Pinkus Tumor
The fibroepithelioma of Pinkus is an unusual neoplasm that was first described by Hermann Pinkus in 1953 as a premalignant fibroepithelial tumor. Clinically, the lesion is a benign-appearing, pedunculated, pink tumor that may resemble an acrochordon. However, Pinkus noted 4 such lesions to have a peculiar histologic appearance that resembled both a reticulated seborrhoeic keratosis and a basal cell carcinoma. Pinkus considered the tumor to be a variant of basal cell carcinoma, which illustrated the interaction and interdependence of stromal and epithelial components of basal cell carcinoma.

Current advances in molecular biology are allowing new insights into the pathogenesis of skin cancer. The TP53 gene codes for a protein product that is a strong negative regulator of normal human cell growth and is thought to act as a tumor suppressor. Deletion or mutation of this gene results in decreased control of cellular proliferation and can contribute to the formation of an immortalized cell. It is now believed that this gene is intricately involved in the development of nonmelanoma skin cancer, including the fibroepithelioma of Pinkus. Further study of this pathway is currently underway.

Evidence implicates another genetic pathway that may be involved in the transformation of cells in skin cancer. Studies of both nevoid basal cell carcinoma syndrome and sporadic basal cell carcinomas have shown mutations in the PATCHED gene. Mutation of this gene eliminates a crucial inhibitory signal for a cellular regulation pathway known as the Hedgehog pathway, which is named after a similar pathway found in Drosophila. Loss of this inhibition results in increased expression of the GLI family of transcription factors, promoting cell growth. Constitutive activation of this pathway in human keratinocytes has been shown to produce a neoplasm identical to basal cell carcinoma. Further study of this pathway is also underway and will likely have considerable relevance to the pathogenesis of basal cell carcinoma and the fibroepithelioma of Pinkus.

Although the fibroepithelioma of Pinkus has been accepted as a variant of basal cell carcinoma, the reason for its distinct histologic pattern remains a mystery. Several authors have proposed that the initial change is the invasion of an eccrine duct by a basal cell carcinoma. Eventual obliteration of the ductal lumen would then impart the characteristic histologic pattern.

The true frequency of the fibroepithelioma of Pinkus is unknown. Its epidemiology is thought to mirror that of basal cell skin cancer. Unlike other histologic types of basal cell carcinoma,
lesions are more common on the trunk and extremities than the face.

The fibroepithelioma of Pinkus generally runs an indolent course. It can, however, ulcerate and invade into underlying tissue. To date, none has resulted in death.

The fibroepithelioma of Pinkus, like other basal cell carcinomas, is more common in lighter skin types and relatively rare in dark skin types.

Available reports indicate that this tumor has an equal sexual distribution.

Available reports indicate that this tumor usually develops in persons aged 40-60 years, similar to other forms of basal cell carcinoma. However, a few cases have been reported in children.5

- The tumor can present alone or in association with seborrheic keratoses and/or other basal cell carcinomas.
  - Its frequency is higher in areas of prior radiation-damaged epidermis.
  - Reports have described 2 women who had an associated malignancy. One was found to have intraductal breast carcinoma underlying the fibroepithelioma of Pinkus, and the other was found to have a perianal fibroepithelioma harboring Paget cells.

- The fibroepithelioma of Pinkus usually presents as a slowly enlarging, fleshy, raised or pedunculated papilloma or sessile fibroma with a broad base, most commonly on the trunk or the extremities.
  - The color is usually pink or reddish, but, in some instances, a tinge of brown may be present.
  - It may be single or multiple and shows a strong predilection for the lumbosacral area. However, numerous cases have occurred elsewhere, including the head, the abdomen, the anus, the penis, the breasts, and the scrotum.
  - This tumor can clinically resemble seborrheic keratosis, pedunculated fibroma, nevus sebaceous of Jadassohn, papillomatous melanocytic nevus, amelanotic melanoma, and neurofibroma.
  - Dermoscopy shows fine arborizing vessels alone or associated with dotted vessels and white streaks. Gray-brown areas of pigmentation and variable gray-blue dots may be observed.
Causes

Basal cell carcinomas are most commonly associated with chronic ultraviolet light exposure, previous radiation damage, or prior ingestion of arsenic. Whether any of these predisposing factors is a relevant cause of fibroepithelioma of Pinkus is unproven.