

1A: The Bronchoscopy Report



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Bronchoscopy reports

- The following slides serve as a guideline to what should be included in a report.
- More, but usually NOT less information may be warranted depending on the bronchoscopist and the bronchoscopist's place of practice.

The Bronchoscopy report

- Patient name
- Bronchoscopist's name
- Assistant's name
- Indication for the procedure
 - Contains a brief history of the patient's illness
- Procedures performed
 - For example, lavage, washing, brushing, biopsy, transbronchoscopic lung biopsy, transbronchial needle aspiration....
- Anesthesia
 - Topical anesthesia, conscious sedation, other medications (amount and type administered).

The Bronchoscopy report

- Oral or nasal introduction of bronchoscope
- Nasopharynx, hypopharynx
- Larynx, vocal cords
- Subglottis
- Trachea
- Carina
- Left and right bronchial segments

The Bronchoscopy report

- Summary of abnormalities noted
- Description of procedures performed
- Status of specimens obtained
 - For example, for microbiology, cytology, histology.
- Complications
- Assessment and plan

Bronchoscopy reports

The bronchoscopy report should tell a story that everyone can read and understand the same way.

Morphology: Caliber, patency, shape, normal variants.

Appearance: Normal, abnormal

Mucosa: Color, texture, fragility.

Abnormalities: Location, type, extent, associated lesions.

Secretions: Amount, type, color, location.

Topics for Lesson 1

- Mucosa
 - Examples of abnormalities
- Secretions
 - Examples of abnormalities
- Other abnormalities

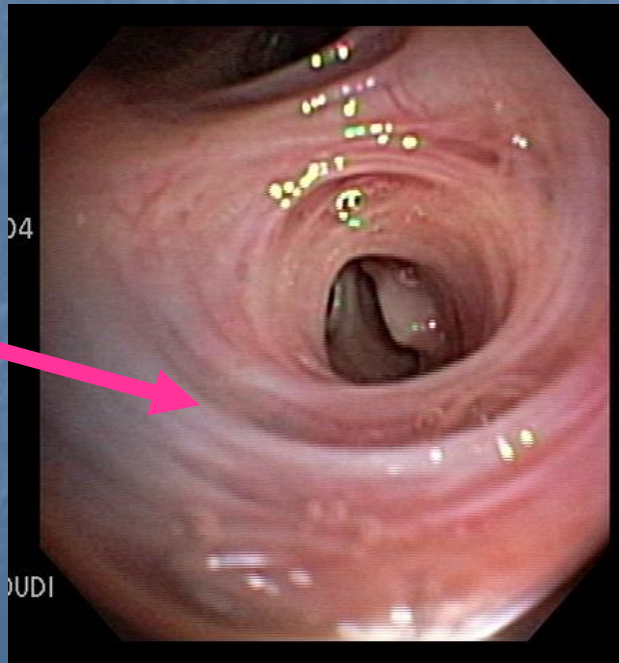
Mucosa

- Color changes dependent on light and video source as well as pathology.
- Need to become familiar with particularities of one's own equipment.
- Limitations of resolution, screen color, and picture quality must also be considered.
- Normal color can only be approximated

Bronchial Mucosa

- Normally pale and pinkish
- Shines slightly when illuminated
- Easily bruised and erythematatous with minimal trauma

