# GASTRIC POLYPS

BY :DR.Abdalraazak Helaal

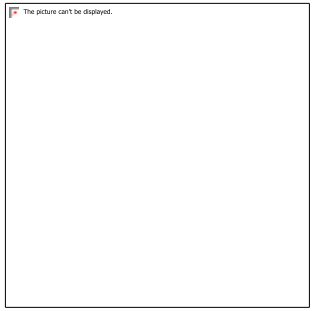
# Epidemiology

- Prevalence: 6-8% of upper endoscopies[1] .
- 70-94% are fundic gland polyps (FGPs) or hyperplastic polyps (GHPs)[1][2] .
- Epidemiologic shift: Declining H. pylori → ↑ FGPs, ↓ GHPs[1] .
- Age and gender distribution varies by polyp type[1].

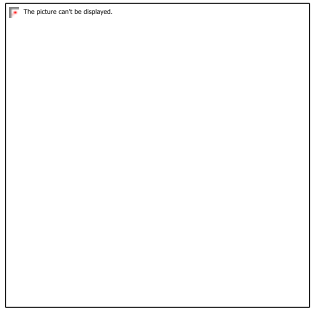
# Histologic Classification

- Fundic Gland Polyps (FGPs) - 77%
- Hyperplastic Polyps (GHPs) - 17%
- Gastric Adenomas (GAs) - 0.69%
- Pyloric Gland Adenomas (PGAs)
- Gastric Neuroendocrine Tumors (G-NETs) - 0.06%
- Others: hamartomatous, inflammatory fibroid[1].

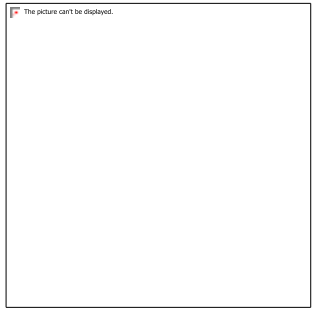
# Clinical Classification - "Good, Bad, Ugly"




- Good: FGPs, inflammatory fibroid polyps - low malignant risk[3] .




- Bad: GHPs, adenomas - intermediate risk, need monitoring/removal[3] .




Ugly: Type 3 G-NETs, early gastric cancer - high risk, urgent treatment[3].

# Fundic Gland Polyps

- FGPs - Clinical Features
- Location: Body and fundus exclusively[1]
- Appearance: Small, multiple, sessile[1]
- Risk factors: PPI use (1.5-5× risk), GERD[1]
- Associations: Inverse with H. pylori, atrophy, GIM[1]

# Fundic Gland Polyps

FGPs - Malignant Potential

- Sporadic: ~1% dysplasia risk[1]

- FAP-associated: 25-46% dysplasia[1]

- Progression to HGD/cancer: 4% in FAP (mean 6 years)[1]

- Higher risk: mucosal carpeting, polyps >10 mm[1]

# Fundic Gland Polyps

FGPs - Management

PPI use: No need to discontinue for valid indications[1]

Sporadic, non-dysplastic: No surveillance needed[1]

FAP/large/dysplastic: Watchful follow-up required[1.

# Hyperplastic Polyps

- GHPs - Clinical Features
- Location: Typically antrum, can occur anywhere[1]
- Appearance: Sessile or pedunculated, [1]
- Associations: H. pylori gastritis, atrophic gastritis[2]
- Usually single polyp[1]

