

# Premalignant Lesions of the Glottis

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# Risk factors

- Tobacco

- 13-fold increase in laryngeal cancer for smokers
- smokers of cigarettes with >22 mg of tar had double the incidence of laryngeal cancer compared with smokers of low-tar cigarettes

- Alcohol

- smokers consuming more than 1.5 L/day of wine had a 34-fold increased risk
- Beer and hard liquor worse than wine
- high risk is multiplicative

# Other risk factors

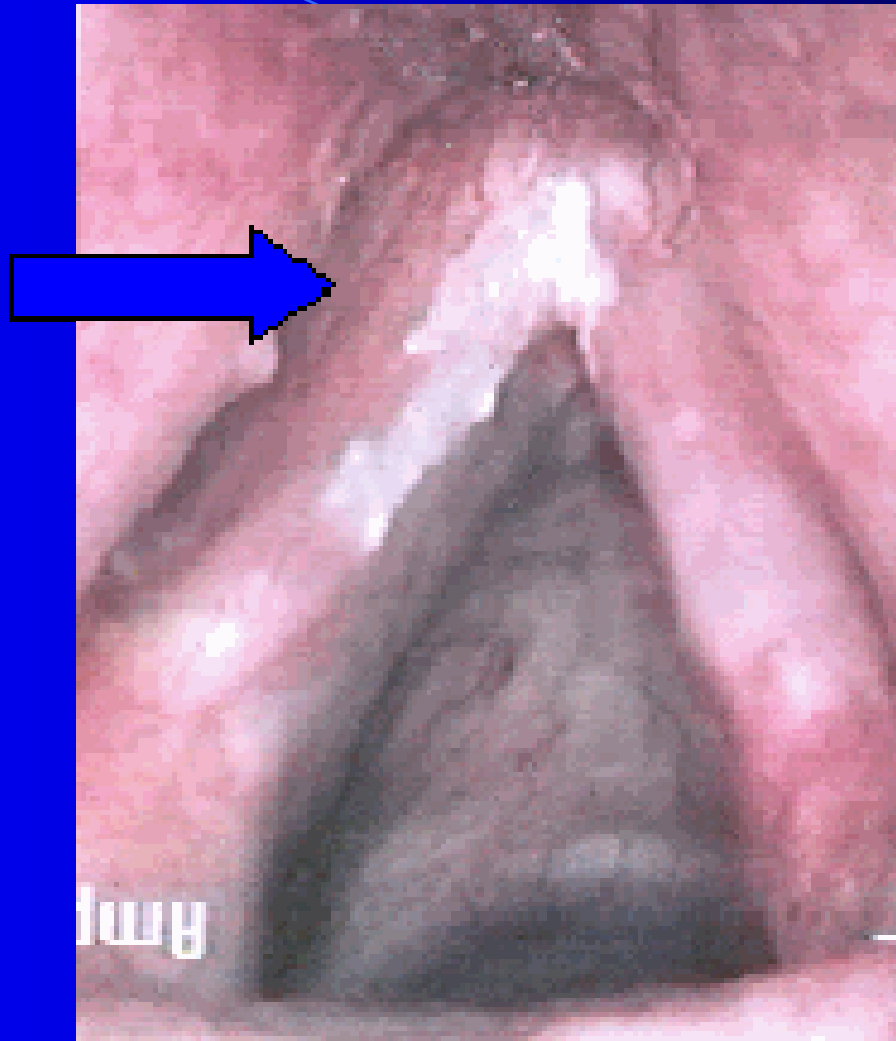
- GERD
- Mate tea
- Occupational exposures
  - Asbestos
  - Nickel
  - Glass-Wool

# Hoarseness

- Persistent for more than 4 weeks
- Mechanisms
  - affecting the vocal wave
  - restricting the direct opposition between the two vocal cords

# Evaluation

- Endoscopy
  - Office endoscopy, stroboscopy
  - Intraoperative direct laryngoscopy
  - Ddx: fungal laryngitis, sarcoidosis, tuberculosis, or Wegener's granulomatosis
- Biopsy
  - Small suspicious lesions should be completely excised with a border of healthy laryngeal submucosa so the depth of invasion can be measured.



