

# Normal and Abnormal Findings in Rhinoscopy

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No Disclosures



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## Learning Objectives

- Maximize diagnostic yield by understanding best technique for Rhinoscopy
- Identify normal anatomy and variants of normal anatomy visualized in Rhinoscopy
- Identify abnormal findings visualized in Rhinoscopy



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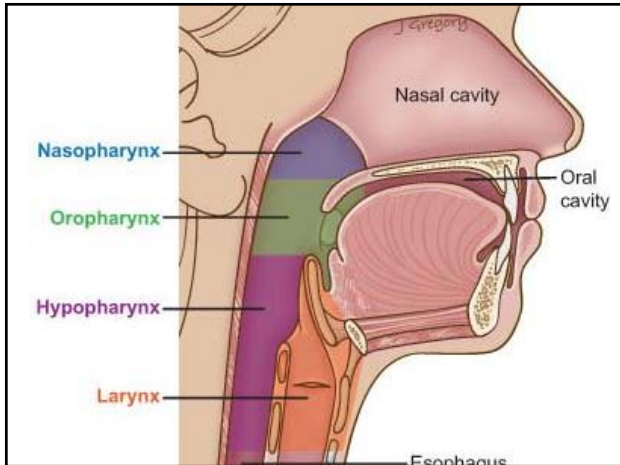
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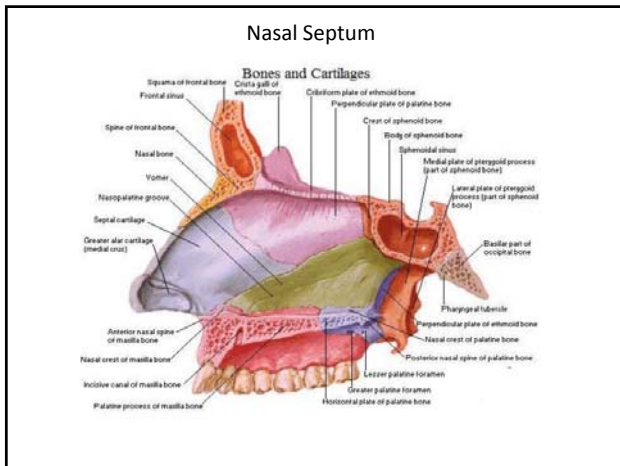
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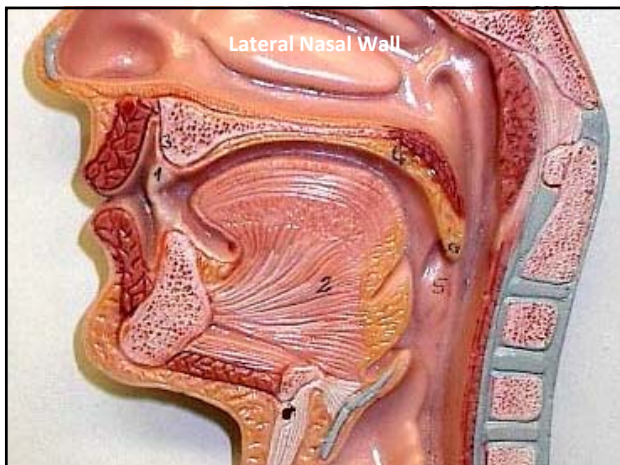
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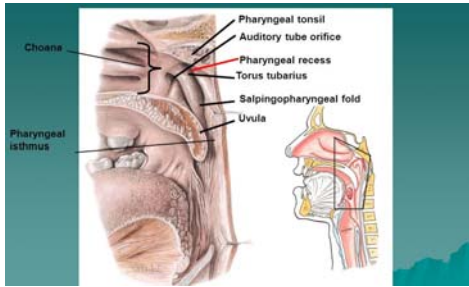
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## Nasopharynx

Mucosa Intact



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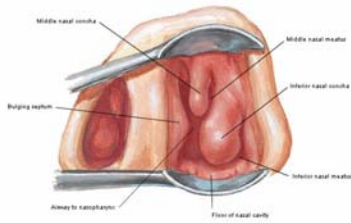
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## Anterior rhinoscopy



