

# REPORT

## Spinal conditions treated with minimally invasive spine surgery

Low back and neck pain is common in the United States. An estimated \$50 to \$200 billion is expended annually to manage this often life changing pain. It ranges from mild to severe and influences people's daily lives in many ways. Those who suffer with back and neck pain should be aware when it is critical to consult with a spine surgeon to consider if an intervention may be necessary.

Evidence suggest that in a majority of cases, conservative management is effective in improving clinical outcomes and reducing pain and functional limitation in acute and chronic low back pain patients. Surgical interventions may be recommended for patients with progressively worsening pain, significant neurologic deficit and when non-surgical managements fail.

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## Meet our new neurosurgeon Dr. Frimpong

SpineMed Specialists (Pain Management Associates) is

pleased to announce the addition of Thomas Frimpong, DO to our team. Dr. Frimpong brings a unique skill set to the care of people with spinal disorders, with expertise in minimally

invasive spine surgery, scoliosis and complex spinal disorders. A graduate of Lake Erie College of Osteopathic Medicine in Pennsylvania, he completed his Neurosurgery residency at Virginia Tech Carilion School of Medicine, Roanoke. He did his post-residency fellowship in minimally invasive and complex spine surgery at Bassett Healthcare, Columbia University College of Physicians and Surgeons, New York, where he functioned as a neurosurgery attending and a

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*Practice of interventional spinal diagnostics and minimally invasive treatment of spinal origin pain.*

# Minimally invasive spine surgery

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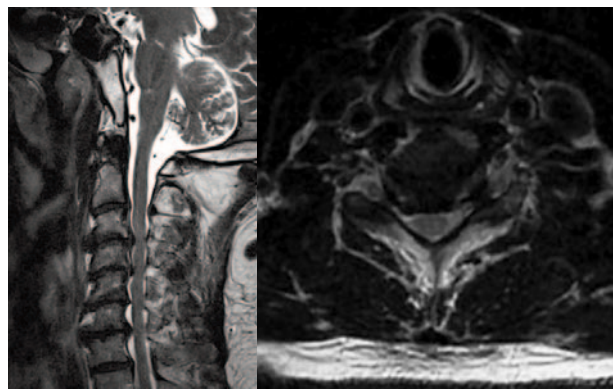
Both traditional “open surgery” and minimally invasive surgery methods have their particular advantages.

## ***What are the benefits of minimally invasive spinal surgery?***

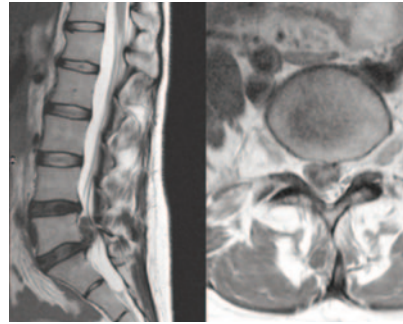
Minimally invasive spine surgery (MISS) techniques have revolutionized spine surgeries and enabled spine surgeons to attain similar results as open surgery, while minimizing the collateral tissue damage typical in traditional open methods. The application of MISS techniques allows for the avoidance of extensive muscle, ligament and skin dissection. The lower degree of surrounding tissue injury leads to decreased postoperative pain, accelerated recovery, reduced blood loss, and shortened hospital stays. Some biomechanical and imaging research have demonstrated the potential of MISS approaches to minimize paraspinal muscle atrophy and to provide opportunities for better preservation of normal spinal motion.

## ***Should you undergo minimally invasive spine surgery?***

The majority of individuals with neck pain or back pain do not require spine surgery. Health care providers most often recommend conservative management as the initial treatment. Less than 5% of patients presenting with neck and low back pain require surgery. Consultation with a spine surgeon for chronic spine pain may be appropriate if non-surgical treatment (medications, epidural steroid injections, facet diagnostic and treatment efforts or physical therapy) show inadequate improvement after 3-6 months.



## ■ Lumbar Disc Herniation



A herniated or bulging disc, impinging a nerve, may result in leg pain, weakness, or numbness. The use of a muscle splitting percutaneous technique allows the surgeon to reach the spinal column through the tubular retractor placed via a minimal incision (less than 1 inch) and the natural muscular planes and avoid muscle stripping and big incisions associated with traditional open surgery. Surgeons perform laminectomy (i.e. a small bony resection) to get to the spinal canal and successfully remove the herniated disc.

## ■ Spinal Stenosis



Spinal stenosis represents a pathological reduction of the vertebral canal caused by disc degeneration, synovial cyst, or thickened ligament, contributing to pressure on nerve roots or the spinal cord. Individuals with spinal stenosis are typically characterized by “neurogenic claudication”. Staying in a vertical position is a challenge for them, and they try to find any point of support nearby due to the need to have numerous breaks leaning or sitting to move through long distances. Surgical treatment results in the removal of the thickened ligament and posterior bony structure to make the nerve root tunnel (foraminotomy) or the spinal canal wider (laminectomy). In comparison to traditional open surgery that involves an extensive dissection of muscles and weakens the posterior tension band to get to the spine, bilateral decompression is possible though the use of a unilateral tubular retractor method via a small incision. MISS preserves the posterior tension band to prevent post-laminectomy flat back syndrome.

