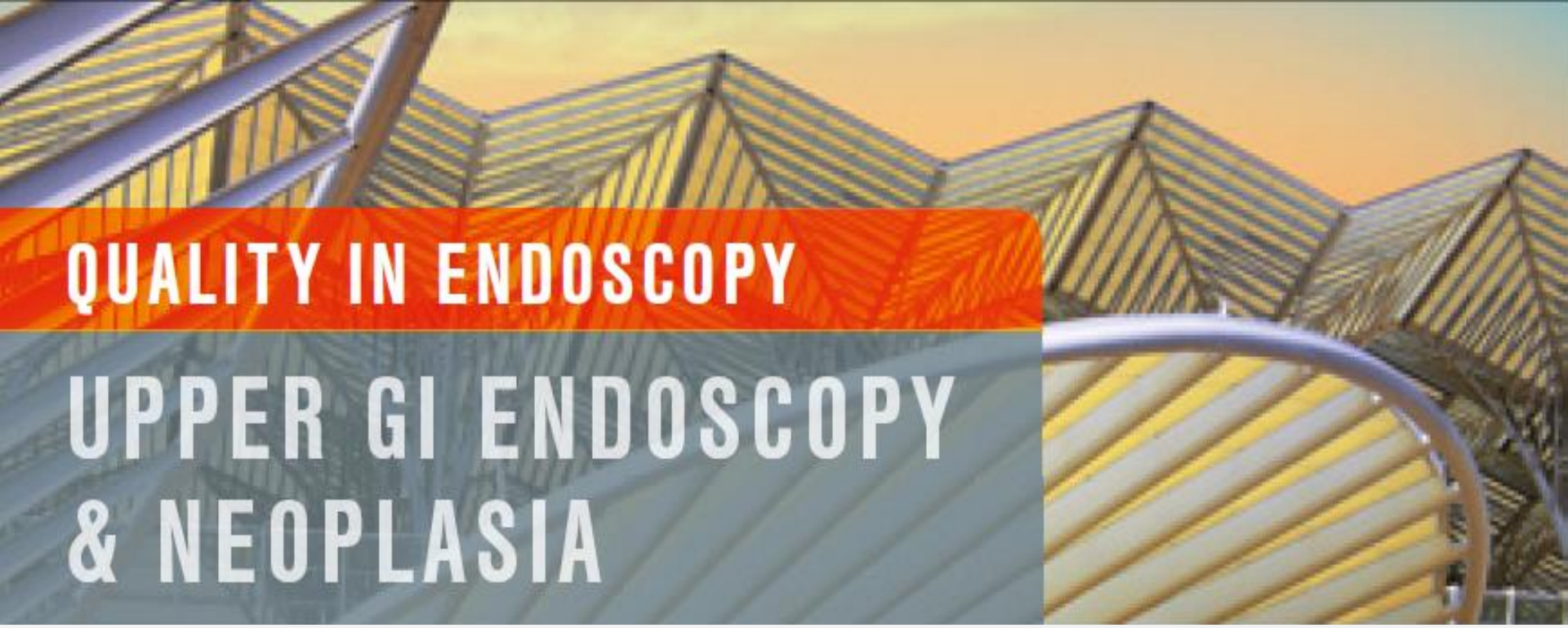


When to do upper endoscopy

Name: Lars Aabakken
OUS-Rikshospitalet, Oslo
Norway

ESGE esdo

For starters

- **Upper endoscopy is widely available**
  - Equipment
  - Expertise
  - Convenience
- **Still, every request for EGD must be assessed:**
  - Indication
  - Urgency
  - (Local competence)

To do or not to do

- **60 y/o male on NSAIDs, Black and red hematemesis for 2 days**
- **29 y/o girl with upper abdominal pain and bloating, previous negative EGD 2 years back**
- **40 y/o man with extensive fundic varices and intolerance to betablockers**

EGD indication categories

- **Emergency indication**
- **Definite indication**
- **Questionable indication**

Emergency indications

- **Red hematemesis**
- **Black hematemesis (?)**
- **Esophageal foreign objects**
- **Gastric foreign objects (?)**
- **Caustic injuries**
- **Esophageal perforations**