Ehab Zayyan MD, PhD

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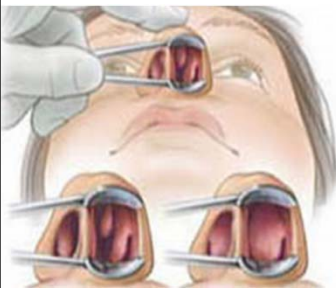
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## Anterior Rhinoscopy



Non Dominant Hand. Index Finger on Nasal Tip. Keep open until fully removed to avoid pulling hairs. Headlight illumination

**Nasal Septum:** deviation, perforation, stigmata of recent or active bleeding

**Inferior Turbinates:** color of mucosa, congestion, secretions

**Internal Nasal Valve** - Septum, floor, caudal border of upper lateral cartilage, anterior head of inferior turbinate. Narrowest part of nasal airway

**Middle Turbinates**

**Mucosa**



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## Flexible Nasal Endoscopy: Technique

- Topical decongestant/anesthetic
- Two hands required to drive scope
- Thumb drive or index finger drive
- May add lubricant to leading edge of scope
- Improved image quality with digital flexible endoscopes
- Generally smaller diameter and well tolerated even in tight areas
- Flexible end allows wide range of visualization
- Can easily pass into NP and visualize pharynx and larynx
- Poor tool for obtaining culture or biopsy



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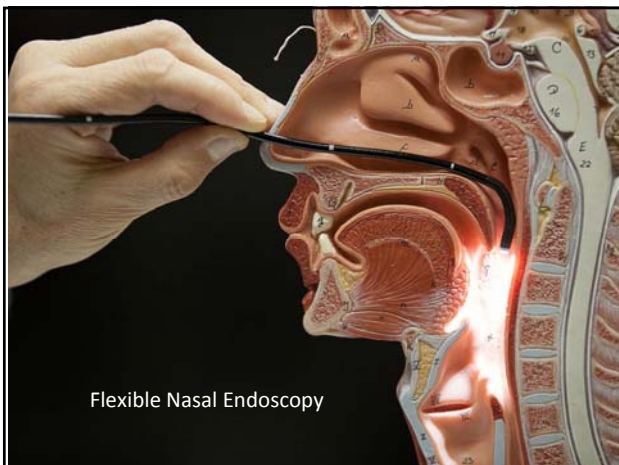
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## Rigid Nasal Endoscopy

- One hand to drive scope
- Second hand available for:
  1. culture
  2. debridement
  3. epistaxis
  4. biopsy
- Superior illumination & image quality
- Identify pathology in 40% of patients with normal anterior rhinoscopy
- Generally 0, 30, 45, 70 degree angles
- 2.7mm and 4.0 mm
- Uncomfortable if contacts septum, middle turbinate and sphenoidal recess



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## Nasal Endoscopy: Indications

Sinonasal symptoms (congestion, drainage, pain, anosmia)

Response to Medical Tx

Unilateral dz or nasal mass

Unilateral middle ear effusion in adult - Nasopharynx and ET orifice

Complicated sinusitis (orbit, CNS, skin)

Culture, Biopsy, Epistaxis, Removal FB

Debridement post FESS and surveillance

CSF Rhinorrhea



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## Nasal Endoscopy: Relative Contraindications

- Bleeding disorder, anticoagulants
- Anxious patient



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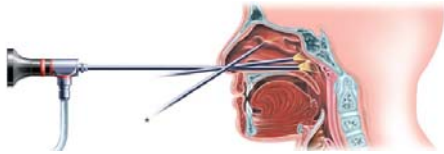
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## Nasal Endoscopy

- 3 Passes of Endoscope
- Low - Nasal floor to Nasopharynx
- Mid - Middle turbinate/M. Meatus to SER
- High - Cribriform fossa



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## Diagnostic Nasal Endoscopy



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Insert Nasal Endoscopy with view of Inferior, Middle and Superior Meatus - discuss what drains in each



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## Lund-Kennedy Endoscopic Scoring System

- Quantifies bilateral sinonasal pathology (0-20 score)
  - Initial evaluation, Pre-op, Post-op
  - High interrater agreement
- Polyps
  - Discharge
  - Mucosal Edema
  - Scarring or Adhesions
  - Crusting