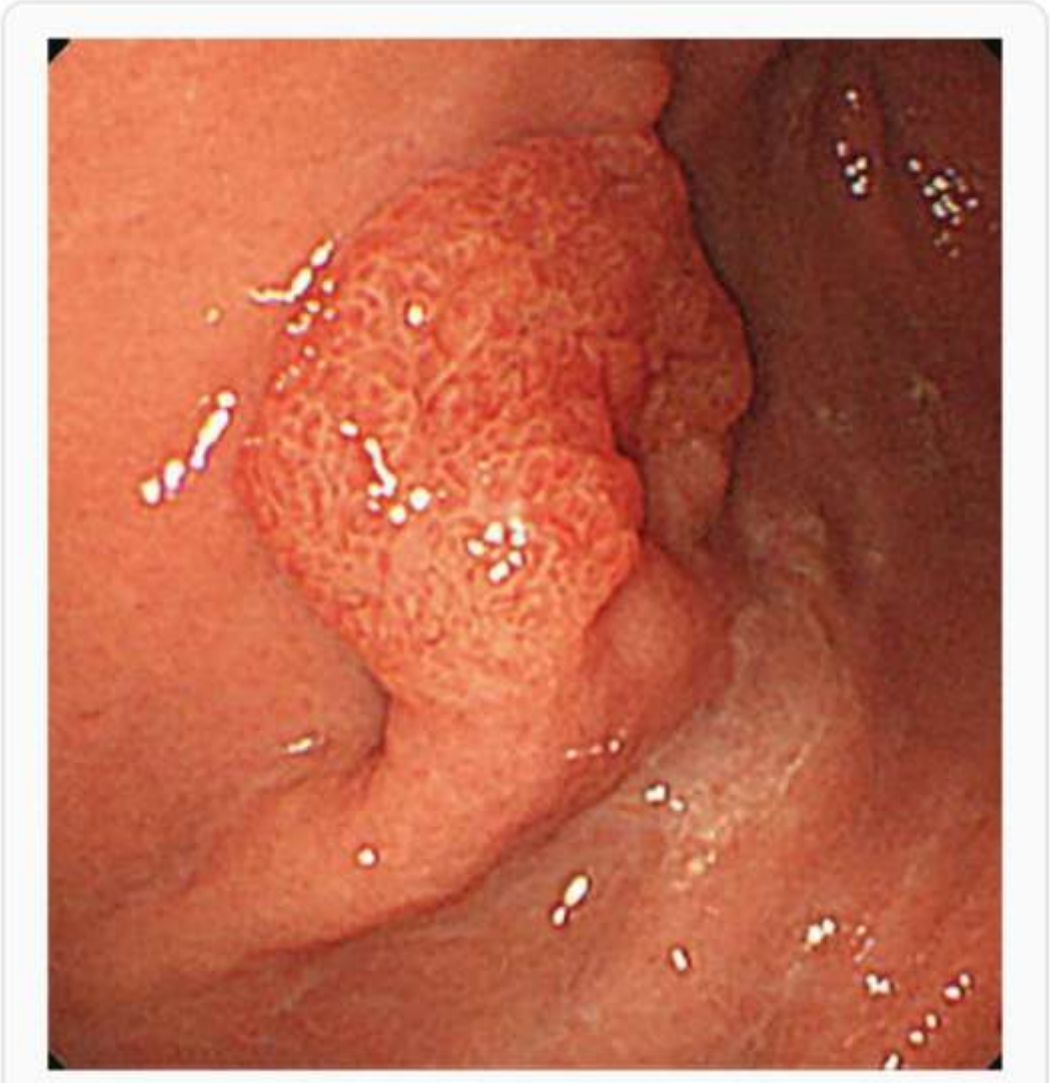
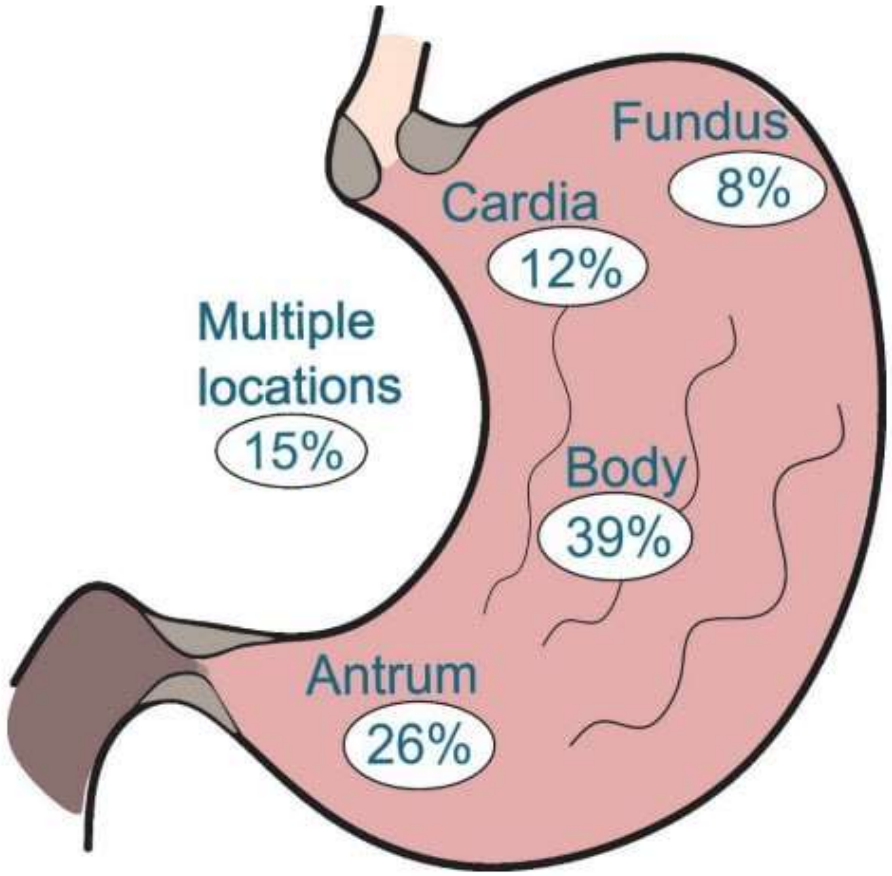


