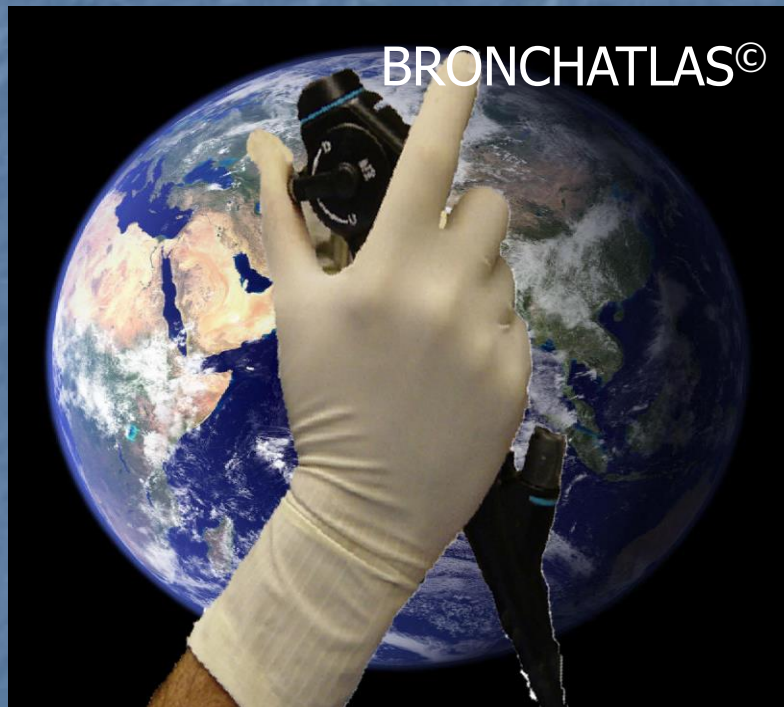


5A: Abnormalities of The Trachea



Prepared By
Bronchoscopy International

Contact us at
BI@bronchoscopy.org

Bronchoscopy reports: The Trachea

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: Normal, color, edematous, friable

Abnormalities: Location, type, extent, associated malacia, number of cartilaginous rings involved, posterior wall (dynamic collapse, excessive dynamic collapse)

Secretions: Abundance, location, type, color

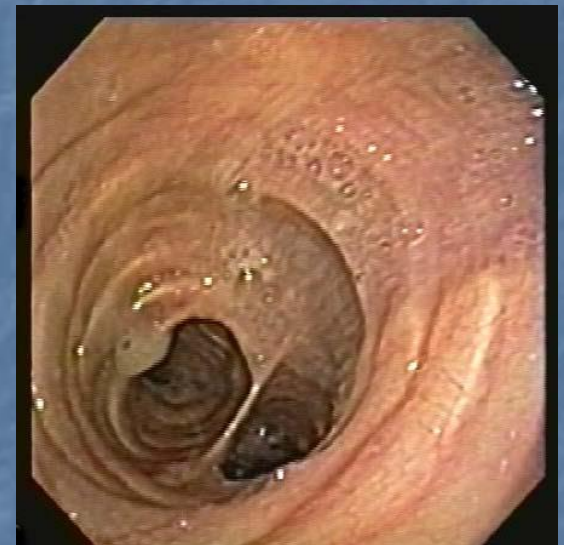
Various tracheal morphologies



Horseshoe trachea



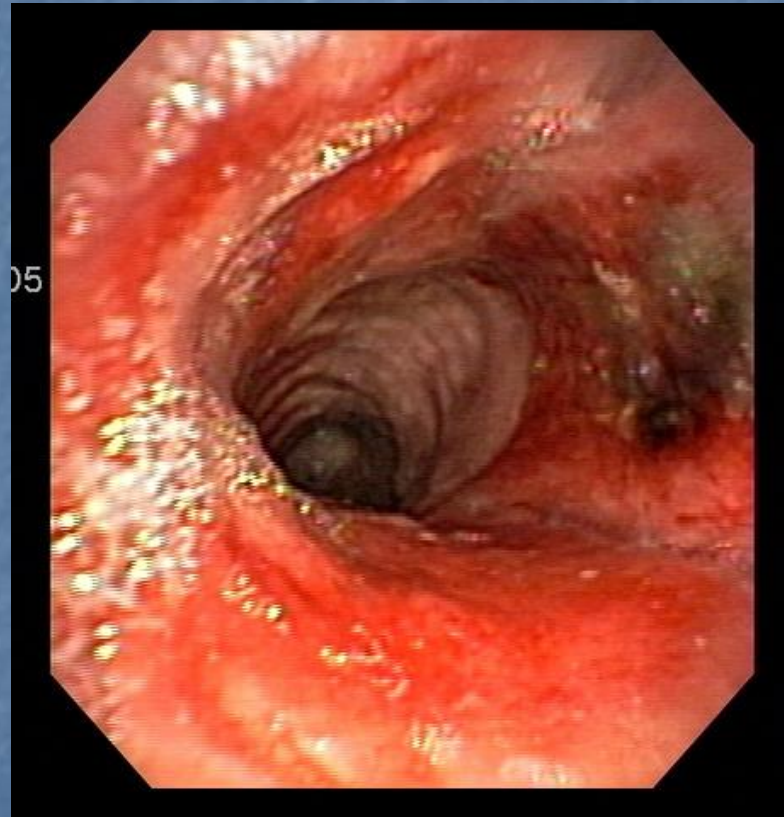
Fixed Saber sheath
($TI < 0.6$)



