

Using Internet Technology to Help Diagnose and Treat a Girl's Cancer

As head of the pediatric oncology department at the Kyrgyz State Cancer Center in Bishkek, Dr. Damira Baizakova oversees the cases of each patient who comes to the department for treatment. When Baizakova first met Nargiz, an 11-year-old girl who suffers from a rare form of cancer that disfigured her face with tumors, she was struck with a host of emotions. "When I reviewed her file, which was filled with histological reports and inconclusive findings from numerous physicians, I felt as if I was in a blind alley . . . but I was determined to do my best to help the child." Helping is not always easy though, Baizakova admits, especially when a patient suffers from a rare or unknown condition. "I have a very narrow professional profile—there are only a small number of oncohematologists in Kyrgyzstan—so I often have no one to consult with on difficult cases. This was what happened with Nargiz."

After diagnostic surgery and an unsuccessful course of hormone therapy, Baizakova turned to the Institute's LRC for assistance. "Previously, Moscow was our only source of information and knowledge," Baizakova explains, "but, thanks to the information technology available at the LRC, we now have access to nearly limitless data on oncology." Baizakova—along with Galina Sergeeva, head of the Institute's Scientific Medical Information Library and then information coordinator of the Bishkek/Kansas City partnership—was able to consult with clinicians from around the world on Nargiz's case. After receiving a number of responses from their AIHA partners in Kansas City and another specialist in the Czech Republic, Baizakova decided to try chemotherapy. She used information compiled by Sergeeva to explain the treatment procedure to Nargiz and her mother and thereby to help alleviate some of their fears about the operation.

"I felt so sorry for the shy and unsmiling little girl and wanted to do my best to help her as soon as possible," says Sergeeva. As information coordinator at the Institute's LRC, she conducted clinical research using the Internet and a wide range of information technology resources for healthcare profes-



PHOTO: COURTESY OF GALINA SERGEEVA

Dr. Damira Baizakova (standing) arranges for a tele-consultation on a difficult case with Galina Sergeeva, then information coordinator of AIHA's now-graduated Bishkek/Kansas City partnership.

sionals, medical students, and patients from Bishkek and surrounding areas.

"The physicians here make good use of the LRC when they are faced with cases that are difficult to diagnose or treat. On average, I received 10 requests for information and one or two calls for tele-consultations using the Internet each month," Sergeeva notes. When asked to assist a clinician who wants to discuss a particularly challenging case with colleagues and experts from around the world, Sergeeva would prepare a patient history; translate it into English; scan X-ray, CT, MRI, or histology slide images; and often take a digital photograph of the patient. This information package was then sent electronically to AIHA partner mailing lists and other more specialized oncology list serves worldwide. "In most cases, the responses come quickly—some as soon as the next day. The success rate of these tele-consultations is high and we have received many useful recommendations and up-to-date chemotherapy protocols," she explains.

Nargiz is getting better and better with each treatment, Sergeeva says, and when she comes to the Center, she always visits the LRC to have her picture taken. "Now she smiles and is no longer so painfully shy and embarrassed. . . . She seems much more active and full of joy. Nothing can compare to the feeling of pleasure I get from watching a sick child smiling and enjoying life."

AIHA's Learning Resource Centers (LRCs)—an integral component of the Information Technology Program—link partnership institutions in the NIS and CEE to the growing network of medical information and resources available through the Internet, allowing clinicians to overcome decades of isolation from information and providing new opportunities for education, communication, and collaboration. Since 1995, AIHA and its partners have established more than 140 LRCs that cumulatively provide information and communications services to more than 95,000 practitioners, medical students, and patients. Information coordinators from AIHA's LRCs have trained nearly 15,000 healthcare professionals in the use of computers and the Internet as tools of evidence-based research and have responded to approximately 42,000 requests for information from clinicians and patients since 1997 alone. The story of one clinician and the information coordinator who assisted her appears below; one young girl's story is on the other side.*

Calling these tele-consultations a marvel of modern medicine, Baizakova agrees, stating, "My job is a difficult one. It is never easy to see a child suffer. Sometimes I want to give it up just so that I can sleep peacefully at night, but successful cases such as Nargiz's make it all worthwhile. Thanks to AIHA's partnership program, the people of Kyrgyzstan—especially ill children—are able to get effective care and treatment. So many of my colleagues have had the opportunity to learn new techniques, improve their professional skills, and—more importantly—find cures that save lives."

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