**Fig. 2s** Anatomical distribution of gastric hyperplastic polyps.



# Hyperplastic Polyps

- Malignant Potential & Management
- Dysplasia: 4% of polyps[1]
- Cancer risk: 0.8-10% (higher in polyps >20 mm)[1]
- H. pylori treatment: 79% reduction after eradication[1]
- Management: Resect if >10 mm; yearly surveillance if dysplastic[1].

# Gastric Adenomas

GAs - Clinical Features

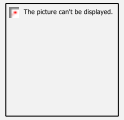
Prevalence: 1-10% of gastric polyps[1]

Location: Typically antrum[1]

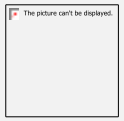
Appearance: Single, flat, [1]

Types: Intestinal (56%), foveolar (41%), pyloric, oxyntic[1] .

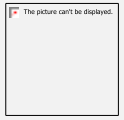
# Gastric Adenomas



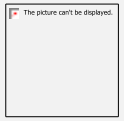
GAs - Malignant Potential



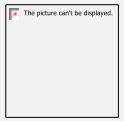
- Risk factors for cancer: Size >20 mm, villous histology[1]



- Pyloric gland adenomas: 42% HGD, 12-47% cancer[1]



- Recurrence: 2.6% after complete resection[2]



- Follow-up cancer: 1.3% of patients[2] .

# Gastric Neuroendocrine Tumors

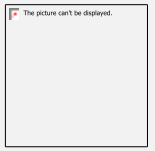
Type 1 (>70%): Autoimmune gastritis, multiple, body/fundus, good • prognosis[1]

Type 2: MEN-1/Zollinger-Ellison, multiple, intermediate prognosis[1]

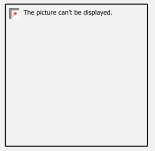
Type 3 (15%): Solitary, large (up to 5 cm), worst prognosis[1]

Management depends on size, number, grade[1].

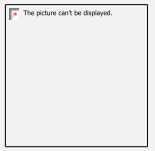
# Endoscopic Evaluation



- HD-WLE with adequate distension, mucus clearance[1]



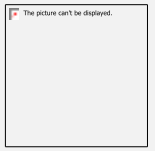
- Virtual chromoendoscopy (NBI) recommended[1]



- Miss rate: 4.7-11.3% neoplastic lesions within 3 years[1]

- Photo-document polyps and surrounding mucosa[1).

# Systematic Examination




Examine polyps AND surrounding mucosa[1]

Assess for: H. pylori gastritis, autoimmune gastritis, GIM[1]

Biopsy protocol: Antrum and corpus minimum[1]

Test H. pylori if adenomas or HPs identified[1).