## ■ Degenerative Spinal Disease

Degenerative spinal disease is an age-related condition caused by a gradual loss of the normal structure and function of the spine. This happens when one or more of the discs between the vertebrae, facets and ligaments deteriorate leading to narrowing and nerve root compression. Stenosis may lead to weakness, numbness, tingling and pain down the legs, low back pain, and bladder or bowel dysfunction. Patients who fail non-surgical treatments may be referred for surgery. MISS preserves important anatomical structures of the spine, has lower prevalence of complications and faster recovery makes it an ideal surgical option for treating degenerative spine disease. During MISS endoscopic and percutaneous approaches are used to perform decompression, instrumentation and fusion utilizing small corridors to reach the disc spaces via small lateral or posterior incisions to perform discectomy and interbody fusion. A number of small skin incisions may be used to place screws and rods percutaneously.



## Dr. Frimpong

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Clinical Instructor in Neurological Surgery. He is a member of the American College of Osteopathic Surgeons, The International Society for the Advancement of Spine Surgery, and the North American Spine Society. Dr. Frimpong joins Pain Management Associates' Dr. Rodney Jones and Dr. Milton Landers, with over 45 years of combined Interventional Pain Management experience to offer the least invasive, most effective and comprehensive treatments to people with brain and spinal disorders.

### Dr. Frimpong is affiliated with these health facilities:

Wesley Medical Center, Wichita  
Ascension Via Christi  
St. Francis, Wichita  
Kansas Medical Center, Andover  
Cypress Surgery Center, Wichita  
William Newton Hospital, Winfield  
Summit Surgical Hospital,  
Hutchinson

### **Other indications of minimally invasive spine surgery include:**

- Spinal deformities
- Spinal infections
- Spinal tumors
- Spinal instability

### **Advantages of minimally invasive spine surgery:**

- Smaller skin incisions
- Minimal tissue dissection
- Minimal injury to surrounding muscles
- Less scarring
- Minimal blood loss caused by surgery
- Lower infection risk
- Minimal post-operative pain
- Faster recovery and minimal rehabilitation
- Return to the routine activities in a short term

### **Disadvantages of minimally invasive spine surgery:**

- An extended time for surgery
- A relation to higher radiation impact
- Less surface area for fusion
- The inability to cover all pathology
- Extended learning curve for surgeons
- Challenges with repairing a spinal fluid leak

### **Conclusions**

The growth of MISS procedures has transformed spine surgery over the years. Minimally invasive spine surgery when compared to the open surgery can be a safe, quick procedure with short downtime. Current evidence suggests similar surgical outcome when comparing MISS to open spine surgery. However, MISS has less estimated blood loss and shorter hospital stays compared to other more extensive open spine procedures. Moreover, the use of minimally invasive techniques enables surgeons to perform surgery among the elderly and patients who have been considered unfit for open procedures, showing great clinical and radiographic outcomes. ■

### **Areas of Neurosurgical and Pain Practice:**

- Minimally invasive spine surgery
- Degenerative spine reconstruction
- Navigation-guided spine fusion
- Navigation-guided biopsy and removal of brain and spine tumors
- General Neurosurgery
- Traumatic brain and spinal injury
- Scoliosis
- Failed previous spinal surgery
- Spinal Cord stimulator placement
- Interventional spine and pain procedures

**A New Name** With the addition of Dr. Frimpong, the scope of services offered by Pain Management Associates expands considerably. Not only is a full range of Interventional Pain Management procedures offered, but also, world class Neurological Surgical procedures by a board certified and fellowship trained surgeon. To better reflect this considerable expansion in services we chose the name SpineMed Specialists, LC. As we move forward, we will be using both names, SpineMed Specialists and Pain Management Associates.

 **SpineMed** SPECIALISTS, L.C.  
Neurosurgery & Pain Management

*Providing world class interventional spinal diagnostic and treatment services in a compassionate state of the art environment.*

**Get to know ...**

## SpineMed Specialists (Pain Management Associates, L.C.)

Doctors Milton Landers, Rodney Jones and Thomas Frimpong along with the dedicated staff of nurses, x-ray technologists, and office management personnel comprise SpineMed Specialists and Pain Management Associates.

Dr. Frimpong is board certified in neurosurgery with fellowship training in minimally invasive and complex spine surgery. Dr. Landers and Dr. Jones are board certified anesthesiologists with additional certifications in Pain Management and hold academic positions within the University of Kansas School of Medicine.

Dr. Frimpong served as an attending physician at Bassett Healthcare – Columbia University College of Physicians and Surgeons where he completed his fellowship training. For the past three years he served as attending neurosurgeon at Trinity Health in Minot, ND.

Drs. Landers and Jones have each practiced Pain Medicine for over thirty years. Both physicians are active members of the Spine Intervention Society where they both serve as Master Instructors.



**Dr. Rodney Jones**



**Dr. Milton Landers**



**Dr. Thomas Frimpong**

Dr. Jones was named “Instructor of the Year” for 2019 from a group of over 60 instructors mostly from large academic teaching institutions.

Dr. Landers received the “Charles April Lifetime Teaching Award” in 2010 for his “tireless dedication to teaching and the pursuit of excellence”. Each has published extensively in peer reviewed journals and they have produced several book chapters.

Dr. Frimpong offers a complete array of neurological surgery procedures with emphasis on minimally invasive and complex spine surgeries.

The physicians and staff are dedicated to the safe and accurate diagnosis and effective treatment of chronic pain and disability of the spine using up to date, evidence-based techniques and surgical interventions when indicated.

SpineMed Specialists and Pain Management Associates provide world class services for workers compensation, all major insurances, Medicare, self-pay and “Boutique Health” services to improve function and reduce pain and disability in a compassionate, timely and cost-effective manner. SpineMed Specialists and Pain Management Associates strive to be the patient advocate and payor’s insider for the best possible outcome. ■

**For referrals or more information contact:  
316-733-9393 • [SpineMedSpecialists.com](http://SpineMedSpecialists.com)**