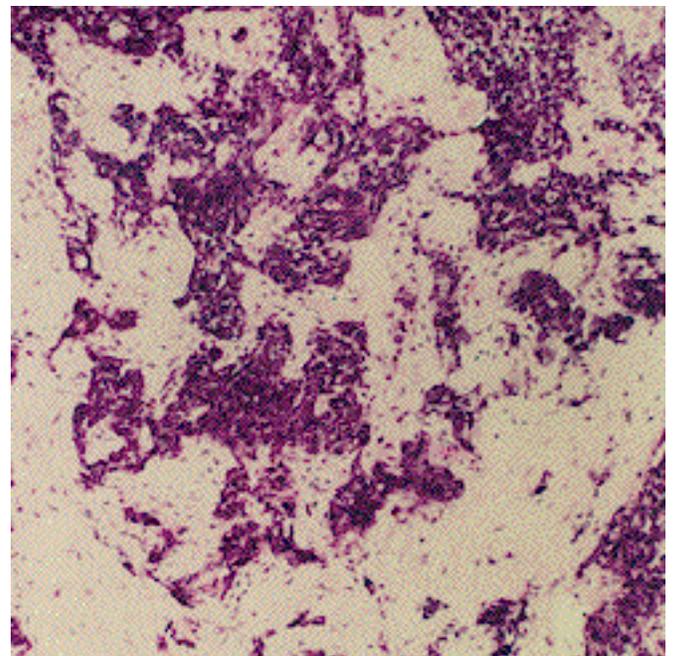


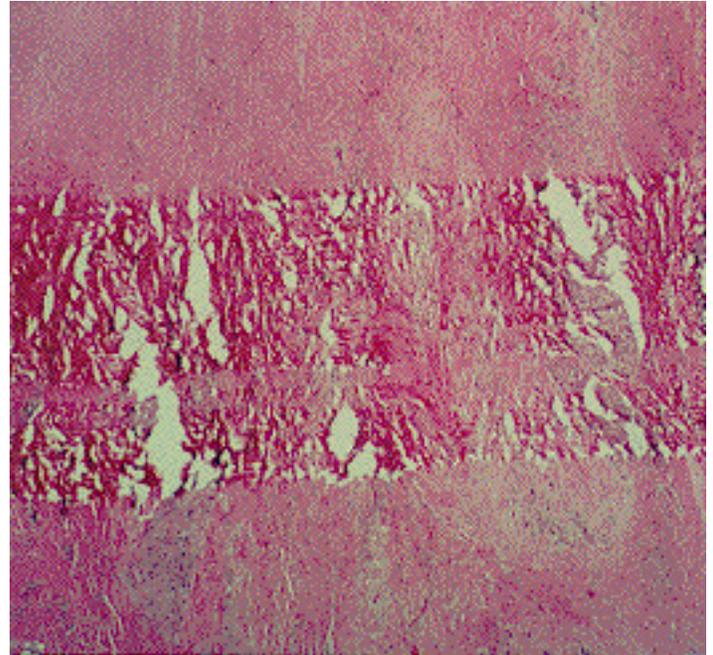
ARTIFACTS

Artifacts are very common in microscopic preparation and may be caused in many different ways. The surgeon must be careful not to crush tissue removed for examination or the tissue may become non-diagnostic. This same technical error can be introduced in slide preparation. Electrosurgical artifacts are commonly found and they give the appearance of coagulated or shredded tissue. Sometimes dyes or colored medicaments are applied to tissue at the time of surgery and these will show in tissue as an artifact. Dehydration artifacts are also common and may be caused by improper fixatives or air drying of the specimen if left too long before being placed in formalin. Several hundred different artifacts are known but only a few of these need to be dealt with on a day-to-day basis by the pathologist.