# Endoscopic Resection Techniques

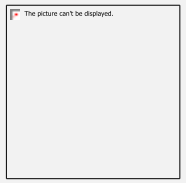
- ≤3 mm: Cold forceps biopsy[1]

- 4-10 mm: Cold snare or EMR[1]

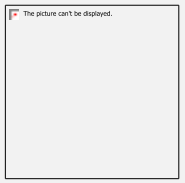
- >20 mm: EMR or ESD (refer to expert center)[1]

- ESD: Reserved for suspected neoplasia[1] .

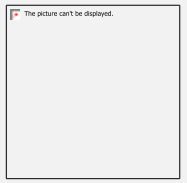
# Management of Multiple Polyps



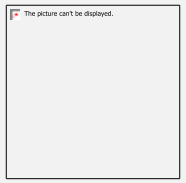
- Solitary Polyp: Resect At Index Endoscopy[1]



- Multiple Polyps: - Resect Largest Polyps (≥10 Mm)[1]



- Sample Or Resect Smaller Polyps[1]



- If All Suspected FGPs: Resect Largest Or Visually Atypical[1].

# Surveillance - Dysplastic Polyps

- Complete resection:
- Low-grade dysplasia: 1 year[1]
- High-grade dysplasia: 6 months[1]
- Incomplete resection/biopsy only:
- Low-grade dysplasia: 6 months[1]
- High-grade dysplasia: 3 months[1].

# Surveillance - By Polyp Type

- - Non-dysplastic FGPs: No surveillance (unless syndromic)[1]
- - GHPs >10 mm: Resect; yearly if dysplastic[1]
- - Adenomas: 6-12 months initially, then annually[1]
- - GIM/atrophic gastritis: Surveillance indicated[1].

