SILHOUETTE™ SPINAL SYSTEM
Case and images courtesy of Scott A. Webb, D.O., Clearwater, FL

Scott A. Webb, D.O. Clearwater, FL
Dr. Webb received a B.A. degree, with honors, from Southern Illinois University and a D.O. degree from the Chicago College of Osteopathic Medicine. He completed his residency in orthopedic surgery at Mt. Clemens General Hospital and a Fellowship in orthopedic spine surgery at Florida Spine Institute.

Dr. Webb is certified in orthopedic surgery through the American Osteopathic Academy of Orthopedics and is a member of the North American Spine Society, the American College of Spinal Surgeons, the American Osteopathic Association and the Florida Orthopedic Association.

Patient History
The patient is a 48-year-old female who presented with low back pain in the midline, increased with flexion. She also had pain in the right lower extremity, that increased with straight leg raise maneuver, and was without weakness or reflex change. Her injury occurred in 1997 when she lifted a box at work. She described her pain as split 50/50 between her midline low back and her right leg.

She underwent an IDET with initial diminished pain in August 1999, but by May 2001, her symptoms had returned. Despite treatment with rest, non-steroidal anti-inflammatory drugs, physical therapy and radiographic-guided epidural steroid injections, the patient continued to be very symptomatic and remained on total temporary disability. She underwent diskography and updated MRI imaging that demonstrated single concordance at L4-L5, with no involvement of the adjacent discs. The preoperative diskogram with post-diskogram CT scan was concordant at L4-L5, indicating an annular tear and fissuring. The MRI indicated substantial desiccation of the L4-L5 disc.

The Procedure
A single level transforaminal lumbar interbody fusion at L4-L5 was accomplished in 2 hours. The surgeon chose to implant an 11 mm x 20 mm Threaded Cylindrical Radiolucent Cage (TCRC). For the posterolateral instrumented fusion, the surgeon used the Silhouette™ System Snap Technique. The pedicles were identified through the laminectomy defect and radiographically. Using the Silhouette System Snap Technique, the Silhouette headless screws were placed into the pedicles.
of L4-L5 bilaterally and applied to assist with the interbody technique, using the screw interface distractor. The disc space itself was slightly distracted with the pedicle screw and bullet distractors to size the implant. The broach and tap technique was used to complete preparation of the disc space. The pituitary rongeur and curette were employed to remove excess material from within the disc space.

When the disc space preparation was complete, autograft was packed into the space. The implant itself was packed with autograft and then advanced in an oblique fashion into the L4-L5 interspace and countersunk. Once the TCRC was placed, an MRI/X-ray showed the TCRC to be in excellent position with restoration of the disc height. Then posterolateral gutters were prepared by decorticating the transverse processes. The autograft was then placed into the posterolateral gutters along with a bone graft extender.

The Silhouette System variable angle screw heads were reattached to the appropriate screws after graft placement, which allowed the surgeon to place a great deal of graft into the posterolateral gutters and beneath the screw heads. Once the polybody was reattached to spherical screw head and the rods were placed and tightened, lordosis was applied using the screw interface compressor. X-rays revealed maintenance of lordosis. The visualization of the canal revealed the foramen to be open, without further neural compression. Blood loss was 400 cc.

**Case Comments**

The patient was discharged on the fourth postoperative day. She noted diminished preoperative symptoms prior to discharge. The advantages of the Silhouette System Snap Technique is that abundant bone can be placed into the posterolateral gutters prior to variable angle head placement. Additionally, the screws placed prior to the TCRC enabled the surgeon to distract using the pedicle screw distractor. This helps facilitate cage placement without compromising the endplates. Lordosis can then be introduced using the screw interface compressor as the rods are tightened down.

At approximately 4 weeks post op, the patient continues to do well. She says her preoperative pain is at least 75 percent improved. Her function is improved as well. At this point she is quite happy with her progress.