Definite indications

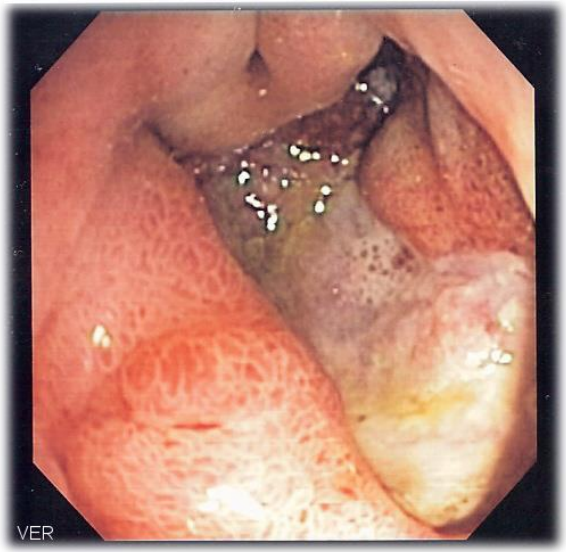
- **Alarm symptoms from upper GI tract**
  - Dysphagia, weight loss, anemia, persistent vomiting
- **Assessment and therapy of previously (or otherwise) shown pathology**
- **Surveillance per protocol**
  - Portal hypertension, Barretts, FAP

Not so definite indications

- **Dyspepsia without alarm symptoms**
- **Endoscopy for reassurance**
- **Repeat endoscopy**
- **Questionable surveillance schemes**

Organic causes of dyspepsia

- **10488 consecutive EGD pts in Singapore**
- **5066 for simple dyspepsia**
  - 19.5% significant disease
  - 14.9% peptic ulcer
  - 5% esophagitis
  - 0.5% stomach cancer

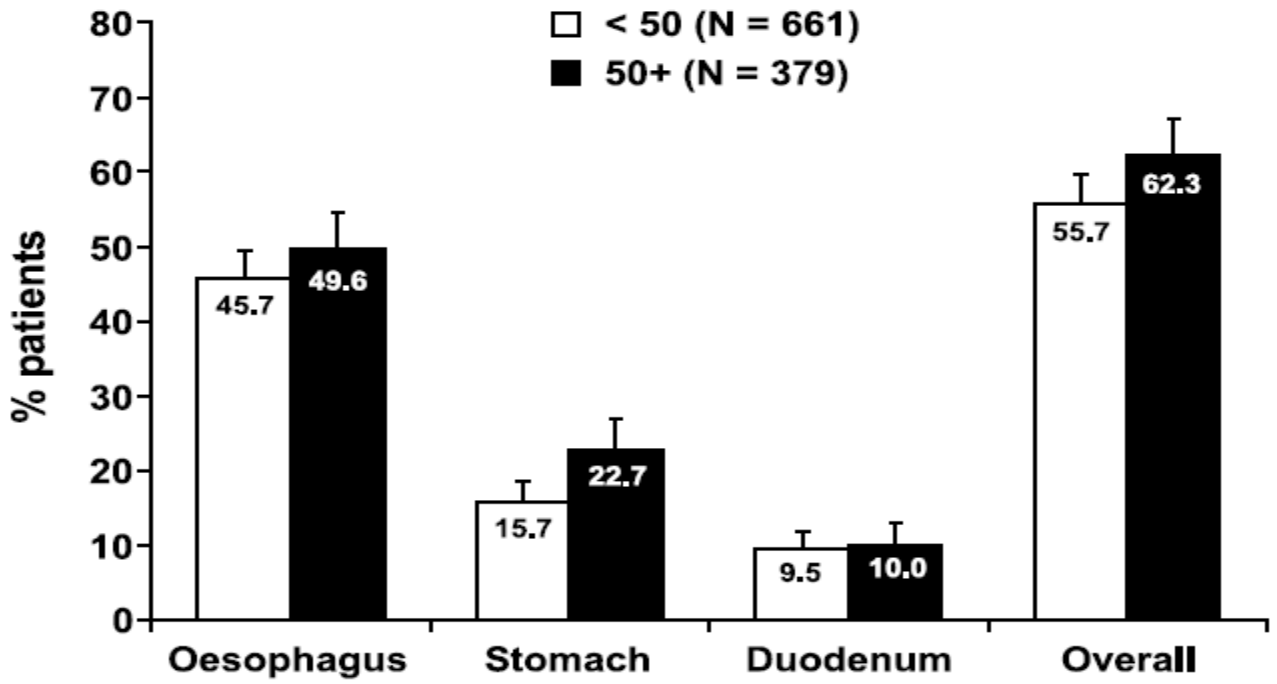


- **>45 yrs: x10 increased risk of cancer**

Wai et al , Gastrointest Endosc 2002

Organic causes...

- **1100 pts in Canada referred to endoscopy for dyspepsia (not heartburn alone)**
- **Clinically significant findings in 58%**



Thomson et al, Aliment Pharmacol Ther 2003

Organic causes...