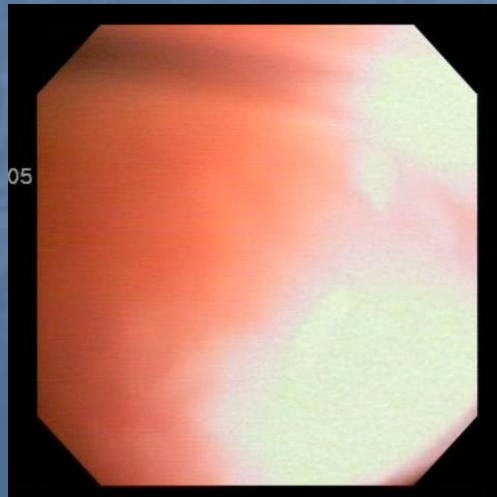
Bronchitic
changes Lingula



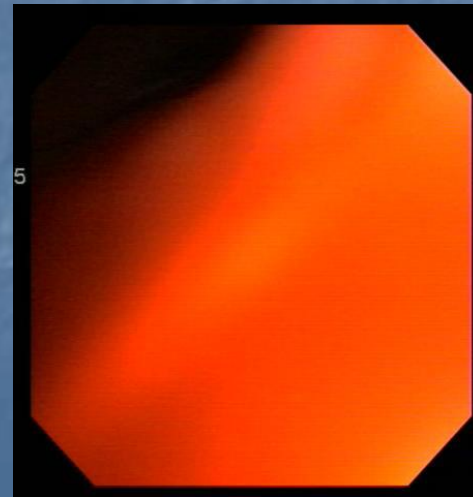
Bronchial Mucosa

- Placing the distal extremity of the scope against the airway wall easily causes « red out » with echymoses and erythema, but also causes « white out » with tissue blanching from the pressure exerted on the mucosa.
- Suction can also cause hyperemia, echymoses, or even bleeding.

White out



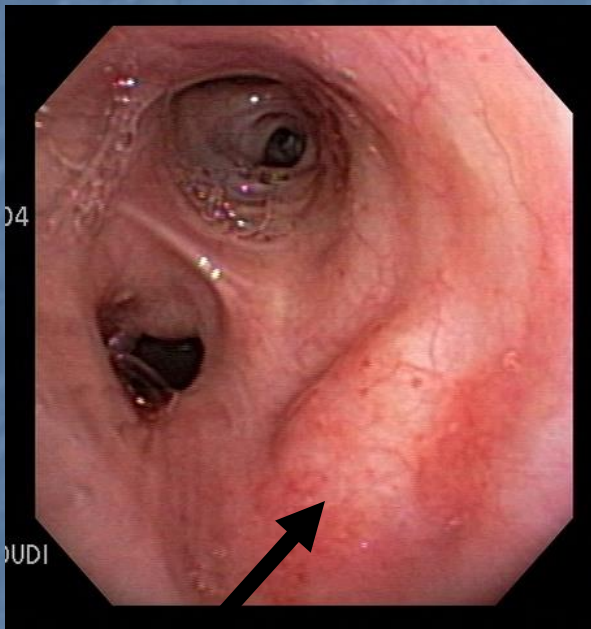
Red out



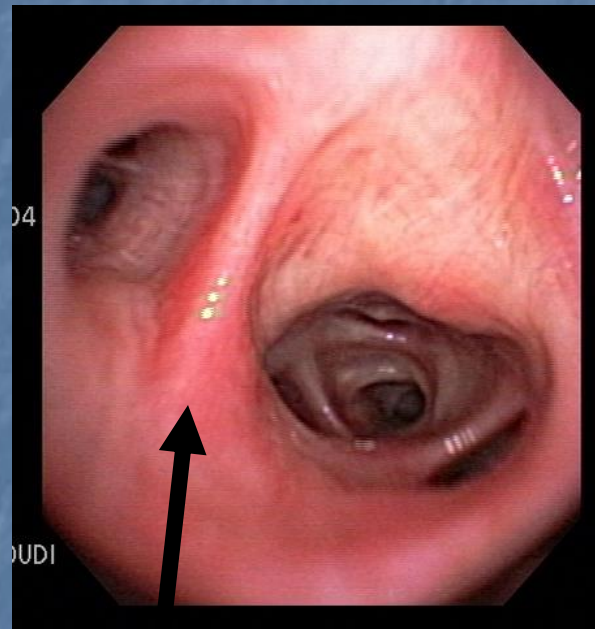
Mucosal erythema or redness

- Usually a sign of inflammation
- But many patients have bronchitis or underlying lung disease, so their airways may appear chronically inflamed.
- Erythema may be associated with
 - Bronchitic changes
 - Tissue swelling
 - Angry, swollen, easily bruised mucosa
 - Purulent secretions
- Color changes can also be quite subtle

