

AP101 Part 1

Practical Approaches to Gastric Mucosal Biopsies

Kenneth P. Batts, M.D.

Lawrence J. Burgart, M.D.

H. Parry Dilworth, M.D.

**Hospital Pathology Associates, LLC
Abbott Northwestern Hospital, Mpls, MN
Minnesota Gastroenterology
University of Minnesota (Clinical Appointments)**

Our Faculty



Parry Dilworth

Ken Batts

Larry Burgart

Disclosures

- **Kenneth Batts – none**
- **Lawrence Burgart – none**
- **H. Parry Dilworth - none**

Course Objectives

- **Identify the major subtypes of gastritis**
- **Recognize the histologic hallmarks of chemical gastric injury**
- **Use appropriate terminology for reporting gastric neoplasms**
- **Be able to explain to clinicians the rationale for adequate sampling of gastric mucosa**

We will stress common processes rather than zebras.

Course Outline

Topic: Gastric Pathology

Time 8:30-12:00

Opening/ Introductions

8:30-8:40

Philosophical and technical issues

8:40-9:00

H. pylori, Atrophic Gastritis & Reactive
Gastropathy

9:00-10:00

Break

10:00-10:30

Gastric Polyps and Neoplasia

10:30-11:30

Application to practice – case examples

11:30-11:55

Summary and Closing

11:55-12:00

Our real goal:

We want the pathologist/clinician team to accurately determine if a patient has a gastric disease and, if present, accurately classify it.

Clinicians need pathologists to think like physicians and not like technicians.

Our Political Agenda

Physician

- Proactively works with clinician regarding sampling strategies
- Makes a diagnosis
- Answers the questions raised by the clinician on that case
- Makes phone calls/interacts

Technician

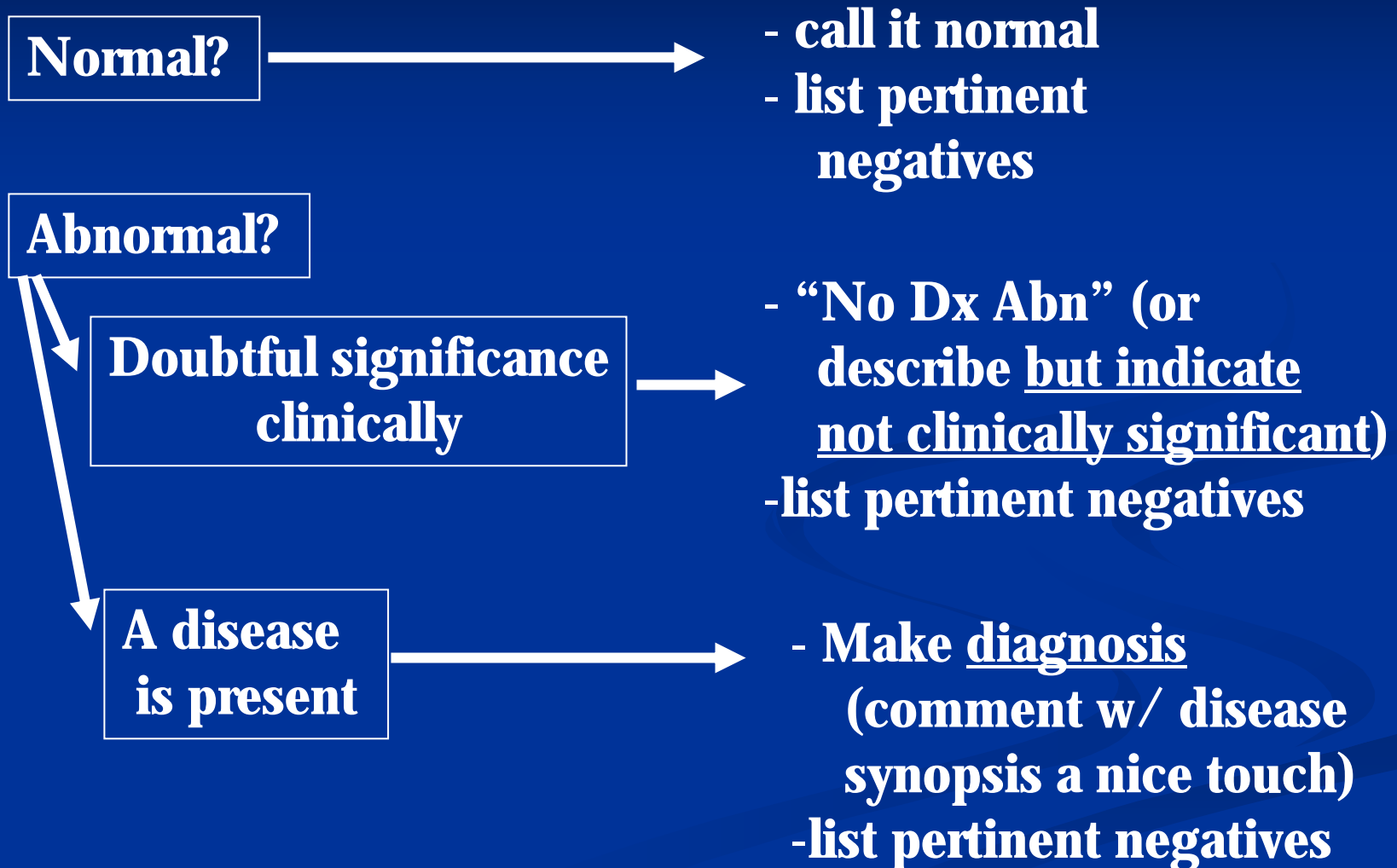
- Little/no relationship with clinician; certainly doesn't tell them what to do
- Descriptive “diagnosis” on non-tumor cases
- Rigidly uniform reporting, regardless of clinical scenario
- Anonymous, “black box”