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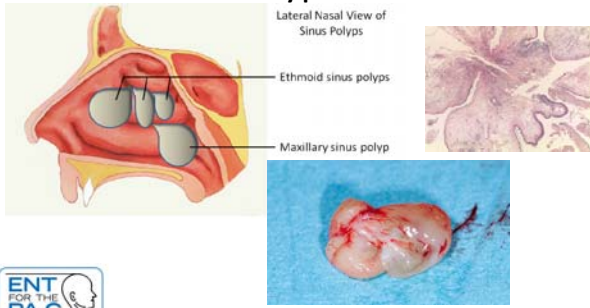
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## Lund-Kennedy Scoring: Polyps



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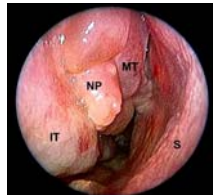
0 - No polyps (absent)



1 - Polyp in Middle Meatus



2 - Polyp Beyond Middle Meatus




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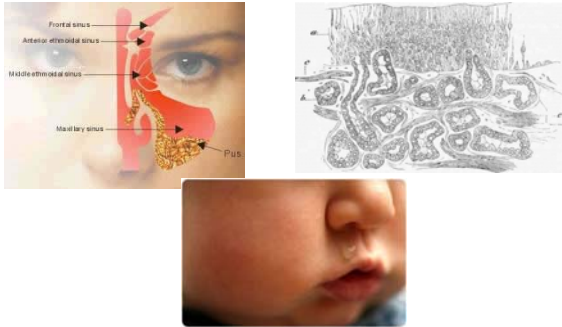
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## Lund-Kennedy Scoring: Discharge




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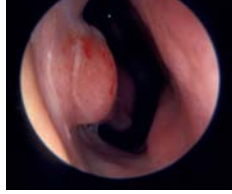
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0 - No discharge



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1 - Thin discharge



2 - Thick or purulent discharge




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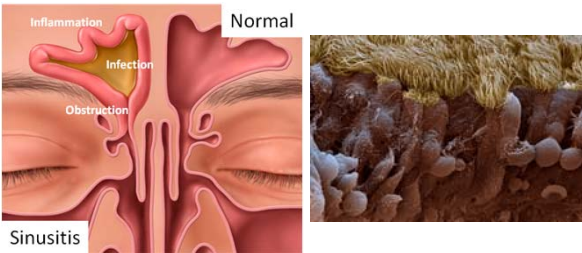
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## Lund-Kennedy: Mucosal Edema




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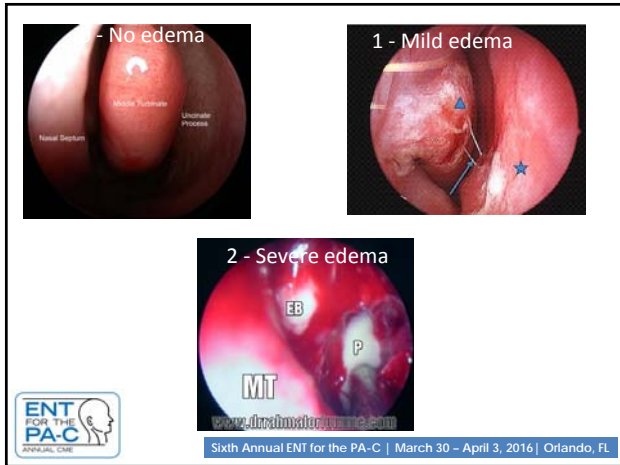
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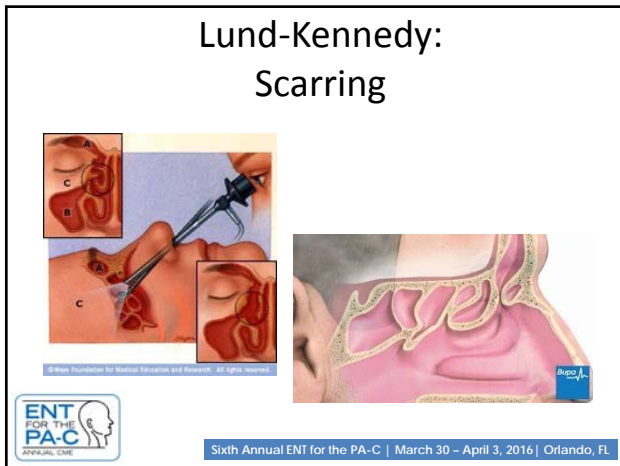
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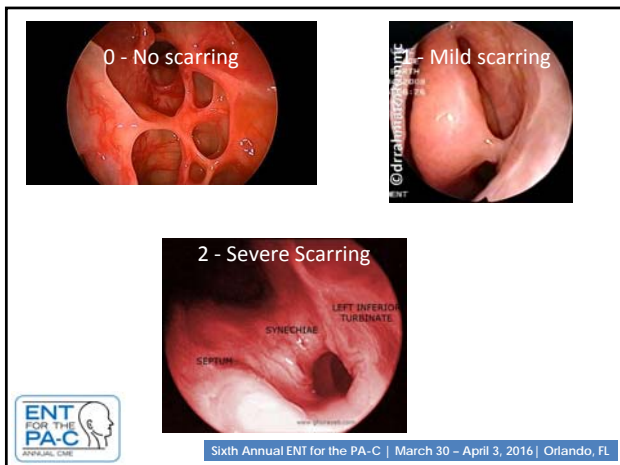
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# Lund-Kennedy: Crusting