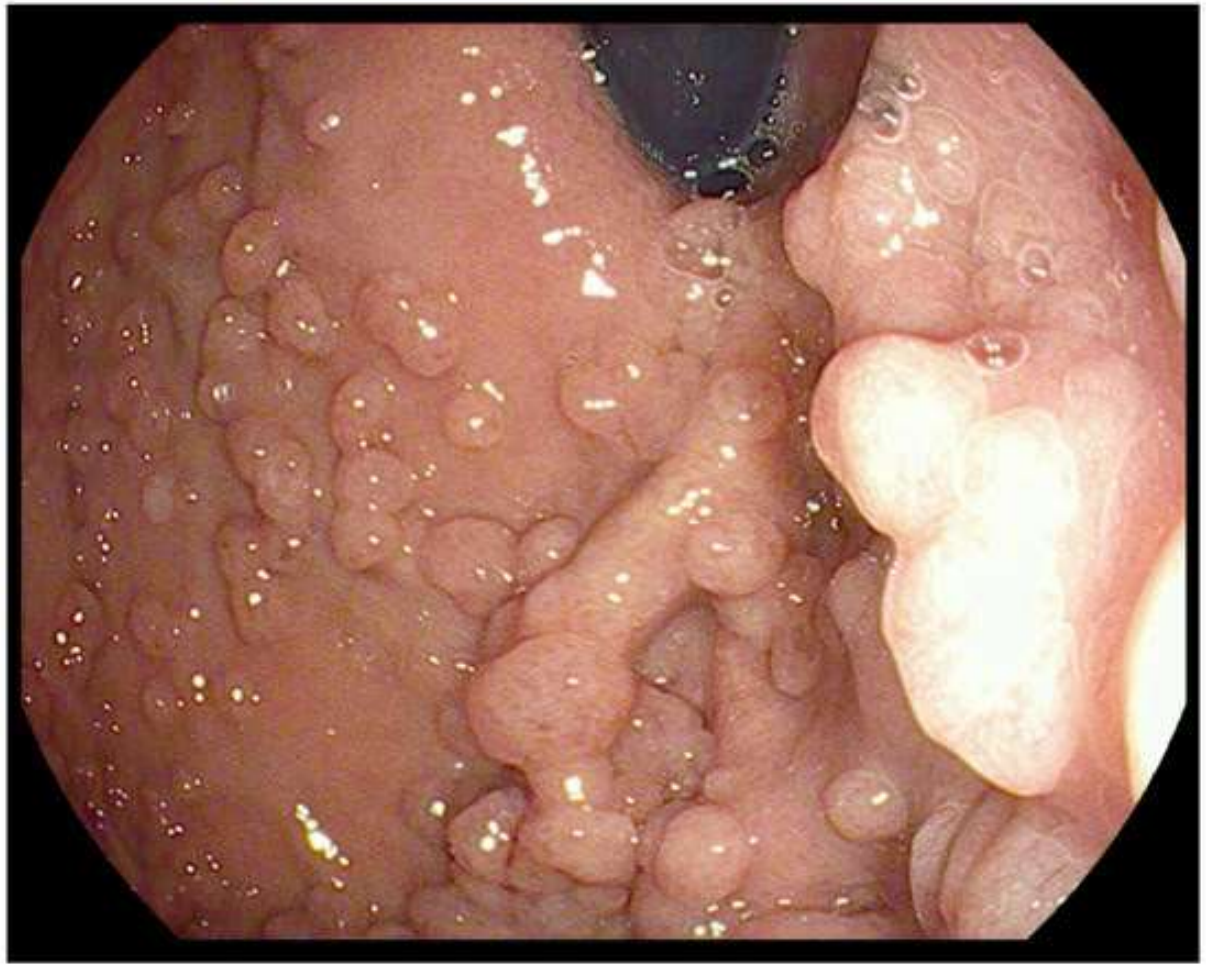
# H. pylori Management

- Test and treat for all adenomas and hyperplastic polyps[1]
- Benefits of eradication:
- 79% reduction in GHP prevalence[1]
- Regression of hyperplastic polyps[1]
- Improved atrophic gastritis[1]
- Decreased gastric cancer risk[1] .

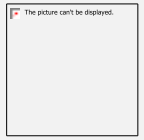
# Familial Adenomatous Polyposis

- - FGPs: Can coalesce, 25-46% dysplasia risk[1]
- - High-risk features: Carpeting, polyps >10 mm, white patches[4]
- - Surveillance: Risk-stratified based on histology and size[4]
- - Consider gastrectomy for multifocal HGD[4]

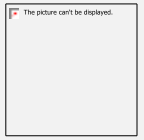
# FAP



# Key Practice Points



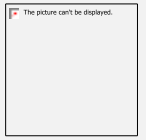
- all newly detected solitary polyps should be resected[1]



- histology cannot be reliably determined endoscopically[2]

