



## **Section I: ASK THE EXPERT – Treating Osteoporosis**

Interview conducted by Stephanie West, DePuy Spine Manager, Medical Education  
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Dr. Jack Chen is a subspecialty trained orthopaedic spine surgeon. His clinical practice in Orange, CA is devoted to treating both adult and pediatric patients with spinal disorders. His interests include degenerative conditions of both the cervical and lumbar spine, including herniated discs, spinal stenosis, and spondylolisthesis. He also has extensive knowledge of spinal deformity, including kyphosis and scoliosis. Furthermore, he has unique experience in treating spinal tumors and trauma, and has won basic science research awards in spine infection and spine biomechanics.

I recently called Dr. Chen to discuss his preferred treatment for patients with Osteoporosis.

**SW: We know that osteoporosis is a growing issue in the aging population today. Associated with this disease is the incidence of vertebral compression fractures. The pain associated with compression fractures of the vertebra has been a significant problem for patients. Can you give us a sense of the extent of the problem and what treatment options exist for these patients?**

JC: In the United States alone, more than 700,000 osteoporotic vertebral fractures occur each year, more than the number of osteoporotic hip and wrist fractures combined.

More than 150,000 patients per year are hospitalized for pain associated with these fractures, costing more than 1.6 billion dollars per year.

The National Osteoporosis Foundation estimates that osteoporosis related pathology causes more immobile days in bed for patients than stroke, heart attack, or breast cancer.

For these patients, conservative treatment consists of bed rest, activity modification, bracing, and pain medications. However, since these patients are often very elderly and frail, these traditional treatments may not always be satisfactory. Elderly patients are sensitive to the effects of narcotics, they are more vulnerable to the complications associated with bed rest, and bracing is often very uncomfortable for them.

Fortunately, for the patients who do not have relief of their pain with traditional measures, cement augmentation of their fracture may alleviate their symptoms.

**SW: Can you provide some insight into the difference between Kyphoplasty and Vertebroplasty from your perspective?**

JC: In my practice, the patients who I have treated with Kyphoplasty compared with Vertebroplasty had a significantly lower incidence of complications associated with cement leakage. This is most likely due to the ability of the balloon to create a well-defined cavity for the cement to flow into.

However, the Kyphoplasty technique requires many extra steps and takes longer to perform than vertebroplasty.

The CONFIDENCE™ Cement System is designed to address the risk of cement leakage by utilizing high viscosity cement, which may reduce the potential for leakage into the spinal canal. The CONFIDENCE system doesn't require the extra steps of using a balloon to create a cement cavity.

I like the simplicity of the vertebroplasty procedure. I also like that I don't have to worry as much about cement leakage.

**SW: Let's talk about height restoration. In your practice have you seen this in your patient population and to what extent?**

JC: In my experience, I am able obtain a few millimeters of height restoration with Kyphoplasty. Even though I may be able to demonstrate a few millimeters of height restoration in the fractured vertebra, the overall kyphosis of the spine does not seem to change. In some of my cases, the overall kyphosis seems to even worsen slightly over 1 to 2 years of follow-up.

Despite the lack of correction (and in some cases, worsening) of deformity my patients' pain relief and reported satisfaction are still very high. My patients are happy that their pain is gone. They don't seem to worry if their vertebral body height is 8 millimeters versus 10 millimeters.

**SW: I understand that these types of procedures require extensive fluoroscopy visualization of the anatomy throughout. Is this a concern for you and does this new technology you are using provide for some relief in this area?**

JC: Nobody likes radiation exposure. That's why the CONFIDENCE system is nice to use. The long handled mallet, trocar holder, and "remote control" injection handle lets me stand further away from the C-arm.