We want you to behave as physicians.

Your Thought Process for Gastric Biopsies – First “Plan Your Work”

- **Tell clinicians what sort of sampling you need to do your job**
- **Develop a reporting system/canned comments that will help you convey your message in a uniform fashion**
 - **Make them fit your local culture and style**
 - **Strongly encourage your entire group to use them**

Then “Work Your Plan”



Issue #1 – Can the endoscopist rely on gross appearance, or do they need to sample?



Can the endoscopist rely on gross appearance, or do they need to sample?

- The initial job of the clinician, pathologist, and radiologist is to determine if a disease is present and, if so, what disease it is (ie diagnosis)
- The endoscopist is doing the gross exam of the stomach
- Ulcers, polyps, masses and erosions are fairly reliably associated with microscopic pathology, but what about “erythema” or “gastritis”?

Basic Concept: The Endoscopist Cannot Accurately Diagnose Gastritis

157 Cases

		Endoscopic Gastritis	
		+	-
Histologic Gastritis	+	72	43
	-	26	26

Falsely negative endoscopic impression

Falsely positive endoscopic impression

“These findings confirm the inappropriateness of an endoscopic diagnosis of gastritis and it is suggested such a term be reserved for histological findings.”

Khakoo SI, et al. Gut 1994;35(9):1172-1175

Gastric Erythema Is Not Predictive of Histology or H. Pylori

Sensitivity Specificity


■ Antral Erythema (34%)

■ H. pylori:	51%	68%
■ 2 or 3+ Chronic Inflammation:	49%	64%

■ Corpus Erythema (17%)

■ H. pylori:	33%	88%
■ 2 or 3+ Chronic Inflammation	39%	82%

“ it must be emphasized that the diagnosis of gastritis should be based on histological examination of the gastric mucosa”.

A high-contrast silhouette of a biopsy forceps against a bright, light-colored background. The forceps are shown in an open position, with the jaws facing each other. The central pivot point is visible as a small circular hole. The text is overlaid on the left side of the image.

