Pan American Veterinary Labs has developed an enzyme-linked immunosorbent assay (ELISA) that is specific for the presence of pythiosis fungal elements and has greatly helped in the recognition of these cases. A simple blood sample is evaluated, and the disease can be confirmed. This testing can also recognize the presence of *Lagenidium* (three cases in horses have been confirmed so far).

"We have developed a 'vaccine' to pythiosis that can be used in confirmed cases, and this immunotherapeutic product works by helping the horse modulate the change from T2 helper to T1 helper cell response," says Glass. This product has been shown to have an almost 100 percent cure rate for acute cases (< 15 days) but is less effective in chronic cases (> 60 days). The overall rate of cure is 75 percent for all cases, strongly suggesting that early diagnosis and treatment are crucial to success (Photos 3-7).

Additionally, many clinicians attempt to debulk these large cancer-like growths if diagnosis and treatment have been delayed. This surgical tissue removal is generally associated with poorer skin healing and cosmetic appearance after infection than if the horse is allowed to heal itself slowly. This is another reason for early and proper diagnosis leading to correct treatment and perhaps lessening the need for surgical tissue removal.

"If I could emphasize one thing to veterinarians," Glass says, "it is to move pythiosis up on the diagnostic scale. If you see a horse that has a pythiosis-like lesion that does not respond to antibiotics and standard treatment in the first 10 days, you should think about pythiosis right away."

The healing outer edges of the mass look almost burnt, and the central area is no longer oozing serum.

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After getting a good look at these lesions, hopefully, no one will be able to forget.

Dr. Marcella is an equine practitioner in Canton, Ga.
“Swamp cancer”: The increasing threat of equine pythiosis

Mar 01, 2011 By Kenneth Marcella, DVM

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Swamp cancer*: The increasing threat of equine pythiosis
Know when to suspect this fungal infection so you can prevent its generally fatal consequences

Pythiosis is a relatively uncommon fungal-like infection causing cutaneous or subcutaneous, gastrointestinal, respiratory or multisystemic disease in many species of animals including humans. Horses are most commonly infected, and the devastating tumor-like nodular skin lesions seen in these cases are likely to be remembered long after the actual name of the organism—Pythium insidiosum—is forgotten. The extremely rapid rate of growth of these lesions and the generally fatal outcome in these cases makes remembering this disease crucial for equine practitioners since early recognition and appropriate treatment are the only hope for survival for infected horses.

An increasing problem
Pythium insidiosum is referred to as an aquatic fungi or water mold, but, although it has some characteristics in common with typical molds, it is phylogenetically distinct. It was first identified in 1901 and has caused problems throughout North, Central and South America, the Caribbean Islands, Australia, the Pacific Islands and Asia. (It is interesting that tropical conditions support pythiosis, but to date no cases have been reported in Africa.)

Although we’ve been interested in Pythium, Lagenidium and the hundreds of other related species since many more horses are exposed than become ill, and all the factors required for successful infection are not yet known

Why the increase in infection?
Pythiosis has been called a number of names throughout the world, from swamp cancer, Florida horse leeches and summer sores to gastrointestinal, respiratory or multisystemic disease in many species of animals including humans. Pythiosis is a relatively uncommon fungal-like infection causing cutaneous or subcutaneous, gastrointestinal, respiratory or multisystemic disease in many species of animals including humans. Horses are most commonly infected, and the devastating tumor-like nodular skin lesions seen in these cases are likely to be remembered long after the actual name of the organism—Pythium insidiosum—is forgotten. The extremely rapid rate of growth of these lesions and the generally fatal outcome in these cases makes remembering this disease crucial for equine practitioners since early recognition and appropriate treatment are the only hope for survival for infected horses.

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Pythiosis typically begins as a small irritated area usually on the distal limb of a horse. This longer pruritic, indicating an early to the allergic phase.

Photo 5: An early red, uneven granulation bed is noted on the caudal heel and pastern of this horse, Ebony. She is slightly lame and pruritic as well.

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