

## Sean's Story – Orbital Lymphangioma

Sean is your typical 12 year old. The outgoing sixth-grader from Tacoma, Wash., plays drums in the school band and can't get enough of his favorite XBOX 360 video game, "Oblivion: The Elder Scrolls". His favorite class is language arts because he loves to read. He's got two orange and white tabby cats, Melvin and Gisella, and a pointer mix named Mac.



*December 22, 2003  
Before CyberKnife treatment*



*Today  
After CyberKnife treatment*

But not too long ago, Sean was much shyer and socially awkward, embarrassed by his appearance and experiencing severe vision problems. Sean was suffering from a condition called orbital lymphangioma, in which a benign tumor was growing behind his right eye. The tumor was pushing his eye out of its socket, causing double vision and requiring Sean to turn his head when he read, watched TV or played video games.

The cause of the tumor remains a mystery, possibly a genetic anomaly. Sean's parents, Joe and Markiva, said that when he was born, they noticed the corner of his right eye was puffy. By the time Sean was about 6 years old, the swelling was getting more pronounced, so much so that others were noticing that something was wrong with his eye.

Joe and Markiva consulted doctors in the Seattle area. Shortly after Sean's eighth birthday, in January 2003, doctors surgically removed the growth in his eye, which was filling the space between the bridge of his nose and his eye lid. A biopsy revealed that it was a lymphatic malformation.

By September 2003, Sean's parents again noticed swelling and bruising in the corner of his upper right eye lid. The lymphangioma had returned and continued growing over the next few months. Doctors in Seattle told Sean's parents that if he didn't have surgery again, the lymphangioma would eventually push Sean's eye out of the socket. "The surgical alternative was not much more promising," Joe said. "Sean could face multiple surgeries, which could result in permanent facial disfigurement, the need for a cornea transplant or even the loss of his eye."

Joe and Markiva did not want to subject their only child to the painful surgeries, long recoveries or the possibility of disfigurement. Sean's bulging eye already was causing him to become self-conscious about his appearance, noticing that he was different than his classmates in third grade. Joe began researching various treatment options for lymphangiomas. One treatment he discovered was the CyberKnife® Robotic Radiosurgery System, which offers a non-invasive, pain-free way to treat tumors anywhere in the body by precisely delivering radiation.

Thinking that the CyberKnife System might be able to help Sean and limit the potentially devastating side effects of surgery, Joe contacted the CyberKnife Society, an organization of medical professionals who use the system. Through the CyberKnife Society, Joe found a doctor in Boulder, Colo., who believed he could successfully treat Sean's condition.

By Christmas 2003, the situation became more urgent. Sean's eye started bleeding. On January 4, 2004, Sean and his parents flew to Boulder to begin treatment with the CyberKnife System. Within a week, the doctor had worked with the family to develop a plan to treat the lymphangioma that also took into account the fact that Sean has juvenile diabetes. Beginning January 15, 2004, Sean had four CyberKnife treatments, lasting 30 minutes each, on four consecutive days.

“I was kind of scared before I went in,” Sean admitted, because his surgery a year before resulted in a hospital stay and a lot of facial bruising. “But the CyberKnife treatment was easy. I just went to sleep while they did it, and then went back to the hotel with my parents.”

“Sean was bouncing with energy after each treatment,” Joe recalled. “He had more energy than his mother and I did, and had no restrictions on any activities following the procedure.”

In the weeks following the CyberKnife treatment, Sean said he felt a popping sensation in his eye. That popping was likely a sign that the CyberKnife treatment was breaking down the diseased lymphatic tissue, causing clear fluid to drain from his eye.

“Within two weeks of the CyberKnife treatment, Sean’s eye stopped bleeding,” Joe said. “In fact, he has had a pretty dramatic regression of the tumor.” Six months after the CyberKnife treatment, a CT scan showed that the lymphangioma was completely gone.

Joe and Markiva noticed that Sean’s appearance began to change within a few weeks of the CyberKnife treatment. While he still has some swelling on the right side of his face, “everything is back to normal,” Joe added. Prior to the CyberKnife treatment, Sean had 60/20 vision and his right eye was protruding 6 millimeters further than a normal eye. Within four months of the CyberKnife treatment, Sean’s vision was restored to 20/20. Today, he enjoys his pastimes of reading and playing video games even more than ever before.