



Stateside took a break from chemotherapy treatments to compete in the adult jumpers at this year's Devon Horse Show. *THE BOOK LLC—2014.*

Cancer Can't Keep Stateside From Devon

A nine-month chemotherapy regimen doesn't keep this adult jumper and owner Jane Withstandley from the Dixon Oval.

BY LOUISA SHEPARD

Many riders have a few friends to support them when they compete at an important show like Devon (see p. 18). But Jane Withstandley had more than just friends and family clapping for her as she showed Stateside in the adult amateur jumpers. Her horse's veterinarians from the nearby New Bolton Center also came by to cheer him on.

Stateside has become a favorite at the University of Pennsylvania School of Veterinary Medicine's New Bolton Center, where his owner and veterinarians have teamed up to give him an unusual shot at treating his lymphoma: chemotherapy, which he has been undergoing since March, but which is rarely used on horses.

While he and Withstandley didn't leave Devon with any ribbons, just being able to qualify and be well

enough to compete made the show a landmark event.

"I never thought I'd be able to show at Devon again, and to qualify with my off-the-track Thoroughbred was quite a surprise," said Withstandley, who last showed at Devon 18 years ago when she was 16. "It was also very special to have my family, friends and Calvin's vets from New Bolton there to support me."

A Good Start To Recovery

Stateside, whose barn name is Calvin, is in remission and responding well to the treatment, said Amy Johnson, DVM, who works as an assistant professor of large-animal medicine and neurology at the New Bolton Center in Kennett Square, Pa.

The 11-year-old bay gelding was diagnosed with lymphoma of the skin, and in March, he started a full nine-month

protocol of chemotherapy involving five drugs.

“You want them to go into remission quickly,” said Johnson, noting that Calvin’s cancer was in remission with all symptoms gone after the first two treatments. “The best chance you have of curing them or keeping them in remission for a really long time is continuing the whole course of treatment.”

But the combination of an uncommon condition and a rarity of documented treatments makes it hard to say what to expect. Johnson hopes he will have years of life with no signs of cancer but noted that few horses have gone through this treatment, and there aren’t long-term studies of outcomes.

According to Withstandley, Calvin feels great. “He’s full of energy, just as always,” she said. “He’s eager to go out and jump. There is really no change. It’s shocking to me.”

Calvin and Withstandley, who lives across the street from the Devon showgrounds, started showing in the adult jumpers a year ago, qualifying for Devon in their first season—quite an accomplishment for a former race horse who was nearly unrideable when Withstandley bought him for \$5,000 four years ago. “He has natural athletic ability over the jumps that you just can’t teach,” Withstandley said. “It’s just there.”

Calvin’s sweet nature has made him a member of the family, especially with Withstandley’s 3-year-old daughter, Blair, or “B”. He stands patiently when she brushes his legs and shares her lunch—and sometimes sports sparkle pink polish to please her.

Equine Chemotherapy

Calvin is patient for his chemotherapy treatments, too. Withstandley trailers him from Diane Little’s Peace By Piece Farm in nearby Chester Springs, Pa., to New Bolton Center for his treatments once every week, or every two or three weeks, depending on the protocol, leaving him overnight and picking him up the next day.

“He stands like a rock for every single treatment. It’s pretty amazing,” said Johnson. “One treatment took over an hour. He stood perfectly still.”

Johnson, who is managing Calvin’s treatment, reached out to a Penn Vet graduate in Australia to develop the chemotherapy protocol. Angela Frimberger, VMD Diplomate ACVIM, of Veterinary Oncology Consultants, developed a treatment of five chemotherapy drugs to be administered in rotation four times over nine months.

The veterinarians must suit up with protective gear each time they administer the drugs, which are the same as those used for humans. The drugs are cytotoxic, which means they kill rapidly dividing cells, and are primarily administered intravenously, although some are by injection under the skin or pills.

“If the same people are working with the drugs week after week, you have to make sure that they don’t absorb any of them through the skin or mucous membranes,” said Johnson.

Calvin had some side effects, including fever, to one drug that is often problematic for humans, too, and they’ve removed it from his regimen. Horses, however, do not have the same side effects to the drugs, such as nausea and hair loss, that humans have.

“The goal is to treat the cancer as effectively as we can without sacrificing any quality of life,” said Johnson. “We

want to make sure they don’t suffer during the course of treatment.”

Frimberger said dose and drug adjustments are common in veterinary chemotherapy because they tailor the treatment to the individual’s needs and responses. The protocol requires regular monitoring.

Although his workload is a bit lighter, Calvin competed twice leading up to Devon, but he didn’t have any treatments in the month before the show.

“Straight chemotherapeutic agents administered 30 days before competition would not be in conflict with USEF rules,” said Steve Schumacher, DVM, the chief administrator of the U.S. Equestrian Federation Drugs and Medications program.

A Visit To New Bolton

An unusual abscess prompted Withstandley to bring Calvin to New Bolton Center in January.