Tracheomegaly

Necrotizing tracheitis

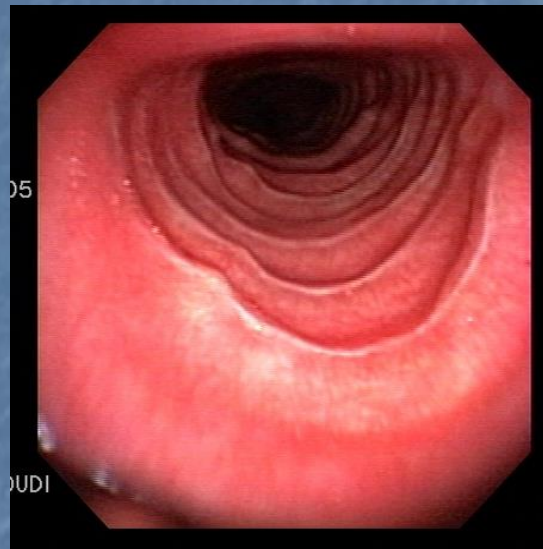
Noticed in patient
while on mechanical
ventilation



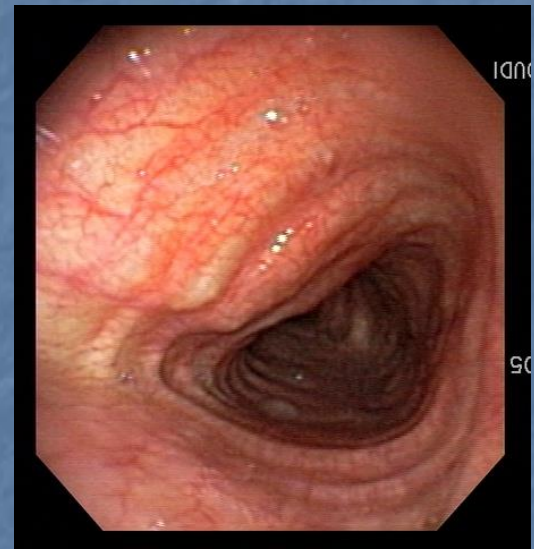
Cartilaginous tracheal abnormalities



Bony spur

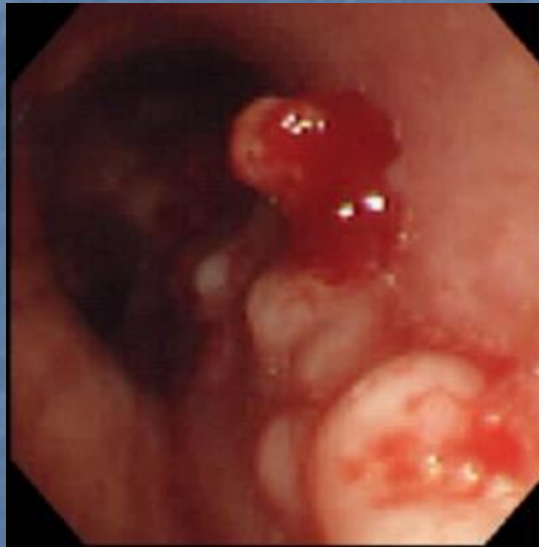


Prominent thin
cartilage



Triangular (with bony
spur)