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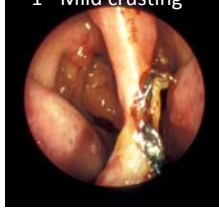
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0 - No crusting



1 - Mild crusting



2 - severe crusting



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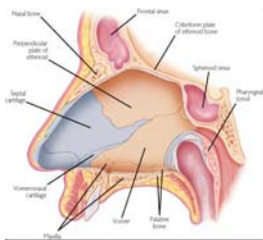
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# Nasal Septum



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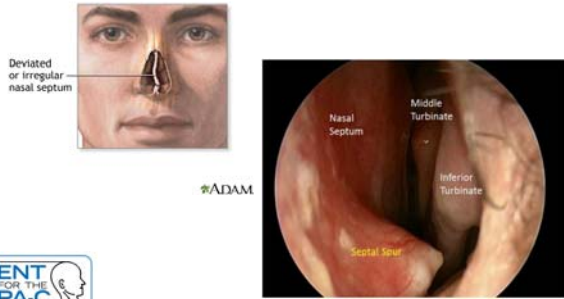
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## Septal Deviation



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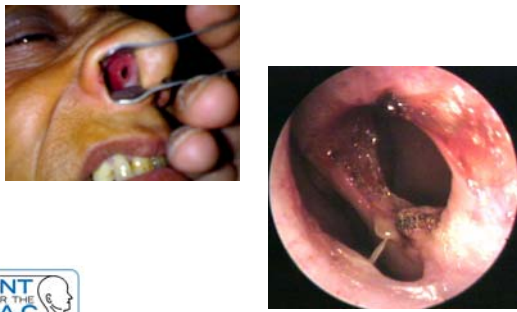
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## Septal Perforation



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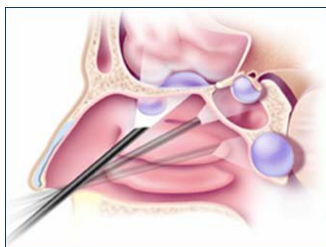
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## Sinus Surgery