**Biopsy of gastric
mucosa is
needed to
diagnose disease**

Guidelines for the Endoscopist: When and How to Biopsy Stomach

Endoscopy

Bottle 1

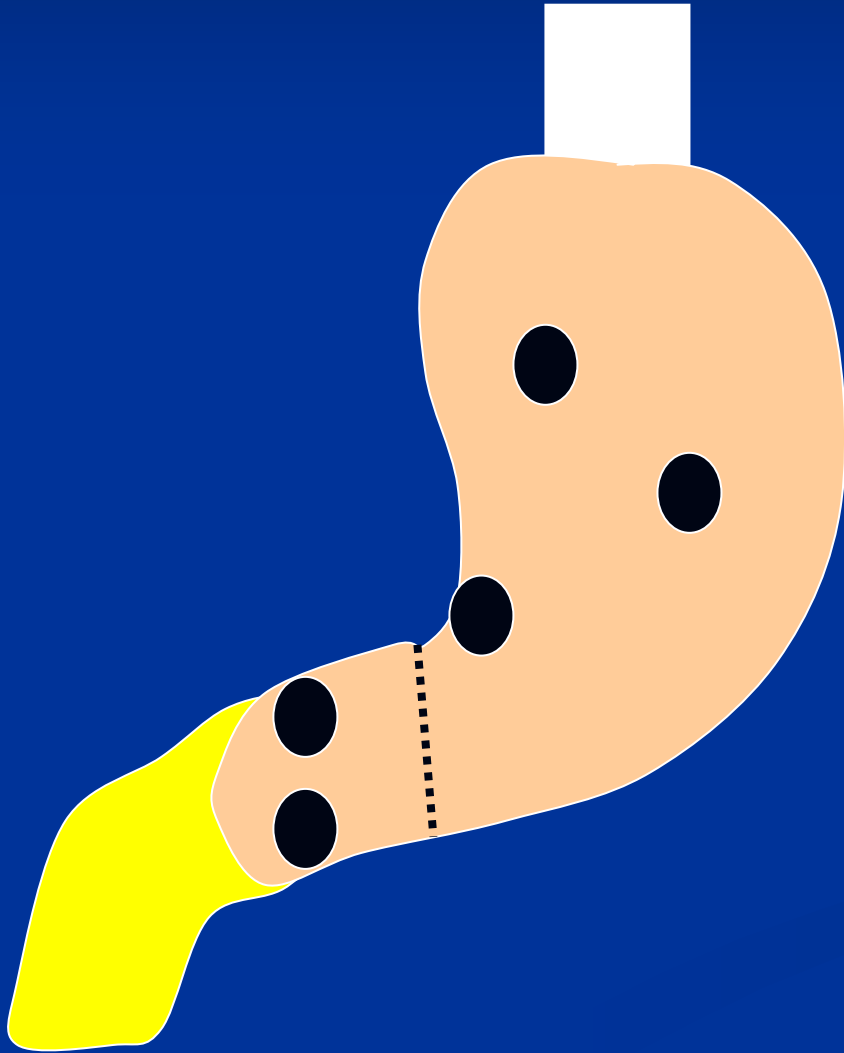
Bottle 2

■ Mass	Mass	Background stomach
■ Polyp	Polyp*	Background stomach
■ Ulcer	Ulcer	Background stomach
■ Erosion	“Fab Five”	
■ Erythema	“Fab Five” **	
■ Normal	“Fab Five” **	

*If obvious cystic fundic gland polyp, consider not sampling

**If clinical symptoms warrant

The “Fab Five”: Recommended Sampling Protocol to Characterize Potential Gastritis



- Because endoscopic appearance is poorly predictive of histology
- All samples can be placed in one bottle
- Allows:
 - Optimal HP detection
 - Characterizing atrophic gastritis
 - ID of reactive gastropathy

