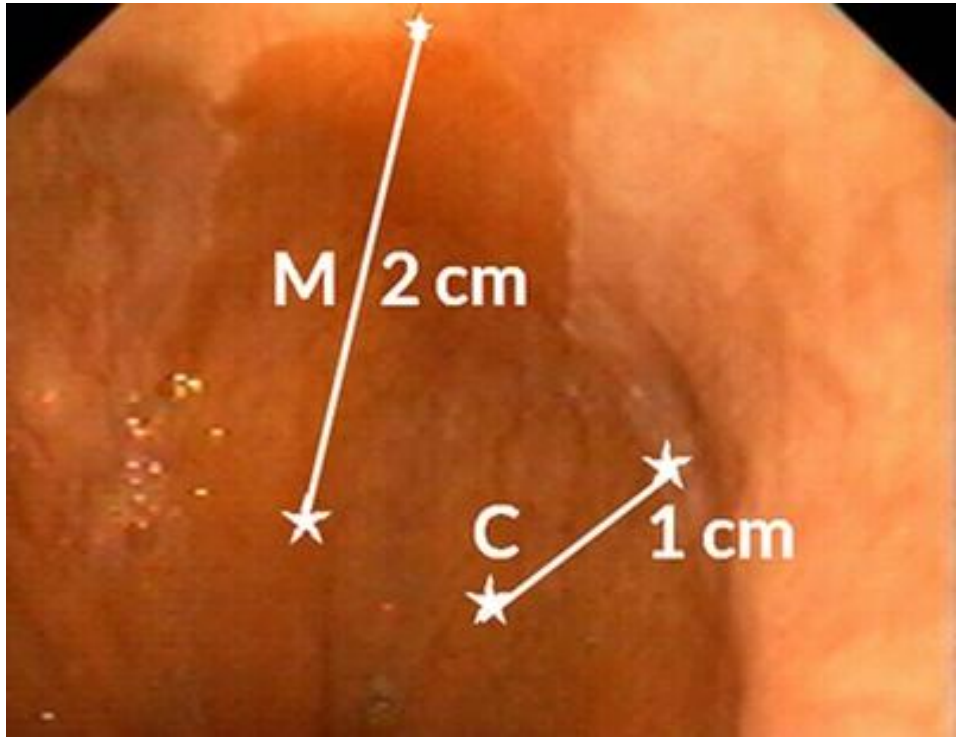


LA D

Mucosal breaks involve ≥75% circumference.

Photos: Endoscopy Campus — Reflux esophagitis / Los Angeles classification

Barrett esophagus



Prague C & M

C = circumferential extent
M = maximal extent above the GEJ.

Photographic example

C1M2 in the annotated source image. M includes the circumferential segment.

Example report

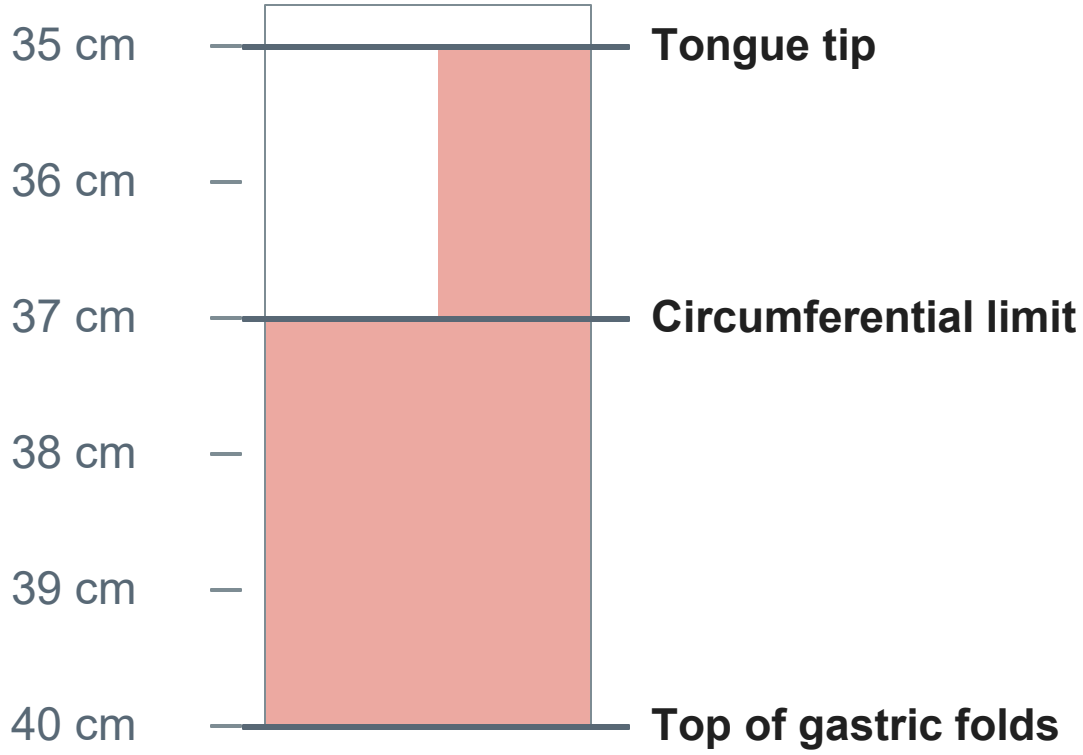
Columnar-lined mucosa, Prague C1M2. Add separate islands and focal lesions.

Endoscopy describes columnar mucosa. Histology confirms intestinal metaplasia and dysplasia.

Photo and original annotations: Endoscopy Campus — Prague classification (C1M2 example)

Prague C & M: measure during withdrawal

Illustrative scope readings at the incisors



1 Identify the GEJ: gastric folds at 40 cm

Use gentle insufflation; record the diaphragmatic pinch separately.