Osteochondroplastica

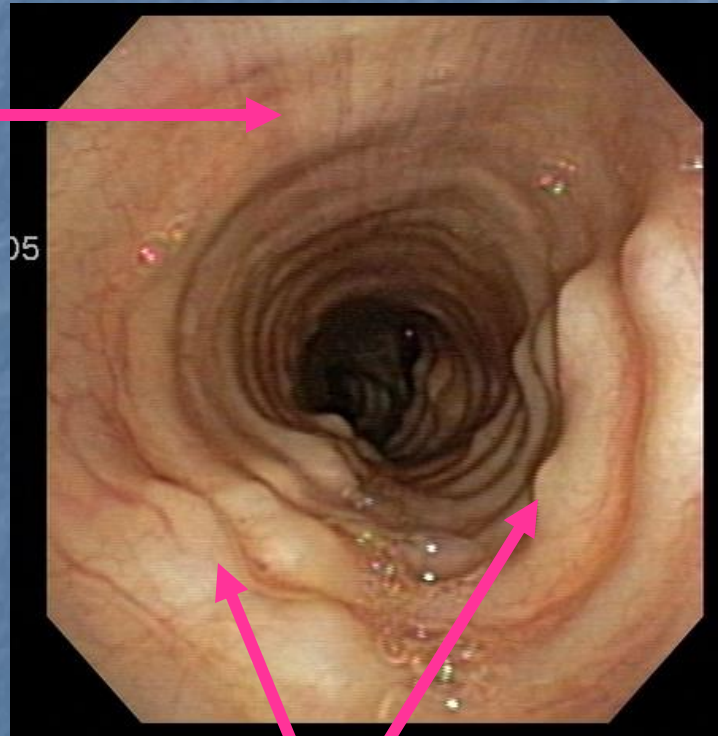


Firm intraluminal cartilaginous nodules

* Courtesy P. Grynblatt, Argentina
BI, All Rights Reserved, 2005

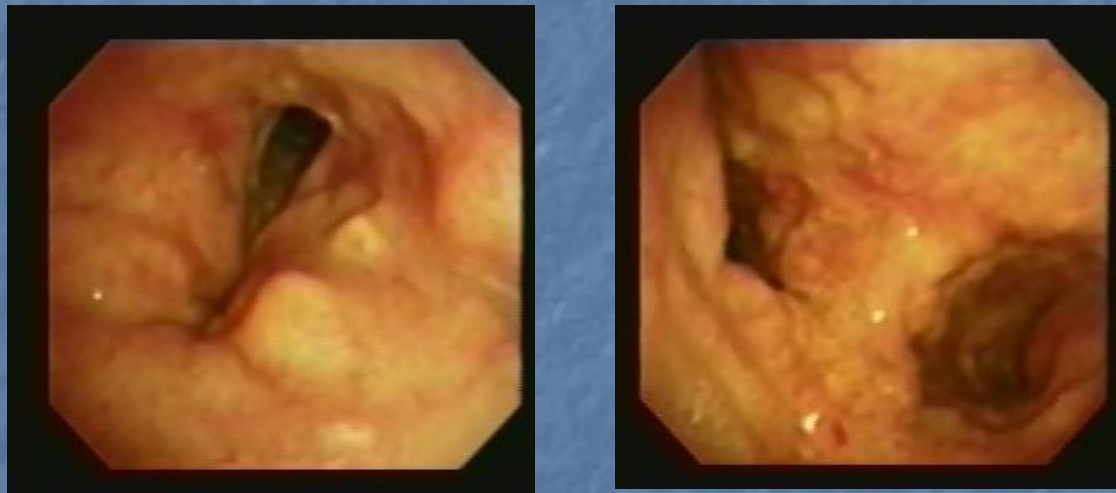
Osteochondroplastica benign appearance

Posterior membrane



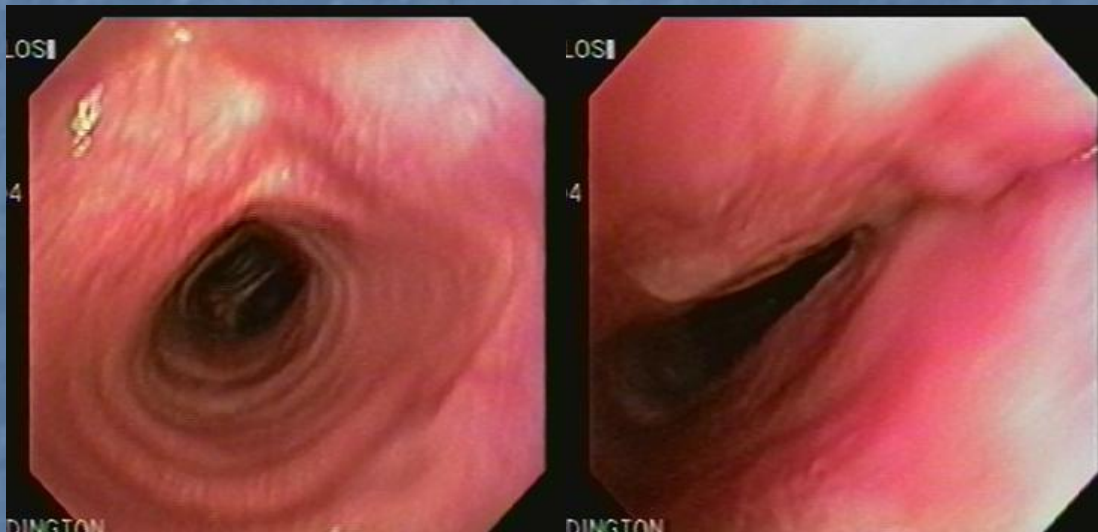
Cartilage protuberance

Infiltrative tracheal abnormalities



Amyloidosis involves larynx, trachea and carina

Tracheobronchomalacia

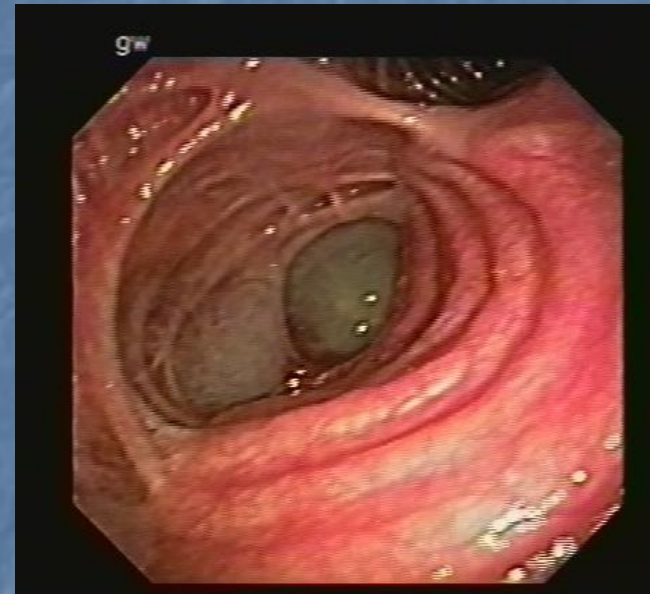
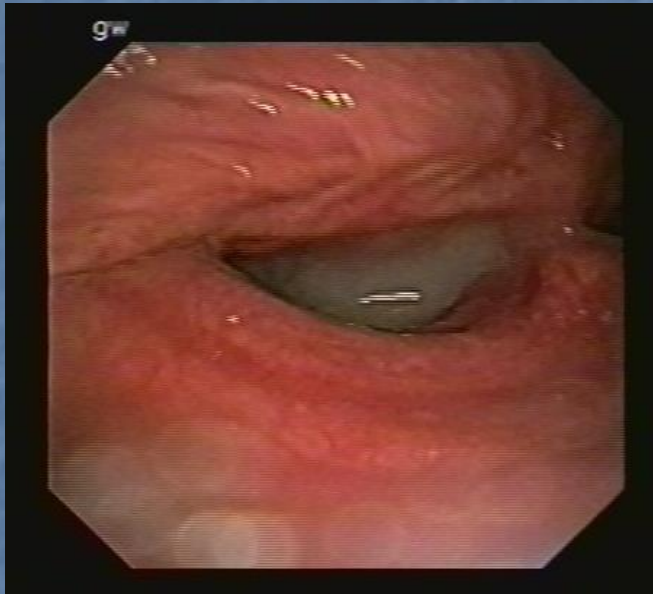


