Silent No More: Woman Lends Voice to Hope after Cancer

By Yadira Galindo | June 28, 2018

inging hymns in church has always brought Cynthia Zamora joy. Today, her once sharp intonation has given way to a raspy voice. But Zamora is thankful that she has a voice at all after spending three months without the ability to utter even one syllable.

"I miss going to church and singing with people," said Zamora. "Although, if I am in the back I'm still singing. I'm just hoping they don't hear what sounds like a 13-year-old pubescent boy back there, because that's how I sound. I know God thinks it's beautiful, so I don't worry about it. I just go on with life."

In 2017, Zamora bit her tongue while sleeping, splitting her tongue nearly in half. She was referred to a specialist when her wound would not heal. They found a 5.4-centimeter tumor that enveloped more than half of her tongue. To save her life, her surgeon, Joseph Califano, MD, delivered grim news: Zamora would have to undergo a glossectomy — the surgical removal of all or part of the tongue.

For three months Cynthia Zamora was left speechless after a team of surgeons removed a tumor that took up more than half of her tongue. Today, Zamora speaks slowly, with a raspy voice but she is thankful that she has a voice and can eat fried chicken again.

"By the time I saw her she was really having a hard time speaking and swallowing," said Califano, director of the Head and Neck Cancer Center at UC San Diego Health. "With Cynthia that was a difficult discussion because it was unclear how much tongue we would save and how good the function would be with the remaining tongue that would be preserved."

A multidisciplinary team of experts that included medical oncology, surgical oncology, reconstructive surgery, radiation oncology, speech therapy, nutrition, psychiatry and a host of others came together to design a comprehensive plan to eradicate an aggressive, stage IV squamous cell carcinoma and deliver the best quality of life for a woman who was about to undergo a catastrophic surgery.

"The tongue is critical. It's one of the strongest muscles we have in our body. In speech, our tongue is moving so rapidly within the confines of our mouth in order to generate and make certain sounds in conversation that we find it's hard to grasp how complex that action is," said Liza Blumenfeld, CCC-SLP, BCS-S, speech-language pathologist at Moores Cancer Center at UC San Diego Health. "Without a tongue you're having to compensate for all of that movement with other structures, your lips, your cheeks and your jaw."

During a 12-hour surgery, Califano would remove a large portion of Zamora's tongue and place a breathing tube and feeding tube before a reconstructive microsurgeon would step in to replace the portion of tongue that was removed.



"The primar y goal of surger y is to remov e the cancer as best we can while sparin q as much

normal tissue as possible," said Califano. "It was a challenging surgery in that we had to cut just right to save enough tongue so that she would have some function and we could still get well around the tumor. We were able to save less than half her oral tongue. That wasn't a lot."

Ahmed Suliman, MD, a plastic surgeon who specializes in reconstruction after cancer treatment, was tasked with reconstructing her tongue.

"When you remove the majority of the tongue you can't really function," said Suliman. "You can't swallow and articulation is limited. We had to rebuild a tongue to provide bulk so that Cynthia could move food in her mouth in order to swallow and to speak."

He used a method called anterolateral thigh perforator flap (ALT). Suliman cut a 6 by 8 centimeter tissue of skin and fat from Zamora's leg to shape and create a new tongue. The replacement tongue does not move, but because Califano was able to spare the base of her original tongue, Suliman was able to reconstruct using the remaining tongue base to preserve some movement for Zamora. Suliman sutured the new tongue, attaching one artery and a vein from the neck using a microscope.

The reconstructive surgery and dissection of cancerous tissue in her tongue and lymph nodes left Zamora temporarily unable to walk, talk or eat. One of the advantages of performing an ALT is that minimal thigh muscle, or none at all, is cut when extracting tissue for the new tongue. This allows for a faster recovery because Zamora did not lose leg muscle function, so with physical therapy Zamora was on her feet fairly quickly.

Skin and fat tissue are more resilient to radiation therapy than muscle, said Suliman, making this tissue more ideal for someone like Zamora, who received treatment following surgery.

"The success of management of these advanced cancers rely on the coordinated efforts of a multi-disciplinary oncologic team," said Suliman. "This leads to better planned surgery, good preoperative and post-operative care, and follow up. The success of complex cases is higher and outcomes are better, as demonstrated by Cynthia."

While Zamora was undergoing physical therapy and speech therapy, she was also undergoing chemotherapy, radiation and was receiving an experimental immunotherapy called Pembrolizumab (Keytruda), an antibody that inhibits the abnormal interaction between the molecule PD-1 on immune cells and the molecule PD-L1 on cancer cells, allowing the immune cells to recognize and attack tumors. Pembrolizumab is FDA-approved for some cancers, such as melanoma but is still under a clinical trial for squamous cell carcinoma of the head and neck $\ Z$.

While Zamora continued aggressive treatment and attended physical therapy, she also met with Blumenfeld.

"Teaching somebody to regain their speaking and swallowing abilities during head and neck cancer treatment is really difficult," said Blumenfeld. "Being able to understand what their abilities



were like before , and being able to under stand what their new norma Hooks like, helps us

play on their strengths and their ability to compensate with other structures."

Blumenfeld and Zamora worked together targeting the sounds that she had problems expressing. Zamora had to slow her speech and exaggerate each sound, compensating with her vocal chords for sounds she can no longer make with her tongue.

It is a tedious process but in three months Zamora was speaking well again.

"Previously, I was well pronounced with an expansive vocabulary. I had to be patient with myself and use more expressions in my eyes, hands and face. Sometimes I have to pick words I wouldn't normally use because I can't use my original vocabulary. Quality is better than quantity," said 7amora.

"You have to want to be able to communicate in order to talk, and I wanted that more than anything, because I am a person who loves to communicate. I haven't got singing down yet, but hopefully that will come."

Zamora's vocal chords are healthy and with time, patience and modifying her technique, Blumenfeld thinks that Zamora will be singing "proudly, loudly sometime soon."

"There are people that come into your life as patients and your mind is blown by their strength of character, their humor, their wisdom, and their willingness to fight. Cynthia really embodies all of those things," said Blumenfeld. "From the first day she was insistent that she was going to come out of this as a stronger, better person. She has really shown me, even in my own personal life, to never give up and to set your mind on a set target, and you simply do not deviate from that."

In addition to regaining her speech, Zamora would need to relearn to eat. This was her last hurdle to recovery. It was only in early 2018 that she began to eat without a feeding tube.

"I would encourage everybody to think for a moment of what life would be like. Grab your tongue with your teeth and try to talk without a tongue. Try to think about, when you take a bite of a sandwich, everything that's going on in your mouth," said Blumenfeld. "In order for us to be able to chew, we have to be able to manipulate food, move it from one side of our mouth to the other side of the mouth. We have to be able to organize all that food on top of our tongue and propel that food backwards in order to swallow it. Without a tongue that becomes almost an impossible task."

Thankfully, Zamora mastered the ability to eat again and laughs when recalling eating half a lava cake in front of her shocked family during a restaurant outing. She eats crispy fried chicken and just about anything she wants.

"With a little patience and care, and one step, baby steps, along the way, you can do anything," said Zamora. "Look at me. I had no tongue, and I'm talking. I'm eating. I'm drinking. I'm doing great. There is life after this surgery. Don't give up. Keep going. Be strong. Be stubborn. You can do it, you can."

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