- **Esophagitis 43.4%**
- **Erosive gastroduodenitis 16%**
- **Peptic ulcer 5.3%**
- **Gastric cancer 0.2%**
- **No significance of symptom profile**
- **No significance of alarm symptoms**
- **HP+ and NSAID/ASA predictive of significant disease**

Thomson et al, Aliment Pharmacol Ther 2003

Overall range

Table 2 Range of endoscopic findings in dyspepsia (median (range) values from 22 studies)[3–24]

Gastroduodenal ulcer combined	17% (1–44)
Gastric ulcer	5.5% (1.6–8.2)
Duodenal ulcer	10% (2.3–12.7)
Reflux oesophagitis	12% (0–23.0)
Gastric malignancy	1.2% (0–3.4)
Normal findings/miscellaneous irrelevant findings	51% (2–71)

Tytgat Gut 2002

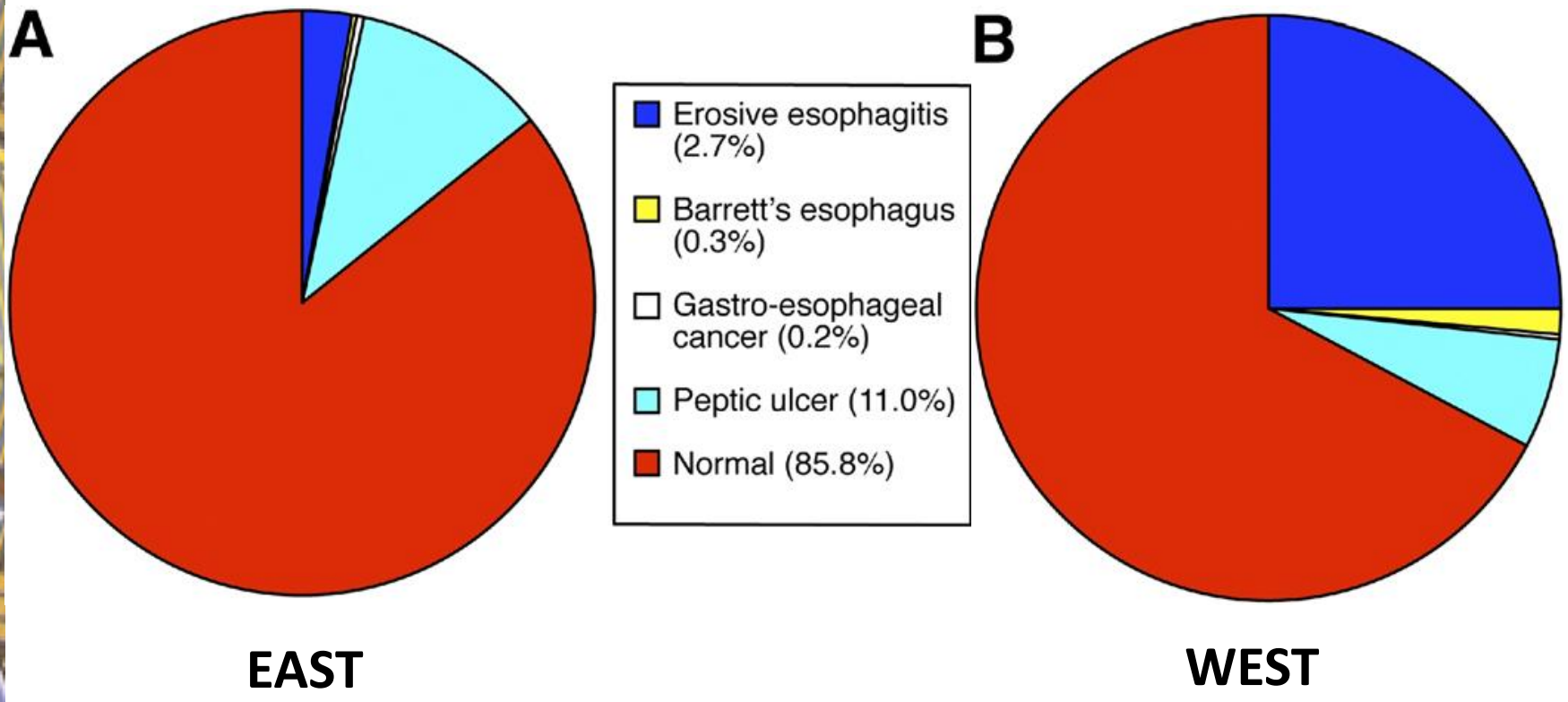
More recent data...