2 Circumferential limit at 37 cm

C = 40 − 37 = 3 cm

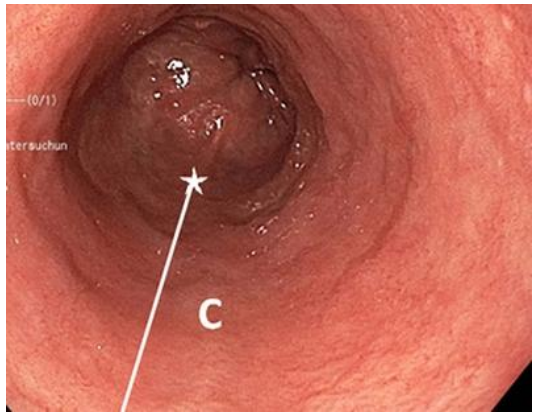
3 Most proximal tongue at 35 cm

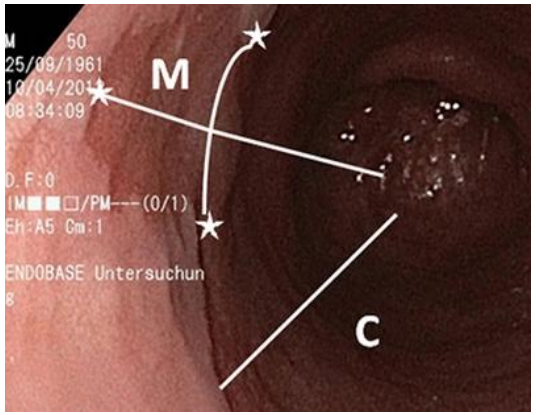
M = 40 − 35 = 5 cm → C3M5

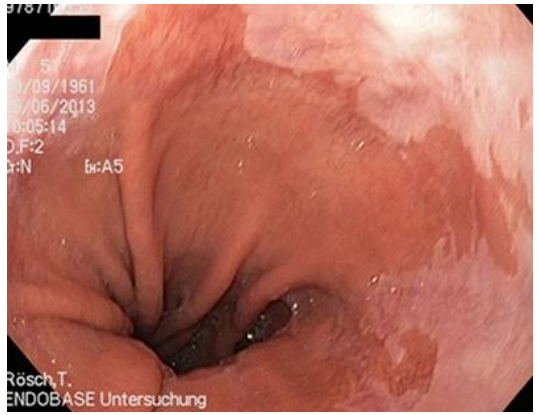
M includes C. Exclude isolated islands.

Method: Sharma et al., Gastroenterology 2006;131:1392–1399 — Prague C & M criteria

Prague examples: long segment and tongues only









C7M8

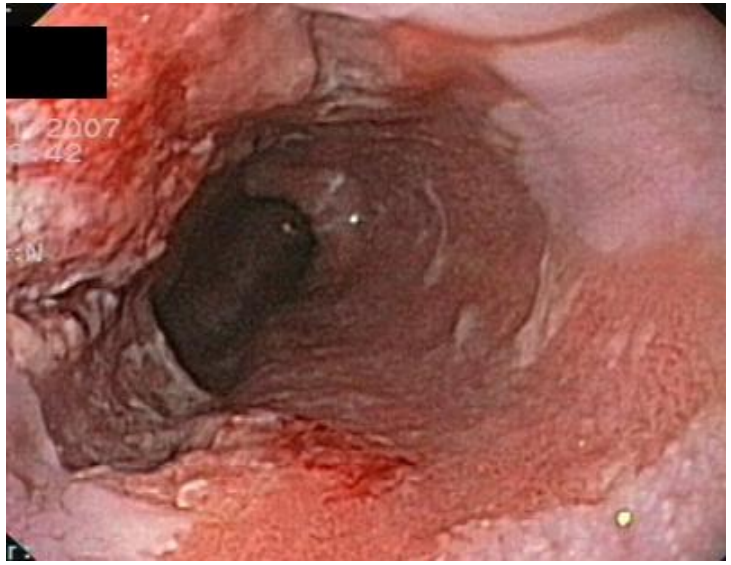
7 cm circumferential + 1 cm additional tongue. M is 8 cm in total.

C0M2

No complete circumferential segment. The longest tongue extends 2 cm above the GEJ.

Photos and source measurements: Endoscopy Campus — Prague classification (C7M8 and C0M2 cases)

Esophageal cancer



Flat ulcerated lesion



Polypoid semicircular tumor

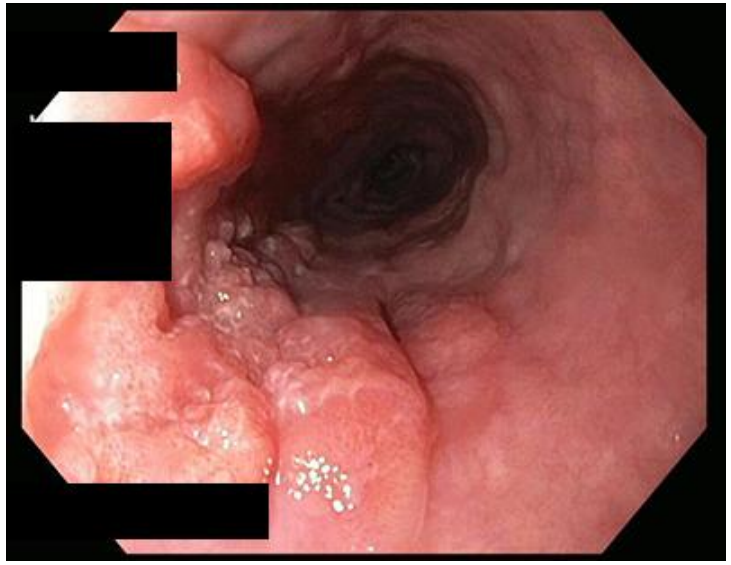


Ulcerated stenotic tumor

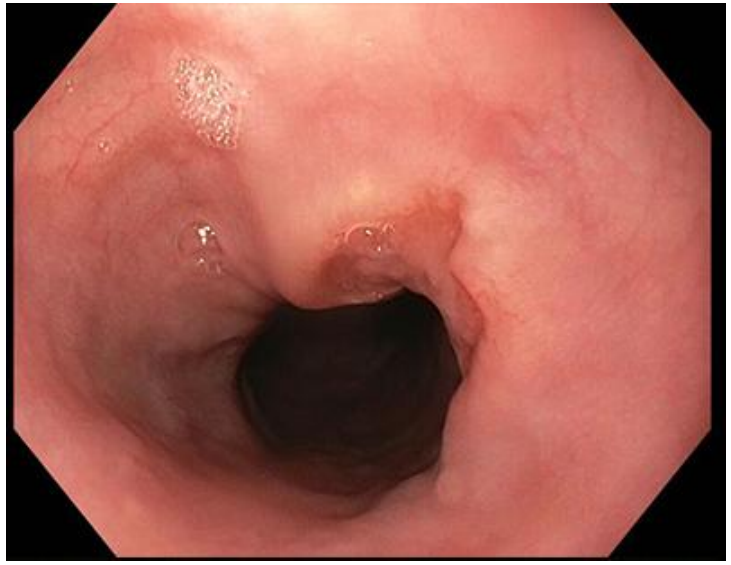
Report proximal/distal limits in cm, relation to the GEJ, circumference, bleeding and scope passage.

