The spinal deformity surgery program at All Children’s Hospital is led by Jeffrey B. Neustadt, M.D. and Gregory V. Hahn, M.D. They have performed over 1,200 scoliosis surgical procedures to date over the past 21 years. Over 100 children and adolescents have been treated surgically each year in the past few years. They utilize the most advanced treatment options such as intraoperative computerized image guidance.

Advancing the treatment of spinal deformity among children has been a career long venture for Drs. Neustadt and Hahn. Since they joined the practice, Drs. Neustadt and Hahn have been delivering cutting edge surgical care for every one of their young patients. Image-guided surgery with a navigation system is one of these many advancements available to patients seeking scoliosis correction.

For patients needing corrective spinal surgery, Stryker Navigation’s Computer Assisted Surgery (CAS) platform provides our surgeons with comprehensive data about the patient’s anatomy to pre-plan for surgery, potentially saving valuable time and uncertainty in the operating room. Within the CAS platform, is specialized software that creates a virtual, 3-D model of the patient’s spine, essentially a digital roadmap or blueprint to help guide the surgeons. During spine surgery, Drs. Neustadt and Hahn match the patient’s actual spine to the computer’s virtual model displayed on the monitor in the operating room. Much like a GPS system in an automobile, our surgeons are then able to track in real time the position of surgical instruments and implants in relation to the patient’s true anatomy. For this reason, CAS may also be referred to as surgical navigation.

CAS, or Surgical Navigation technology, can then be utilized to assist the surgeon in guiding spinal implants used to correct abnormally curved anatomy. This advanced visualization for the human eye, gives surgeons the necessary information needed to make real-time decisions in complex procedures.
What is scoliosis?

Idiopathic scoliosis, for which the cause is unknown, affects approximately 2% of the population, although only a small number of those with scoliosis require treatment. Treatment of scoliosis is indicated for those who have progressive spinal deformity.

A parent or doctor may suspect scoliosis if one shoulder appears to be higher than the other, or the pelvis appears to be tilted. Untrained observers often do not notice the curving in the earlier stages. Children’s modesty causes them not to undress in front of their parents. When they are in a bathing suit, do you notice a sideways curvature of the spine that looks like an “S” or “C” or that one shoulder or hip appears higher than the other? If so, your child or patient may have scoliosis.

The surgical treatment of idiopathic scoliosis is usually reserved for curves that have progressed beyond 40 to 45 degrees. If left untreated, continued progression of these curves may lead to chronic severe pain, deformity, psychosocial disability and pulmonary dysfunction.

To learn more about Computer Assisted Surgery (CAS), navigate your way to the following websites:

www.chortho.com  
www.KnowCAS.com  
www.GPSspinesurgery.com