Mucosal changes



Raised nodularity/benign
cause unknown

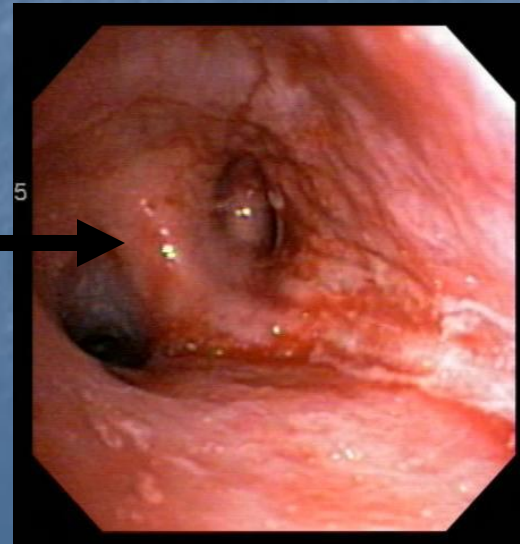


Erythema

Mucosal edema

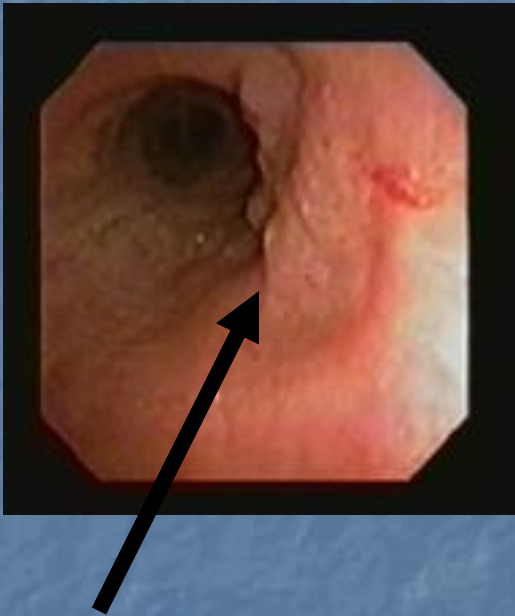
- Common with inflammatory processes
- May be seen along minor carina and along cartilaginous rings
- May cause narrowing of airway lumen

