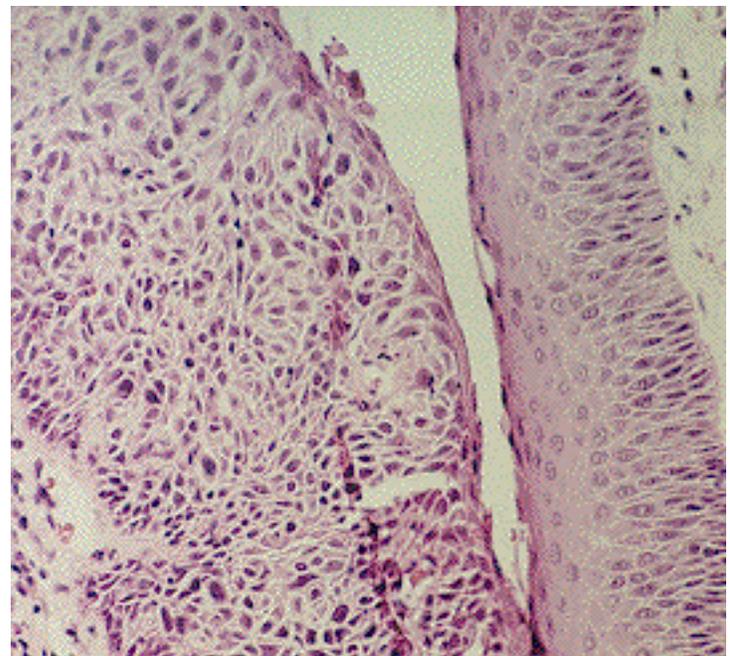


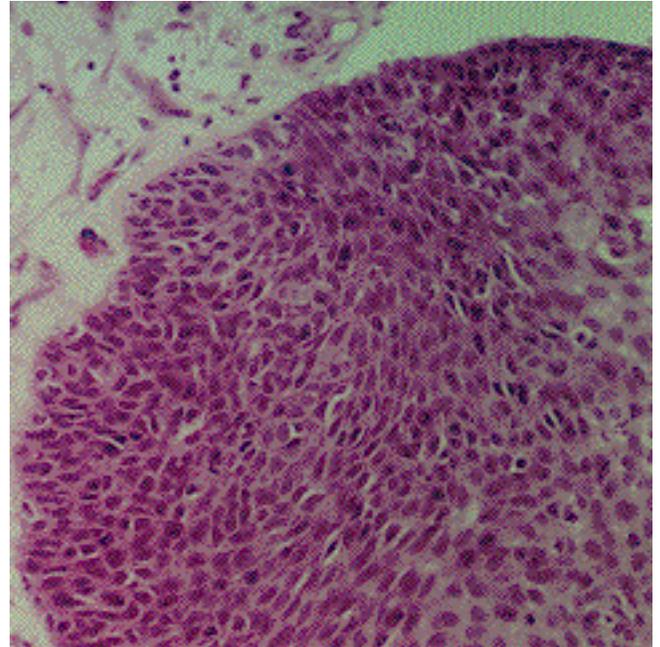
## CARCINOMA IN-SITU

Carcinoma in-situ describes dysplastic changes in epithelium, severe enough to be considered carcinoma and existing throughout the entire thickness of the epithelium ("top to bottom"). Unlike mild or moderate dysplasia in which similar changes are seen but which involve only a portion of the thickness or depth of epithelium, carcinoma in-situ is not reversible with the elimination of the causative agent such as cigarette smoke, and eventually is expected to become invasive carcinoma. It is important in studying carcinoma in-situ to note that the basement membrane is intact thus limiting cancer cells to the epithelium. Without invasive carcinoma, there will not be metastatic disease. Sometimes malignant cells make their way into ducts of epithelial glands and replace normal glandular epithelium but again the basement membrane remains intact.