Table 2. Prevalence of Clinically Significant Endoscopic Findings in Individuals With Dyspepsia

Endoscopic finding	Number of studies	Number of subjects	Pooled prevalence	95% CI
Erosive esophagitis	7	2067	13.4	1.3–35.1
Barrett's esophagus	6	1982	1.0	0.03–3.4
Peptic ulcer	9	2597	8.0	6.0–11.0
Gastric ulcer	6	2284	3.2	2.0–4.7
Duodenal ulcer	6	2284	3.4	1.6–5.9
Gastric cancer	6	1982	0.25	0.05–0.6
Esophageal cancer	6	1982	0.1	0.02–0.3

Ford Clin Gastroenterol Hepatol 2010

Regional differences



Ford Clin Gastroenterol Hepatol 2010

Finding versus cause

Endoscopic finding	Number of studies	Number of subjects with dyspepsia (% with finding)	Number of subjects without dyspepsia (% with finding)
Erosive esophagitis	5	907 (10.5)	1971 (8.1)
Barrett's esophagus	4	822 (1.0)	1034 (0.4)
Peptic ulcer	6	1283 (7.6)	2596 (7.9)
Gastric ulcer	3	970 (2.0)	1487 (1.4)
Duodenal ulcer	3	970 (4.2)	1487 (1.5)
Gastric cancer	4	822 (0.4)	1034 (0.3)
Any clinically significant finding	3	513 (23.6)	724 (17.5)

Ford Clin Gastroenterol Hepatol 2010

Appropriateness of EGD

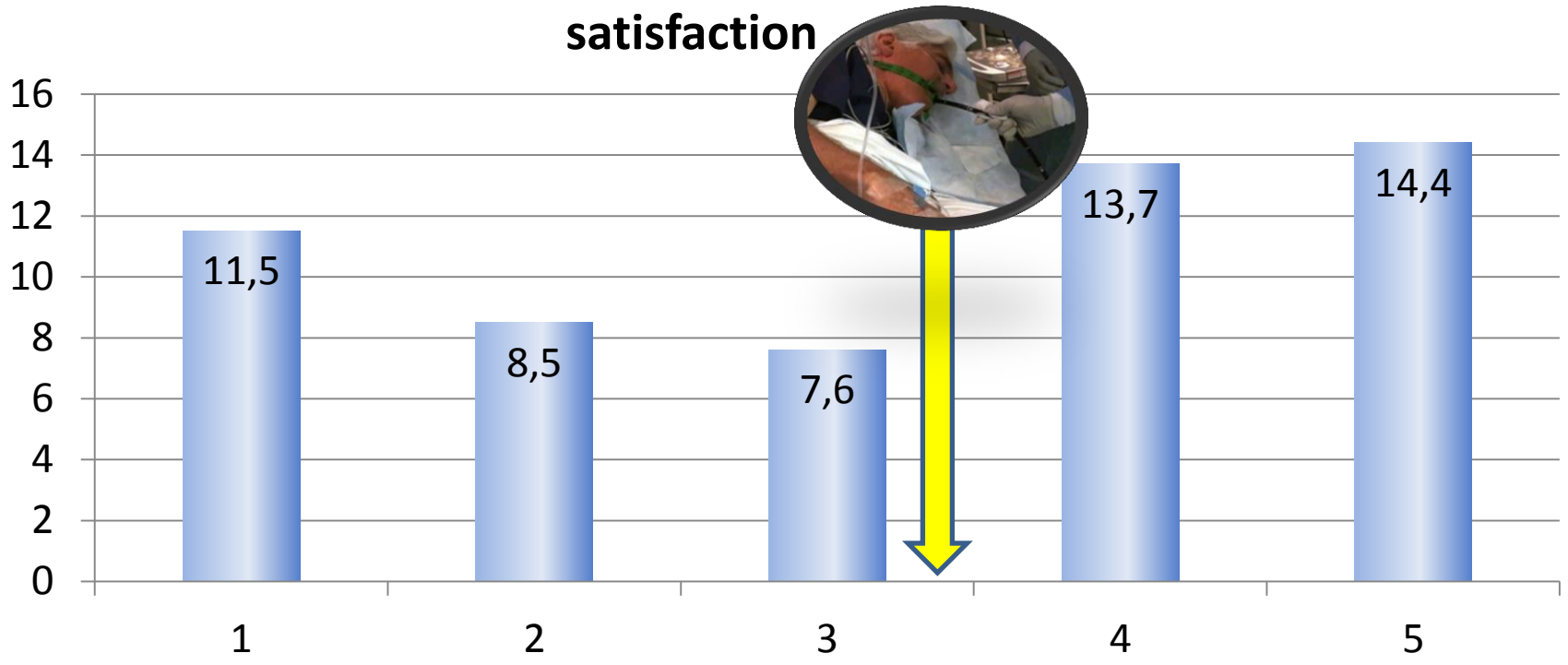
- **ASGE guidelines on appropriate EGD**
- **442 consecutive patients**
- **46% inappropriate**
- **Peptic ulcer disease:**
  - Appropriate: 16%
  - Inappropriate: 13%

