

What is squamous cell carcinoma?



Transmission or Cause: Squamous cell carcinomas are common malignant neoplasms of the dog and cat, arising from keratinocytes (skin cells). An underlying cause is not always apparent. These tumors are most frequently diagnosed in animals that have sun-damaged skin. Squamous cell carcinoma is observed most frequently in geographic areas characterized by long periods of intense sun exposure. Rarely, squamous cell carcinoma has been reported to arise from burn scars, chronic infectious processes, and chronic discoid lupus lesions (dogs). Papillomaviruses of both dogs and cats can predispose an animal to squamous cell carcinoma.

Affected Animals: In dogs, squamous cell carcinoma occurs at an average age of 9 yrs, with no sex predilection. In general, Scottish terriers, Pekingese, Boxers, Poodles, and Norwegian Elkhounds are predisposed. Squamous cell carcinomas with claw bed origin are seen most commonly in black-coated dogs of large breeds, especially Labrador retrievers, standard poodles, giant schnauzers, dachshunds, and Bouvier de Flanders. Short-coated breeds with white or piebald ventral coat and skin color (Dalmatian, American Staffordshire Terrier, Bull Terrier, and Beagle) have the highest incidence of solar-induced squamous cell carcinoma. In cats, squamous cell carcinoma occurs at an average age of 9 yrs, with no breed or sex predilection. White cats have squamous cell carcinoma about 13 times as frequently as do other cats, owing to increased susceptibility to sun damage.

Clinical Signs: In dogs, lesions occur most commonly on the trunk, the legs, the digits (toe), the scrotum, the lips, the anus, and the nose. The lesions are typically ulcerated or cauliflower-like in appearance, bleed easily and are typically solitary. Sun-bathing dogs or the claw beds of large, black-coated breeds are more prone to multiple lesions. Squamous cell carcinoma is the most common tumor of the digits of dogs. In cats, lesions are most commonly observed at the external nares (nasal openings), the ear pinnae, the eyelids, and the lips. The lesions are typically ulcerated or cauliflower-like in appearance. About 45% of affected cats will have multiple

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lesions. Generally, squamous cell carcinomas are locally invasive and slow to spread. In both dogs and cats, squamous cell carcinomas arising from the digits appear to be more aggressive.

Diagnosis: The diagnosis is typically made with a skin biopsy. Other diseases that need to be considered include other forms of cancer as well as infectious diseases (bacterial, fungal). Clawbed lesions are frequently misdiagnosed as infectious in nature.

Prognosis: Squamous cell carcinomas are generally locally invasive but are slow to spread. Spread to regional lymph nodes and lungs is seen with advanced neoplasms. Tumors of the claw bed are more aggressive and can invade underlying bone as well as spread to regional lymph nodes more often compared to other locations. Squamous cell carcinoma of the digits of cats is the most aggressive of the locations and carries the poorest of prognoses as it spreads quickly (slower spread in dogs).

Treatment: Clinical management of squamous cell carcinoma may include surgical excision, cryotherapy (freeze/thaw), electrosurgery, hyperthermia, radiotherapy, and chemotherapy. Avoidance of sunlight is an important part of prevention.

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