Saber-sheath type. Note collapse of lateral walls during expiration



Crescent type. Note flattened anterior wall during expiration

Tracheobronchomegaly with malacia



With chronic accumulation of purulent secretions

Excessive dynamic airway collapse



Posterior wall bulges inward during expiration
while anterior wall remains intact*

Tracheal stenosis

- Web-like subglottic stricture
- Circumferential subglottic stenosis



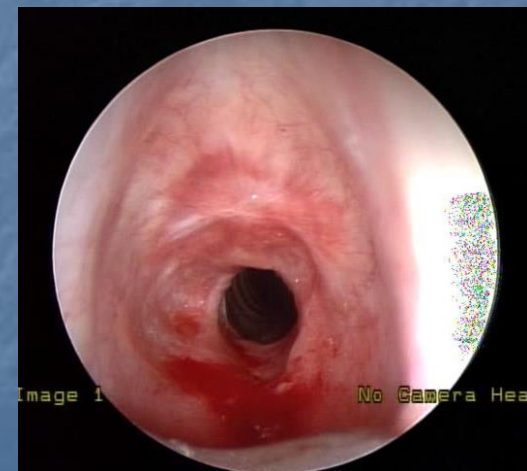
Pseudoglottic stenosis

- Usually post tracheostomy
- Fracture of cartilage
- Malacia of cartilage



Idiopathic tracheal stenosis*

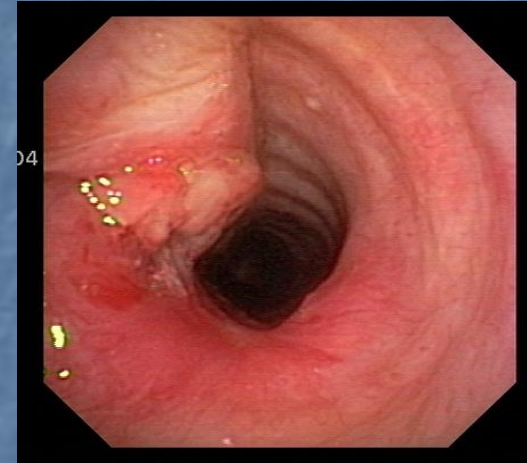
- Circumferential stenosis
- Subglottic
- Female predominance



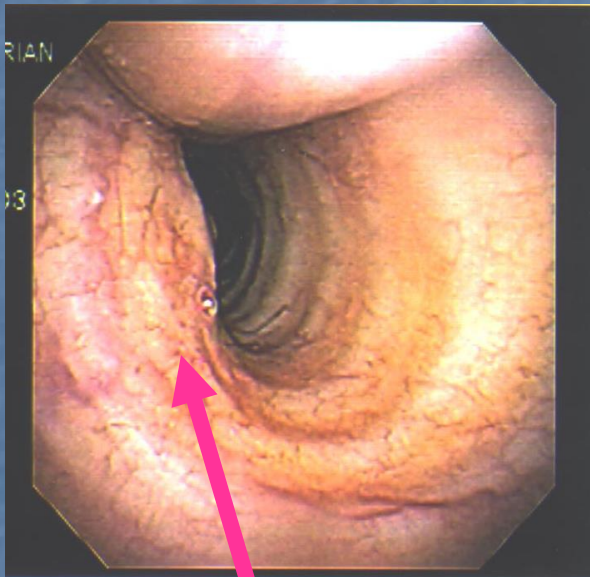
*Courtesy J. Janssen

Tracheal tumors

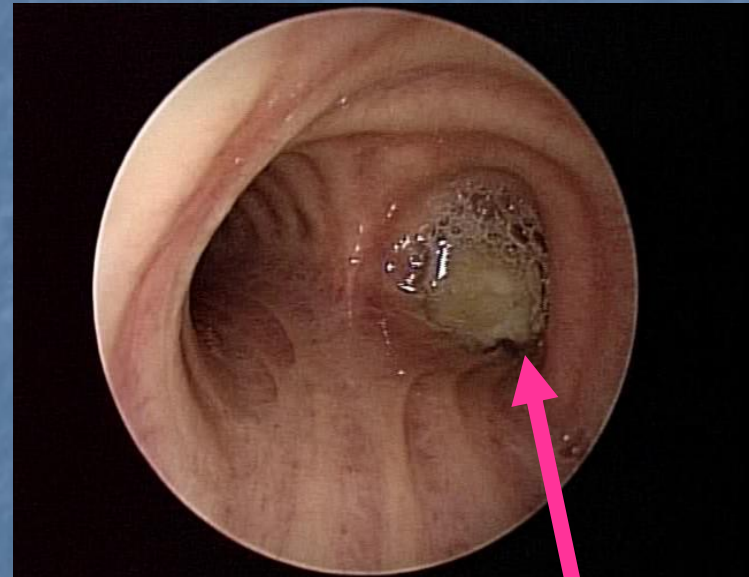
- Adenoid cystic carcinoma
- Squamous cell carcinoma