Edema from chronic lower lobe pneumonia and retained secretions





This abnormality is



A. Pale, raised, and irregular

B. Thick and erythematous

C. Extrinsic compression

Click here for correct answer: **A**



This bronchial mucosa is



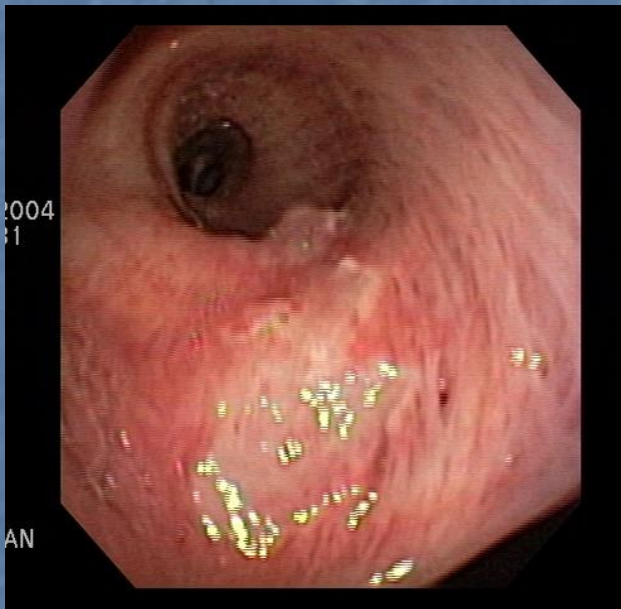
A) Swollen and erythematous

B) Pale and granular

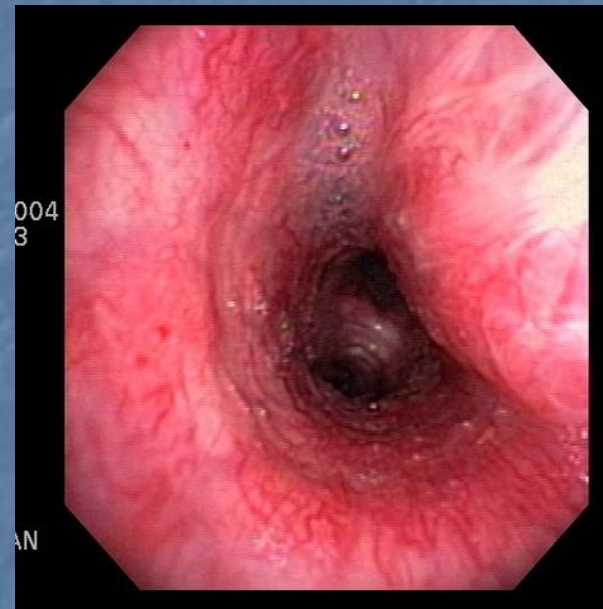
C) Extrinsic compression

Click here for correct answer: **A**

Bronchial mucosal abnormalities a

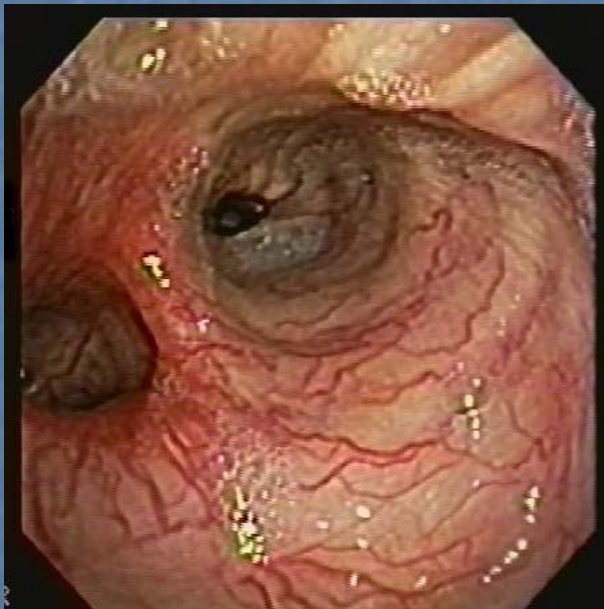


Suction trauma

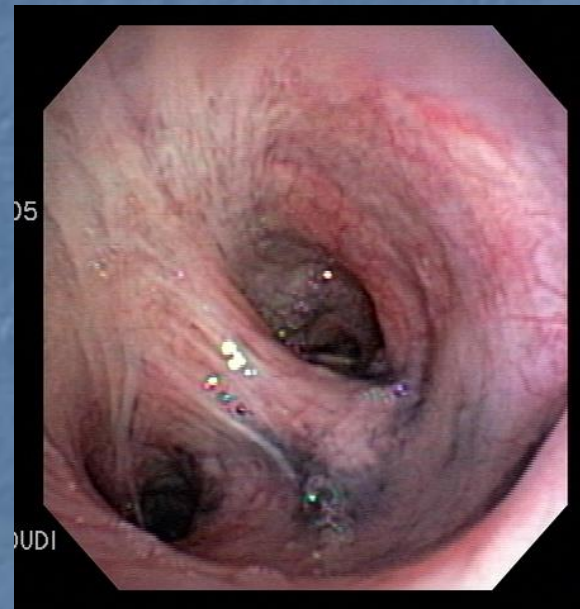


Hyperemia

Bronchial mucosa abnormalities b

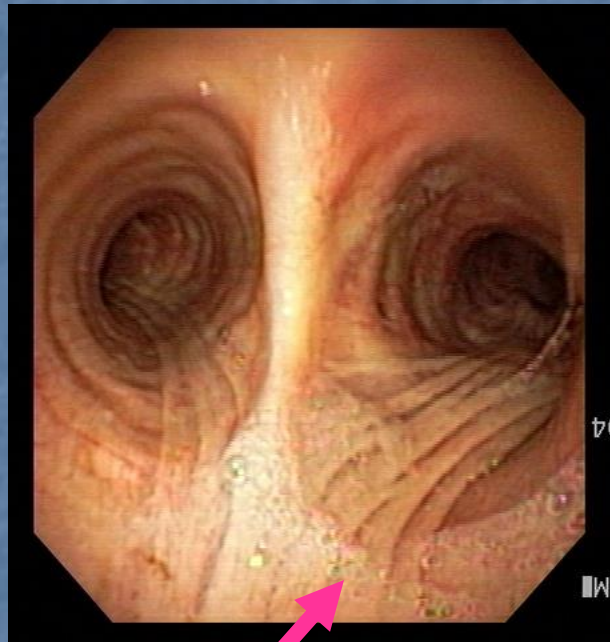


Hyperemia, and
neovascularization



Palor, erythema, and
anthracosis

Bronchial mucosa abnormalities c



Prominent posterior
tramlines (muscularis)



Petechia

Airway Secretions

- Usually little mucous or clear slightly frothy secretions are noted.
- Secretions can be increased
 - As in chronic or acute bronchitis
 - Purulent infectious lung diseases
 - Rarely can be thick and tenacious as in asthma, mucous plugging from infection, atelectasis, and postobstructive processes

