

Equine Sarcoids
Wendy Krebs, DVM
Bend Equine Medical Center

Sarcoids are the number one most common tumor in horses in the world. Chances are most of you have seen a horse with sarcoids before. Sarcoids have a “wart-like” appearance in most cases, and are called that by some horsemen, but they can appear as any of six different types: occult (hidden under skin), verrucous, nodular fibroblastic, ulcerative fibroblastic, mixed tumors, or malevolent. The most aggressive type is malevolent sarcoids, and these grow rapidly and frequently reoccur after removal. In many horses, a small sarcoid can exist unchanged for years and never cause a worry for the horse but in others, the location or increasing size of the tumor can become very problematic and necessitate removal or another form of treatment.

The common sites for sarcoids to occur are around the muzzle, ears, eyes, throatlatch, or flank. They can also actually invade a pre-existing wound on legs or other areas. Quarterhorses and Paints are almost twice as likely to develop sarcoids as other breeds, and there is a known genetic basis for infection. Young horses are also more likely than older horses to develop them. A viral relationship, particularly with Bovine Papilloma Virus (BPV), seems to be at work, but the connection has been difficult to identify. When researchers intentionally infect horses with BPV, horses do not develop a classic sarcoid. On the other hand, the BPV is present in almost all naturally-occurring sarcoid tumors. It may be that BPV is the ultimate cause of sarcoids, but most horses have functional immune systems to prevent it from causing an infection, while other horses are genetically-predisposed via a less effective immune system and cannot eliminate the virus.

The most obvious treatment is surgical excision. However, the recurrence rate following this treatment can be as high as 82%! This is partially due to the fact that the tumor projects arms of malignant cells into surrounding normal-appearing tissue, making it impossible for the surgeon to determine good margins. It's also possible that the surrounding cells may harbor virus infections that are essentially dormant, but become activated when traumatized by the nearby surgery.

Laser surgery is more successful, with an overall recurrence rate of 38%. This is thought to be related to less trauma to the surrounding tissues and possibly less viral contamination of surrounding tissues by movement of the scalpel blade.

Cryotherapy, or freezing of the tumors with liquid nitrogen, is also frequently used. For the best success, tumors should be treated with three freeze-thaw cycles which reduce temperature of the tissues to -30 degrees Celcius.

Radiation therapy is also another option available at some universities, with reported good success rates. However, treatment is quite expensive, may require general anesthesia, and can be hazardous. For these reasons, it is not commonly used.

Some treatments are aimed at addressing the link with the immune system. A commercial product called Regressin is formulated from the cells walls of bacteria and is injected directly into the tumor in a series of multiple treatments. These injections can result in severe swelling of the surrounding tissues as the immune system reacts, and rarely can cause anaphylactic reactions. This technique is often combined with immune stimulants such as EqStim, that are given as an IV injection simultaneously.

Local chemotherapy is also effective in many cases. Options include implantation of cisplatin slow release beads, or injection of a cisplatin in oil formula. These therapies may need to be repeated multiple times. Topical application of chemotherapy in the form of creams such as 5-FU works well in some cases.

Here at Bend Equine Medical Center, we typically chose either laser or surgical removal combined with either cisplatin chemotherapy or immune stimulants. For sarcoids around the eyes, we are more likely to use Regressin along with EqStim. Both protocols do require follow up in the form of repeated implantation or injection of cisplatin over a series of treatments, or repeated injections of Regressin and EqStim. Unfortunately, there is no easy way to handle most sarcoids, so owners must be committed to finishing a course of treatments if they want the best possible result. The good news is that the vast majority of sarcoid cases can ultimately be resolved if addressed early and vigorously!