Photos: Endoscopy Campus — Esophagastric junction cancers: source Figs. 2, 4 and 6

Squamous cell carcinoma: subtle to elevated



Elevated lesion (0-l)

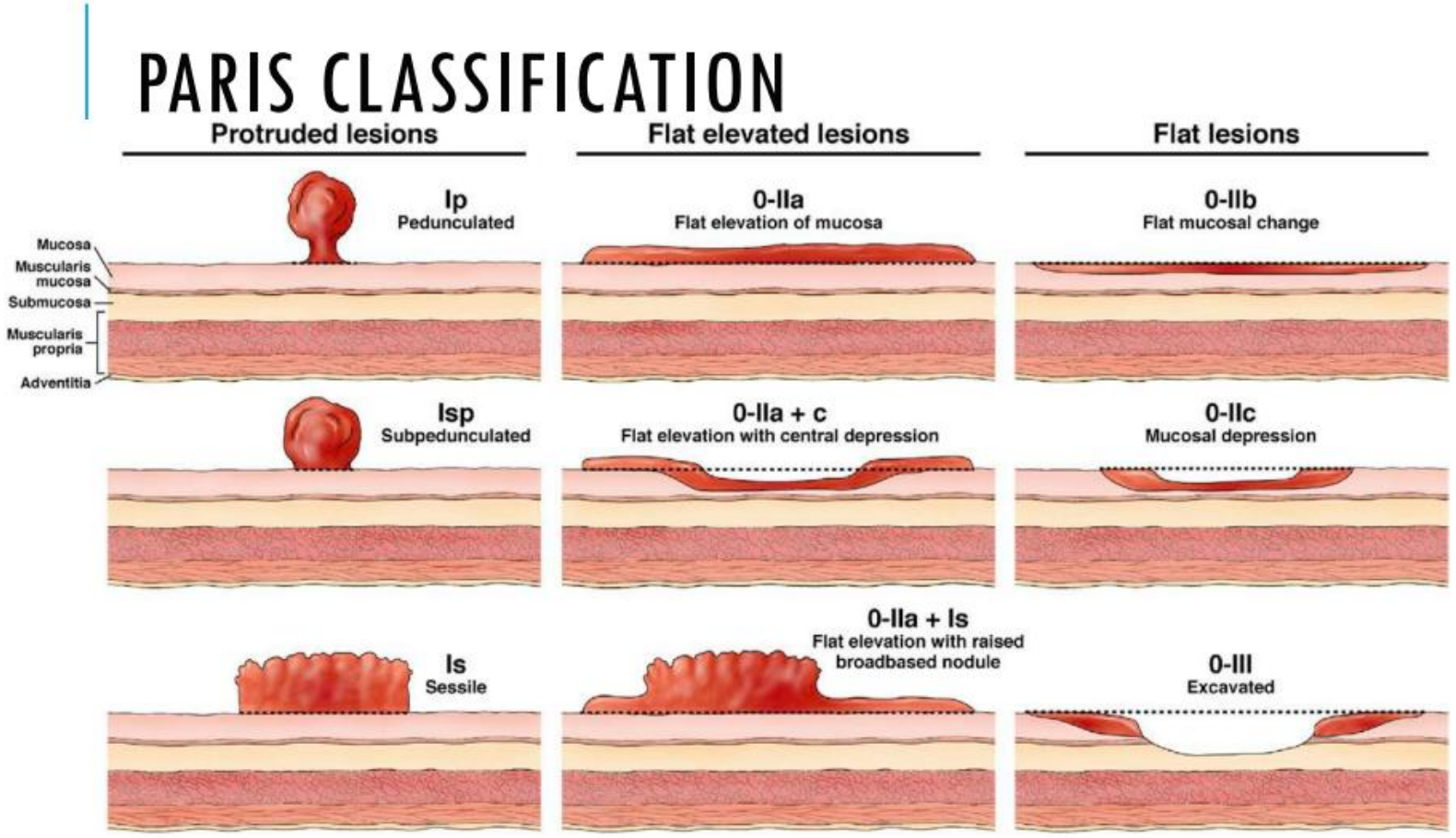


Shallow depressed lesion

Describe morphology with Paris, surface and vascular irregularity. Histology confirms carcinoma.

Photos: Endoscopy Campus — Paris classification: early squamous cell cancers (selected source cases)

Paris classification: superficial morphology



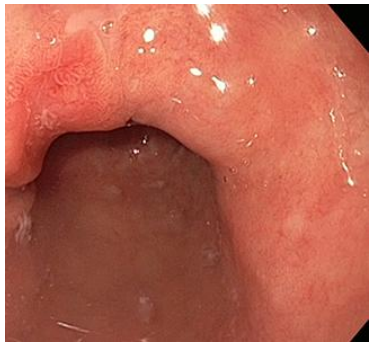
Paris classification: superficial morphology