Bronchitis and Airway secretions

Bronchial
Pits



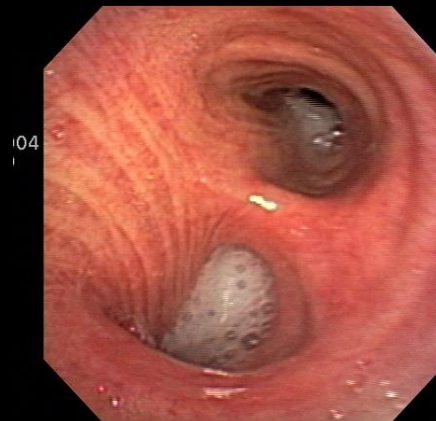
Tan



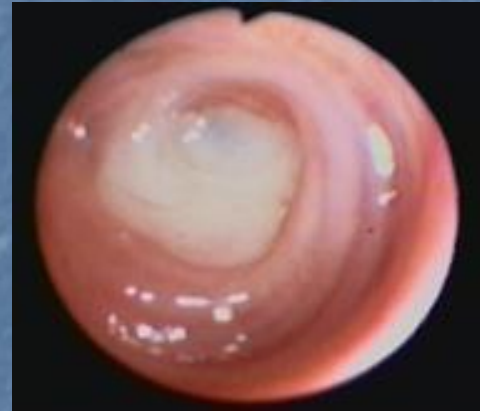
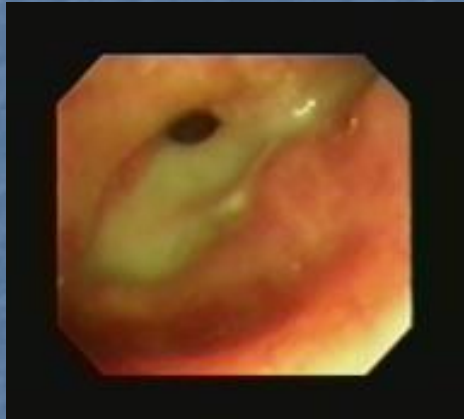
Green



