Attaching screws or metal plates to bones around the spinal cord takes precision and a delicate touch.

To be even more accurate, Carolinas HealthCare System Blue Ridge’s spine surgeon, Jason Zook, MD, FAAOS, is now using a brand-new robot in the operating room that applies GPS much like the one in your car.

Dr. Zook used the new robotic surgical system for spine surgery for the first time on Nov. 13. The robotic assisted navigation system guides the surgeon during a procedure in real time just like your car’s GPS guides you to your destination.

“This allows us to put hardware into the spine almost exactly where we want it to go and eliminates any uncertainty,” Dr. Zook said. “I’m very excited about it. It’s new and the first one in this area. The closest one is an hour and a half drive away.”

This system offers patients a less invasive option for spine surgery, by helping guide more accurate implant and hardware placement. This can result in less blood loss, less muscle damage and a quicker recovery for many patients.

“We are excited to bring the latest in surgical spine technology to our community. Combined with our spine surgeon expertise, patients can receive world-class care in our own community,” said Jon Mercer Chief Operating Office at CHS Blue Ridge. “This investment in leading edge technology continues to demonstrate our commitment to our community and our patients.”

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How does ExcelsiusGPS work?

Globus Medical says the Excelsius GPS is the next revolution in robotic spine surgery. It is designed to improve accuracy and optimize patient care by using robotics and navigation, much like a GPS in your car.

On the day of surgery, medical images are taken and imported into the ExcelsiusGPS. The surgeon uses these images to determine the size and placement of implants and creates a patient plan based on your anatomy. This is used to guide the rigid robotic arm to a specific region of your spine, similar to a planned route or pathway on a GPS. The surgeon uses this pathway or route to accurately place the implants using instruments.

Throughout the procedure, the surgical instruments and implants are continuously displayed on the screen for the surgeon and staff to monitor. This display allows the surgeon to view live feedback during your procedure for more precise implant placement.
Dr. Zook, who heads the Blue Ridge Spine Center, said the system gives a three-dimensional look at the spine resulting in much better visuals than the traditional fluoroscopy (continuous X-ray). "We can potentially make mistakes, as there’s always an element of human error," Dr. Zook said. "But this system doesn’t allow me to put screws outside where it needs to go, and it makes sure I’m executing the surgical plan accurately."

Dr. Zook received hours of special training, but said the system is user friendly. "This is a big deal for our patients," he said. "It increases their safety and I think it will become a standard of care in spine surgery. We have the very latest in surgery right here."

The Blue Ridge Spine Center offers the latest in non-surgical and surgical techniques and technology. For more information, call 828-580-8037.