Malignant central airway obstruction

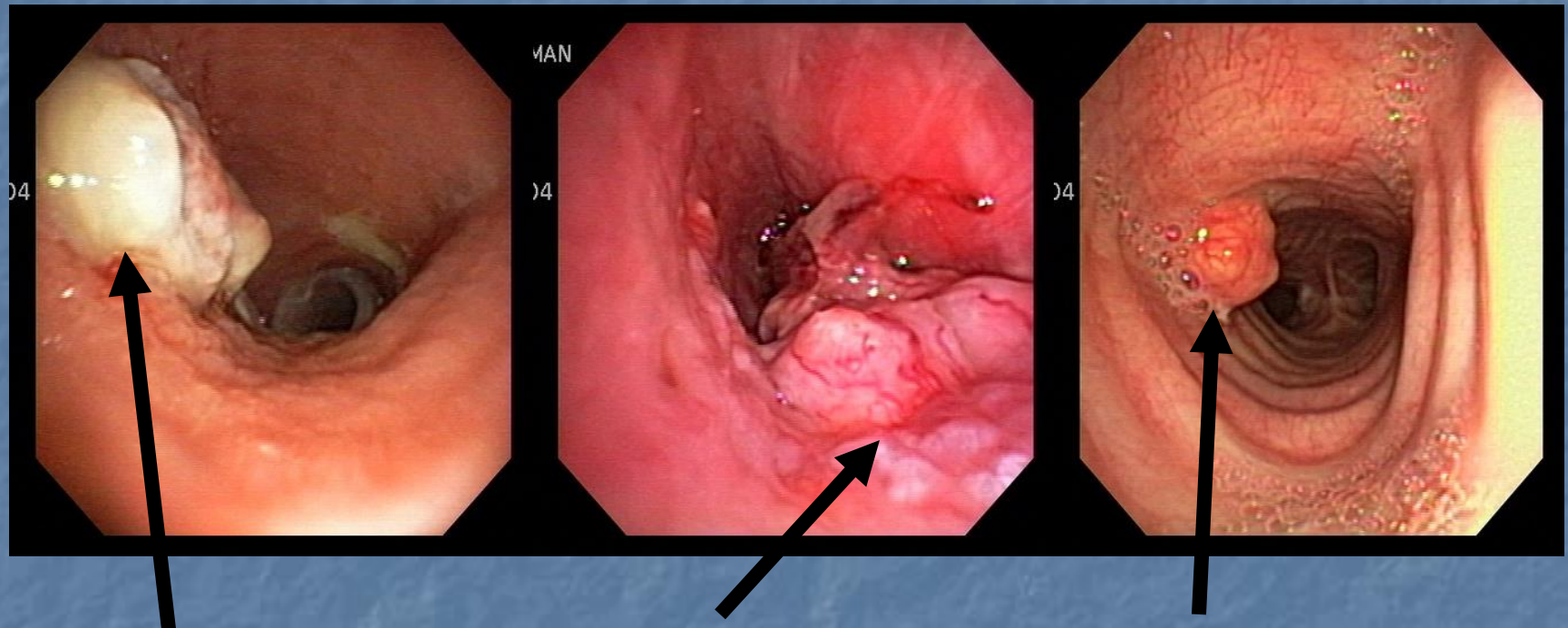


Invading Thyroid cancer
with extrinsic compression



Necrotic Intraluminal, exophytic
Squamous cell cancer obstructing
Right main bronchus

Intraluminal exophytic lesions



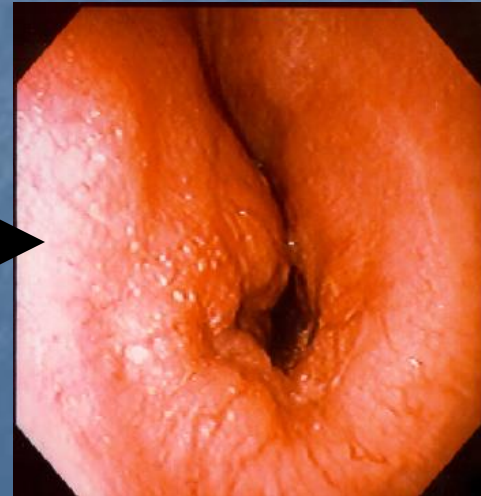
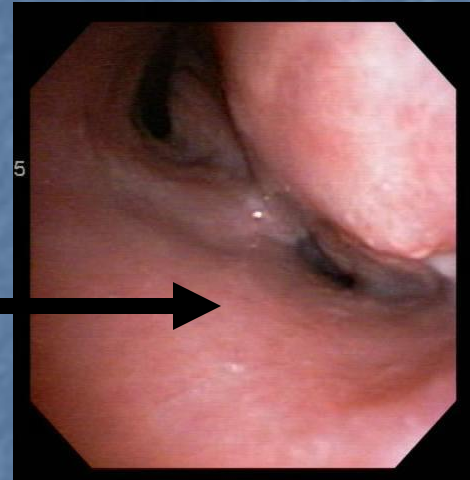
Necrotic Squamous cell