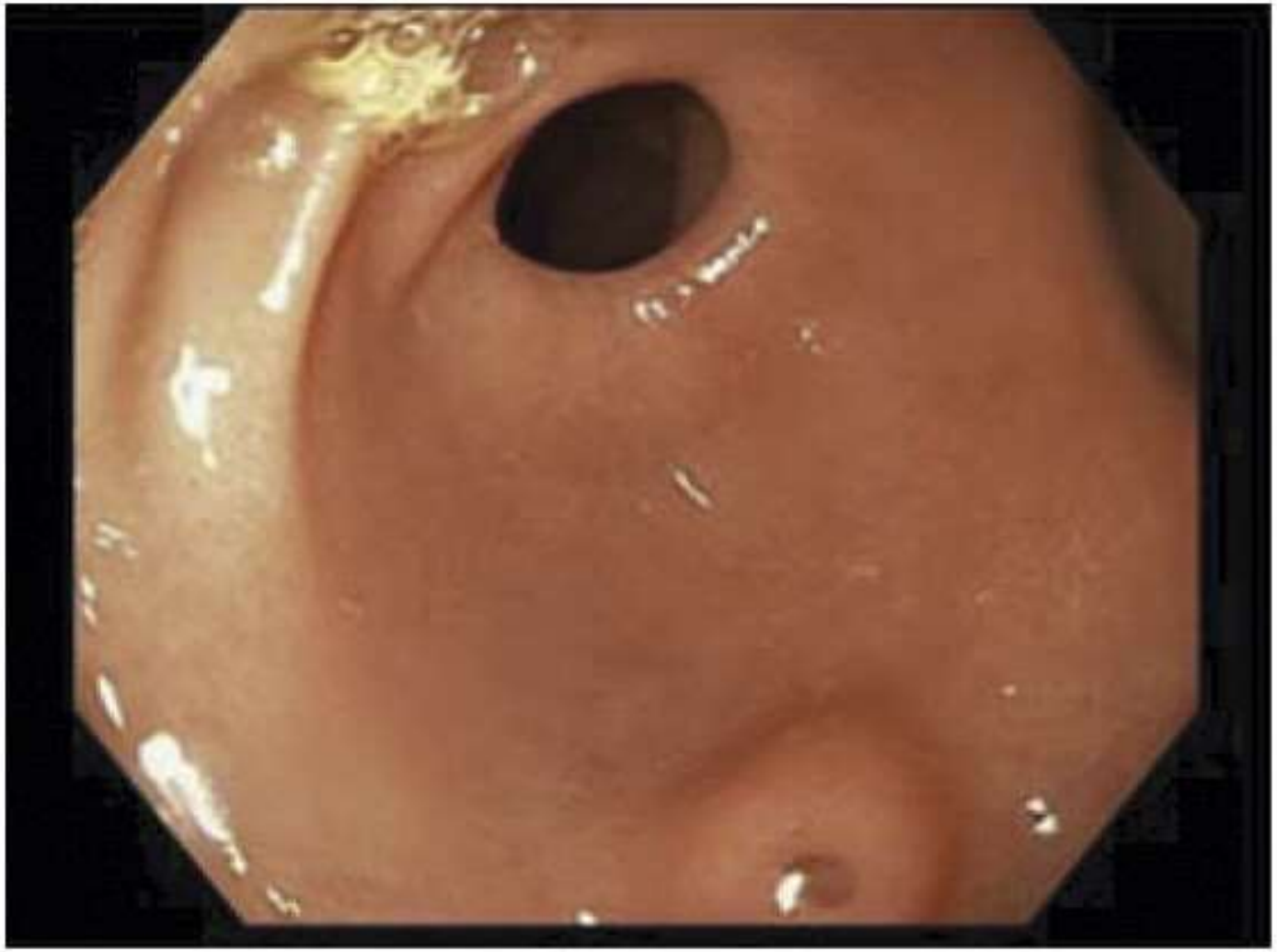
- assess surrounding mucosa for GIM, atrophy, h. pylori[1]