0-Is: protruding



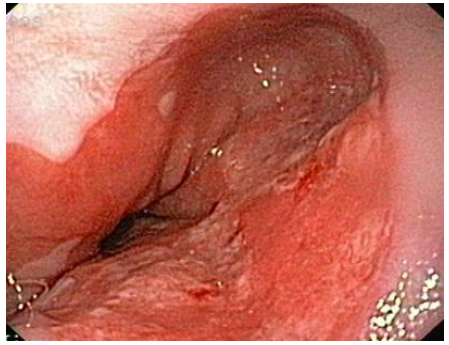
0-IIa: slightly elevated



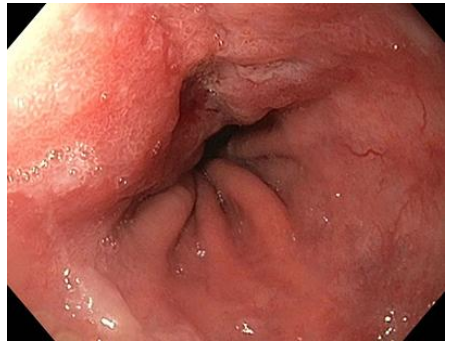
0-IIa+IIc: mixed



0-IIb: flat



0-IIc: depressed



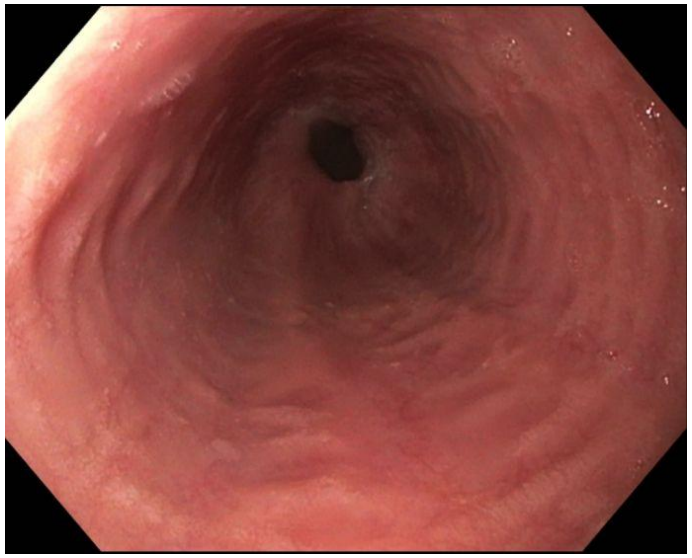
0-III: excavated

Photos: Endoscopy Campus, A. Meining & T. Rösch — Paris classification: early Barrett cancers (selected examples)

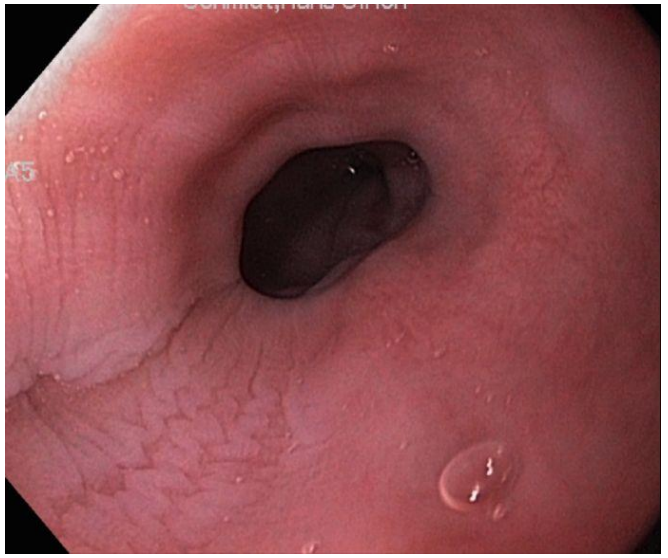
Eosinophilic esophagitis



White exudates



Fixed rings



Longitudinal furrows

Also record edema, strictures and luminal caliber. Report each EREFS component.

Photos: Endoscopy Campus, S. Miehlke, Y. Werner & T. Rösch — Eosinophilic esophagitis

EREFS: component scoring

Example: E1 R2 Ex0 F1 S0 = 4/9. Document the scoring version.

Feature	Score and definition
Edema (E)	0 absent - 1 reduced or absent vascular markings
Rings (R)	0 absent 1 subtle 2 distinct but passable 3 impassable
Exudates (Ex)	0 absent 1 <10% surface 2 ≥10% surface
Furrows (F)	0 absent 1 present without depth 2 with visible depth
Stricture (S)	0 absent 1 present. Add location and diameter.

Candida esophagitis



Adherent white plaques

Recognize

White or yellow plaques that resist rinsing; may merge over erythematous mucosa.

Report

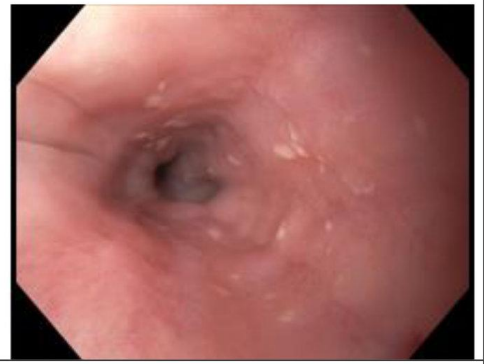
Level and extent, plaque size and confluence, friability and any narrowing.

Diagnostic impression

“Appearance suggestive of Candida esophagitis.” EoE exudates can mimic plaques.

Photo: Endoscopy Campus — Kodsi classification of Candida esophagitis (grade II panel, cropped)

Candida esophagitis

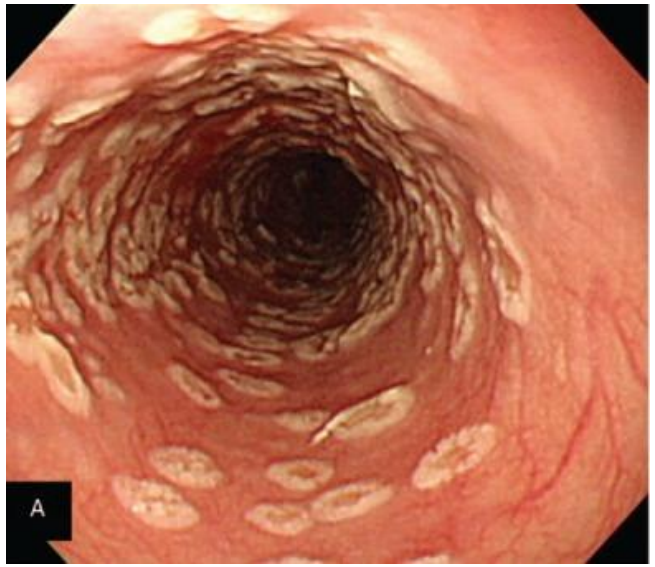
Kodsi grade I		• Plaques ≤ 2 mm * • No edema, no ulceration
Kodsi grade II		• Plaques ≥ 2 mm * • Edema possible, no ulceration