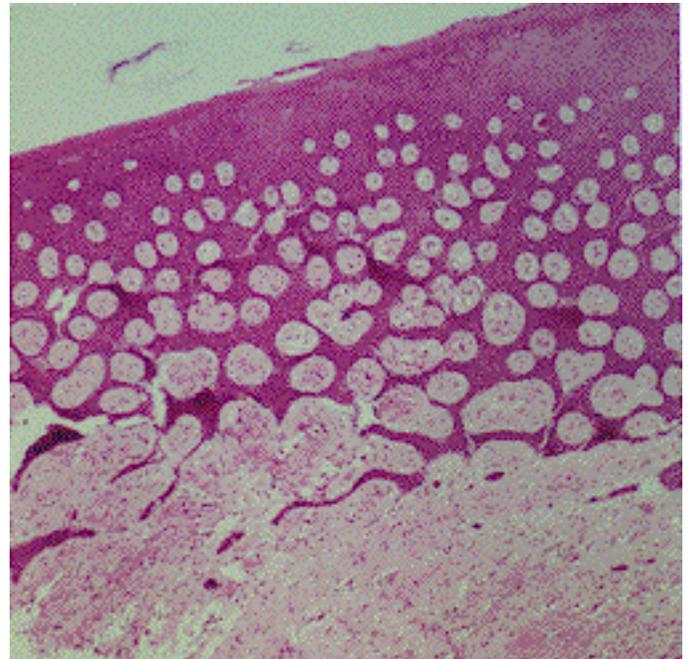
Crush artifact occurs from incorrect use of forceps in handling tissue either at surgery or at the pathologist's table. Dull scissors or knife also contribute. Some types of tumor cells such as small undifferentiated carcinoma are particularly prone to crush artifact and such an artifact can render a tumor biopsy uninterpretable.

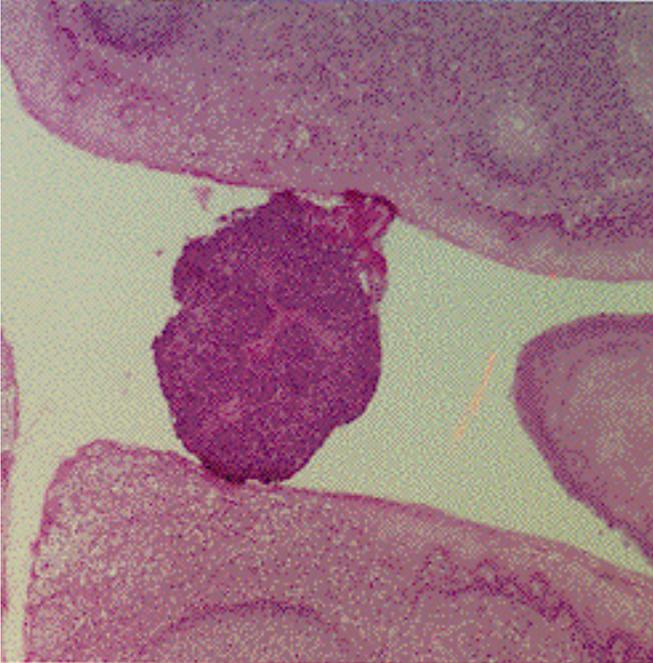


Histologic knife artifact, the result of a dull or chipped blade on the microtome in the histology laboratory.

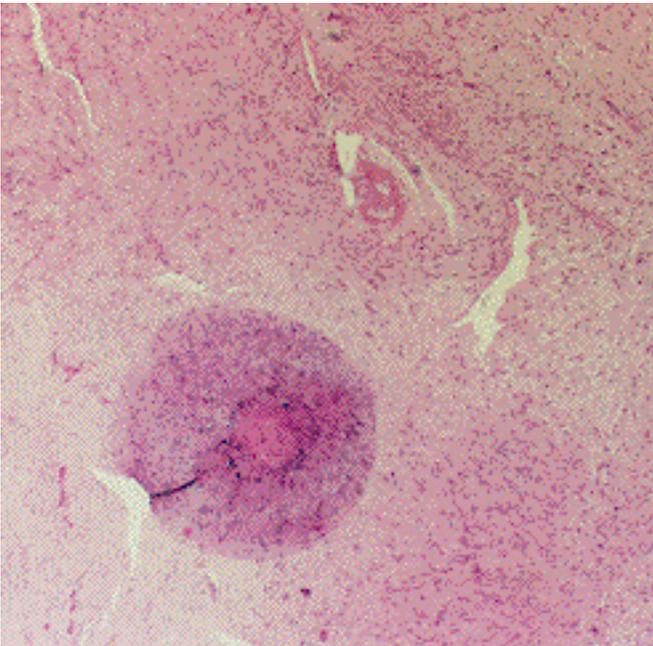


Tangential cut artifact. The rete pegs give a false impression of invasive squamous cell carcinoma.





Floater artifact caused by contamination of a dermatome blade by a particle of previously cut tissue which is then transferred by water bath by a particle of previously cut tissue which is then transferred to the new block. This "floater" is in the crypt of a tonsil.



Artifact caused by a drop of water resting between cover glass and specimen during preparation of slide.