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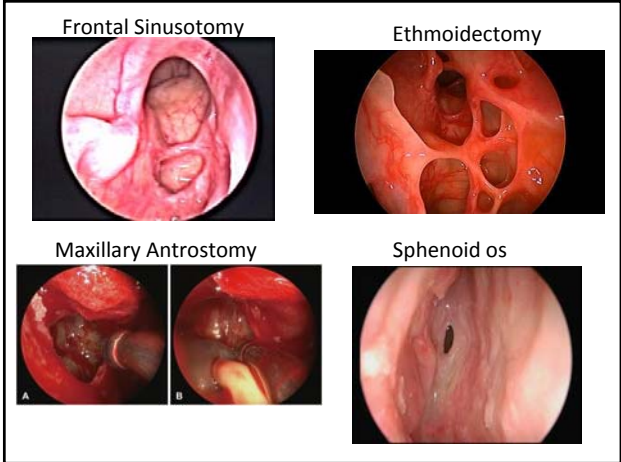
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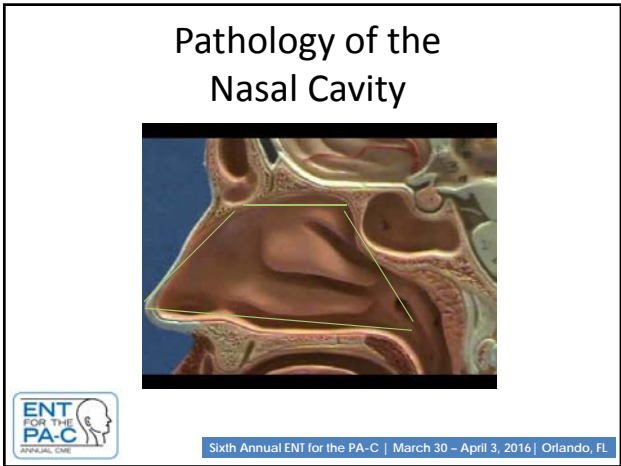
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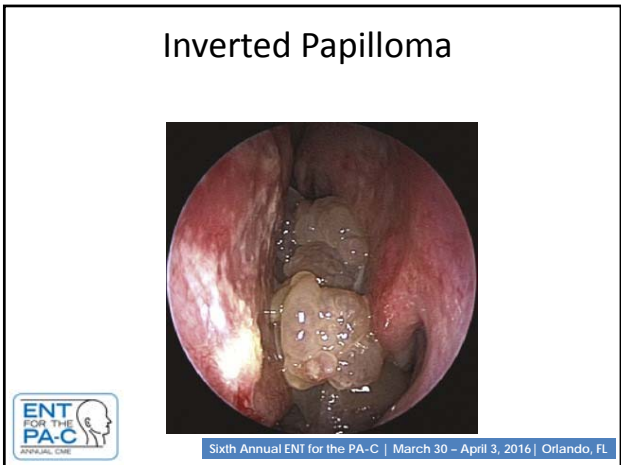
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## Sinonasal Malignancy



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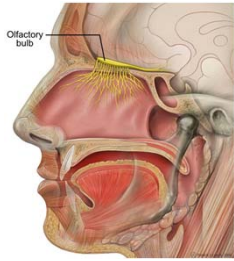
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## Tumors of the Cribriform Fossa: Meningioma



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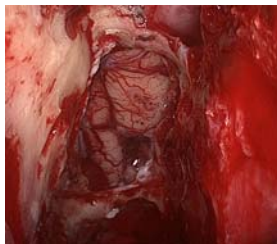
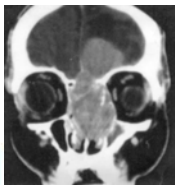
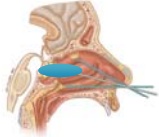
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## Tumors of the Cribriform Fossa: Esthesioneuroblastoma



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### Cribriform Fossa Encephalocele and CSF Leak



Dr. Vandana MBBS, MS, India



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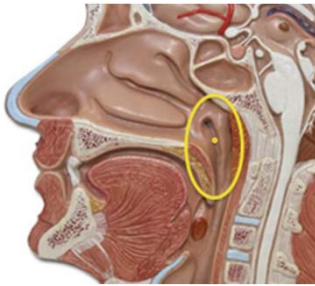
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### Pathology of the Nasopharynx



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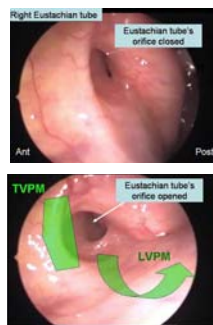
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### Eustachian Tubes



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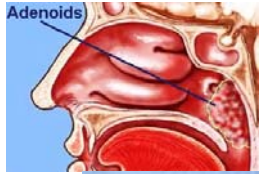
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## Adenoid Hypertrophy



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## Nasopharyngeal Cysts



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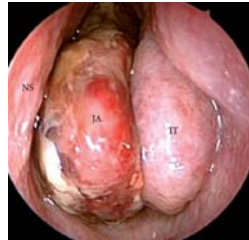
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## Juvenile Nasopharyngeal Angiofibroma (JNA)



JNA in Posterior Right Nasal Cavity



JNA extending to Anterior Left Nasal Cavity

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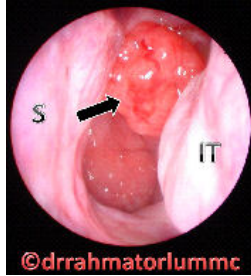


# Nasopharyngeal Carcinoma



@drahmatorlummc

Unilateral Serous OM



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Questions?



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