Founded in 1950 by Variety Clubs International, Nicklaus Children's Hospital® is South Florida's only licensed specialty hospital exclusively for children, with more than 740 attending physicians and over 220 pediatric sub-specialists. The 289-bed hospital is renowned for excellence in all aspects of pediatric medicine with several specialty programs ranked among the best in the nation by *U.S. News & World Report*.

Dr. Toba Niazi specializes in the surgical treatment of children with brain and spinal cord tumors, and children with cerebral palsy, hydrocephalus, spasticity, vascular malformations, craniocervical and spinal pathologies and movement disorders.

Pediatric Spasticity

New Treatments Mean Better Outcomes for Children … and Their Parents

At Nicklaus Children's Hospital

People become doctors for different reasons. For Dr. Toba Niazi, a neurosurgeon at Nicklaus Children's Hospital, part of Miami Children's Health System, saving lives literally was inspired at home.

"My dad was pretty sick growing up," she says. "He had idiopathic primary pulmonary hypertension. When I was little, I just saw a guy who was really sick and couldn't take a couple of steps. I wanted to help my dad. But when he passed on, I knew emotionally I could not treat people with cardiac or pulmonary conditions because it would be a daily reminder of my father. Pediatric neurosurgery is the other end of the spectrum where I feel like I can make a significant impact in a child's life, and because you deal with a younger population, they tend to have better outcomes than adults."

Nicklaus Children's Brain Institute balances safety and efficacy to achieve the best possible quality of life for children with a neurological condition. As the first pediatric Brain Institute in the country, its team of specialists has established undisputed leadership in the field.

Dr. Niazi's career path began in Maryland, where she attended high school near the National Institutes of Health. She was chosen for an internship there that provided an early opportunity to study HIV and AIDS and how they affected the brain.

Dr. Niazi received her medical degree from the University of Maryland School of Medicine. She completed her internship and residency at the Department of Neurological Surgery at the University of Utah School of Medicine, and did a fellowship in neurosurgery at the University of Washington/Seattle Children's Medical Center. During her time in training, she focused on translational research in a transgenic mouse model with medulloblastoma. This work led her to earn the prestigious Kenneth Shulman Award through the American Association of Neurological Surgeons and Congress of Neurological Surgeons.

Dr. Niazi specializes in the surgical treatment of children with brain and spinal cord tumors, and children with cerebral palsy, hydrocephalus, spasticity, vascular malformations, craniocervical and spinal pathologies and movement disorders.

"Spasticity" refers to stiff or rigid muscles. The condition can interfere with walking, movement or speech. Spasticity is usually caused by damage to the part of the brain that is involved in movements under your control. It may also occur from damage to the nerves that go from the brain to the spinal cord.

One of the most common reasons that children have spasticity is cerebral palsy. It's the most common congenital neurological condition in children.

"The general time period that we like to intervene is around three to seven years of age," Dr. Niazi explains. "Parents are concerned because we're telling them, 'We're going to do a spine operation, where we cut nerves.' That's essentially what the rhizotomy is. It is selectively cutting these nerves so that we can stop this abnormal loop from the brain to the spinal cord, so the muscles can function correctly.

Dr. Niazi also offers her young patients the option of a palliative dorsal rhizotomy, which precludes the need for the Baclofen pump, which is a lifelong commitment.

"Traditionally, the thought was we can install a Baclofen pump that infuses medication into their spinal canal," she says. "But palliative dorsal rhizotomy is an alternative option without a lifelong implanted pump that helps reduce the tone in their bodies."

"You always have to get it filled. It can break. It can get infected," she says. "There are a lot of things that can go wrong with it, whereas if the palliative rhizotomy does work, it reduces that tone in the child's muscles, and then they're able to do the same things as with the Baclofen pump but without all of the upkeep of the pump."

Also unique in Dr. Niazi's process is her minimally invasive approach to surgery, meaning that her spinal incision is about 2 to 2.5 inches long, whereas the traditional incision is roughly 10 to 15 inches long.

This means less down time for the child, and less risk of post-op deformities such as scoliosis.

"It's a multi-disciplinary approach with the selective dorsal rhizotomy," Dr. Niazi says, "because it really depends on patient selection. Patient selection is key, making sure that they really have this increased tone. Our physical therapists evaluate them. My neurology colleague, Dr. Migvis Monduy, is excellent. She helps to make sure that there's no dystonia involved in these patients.

"I'm just one piece of a pie," she adds. "All of the other people take another piece, and everything needs to be in line together in order to get this child to be successful. We sit down, we talk. This includes our orthopedic colleague, Dr. Michael A. Tidwell, to make sure that everybody is in agreement that this is the right thing for the patient; and making sure that this is in their best interest."

BEST CHILDREN'S HOSPITALS U.S.News & WORLD REPORT NEUROLOGY & NEUROSURGERY 2016-17

Nicklaus Children's Hospital
Brain Institute

To discuss acute cases with a neurosurgeon, call 1-888-543-3358.
For more information, visit nicklauschildrens.org