

# French Society of Digestive Endoscopy SFED guideline: monitoring of patients with Barrett's esophagus



## Authors

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## Bibliography

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## Definitions

Diagnosis of Barrett's esophagus, also known as Barrett's mucosa, is by two means, endoscopic and histologic. Endoscopically, the condition is defined as a columnar epithelium that extends above the gastroesophageal junction (GEJ); histologically, it is defined by the presence of a specialized intestinal metaplasia.

Barrett's esophagus is classified into three types according to its length:

- ▶ Long-segment Barrett's esophagus: when the distance between the GEJ and the squamocolumnar epithelial line (Z-line) is more than 3 cm long.
- ▶ Short-segment Barrett's esophagus: when the distance between the GEJ and the Z-line is from 5 mm to 3 cm long. It may be circular like a sleeve or segmented into tongue(s).
- ▶ Ultra-short-segment Barrett's esophagus: when the distance between the GEJ and the Z-line is less than 5 mm long. This entity cannot be diagnosed endoscopically since it cannot be distinguished from the cardial intestinal metaplasia.

## When to monitor

- ▶ Patient has long- or short-segment Barrett's esophagus.
- ▶ Patient age and general status are compatible with treatment should malignancy occur. In elderly patients with a life expectancy of several years, monitoring should be proposed only when the first biopsies show dysplasia.

## Endoscopic technique

The GEJ must be carefully examined in every patient undergoing gastroscopy for whatever indication and even in the absence of symptoms of gastroesophageal reflux disease (GERD). This examination must be performed while the endoscope is on the way down. Using insufflation, all the time needed must be taken in order to examine the cardia in its closed and open positions. The endoscope must be positioned a few centimeters above the GEJ, which is located at the most proximal extent of the gastric folds or at the distal extent of the palisade vessels. The Z-line must also be examined along its entire length.

In cases of severe esophagitis, treatment with proton pump inhibitors (PPIs) must be started and follow-up endoscopy performed 6–8 weeks later. If possible during the first endoscopy, the biopsies should be taken according to the protocol described in **Table 1**. Otherwise, especially

**Table 1** Monitoring protocol

No dysplasia	Short-segment BE (< 3 cm): endoscopy + biopsies every 5 years Long-segment BE (3–6 cm): endoscopy + biopsies every 3 years Long-segment BE (> 6 cm): endoscopy + biopsies every 2 years
Low-grade dysplasia	Double-dose PPI treatment for 2 months Prior repeated endoscopy + biopsies If low grade confirmed, endoscopy + biopsies at 6 months, 1 year, then yearly
High-grade dysplasia	Double-dose PPI treatment for 1–2 months Prior repeated endoscopy + biopsies If high grade confirmed, endoscopic or surgical treatment

BE, Barrett's esophagus; PPI, proton pump inhibitor.