Nodular Adenocarcinoma

Nodular Squamous cell

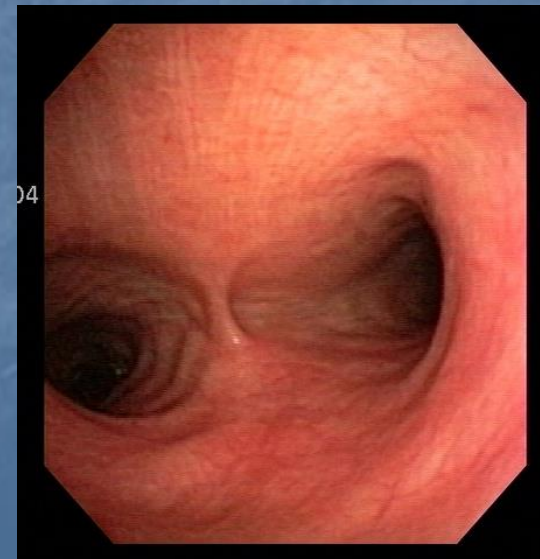
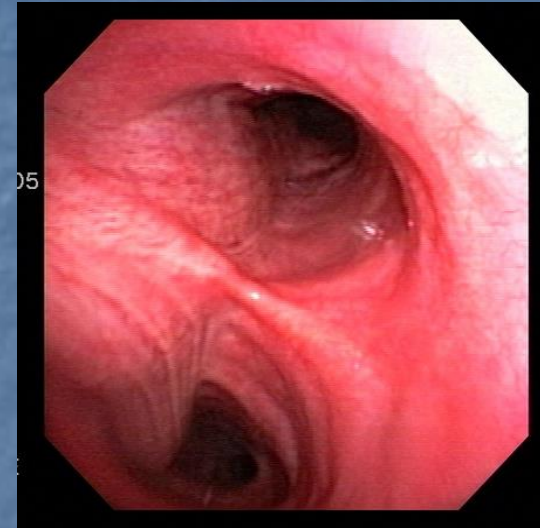
Extrinsic compression

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



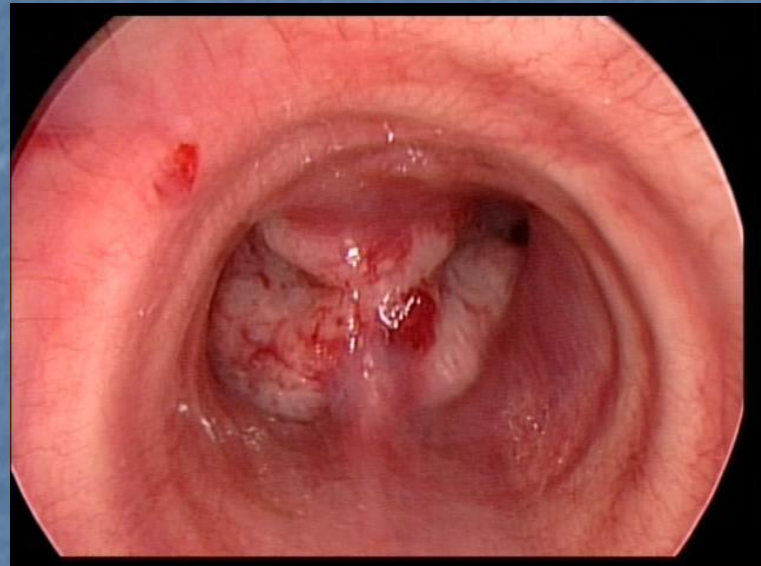
Carina adenopathy

- Subcarina and posterior carina adenopathy
- Subcarina and Pretracheal adenopathy



Neoplasm of carina

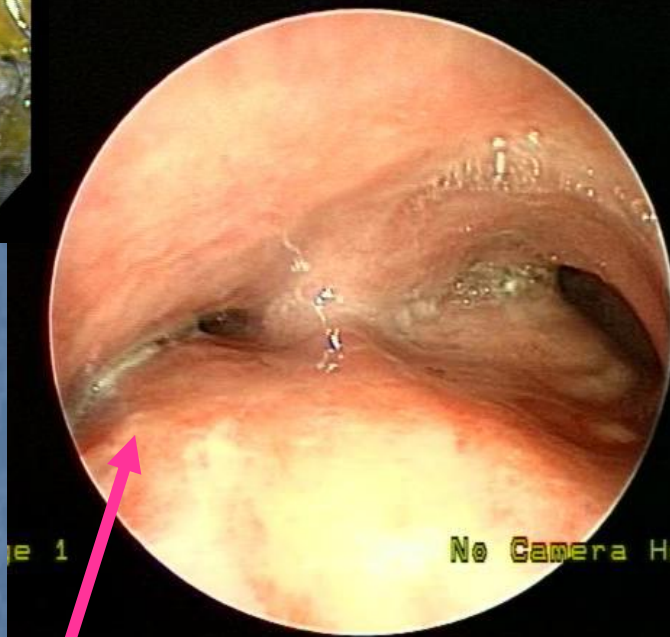
Adenocarcinoma
obstructing left and right
main bronchi and lower
third of trachea above the
carina.