Gonvers Endoscopy 1996

Utility of endoscopy - beyond finding stuff

- **Finding significant pathology**
- **Sampling**
- **HP testing**
- **Excluding pathology**
- **Reassurance**

Psychological impact of endoscopy



Rabeneck et al Gastrointest Endosc 2003

Repeat endoscopy

- **9.3% of 4873 EGD for dyspepsia were repeat procedures after a mean of 1.7 years**
- **Significant findings in 18% v. 29% at initial endoscopy**
- **More so with significant findings at initial endoscopy (26% v. 14%)**
- **10% with significant findings on repeat endoscopy only**

Lodabaum et al WJG 2010

Diagnostic alternatives

- **Imaging studies**
  - Upper GI series
  - Ultrasound of upper abdomen
  - CT abdomen
- **Functional studies**
  - pHmetry/esophageal manometry
  - Gastric emptying studies

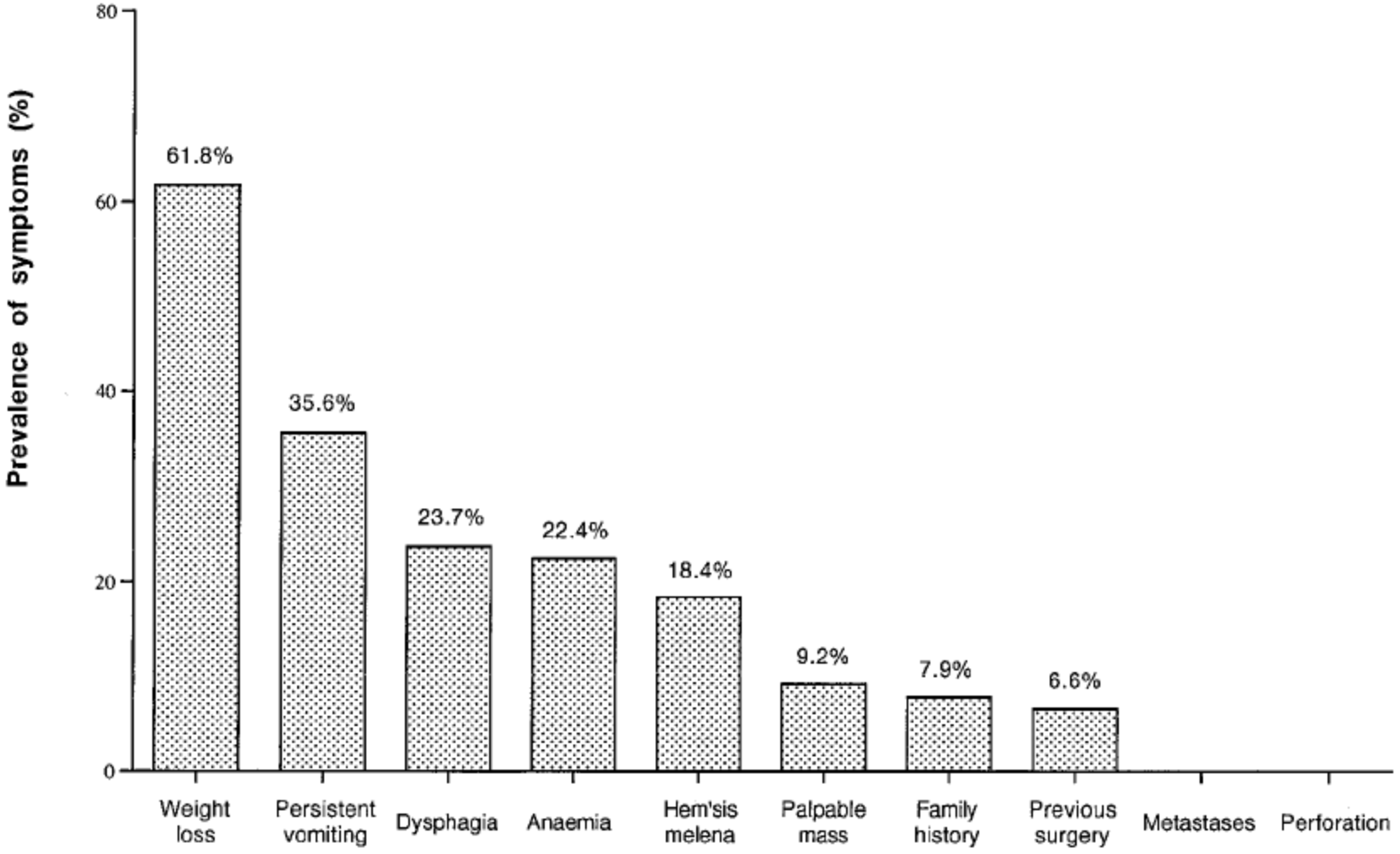
Use of endoscopy
- adjusting pretest likelyhood