Frothy



Secretions



COLOR

White, tan, green, blood tinged

AMOUNT

None, scant, abundant

LOCALIZATION

Segmental, Lobar

TYPE

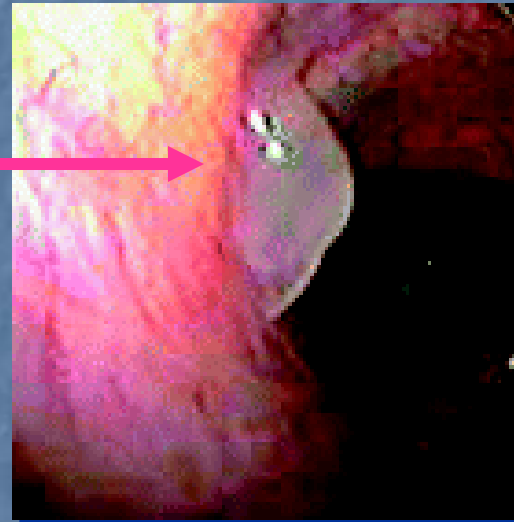
Mucoid, purulent, bloody

CONSISTENCE

Thin, tenacious, watery, thick

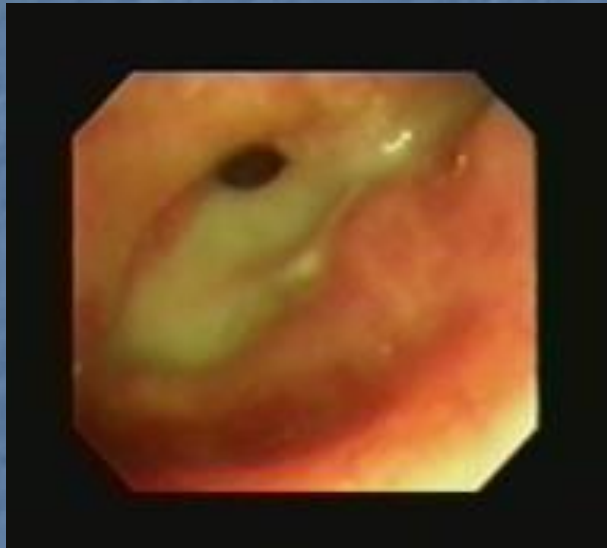
Mucous and mucous plugs

Tenacious and thick





These secretions are

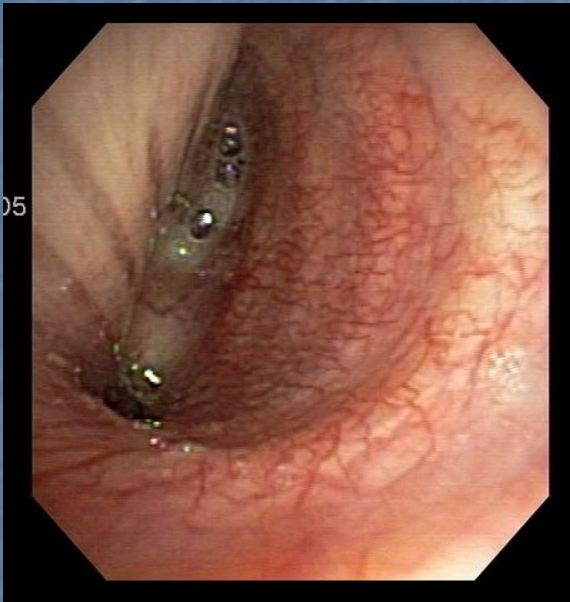


- A. Clear
- B. Frothy
- C. Muroid
- D. Purulent

Click here for correct answer: **D**



This finding is BEST described as



- A) Hypervascular mucosa overlying cartilaginous rings with thick yellow distal airway secretions.
- B) Neovascularization with extrinsic compression.
- C) Volume loss with airway wall invasion.

Click here for correct answer:

A

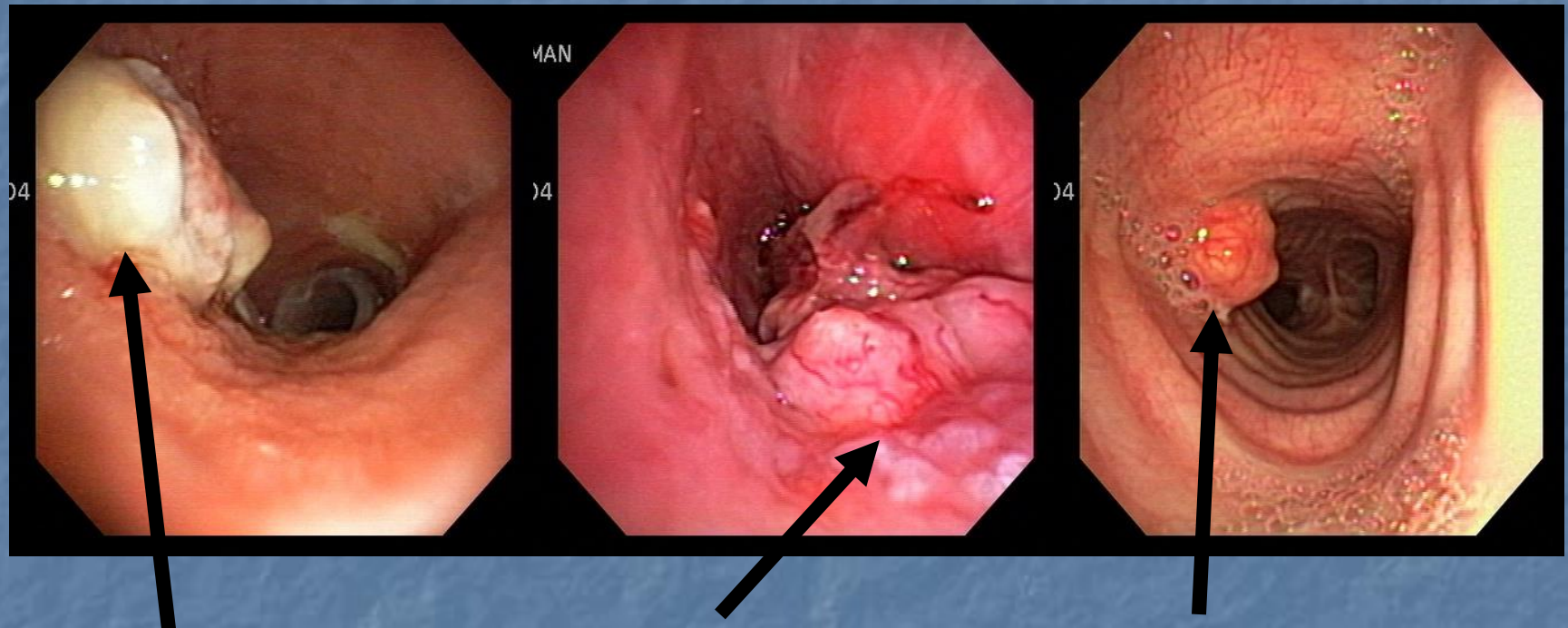
Other Abnormalities:

Tracheal stenosis

- Web-like subglottic stricture
- Circumferential subglottic stenosis



Other Abnormalities: Intraluminal exophytic lesions



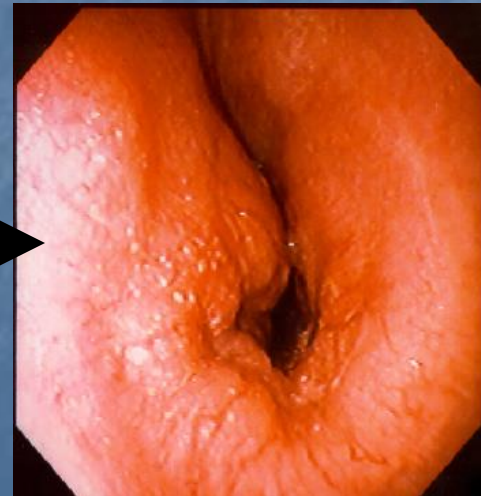
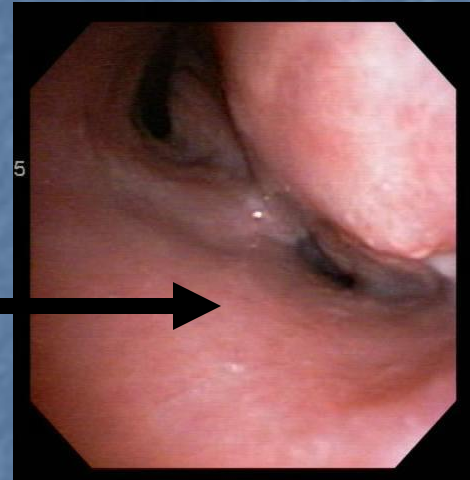
Necrotic Squamous cell

Nodular Adenocarcinoma

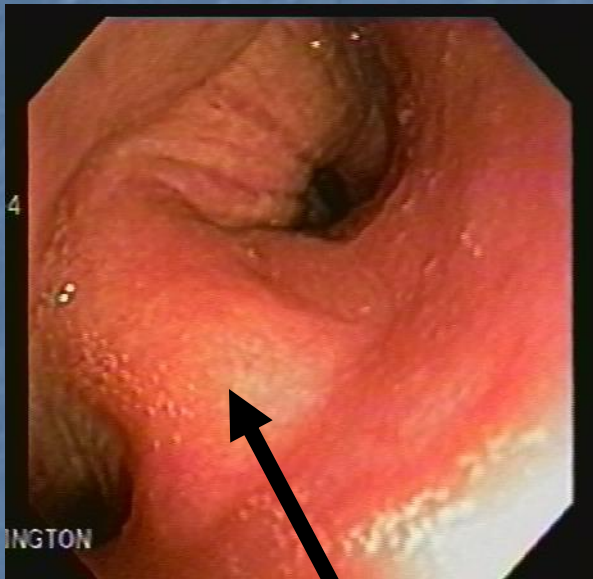
Nodular Squamous cell

Other Abnormalities: Extrinsic compression

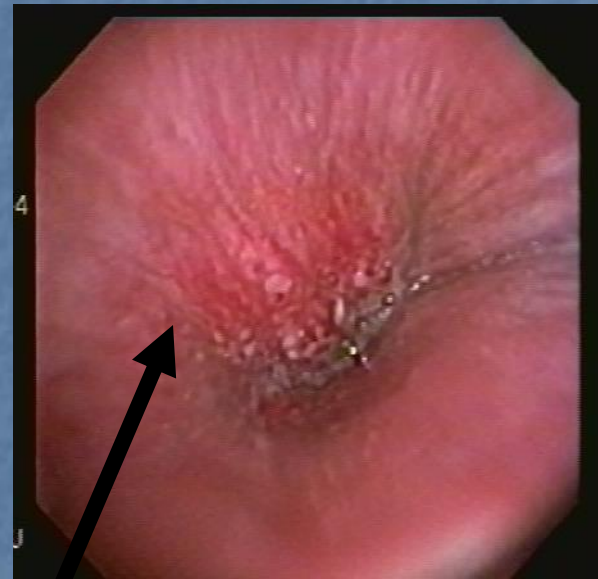
- Compression Left Main Bronchus from Esophageal cancer
- Compression trachea (with invasion) from Adenoid Cystic Carcinoma



