**Disabled chicken to get prosthetic leg at Tufts**

Some folks looking at a disabled young chicken might think: General Tso.

Andrea Martin figured out a way to get the hen fitted with a prosthetic leg.

A poultry behaviorist who specializes in chicken rehabilitation and rescue, Ms. Martin, who lives with her flock on Berlin Street, said she got the 3-month-old bird, named Cecily, from owners who didn't realize she had been hatched with a damaged tendon on the right leg.

"It slipped out of position, and the leg becomes useless," she said.

Faced with two options, fitting Cecily with a prosthetic limb at a cost of $2,500, or euthanizing the Leghorn breed chicken, Ms. Martin said for her there really wasn't a choice. She contacted Cummings School of Veterinary Medicine at Tufts University in Grafton and was told about the procedure, which replaces the damaged leg with a prosthetic made by a three-dimensional printer.

Ms. Martin will pay for the procedure herself.

The pioneering surgery on the bird will begin Wednesday at Tufts when Dr. Emi Knafo, a specialist in avian orthopedics, surgery and wound healing, will amputate Cecily's right leg at the hock – the upper part.

That will follow a CT scan to get a mirror image of the leg to use in creating the plastic prosthetic. Then, after a 10- to 14-day recovery period, the prosthetic, which will be made at Tufts' Medford campus, will be fitted onto the remaining section of the leg.

Dr. Knafo said this will mark the first time the procedure, which is quite rare in general, has been done at Tufts. The slipped tendon condition, she said, is common in fowl such as chickens, ducks and turkeys, and usually occurs at birth.

"The foot tendons contract in an abnormal place," she said. "It puts them at risk for sores and infections, and the choices were euthanasia, or try to manage it with pain medication. It could be an uncomfortable life. But as a veterinarian, we always try to evaluate and intervene in a positive way."

"People would not think twice about it (the procedure) for another kind of animal," Dr. Knafo said. "We want to give her as much of a pain-free life as possible."

However, she is unsure of the prognosis.

"You just don't know if it will work until after it's done," she said, noting that the biggest risk will be putting Cecily under anesthesia for the CT scan and 30-minute amputation, a total of about one or two hours. The prosthetic can be fitted without anesthesia.

The procedure has been done successfully elsewhere, on a rooster and a duck.

Earlier this month, a rooster had both legs replaced with 3D prosthetics at the University of Calgary, Alberta, in Canada. The bird's legs had been frozen in cold weather. A veterinarian there used an image of another rooster's leg to make the prosthetic. The rooster is once again strutting around a barnyard.

In 2013, a duck born with one deformed foot had it replaced with a prosthetic made by Tennessee-based NovaCopy. The company took an image of the duck's sibling and created a 3D image in the printer. The prosthetic is made by using layers of plastic taken from the image. The duck, named Buttercup, now lives at a waterfowl sanctuary in Tennessee.

Brought up on an old-fashioned farm, Ms. Martin, a freelance writer who blogs about raising chickens, solving rooster issues, and about rare breeds of fowl and horses, says animals are her passion.

In fact, Cecily's rescue and paying for the upcoming procedure is not out of the ordinary for her.

She financed a hysterectomy for another of her chickens, named Emily.

"They don't take the ovaries, so she still lays eggs," Ms. Martin said.

She also teaches courses on raising chickens, and her current work involves uncovering the language and culture of chickens and horses.

Dr. Knafo also has other esoteric specialties, including novel therapies for the treatment of the microorganism Mycoplasma pulmonis in pet rats.

By Karen Nugent