



HOAG MEMORIAL HOSPITAL PRESBYTERIAN
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Pickup Family Neurosciences Institute at Hoag Adds First Machine-Vision Image Guided Surgery Platform to New Brain & Spine Fully Integrated Operating Room Suites
7D Surgical System reduces radiation and enhances patient safety in spinal procedures

NEWPORT BEACH, CALIF., April 25, 2019 --- In an incredible leap forward for surgical outcomes and patient safety, [Pickup Family Neurosciences Institute at Hoag](#) today announced the addition of the 7D Surgical System for [spinal](#) procedures. This system uses the same technology found in self-driving cars to provide an unprecedented level of surgical navigation for radiation-free placement of spinal implants.

The 7D system is being utilized in Hoag's two new highly advanced [Brain & Spine Fully Integrated Operating Room \(OR\) Suites](#) at Hoag Hospital Newport Beach, making Hoag the first hospital on the West Coast to implement the innovative technology.

"The 7D system uses machine-learning technology and is the leading-edge in terms of surgical navigation," said [Burak Ozgur, M.D., chief of service for the Neurosurgery Spine Program](#) at the Pickup Family Neurosciences Institute at Hoag. "This tool still allows the surgeon to be in complete control, but it enhances accuracy and speed during surgery."

Reducing surgical time is critical in spinal surgeries to reduce blood loss and improve outcomes, Dr. Ozgur said. Before requesting the equipment, he tested the 7D system in November on a patient with a complex surgical fusion. Dr. Ozgur said he found the level of accuracy and efficiency significantly cut down on the length of the operation, allowing for a swifter recovery time and providing him with increased confidence during the surgery.

"This technology worked very well in that surgery and will make a sizeable impact on patient care," he said. "Hoag is unique in that we have a great philanthropic community that helps us bring in the most advanced equipment to allow us to do our jobs better and safer."

The 7D Surgical System is the only Machine-Vision Image Guided Surgery (MvIGS) platform. This allows spine surgeons to guide their tools to the precise locations needed using



sophisticated camera technology linked to a computer in the operating room. While Hoag has long used surgical navigation tools in spinal surgeries, the 7D system is the most advanced and innovative, allowing for faster surgical workflow for spine procedures without the use of intraoperative radiation. The result is a faster, more precise, safer surgery and reduced recovery time for patients.

For the patient who underwent the spinal fusion surgery in November, the 7D system greatly assisted in an otherwise complicated case. Following a tumor removal at the base of the patient's neck, the patient required a spinal fusion and the installation of screws and rods.

"When you put in that hardware, you could hit a nerve or hit the spinal cord. It's a tight space, so it is critically important that the placement of these instruments be precise," Dr. Ozgur said.

"That's where this device helped the most because I could track instruments in 3D, see where the tip of the screw was and where it was pointed. I could place instrumentation precisely and more quickly. It made a complicated case a lot easier."

Hoag has received numerous [national, state and local accolades](#) for its success with robotic-assisted, minimally invasive surgery, as well as being named one of the Top 100 Hospitals & Health Systems with Great Neurosurgery and Spine Programs by Becker's Hospital Review. Hoag has shown repeatedly how such surgery can result in less blood loss, reduced muscle damage and faster recovery times.

"We continue to invest in these state-of-the-art tools because our patients expect and deserve the best and latest technology that medicine has to offer," said [Michael Brant-Zawadzki, M.D., F.A.C.R., senior physician executive and the Ron & Sandi Simon Executive Medical Director Endowed Chair of the Pickup Family Neurosciences Institute at Hoag](#).

"The new operating room suites symbolize 21st Century medicine at its finest, and underscore Hoag's leadership in cutting-edge patient care," [Robert T. Braithwaite, president and CEO of Hoag](#) said. "The 7D surgical platform is just one of many state-of-the-art technologies we are incorporating into the suites to optimize surgical facilities network-wide and provide the most sophisticated and effective resources possible for our patients."



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The Brain & Spine Fully Integrated Operating Room Suites also feature the CollaboratOR, an 84-inch screen allowing Hoag surgeons, nurses and surgical assistants to simultaneously view, monitor and analyze an array of information to assist in brain and spinal surgeries; Trumpf iLED 7 Surgical Lights that use 3D sensor technology, light field size and intensity to remain consistent regardless of the distance between the light and the surgical site or the position of staff under the lights; and Karl Storz StreamConnect Technology that can facilitate a live video broadcast from doctors and experts around the globe, when necessary.

ABOUT THE PICKUP FAMILY NEUROSCIENCES INSTITUTE

Delivering a personalized, integrated approach using best-practice guidelines, the most advanced technology, and integration of medical specialists in the most appropriate facilities, the [Pickup Family Neurosciences Institute \(PFNI\) at Hoag](#) provides the highest quality care for patients with brain and spine disorders including stroke, aneurysms and vascular malformations, brain tumors, epilepsy, movement disorders, memory and cognitive disorders, pain, minimally invasive spine surgery, multiple sclerosis, addiction medicine and sleep disorders, as well as the mind-body interface of behavioral health. Several of Hoag's PFNI programs have received high acclaim, including the stroke program, which was the first hospital in Orange County and the second in California to be named a Certified Comprehensive Stroke Center by DNV GL Healthcare. It was awarded the American Stroke Association's Get With The Guidelines Stroke Gold Plus Performance Achievement for stroke care. And as one of the first centers in the U.S. to offer the most advanced radiosurgical treatment system available, Leksell Gamma Knife® Perfexion™, the PFNI brain tumor program is the largest in Orange County and is also among the top volume programs in the western United States. The epilepsy program is an accredited Level 4 center. The PFNI's memory and cognitive disorders program is nationally recognized.

ABOUT HOAG MEMORIAL HOSPITAL PRESBYTERIAN

Hoag is an approximately \$1 billion nonprofit, regional health care delivery network in Orange County, California, that treats more than 30,000 inpatients and 450,000 outpatients annually. Hoag consists of two acute-care hospitals – Hoag Hospital Newport Beach, which opened in 1952, and Hoag Hospital Irvine, which opened in 2010 – in addition to eight health centers and 11 urgent care centers. Hoag is a designated Magnet® hospital by the American Nurses Credentialing Center (ANCC). Hoag offers a comprehensive blend of health care services that includes five institutes providing specialized services in the following areas: [cancer](#), [heart and vascular](#), [neurosciences](#), [women's health](#), and orthopedics through Hoag's affiliate, [Hoag Orthopedic Institute](#), which consists of an orthopedic hospital and two ambulatory surgical centers. Hoag has been named one of the Best Regional Hospitals in the 2018 - 2019 *U.S. News & World Report*, and *Becker's Healthcare* named Hoag as one of the 2018 "100 Great Hospitals in America" – a designation Hoag has received five times. For an unprecedented 23



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years, residents of Orange County have chosen Hoag as one of the county's best hospitals in a local newspaper survey. Visit www.hoag.org for more information.