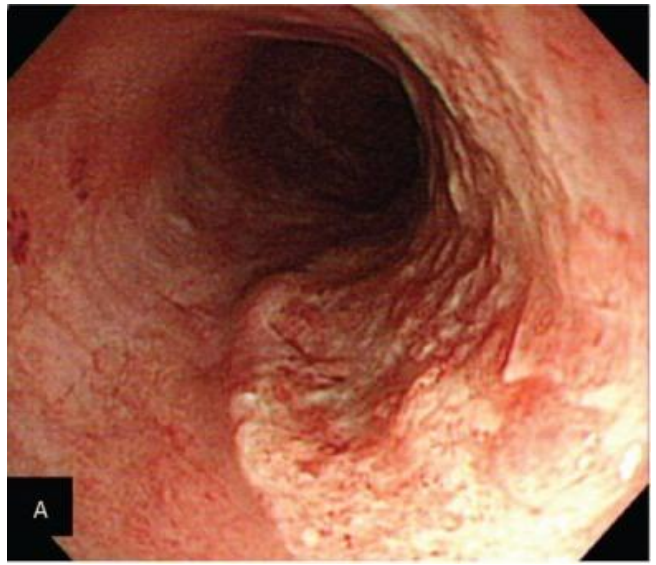
Kodsi grade III		• Linear and confluent plaques • And/or ulcerations
Kodsi grade IV		• As for grade III, plus: • Detachment of mucous membranes and luminal narrowing

Adherent white plaques

Photo: Endoscopy Campus — Kodsi classification of Candida esophagitis

Viral esophagitis: HSV and CMV ulcers





HSV

Usually multiple small, discrete, shallow ulcers; intervening mucosa may look normal.

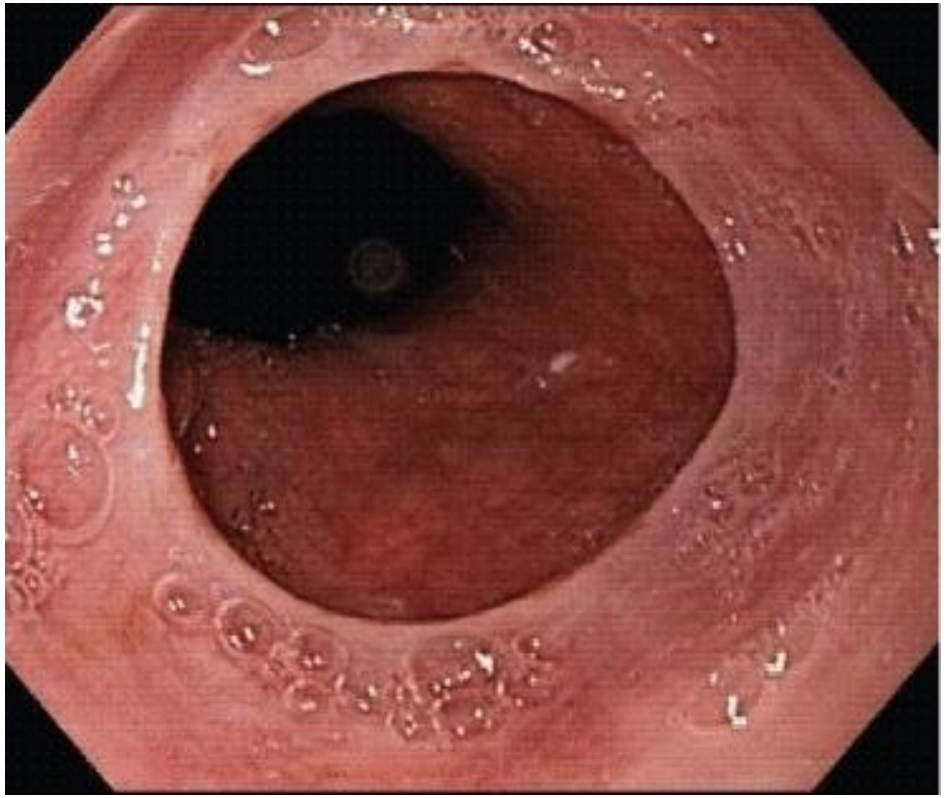
CMV

Often larger, elongated or deep ulcers, especially in the distal esophagus.

Report number, level, size, shape and depth. Appearance overlaps: confirm the cause with tissue.

Photos: Jung et al., Medicine 2019;98:e15845 — Fig. 2A (HSV) and Fig. 3A (CMV), cropped

Rings and strictures



Thin circumferential Schatzki ring

Morphology

Thin ring, web, smooth stricture or irregular narrowing.

Measurements

Location, length, estimated diameter and scope traversability.

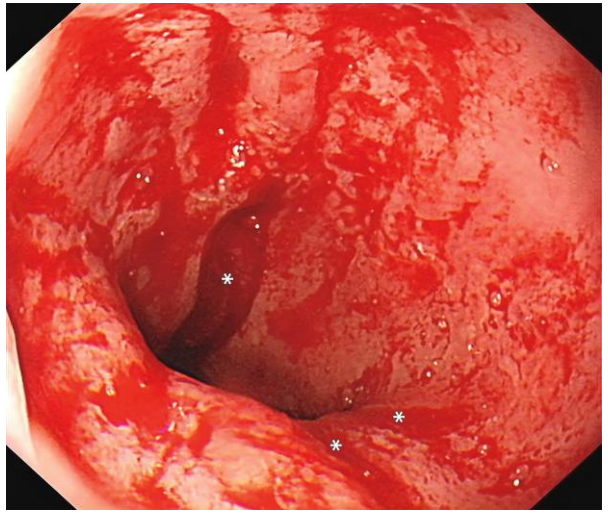
Example report

Thin concentric ring at the GEJ, with a smooth surface and no ulceration. Document lumen diameter and scope passage.

Document how diameter was estimated and whether the gastroscope passed.

Photo: Smith MS — Diagnosis and Management of Esophageal Rings and Webs (2010), Fig. 1 (cropped)

Mallory–Weiss tears: longitudinal mucosal lacerations



Linear tear at the GEJ

Recognize: a mucosal split at or across the GEJ, often after retching or vomiting.