Source: [http://www.chicagovoiceworks.com/Specific\\_Voice\\_Disorders.htm](http://www.chicagovoiceworks.com/Specific_Voice_Disorders.htm)

# Spectrum of Laryngeal Squamous Abnormality

Hyperkeratosis



Hyperkeratosis with atypia



Carcinoma in situ (CIS)



Superficially invasive carcinoma



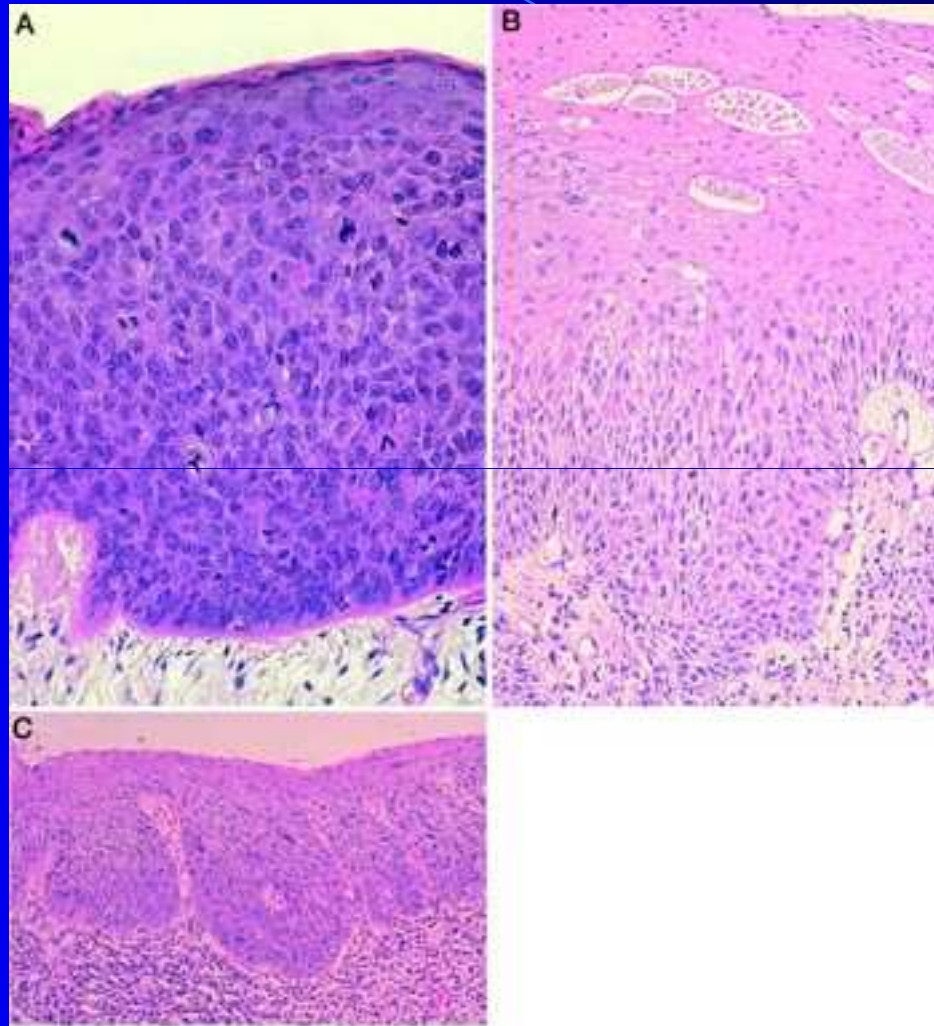
Invasive carcinoma

# Histologic Criteria

- Cytomorphologic and maturation abnormalities
- Proliferation of immature or "uncommitted" cells
  - loss of cellular organization
  - nuclear pleomorphism
  - increase in nuclear size relative to the cytoplasm
  - increase in the nuclear chromatin with irregularity of distribution
  - increased mitoses



# Severe Keratinizing Dysplasia



# Risk of Progression

- Keratotic epithelium without dysplasia: 1-5%
- Mild dysplasia: 5.7%
- Moderate dysplasia: 22.5%
- Severe dysplasia: 28.4%
- CIS: 46%

# Management

- Hyperkeratosis with atypia
  - Remove gross lesion microscopically
  - Follow-up and rebiopsy in 6-12 weeks
  - Severe dysplasia: panendoscopy
  - Behavioral modification
- Rapid or frequent recurrence with the same histology or progression to histologically proven invasive carcinoma
  - Cordectomy
  - Hemilaryngectomy
  - full-course narrow-field radiation