- **Endoscopy for everybody?**
- **Selection by dyspepsia subgroups?**
- **Selection by risk factors?**
  - Age
  - Alarm symptoms
  - HP status
  - NSAID/ASA use
  - Other risk factors

Alarm symptoms

- **Unintentional weight loss**
- **Dysphagia**
- **GI bleeding**
- **Persistent vomiting**
- **(Palpable mass)**
- **(Family history of cancer)**

Alarm symptoms in gastric cancer



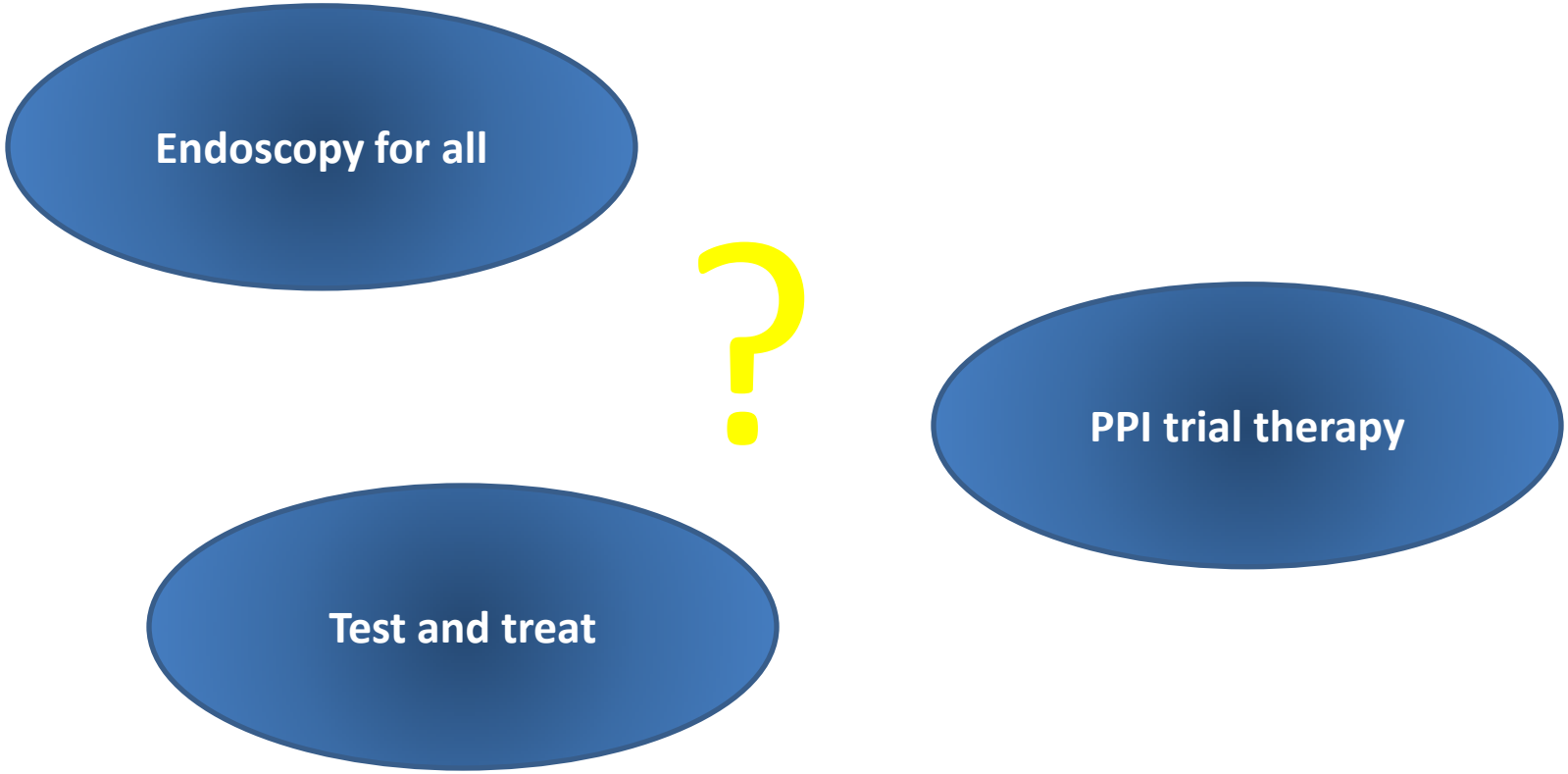
Gillen et al AJG 1999

Age and alarm symptoms?

- **3815 endoscopy patients with dyspepsia**
- **Major pathology in 21%, cancer in 2%**
- **Age>45 y and any alarm symptom:**
  - Sensitivity 87%
  - Specificity 26%