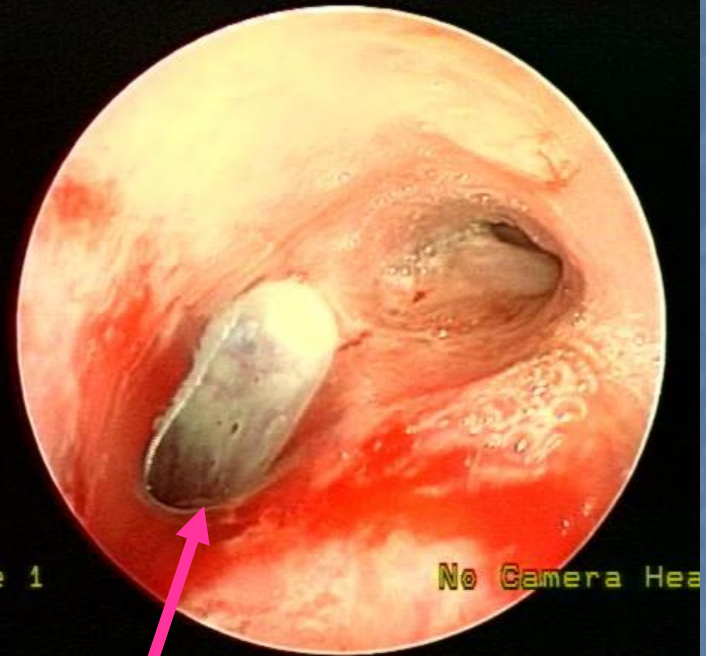
Extrinsic compression from esophageal cancer and esophageal stent