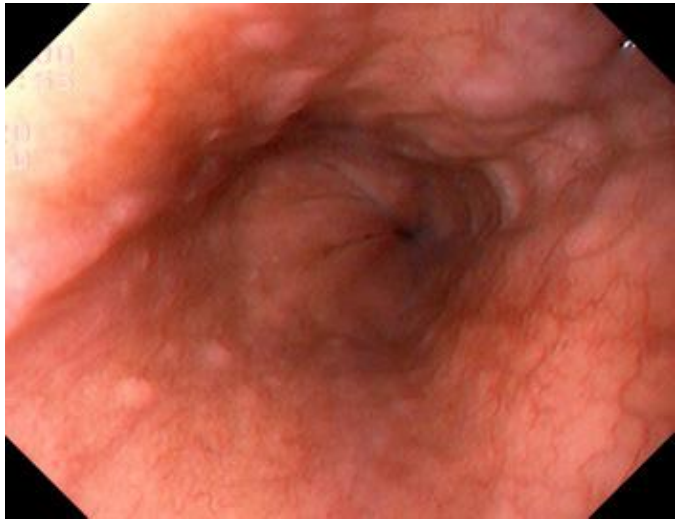


Tear with adherent clot

Report: number, length and location; active bleeding, visible vessel, clot or clean base.

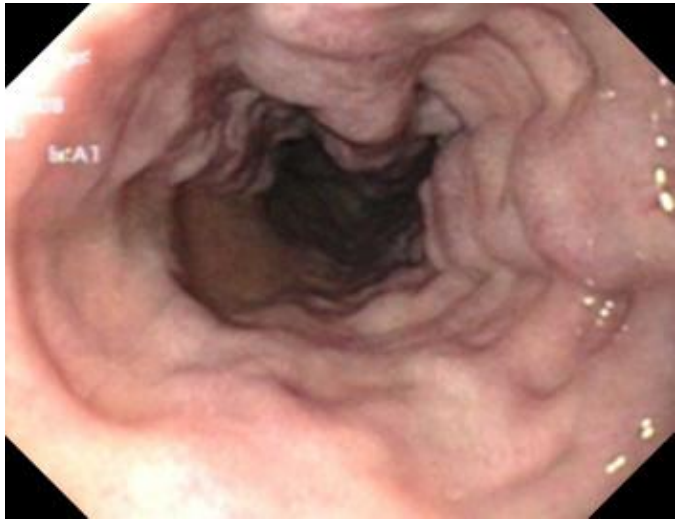
Left: Dr. Zhi Hu — Mallory–Weiss syndrome, NEJM
Right: Dr. Julio Murra-Saca, The Gastrointestinal Atlas — Mallory–Weiss syndrome (different patients)

Esophageal varices: modified Paquet I–III



Grade I

Slight elevation; may flatten with full insufflation.



Grade II

Project into about one-third of the lumen; do not flatten with insufflation.



Grade III

Occupy about half the lumen or more; columns may touch.

Also report diameter, number, distribution and red signs. Assess with moderate insufflation.

Classification and photos: Endoscopy Campus — Esophageal varices, modified Paquet I–III

Varices: red signs and recent bleeding stigmata



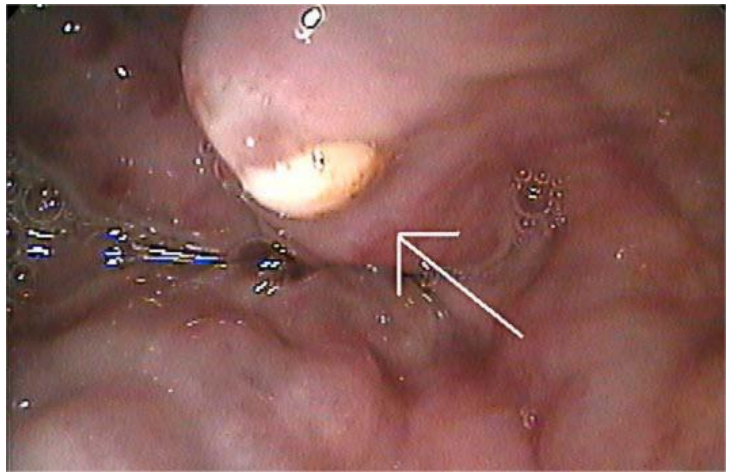
Red wale markings

Longitudinal red streaks: increased bleeding risk.



Cherry-red spots

Discrete red spots, here with red wale marks.