## BARRETT Extent

Localization of lesions and biopsies



Date: / /

Operator: \_\_\_\_\_

Patient identity: \_\_\_\_\_

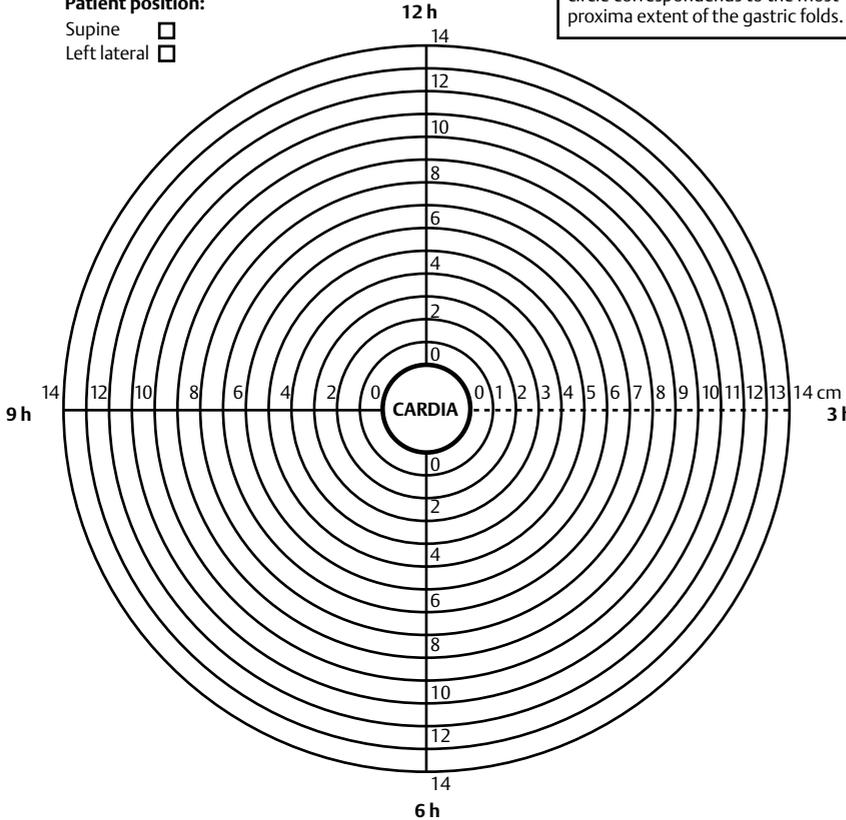
Birthdate: \_\_\_/\_\_\_/\_\_\_\_\_

**Patient position:**

Supine

Left lateral

'0 cm' at the level of the central circle corresponds to the most proxima extent of the gastric folds.



Distance proximal extent of gastric folds – dentate arch: \_\_\_\_\_ cm

Distance proximal extent of Z-line – dentate arch: \_\_\_\_\_ cm

Hight of hiatal hernia (if present): \_\_\_\_\_ cm

**Fig. 1** SFED planimeter for the recording of site and extent of Barrett's esophagus at endoscopy.

in the case of long-segment Barrett's esophagus, a second-look endoscopy under general anesthesia must be scheduled in order to carry out the biopsy protocol under the proper conditions. Dyes that stain intestinal metaplasia, such as methylene blue, are not required for the diagnosis of short- and long-segment Barrett's esophagus.

The endoscopy report must contain:

- ▶ Information about the location of the anatomical landmarks in relation to the dentate arch:
  - Diaphragmatic hiatus.
  - GEJ (most proximal extent of the gastric folds or distal end of palisade vessels).
  - Most proximal extent of the squamo-columnar epithelial line or Z line.
- ▶ Information about the length and width of any identified tongue and the length of the circular Barrett's esophagus. The Prague classification (CM) is recommended for characterization of Barrett's esophagus.
- ▶ Information about the height of any associated hiatal hernia.

### Biopsy protocol (using standard biopsy forceps)

- ▶ In cases of circular long-segment Barrett's esophagus:
  - Any abnormality in the surface or the color of the mucosa must be biopsied, listed and put in a separate vial.
  - Four biopsies (one on each side quadrant) should be obtained every 2 cm starting from the GEJ. Biopsies must be placed in separate vials (one vial per level) containing a 2% formalin solution.
- ▶ In cases of short-segment Barrett's esophagus or tongues:
  - Two to four biopsies must be obtained every 1 cm starting from the GEJ. If any indentation of the Z-line is identified, it must be biopsied if its length is greater than 5 mm.
- ▶ The SFED recommends indicating the site of each biopsy on a drawing (SFED planimeter, **Fig. 1**), which is kept in the patient records. A copy must be sent to the pathologist with the endoscopy report.

- ▶ In cases of low-grade or high-grade dysplasia, a second histological examination must be performed by a different and independent pathologist.
- ▶ Chromoscopy with acetic acid, with or without new imaging methods (magnification, narrow band imaging or Fuji Intelligent Chromo Endoscopy – Fujinon Co., Omiya, Japan), may help to direct biopsies of high-grade dysplastic or carcinomatous areas, but cannot replace systematic random biopsies, as described above.
- ▶ Systematic biopsies of the GEJ for the detection of ultra-short Barrett's esophagus or cardial intestinal metaplasia are not recommended so far.

**Competing interests:** None

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