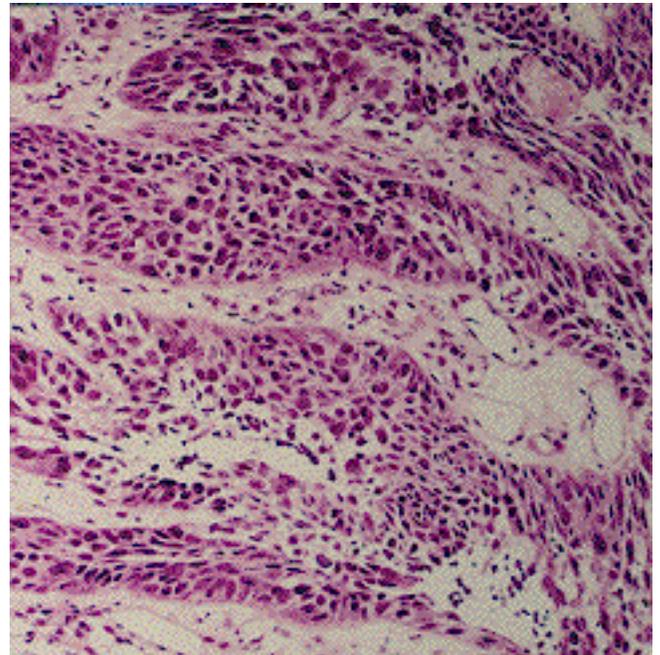
The thinner layer of epithelium is normal and a third to half of the thickness of the epithelium in the left half of the photograph which has full thickness dysplasia. Minor parakeratosis exists. All normal organization of cells is lost; there are pleomorphic, hyperchromatic squamous cells with altered nuclear-cytoplasmic ratio. The basement membrane (not well seen) remains intact identifying this as carcinoma in-situ rather than invasive carcinoma.

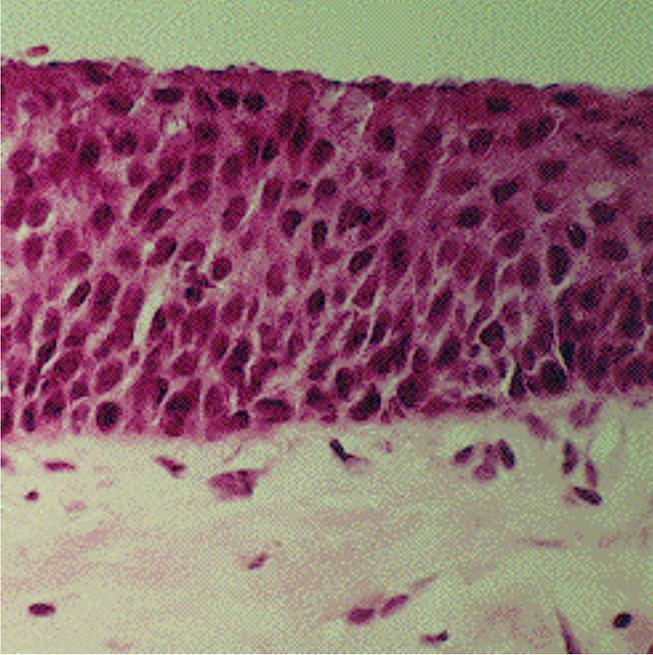


Carcinoma in-situ, sphenoid; Note the well-preserved basement membrane. All cells are hyperchromatic and the nuclear—cytoplasmic ratio is altered. Normal cellular polarity is lost and the normal maturation cycle is not apparent. These changes extend all the way to the epithelial surface.

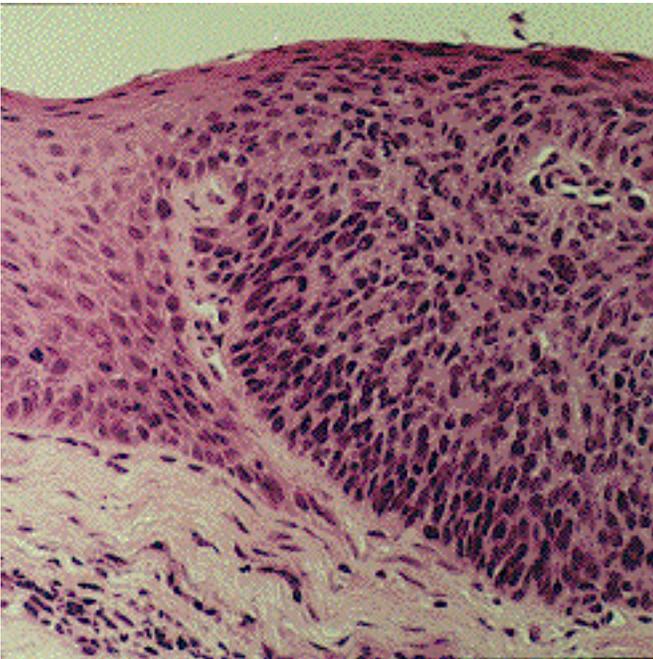


Carcinoma in-situ, larynx; long rete pegs with cells showing hyperchromatic nuclei, pleomorphism and loss of normal maturation cycle, but with an intact basement membrane.





Carcinoma in-situ, larynx. Full thickness cell crowding and lack of organization is seen.



Carcinoma in-situ, vocal cord. Note the abrupt transition from CIS to non-dysplastic mucosa.

Carcinoma in-situ, with partial replacement of glandular cells by dysplastic squamous cells (basement membrane intact).

