

## EVOLUTIONARY ADVANCES RESULT IN MINIMALLY INVASIVE SPINE SURGERY.

### Combined technology results in minimally invasive fusion surgery.

*Indianapolis, IN (December 15, 2003)* - Dr. Rick Sasso, with Indiana Spine Group, has developed a new surgical device advancing the science of spine surgery. This new device, a percutaneous reference frame (PRF), when used with an imaging navigation system provides the surgeon real-time virtual imaging of the surgical area. This image allows the surgeon to place screws in the spine with greater accuracy and precision, when used for lumbar spinal fusions as well as other spine surgeries.

This new technique incorporates three key devices. This includes an intra-operative CT-scan, infrared camera and the newly developed percutaneous reference frame. The combined use of these three devices provides the surgeon internal, real-time imaging while instrumentation is conducted during surgery. This results in minimally invasive spine surgery.

Once in surgery, the newly developed PRF is affixed to the patients' back by the surgical area. After placement, an intra-operative CT-scan image of the spine area is taken which provides a three dimensional image. This image, displayed on a computer screen is further enhanced by an infrared camera, which is focused on the PRF providing the surgeon with real-time images of the surgical area. During the fusion procedure, hollow tubes are inserted to the surgical site via small poke holes. These hollow tubes, which also incorporate a reference frame to allow real-time imaging, are placed at the exact location on the spine where the screws are to be placed. During lumbar fusion surgery the translaminar facet screws are then precisely and exactly placed in the facet joints of the spine. Once placed, the screws will stabilize the vertebrae while the fusion occurs.

*Providing the full spectrum of spine care*

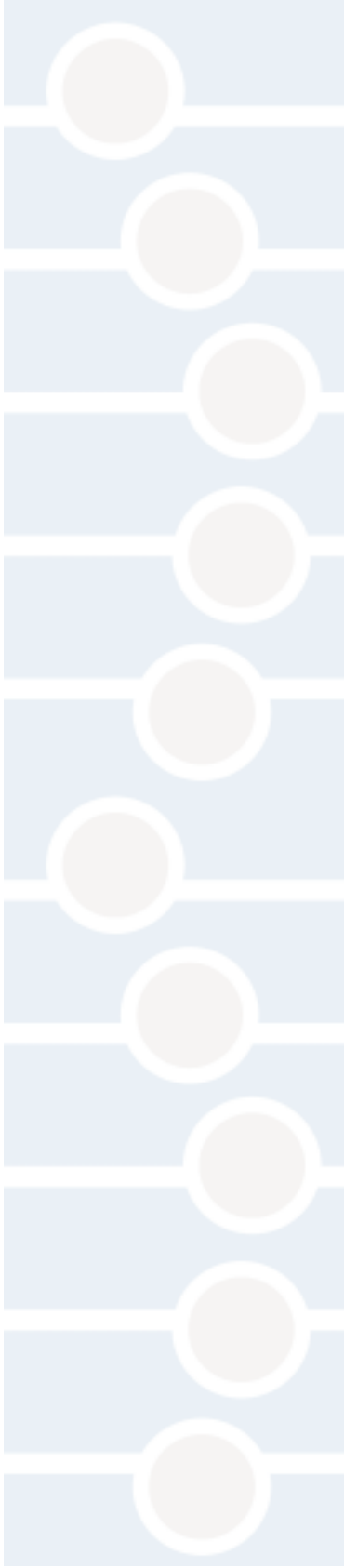
# *Press Release*

This newly developed percutaneous reference frame, used with the inter-operative CT-scan and infrared camera is used for lumbar spinal fusion surgery as well as other spinal surgical procedures. Lumbar spinal fusion is performed on patients who suffer from lower back pain resulting from degenerative disc disease.

Rick C. Sasso, M.D., is a board-certified orthopaedic surgeon who specializes in orthopaedic spine surgery. An internationally renowned speaker, Dr. Sasso is very involved in research and development of spinal implants and techniques of minimally invasive spine surgery. His professional memberships include the American College of Surgeons, North American Spine Society, Scoliosis Research Society, and the Cervical Spine Research Society.

Drs. Sasso is with the Indiana Spine Group at St.Vincent in Indianapolis. Indiana Spine Group is dedicated to spine and neck diagnostics and surgery. Surgeons with Indiana Spine Group perform, develop and refine the newest techniques for traditional and minimally invasive surgery and microsurgery. In addition, physicians with Indiana Spine Group are involved in research to advance the diagnostics, treatment and surgery of the neck and back.

# Press Release



The development of this new percutaneous reference frame used with the inter-operative CT-scan and infrared camera replaces the traditional lumbar fusion procedure. This provides many benefits to the patient, of which the key benefit is that the spine surgery is now minimally invasive. This new procedure utilizes small poke holes rather than larger incisions. Additionally, with guided imaging, there is extremely less internal manipulation of other soft tissue in the spine area resulting in less tissue damage and trauma. For the patient, this results in less post-operative pain, less risk for infection and a faster recovery time.

Other advantages of this new procedure over traditional fusion surgery includes:

- The use of small, compact screws rather than both screws and rods - which are larger and bulkier.
- Utilization of the inter-operative CT-scan and infrared camera eliminates the need for traditional x-rays taken during surgery. The old technique exposes the patient, surgeon and operating staff to unnecessary radiation and does not allow the surgeon to view the instrumentation in real-time. Additionally, radiographs only provide a two dimensional image.

Dr. Rick Sasso, who developed the new percutaneous reference frame for this minimally invasive application to spine surgery, routinely utilizes this technology at St. Vincent Hospital. This application is used on patients requiring lumbar spinal fusions as well as other spine surgeries. According to Dr. Sasso, "This era in spine surgery is very exciting. The new device, when used with imaging technology, is a very significant step in the evolution of spine surgery as we work to reach the goal of providing minimally invasive spine surgery to patients."

A recent patient who had suffered from lower back pain for 15-20 years who had put off having surgery is now pain-free. The patient stated, "I kept putting off having surgery until my back hurt bad enough. Since the surgery my back has not hurt." Following the surgery, the patient was home in two days and even back to work in one week. He is now looking forward to pain-free holidays.

*Providing the full spectrum of spine care*