



DAVIE COUNTY LARGE ANIMAL HOSPITAL

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Equine Squamous Cell Carcinoma (SCC)

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What is Equine Squamous Cell Carcinoma (SCC)?

SCC is the second most common type of cancer in horses. Most prevalent in horses over the age of 10 with unpigmented patches of skin, SCC is a locally destructive cancer. While metastasizing to the internal organs is rare, it can sometimes spread to local lymph nodes and nearby structures. If SCC metastasizes to internal organs such as those in the intestinal tract, the condition is often fatal.

The most affected areas include those where a mucous membrane and is exposed to the environment: inner rim of an eyelid, third eyelid, conjunctiva, oral cavity, free shaft of the penis, vulva, external sheath. The first clinical sign of SCC tumors is an area of the skin that exhibits pigment loss, crusting or ulceration. From there, the tumors obtain a "cauliflower" or "cobblestone" appearance that can be ulcerative or proliferative masses resembling the appearance of "proud flesh".



What horses are at risk for SCC?

SCC occurs most commonly in adult horses over the age of 10 years old. While tumors can develop in horses of any breed, they are more common in horses with pink (unpigmented) skin in areas where the skin meets mucous membranes. This is because UV radiation plays a major role in the development of SCC and pink skin has the least amount of natural protection from those harmful rays. There is also a genetic predisposition to SCC that seems to be more frequent in breeds such as Appaloosas, American Paint Horses, Belgians and Haflingers.

What treatments are available to treat SCC?

Like other forms of cancer, SCC has a high recurrence rate regardless of treatment. If caught early, the prognosis for recurrence is less as well as the chance of metastasis. In addition, SCC is locally invasive and the longer it takes to treat, the less likely it is to save the surrounding tissue. For example, if the cornea becomes invaded by a SCC tumor, enucleation might be the only recourse. The best course of action in treating SCC tumors is to work with your veterinarian to determine the best course of treatment depending on the type, growth-rate and location of the tumors.

- Surgical Treatment

o Surgical Removal

- The best treatment for SCC includes a combination of surgical de-bulking and medical treatment. If surgical removal is possible, the tumor is cut out along with some surrounding tissue to be sent to the lab for further analysis and confirmation of the diagnosis. Depending on the location and size of the tumor, these surgeries can be done under sedation and local anesthesia, or under

general anesthesia. After the mass is removed surgically, the area must be treated with chemotherapy and/or cryotherapy to decrease the likelihood of recurrence.

- *Cryosurgery/Cryotherapy*

- Cryotherapy uses liquid nitrogen to rapidly freeze and then slowly thaw the tumor in order to kill the cells. This treatment is only effective on small, superficial lesions and on SCC tissue left after a de-bulking surgery of larger tumors. Like most SCC treatments, there is a high recurrence rate and will most likely require multiple treatments at 2 to 4-week intervals.

- **Medical treatment**

- *Intralesional Cisplatin*

- A chemotherapy drug mixed with an oil to produce a slow-release effect. It can be injected directly into a sarcoid lesion in most locations 3-4 times at 2-week intervals. This therapy is only effective in a growing lesion.

What is the prognosis for a horse with SCC?

If the tumor is caught early and treated, the outlook is good for a horse with SCC. However, if the cancer is given the chance to grow and metastasize, SCC can be fatal.

Is there a way to prevent SCC?

While there is no guaranteed way to prevent cancer, there are some steps a horse owner can follow to lessen the likelihood of SCC.

For those horses with pink skin on the face or in other areas of high-risk, an owner can limit exposure to UV radiation by covering the areas with UV-blocking fly masks and fly sheets. In addition, limiting turnout at midday when the sun is strongest can protect a high-risk horse from getting too much UV exposure.

Make sure to clean a gelding's sheath regularly, especially unpigmented sheaths, as it is thought that the buildup of dirt and smegma can contribute to tumor development.

Most importantly, make sure that high-risk, light-skinned areas are checked carefully and regularly for any clinical signs of SCC.

If you are concerned your horse might be suffering from Equine Squamous Cell Carcinoma, please contact Davie County Large Animal Hospital to set up an appointment or talk to one of our veterinarians. Our veterinarians will work with you to find a suitable treatment including various medical treatments as well as surgical options from an ACVS board-certified equine surgeon.