Wallace M et al. Gut 2000

Non alarm symptoms, <55 y - strategy options



EGD +/- Helicobacter

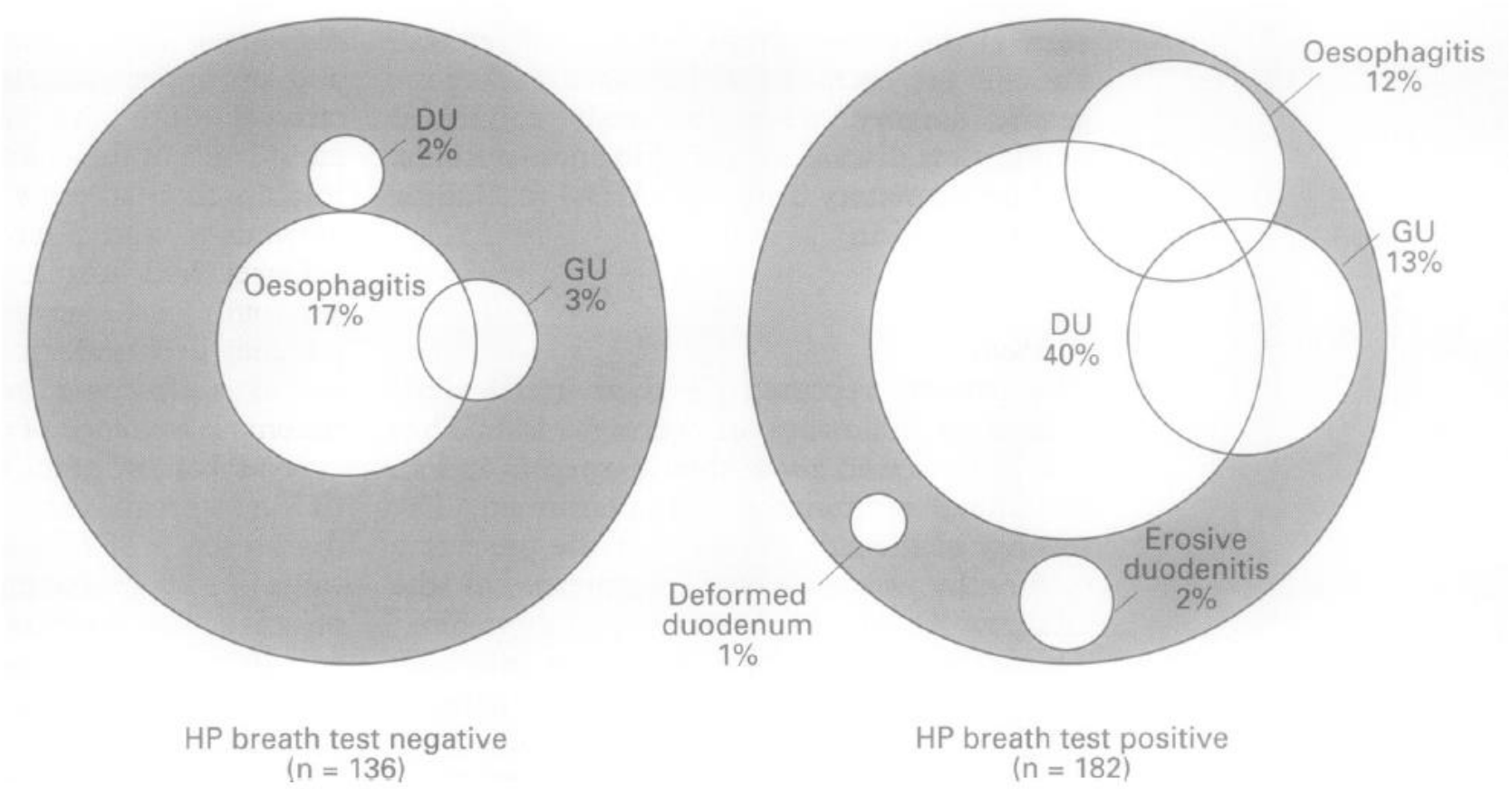


Figure 1: The influence of H pylori *(HP) status on endoscopic findings in dyspeptic patients.*

McColl Gut 1997

False negative endoscopy

- **Pre-endoscopy PPI may mask findings**
- **Poor cleansing may mask findings**
- **Poor endoscopic technique may mask findings**

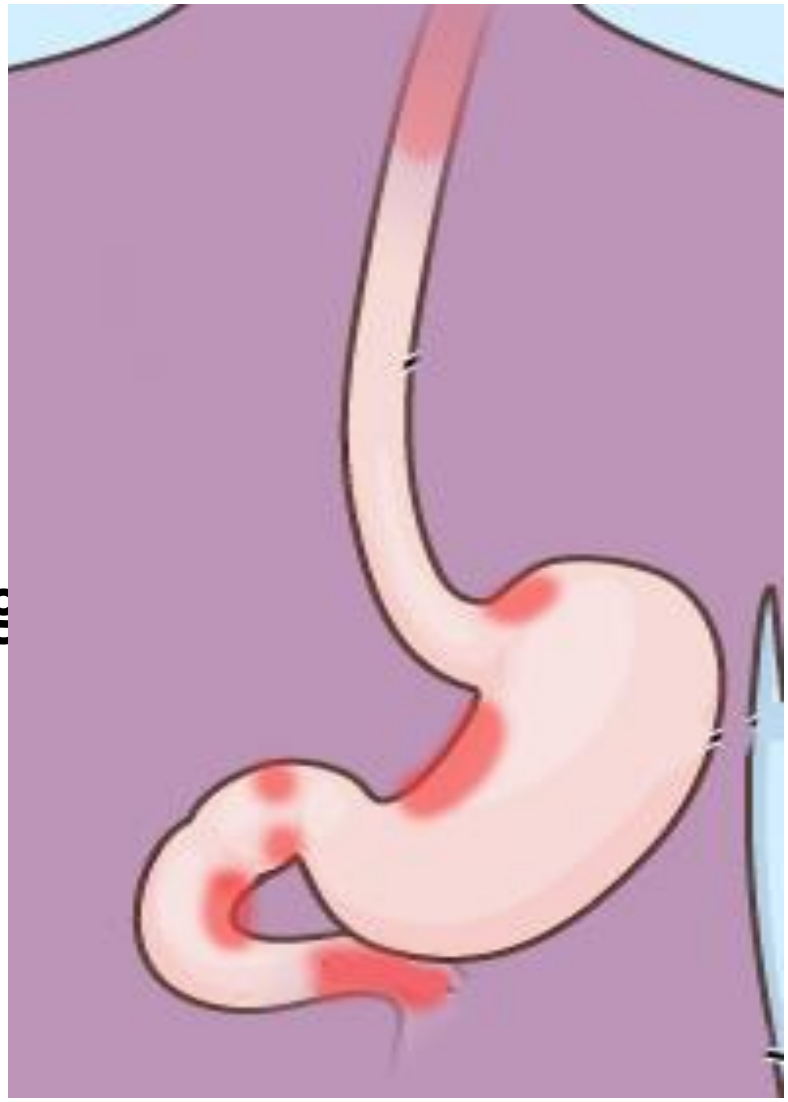
- **A false negative endoscopy is the most harmful of all**

Avoid false negatives!!!

- **Sedate the patient if needed**
- **Spend sufficient time**
- **Adhere to completeness systematics**
- **One lesion does not protect against another**
- **Beware of blind areas**

Blindish areas of upper endoscopy

- **Upper esophagus**
- **Fundic region**
- **Lesser curve**
- **Proximal bulb**
- **Proximal descending**
- **Beyond lower knee**



Summary

- **Ulcers, esophagitis, erosive gastroduodenitis and upper GI cancer are important causes for dyspepsia**
- **Upper endoscopy plays a pivotal role in dyspepsia workup**
- **Age and alarm symptoms matter, but only so much**
- **HP and NSAIDs matter more – detect!**