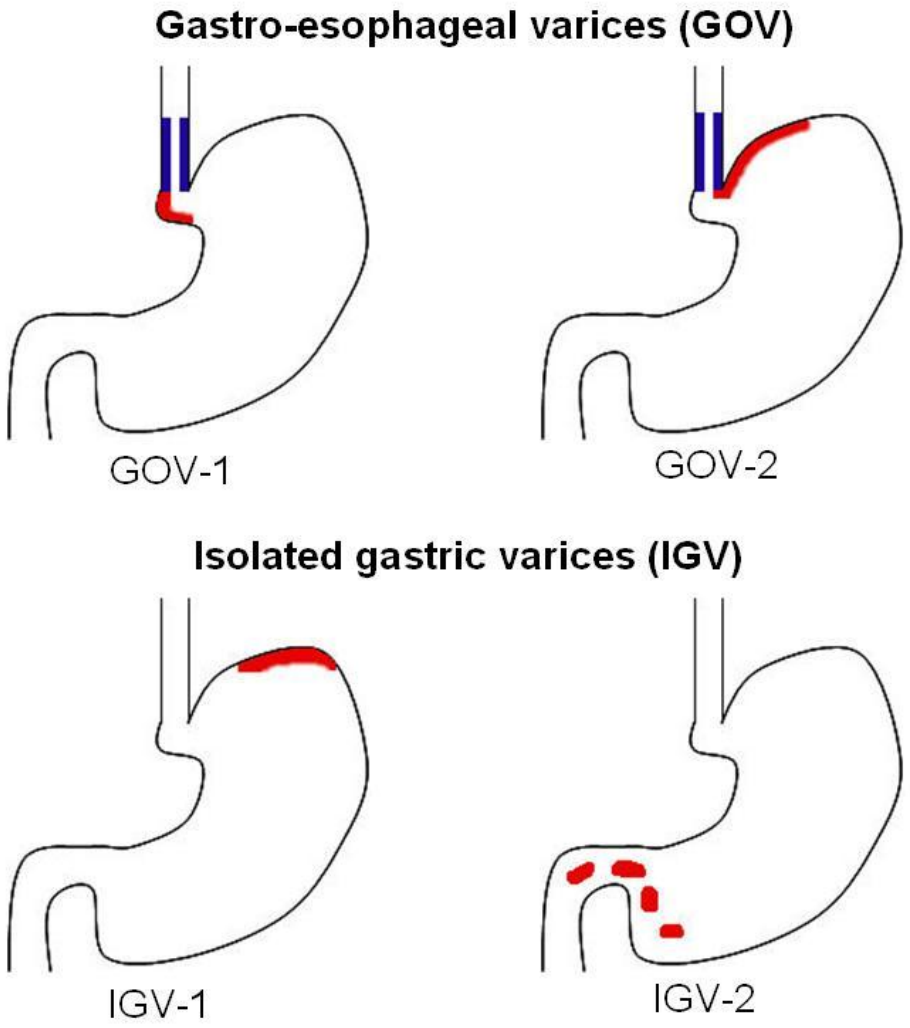


White nipple sign

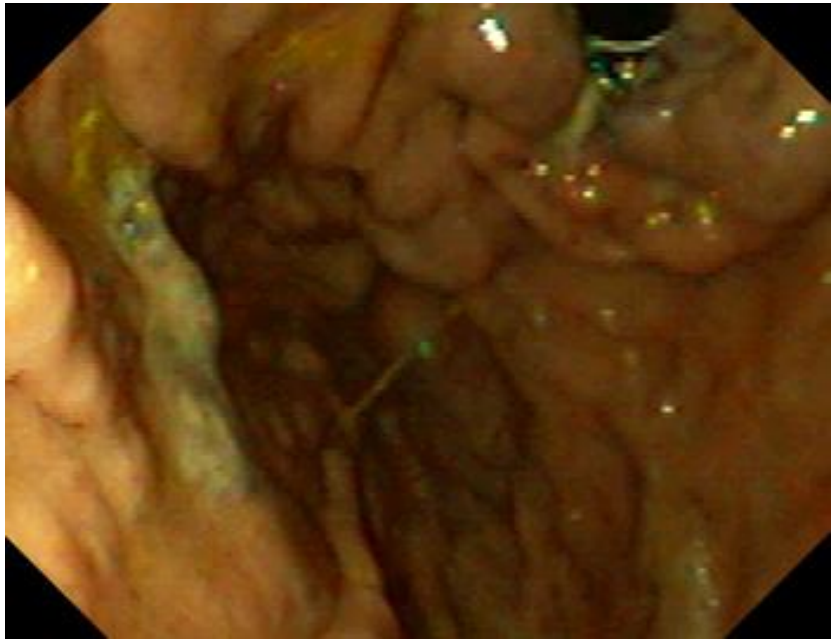
Platelet–fibrin plug: a site of recent hemorrhage.

Left: Endoscopy Campus. Middle: Philips et al., Gastroenterol Rep 2016, Fig. 1F (cropped).
Right: Khan & Shapiro, Case Rep Gastroenterol 2011;5:386–390, Fig. 1 (original arrow).

Fundal varices: Sarin classification

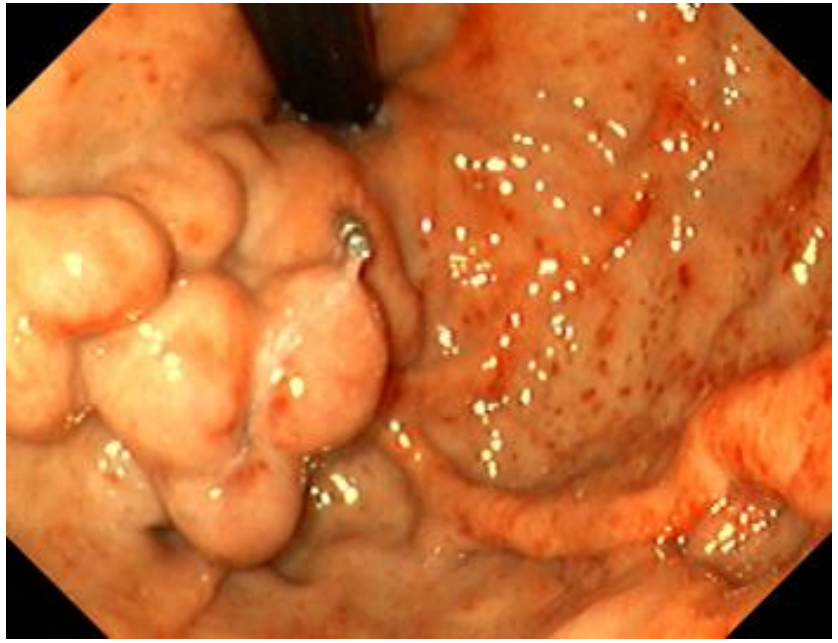


Fundal varices: Sarin classification



GOV2

Esophageal varices extending into the fundus.

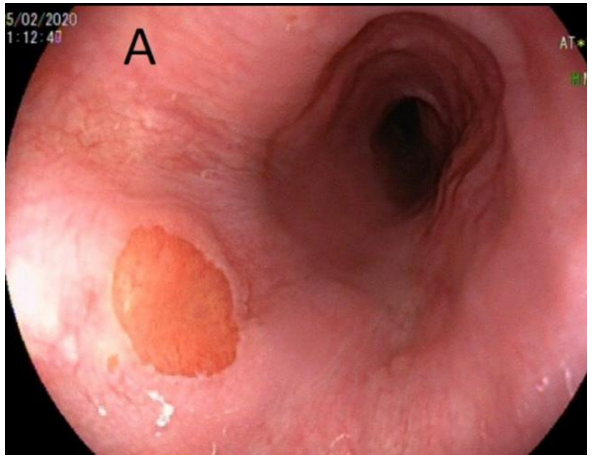


IGV1

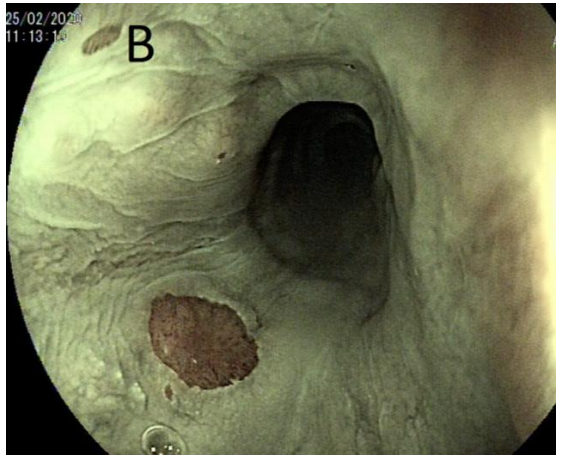
Isolated fundal varices without esophageal extension.