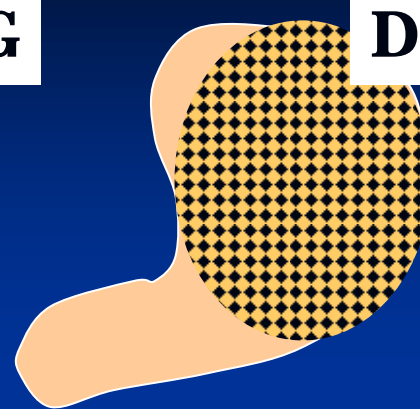
Basic Concept – Gastritis and Topography

MAG

DCAG

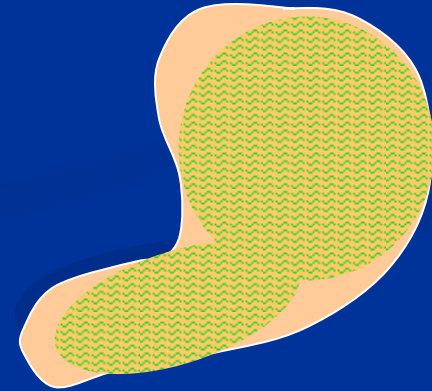
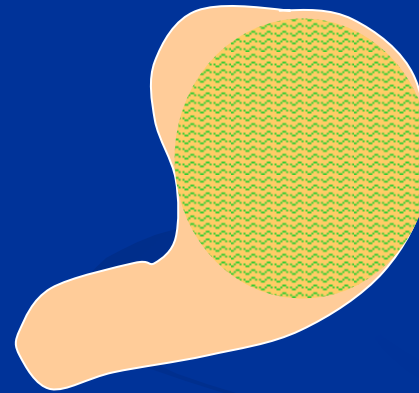
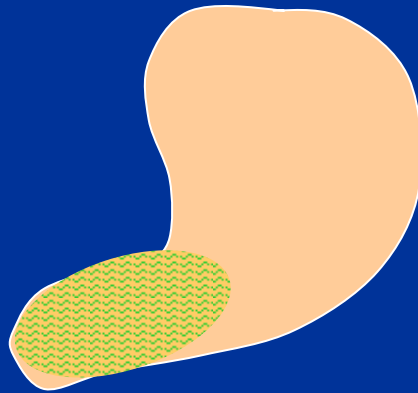
Atrophic Gastritis

- antral/body dist.
is important



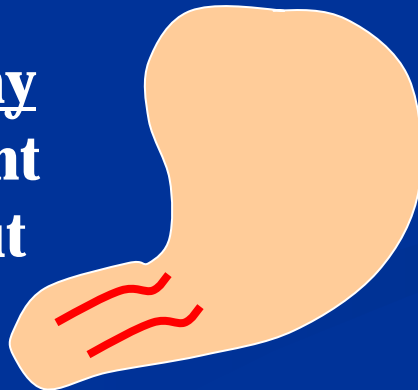
H. pylori Gastritis

- they can be
anywhere in
stomach



Reactive gastropathy

- antral involvement
predominates, but
can be anywhere
in stomach



**If you're gonna do something, you
might as well do it right.**

- My mom, @ 1968

Our Opinion Regarding Common Special Stains and Gastric Biopsies

■ Helicobacter:

- If HP on H&E no stains needed
- If inflamm but no bugs, do stain; locally, we've gone to almost always IPOX
- If no chronic inflamm., hard to justify special stain

■ Intestinal Metaplasia:

- H&E is sufficient for detecting goblet cells
- If equivocal, do alcian blue
 - don't do high iron diamine to subtype mucin

Wright CL, Kelly JK. Am J Surg Pathol 2006;30(3):357-361

**Make sure special stain use is driven
by medical need, and not your own
pocketbook.**

- Me, 2007

**Dr. Dilworth will guide us through
normal stomach, chronic gastritis, and
reactive gastropathy . . .**



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