GPS technology has found its way into the operating room, providing surgeons with greater accuracy in delicate operations and patients with increased safety. Methodist Hospitals’ investment in this cutting-edge treatment supports our vision of being a leader in delivering specialty care, becoming an academic teaching institution, and providing unprecedented health care in Northwest Indiana.

Methodist Hospitals is the only hospital in the Northwest Indiana region to offer this technology.

**WHAT IS COMPUTER-ASSISTED SURGERY?**

During computer-assisted surgery, specialized software creates a three-dimensional, digital roadmap for the surgeon to follow. The surgeon then matches the patient’s actual anatomy to the virtual 3D model displayed on a monitor. Much like a GPS system in an automobile, the surgeon is then able to track in real-time the position of surgical instruments in relation to the patient’s true anatomy.

Methodist Hospitals’ surgical navigation system consists of a computer with specialized software, an infrared navigation camera, an array of tracking devices and surgical Smart Instruments specifically designed for neurosurgery, orthopedic and spine procedures.
YOU have a choice.

Choose CAS.

Computer-Assisted Surgery (CAS), allows Methodist Hospitals’ surgeons to utilize the latest technologies to visualize a patient's unique anatomy with unsurpassed accuracy, without additional radiation exposure. Now, exact placement of tools and implants is assured. And because CAS makes minimally invasive procedures possible, smaller incisions and faster healing times can also be expected.

**BENEFITS OF COMPUTER-ASSISTED SPINE SURGERY**

- Enables minimally invasive procedures by offering the surgeon enhanced visualization of the anatomy, especially when smaller incisions are used.
- Provides the surgeon with comprehensive data about the patient’s anatomy to pre-plan for surgery and determine pedicle screw length, diameter and position; saving valuable time and uncertainty in the OR.
- Offers the surgeon real-time feedback and the ability to correct potential implant misalignment during surgery.
- Aids in the reduction of radiation exposure in the operating room by lessening the number of X-ray images needed during the procedure.

**BENEFITS OF COMPUTER-ASSISTED NEUROSURGERY**

- Allows the surgeon to view surgical instruments in relation to delicate anatomy, such as brain tissue, nerves and blood vessels. The ability to work precisely in this environment helps reduce the risk of numerous complications.
- May support minimally invasive procedures that utilize smaller surgical wounds and reduced trauma to nearby healthy tissue.
- Enhances surgical precision by providing calculated trajectory and depth for tumor resections and brain biopsies.
- Provides the surgeon with comprehensive data about the patient’s anatomy to pre-plan the surgical procedure, saving valuable time and uncertainty in the OR.

**BENEFITS OF COMPUTER-ASSISTED JOINT REPLACEMENT**

- May help to reduce joint wear and extend the life of the implant.
- Enables less-invasive surgical techniques, which have several advantages, including shorter post-operative physical rehabilitation, smaller incision, and less blood loss compared to a standard joint replacement.
- Provides the surgeon with comprehensive data about the patient’s anatomy, which helps determine proper placement of the implant.