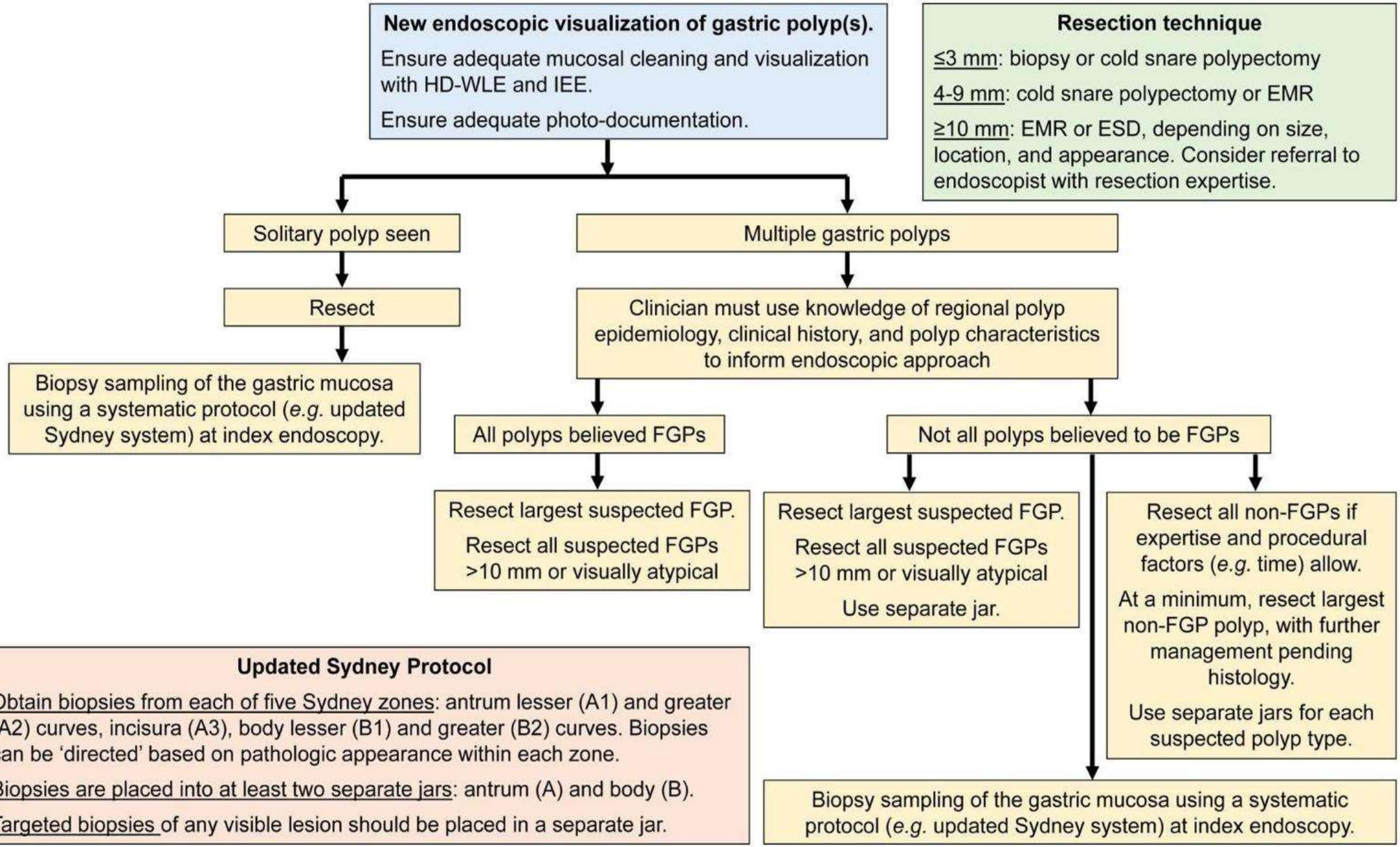
- surveillance based on histology, size, and dysplasia[1]



- ppi continuation acceptable for valid indications with FGPs[1] .

# Pancreatic rest




New endoscopic visualization of gastric polyp(s).
Ensure adequate mucosal cleaning and visualization with HD-WLE and IEE.
Ensure adequate photo-documentation.
Resection technique
≤3 mm: biopsy or cold snare polypectomy
4-9 mm: cold snare polypectomy or EMR
≥10 mm: EMR or ESD, depending on size, location, and appearance. Consider referral to endoscopist with resection expertise.
Solitary polyp seen
Multiple gastric polyps
Resect
Biopsy sampling of the gastric mucosa using a systematic protocol (e.g. updated Sydney system) at index endoscopy.
Clinician must use knowledge of regional polyp epidemiology, clinical history, and polyp characteristics to inform endoscopic approach
All polyps believed FGPs
Not all polyps believed to be FGPs
Resect largest suspected FGP.
Resect all suspected FGPs >10 mm or visually atypical
Resect largest suspected FGP.
Resect all suspected FGPs >10 mm or visually atypical
Use separate jar.
Resect all non-FGPs if expertise and procedural factors (e.g. time) allow.
At a minimum, resect largest non-FGP polyp, with further management pending histology.
Use separate jars for each suspected polyp type.
Updated Sydney Protocol
Obtain biopsies from each of five Sydney zones: antrum lesser (A1) and greater (A2) curves, incisura (A3), body lesser (B1) and greater (B2) curves. Biopsies can be 'directed' based on pathologic appearance within each zone.
Biopsies are placed into at least two separate jars: antrum (A) and body (B).
Targeted biopsies of any visible lesion should be placed in a separate jar.
Biopsy sampling of the gastric mucosa using a systematic protocol (e.g. updated Sydney system) at index endoscopy.

# References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