Photos: Endoscopy Campus — Fundic varices: GOV2 and IGV1 examples (Sarin classification)

Inlet patch: heterotopic gastric mucosa



White light



NBI

Location

Typically in the proximal esophagus, just below the upper sphincter.

Appearance

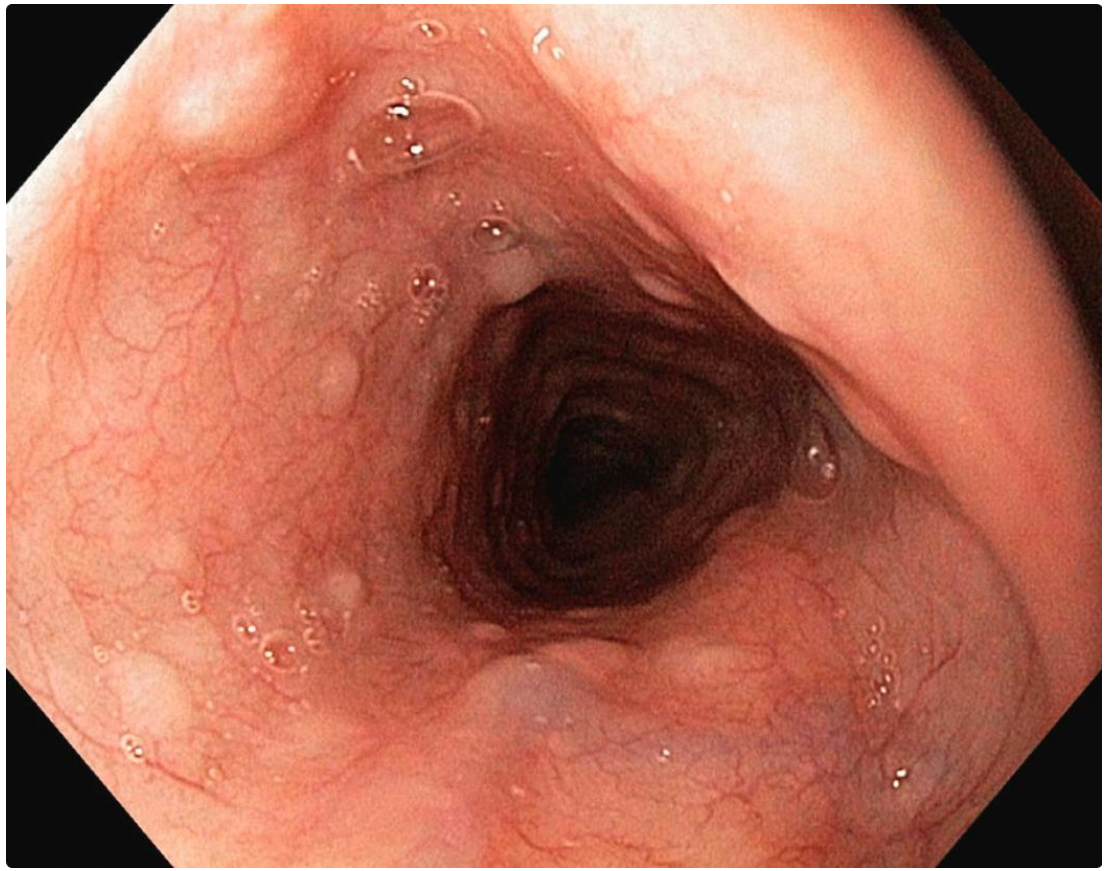
A sharply demarcated salmon-colored patch in pale squamous mucosa.

Report

Number, level, size, borders and surface; document any focal irregularity.

White light: Aznar Ruiz et al., ASENEM — Inlet patch como causa de disfagia y tos crónica, Fig. 1
NBI: Endoscopy Campus — Heterotopic gastric mucosa, Fig. 1b. The photographs show different patients.

Glycogenic acanthosis



Benign squamous epithelial thickening

Multiple small, rounded or oval, slightly raised grey-white lesions on otherwise normal mucosa.

Report distribution, size and any atypical focal change. Consider Candida and EoE in the differential of white lesions.

Photos: Tsai et al., World J Gastroenterol 2015;21:1091–1098 — Fig. 6A/B (separate panels cropped)

A reproducible esophageal report

Landmarks

Z-line, GEJ and diaphragm in cm. Hiatal hernia length.

Classification

LA, Prague, Paris, EREFS, Hill or named variceal system, as applicable.

Description

Level, size, surface, extent, luminal caliber and traversability.

Evidence and certainty

Representative images. Sampling sites if taken. Separate appearance from histology.

Photographic sources

Endoscopy Campus

LA, Hill, Prague, Paris, BING, EoE, Candida, varices, cancers and inlet patches

Clinical atlases / articles

Schatzki ring: Smith. Variceal signs: Philips et al.; Khan & Shapiro.

Jung et al., Medicine 2019;98:e15845

HSV and CMV esophagitis: Figures 2A and 3A (cropped).

ASENEM / Gastrointestinal Atlas

Inlet patch: Aznar Ruiz et al. Mallory–Weiss: Murra-Saca. UZA / BSGIE assets.

Classification references

LA: Lundell et al. Gut 1999. doi:10.1136/gut.45.2.172

Prague / Paris: ESGE optical diagnosis curriculum, 2025

doi:10.1055/a-2662-7978

EREFS: Hirano et al. Gut 2013. doi:10.1136/gutjnl-2011-301817

0–9 EREFS: Dellon et al. CGH. doi:10.1016/j.cgh.2015.08.040

Hill: Hill et al. GIE 1996. doi:10.1016/S0016-5107(96)70006-8

Varices: BSG/AUGIS best practice guidance, 2026

doi:10.1136/flgastro-2025-103455