Esophageal
stent



Compression Left Main Bronchus



Silicone stent for palliation

Miscellaneous airway findings

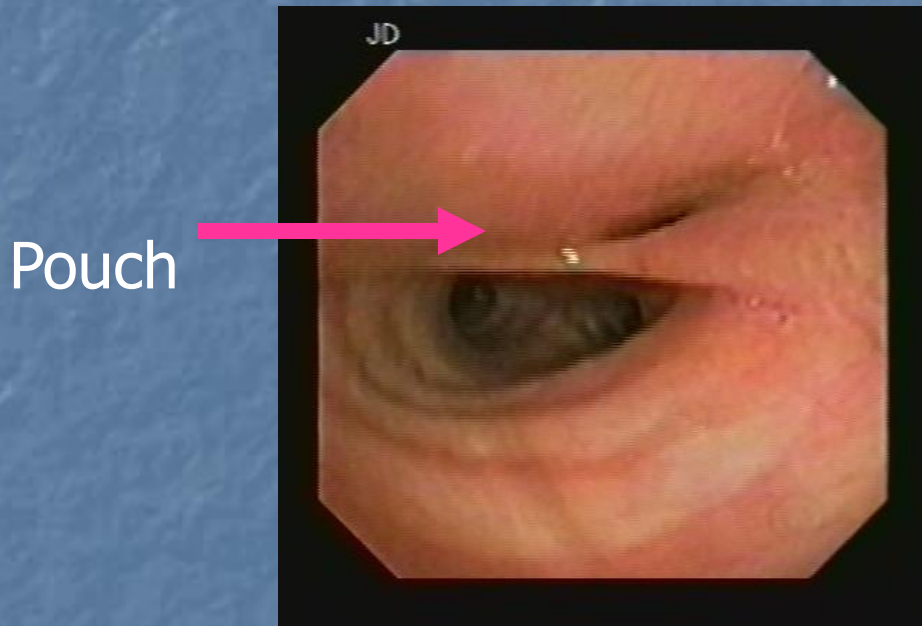


Tracheo-esophgeal fistula

Foreign body

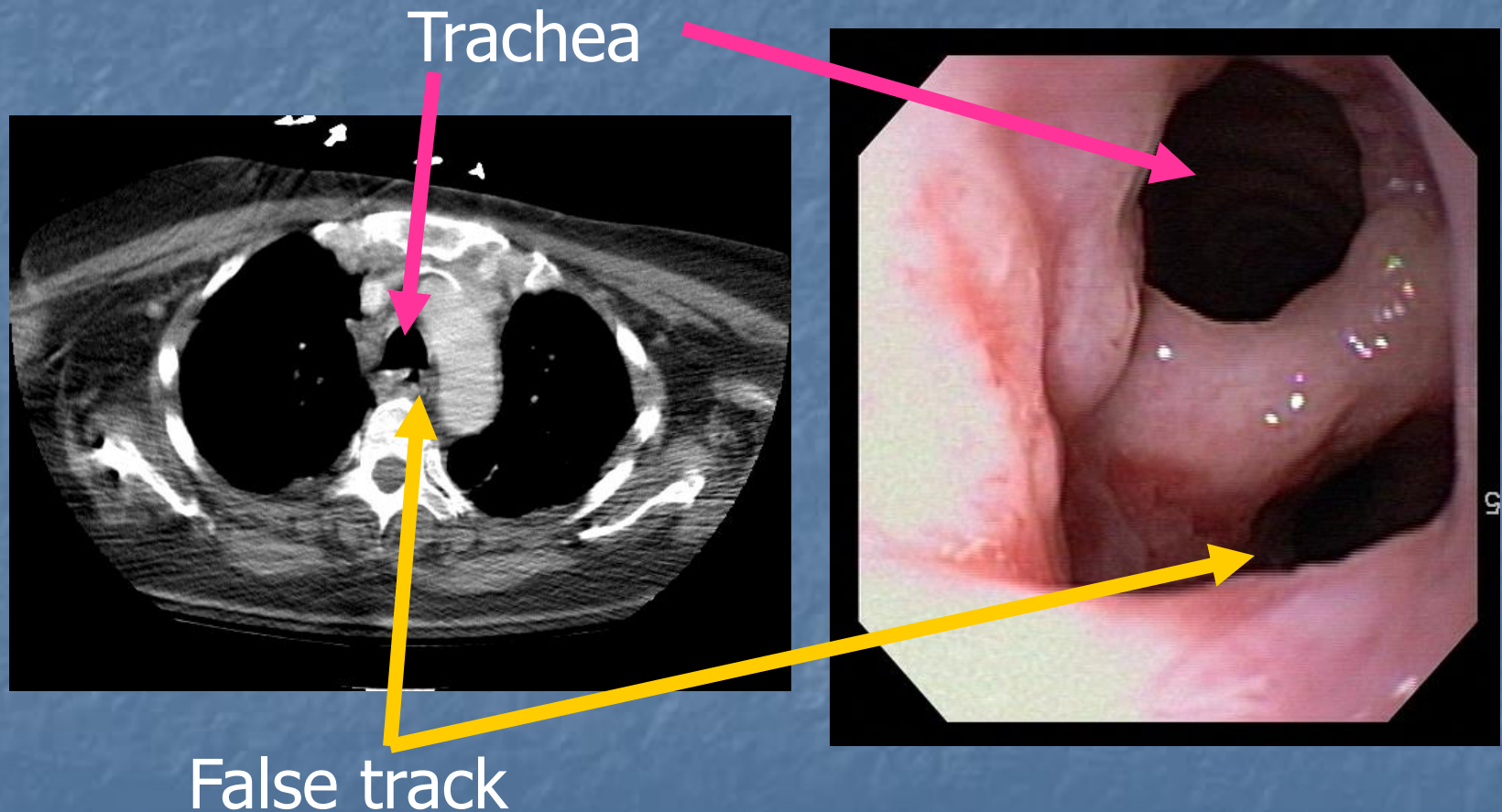
Tracheal bronchus

Repaired tracheocele with pus-filled pouch causing recurrent pneumonia



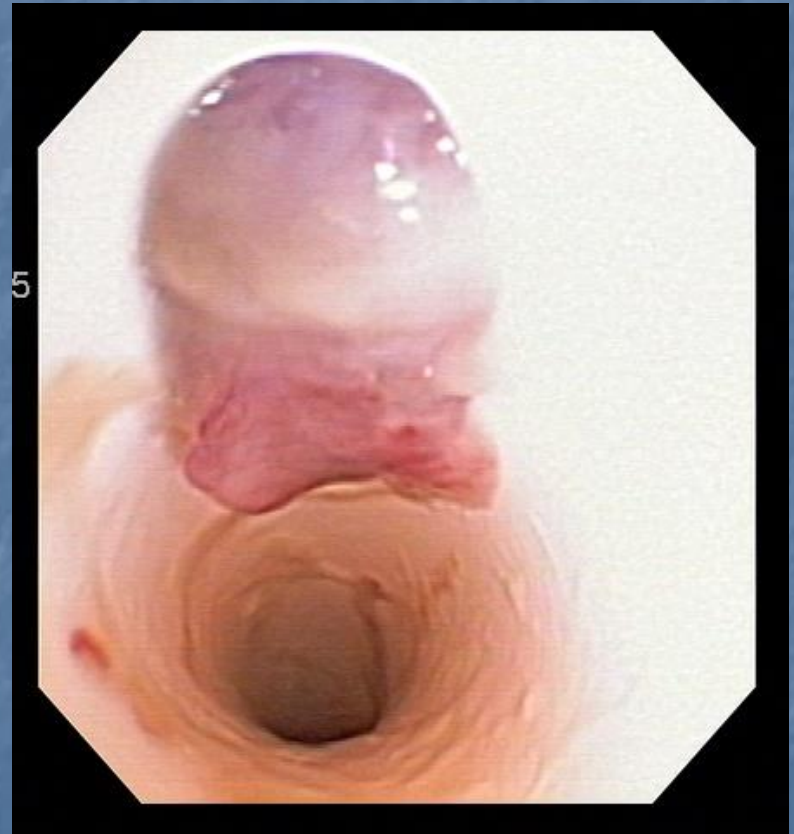
Inside pouch

False track (tracheo-mediastinal fistula caused by tracheotomy tube)



Granulation tissue growing through fenestration of tracheotomy tube

Patient complains of cough, difficulty speaking, and occasional hemoptysis



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



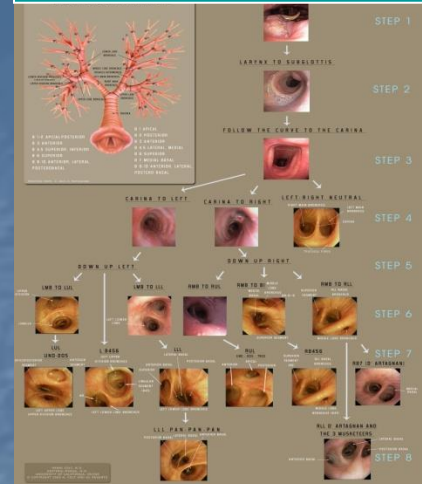
MODULE 1

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



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Thank you