Other Abnormalities: Infiltrating tumors



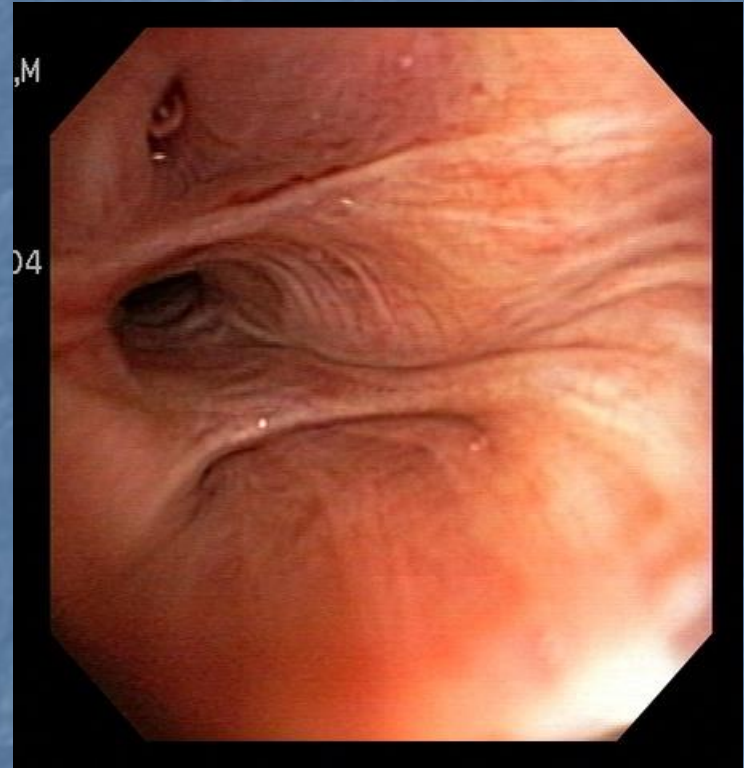
Small cell Lung Cancer



Adenocarcinoma Lung

Other Abnormalities: Volume loss

Lower lobe bronchus volume
loss from pleural effusion



This presentation is part of a comprehensive curriculum for Flexible Bronchoscopy. Our goals are to help health care workers become better at what they do, and to decrease the burden of procedure-related training on patients.

The Essential Bronchoscopist



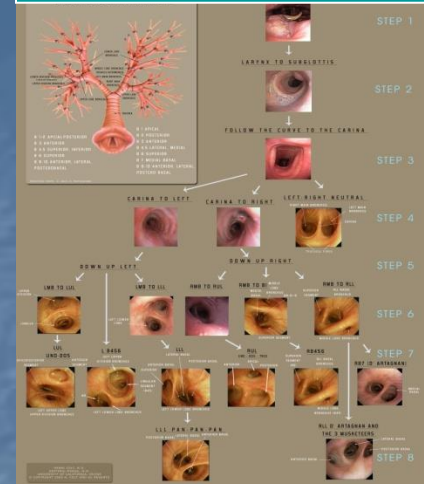
MODULE 1

A new curriculum

Assured competency and proficiency

1. Web-based Self-learning study guide.
2. Computer-based simulations, didactic lectures, and image encyclopedia.
3. Bronchoscopy step-by-step©: Practical exercises, skills and tasks, competency testing.
4. Guided apprenticeship.
5. Learning the art of Bronchoscopy.

Step by Step©



The Art of Bronchoscopy



8 Basic Principles

1. The bronchoscope wants to do the bronchoscopy
2. Stay in the midline (Get off the wall).
3. Moderation in everything; slow down, think, act.
4. If you don't know where you are you probably shouldn't be there
5. Force is wrong. Return to what you know; then move on and grow.
6. Slow down to finish faster.
7. Treasure basic values: peace, harmony and kindness
8. You and the bronchoscope are one

DEMOCRATIZATION AND
GLOBALIZATION OF KNOWLEDGE

BRONCHATLAS©



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Thank you