Veterinarians first suspected that Calvin might have strangles,

Jane Withstandley and her daughter B have a close relationship with Stateside, prompting Withstandley to opt for chemotherapy when the Thoroughbred was diagnosed with lymphoma. LOUISA SHEPARD PHOTO





so he was quarantined in an isolation wing at the hospital where he was diagnosed with an *Actinomyces* infection, a bacteria not commonly found in horses.

While in treatment, the veterinarians noticed nodules developing underneath the skin in Calvin's hindquarters, neck and elsewhere. Withstandley agreed to a biopsy, which confirmed the diagnosis of lymphoma.

"I was devastated. I just sat in the stall and cried," Withstandley recalled. "He didn't deserve this. He is irreplaceable. He's really a family member. He's B's horse."

Johnson ordered a number of diagnostic tests to pinpoint the form of lymphoma and to determine if it was anywhere else in his body: complete radiographs of his chest, ultrasound of his abdomen, and cardiology exam of his heart, among other screening tests. Since the cancer appeared confined to his skin, Johnson determined that his cutaneous lymphoma could be treated.

They discussed three options. The first would be no treatment, which

most likely would have allowed Calvin to live for a few years with the nodules coming and going, but the cancer would eventually spread. The second would be steroid treatments that could make the cancer go into remission temporarily, but would not be a long-term option or cure. The third would be chemotherapy, which was most likely to result in either a cure or a remission long enough for him to live out his natural lifespan.

"We decided to do the chemotherapy," Withstandley said. "We wanted to find the most aggressive form of treatment, but we didn't want Calvin to suffer at all."

The full chemotherapy protocol costs around \$15,000, more than 10 times what a comparable steroid treatment for the condition would cost. There are not any long-term research projects on chemotherapy treatments in horses, and this protocol is rare, said Frimberger.

The oncology practice in Australia treats very few equine patients with a full protocol, and New Bolton

Veterinarians must suit up with protective gear each time they administer Stateside's chemotherapy. LOUISA SHEPARD PHOTO.

Center rarely does so either, although lymphoma is not uncommon in horses.

"What is unusual is the combination of Ms. Withstandley's commitment and perseverance in fighting it and Dr. Johnson's expertise and dedication to giving him the best chance possible at beating his cancer," said Frimberger.

From The Racetrack To The Dixon Oval

When Withstandley went looking for a horse back in 2010, she had a limited budget. Without a trainer or pre-purchase exam, she bought Calvin on instinct. The then 7-year-old (Weekend Cruise—R Fair Dee, Waki Bob) racing under the name Darksideoftheforce had won one race of the 20 he'd run, earning just under \$20,000 in his flat career.

"I spent a lot of time getting his trust back, getting him to focus, letting him know everything was OK,"

Withstandley said. "It takes patience."

Things started to click a year ago at Princeton Show Jumping Spring Classic II (N.J.), as Calvin started listening to her. "We went out there, and I just let him go, and it was the most fun I have ever had on a horse in my life. I thought, 'Wow, this is what it is supposed to be like,'" said Withstandley. "It is finding that balance. It was just Calvin trusting me, me trusting Calvin."

That's when she decided to try to qualify for Devon this year. They stepped up to the adult amateur division, winning classes and championships across Zone 2.

Calvin will have the rest of 2014 off from showing as he continues his treatment. "I imagine we will get back into the show ring next spring, but it's really all up to Calvin," she said.

Meanwhile, thanks to the dedicated veterinarians and owners willing to push the limits of what is known about the treatment of this disease, Calvin's experience may help guide standards of treatment for future equines who encounter a similar problem. 🐾

"He's amazing. That's why I do all this,"
said Jane Withstandley of Stateside. *LOUISA SHEPARD PHOTO*

► What Is Equine Lymphoma?

BY ANGELA FRIMBERGER, VMD, DIPLOMATE ACVIM

Equine lymphoma's clinical presentation and course of disease are variable, although it's generally considered to be a disease that by definition involves the whole body. However, involvement of the skin is common, and masses may be symmetrically distributed over the neck, shoulder, perineum and prepuce.

Most cases of equine lymphoma are rapidly progressive, but horses with lymphoma of the skin can have a waxing and waning and variable clinical course, with reported natural behavior of the disease ranging from aggressive to indolent and survival times up to five years.

For horses with localized disease that can be resected completely, it may be possible to achieve a cure. An alternative local treatment option in some cases can be radiation therapy. However, for most horses the disease is too widespread for these options to be useful.

Combination chemotherapy

represents the current standard of care for lymphoma in small animal oncology and has been used in some horses with lymphoma. Long-term follow-up is uncommonly reported, and anecdotally most horses with multicentric disease relapse within six to eight months of chemotherapy; however, compared to the median survival time of six to eight weeks for horses with multicentric lymphoma treated only with glucocorticoids, this suggests there is a clinical benefit. In addition, there are case reports of long-term responses.

There are also reports of horses treated successfully with single-agent chemotherapy, including doxorubicin and lomustine (CCNU), however, very few horses have been treated with this drug, so until it is better characterized I would try to avoid relying on it as a single agent. There have not been any clinical trials of horses with lymphoma treated in different ways to decide which approach is "best."

