

## WHAT IS INTERFUSE®?

The InterFuse® System is a unique proprietary intra-operative assembly technology from VTI that allows surgeons to implant a large footprint device using a minimally invasive approach. Each device can be optimized to match the unique anatomical features and size of the patient's disc space. The result is a less invasive device implantation without the compromises typically associated with MIS implants.



## A MIS APPROACH



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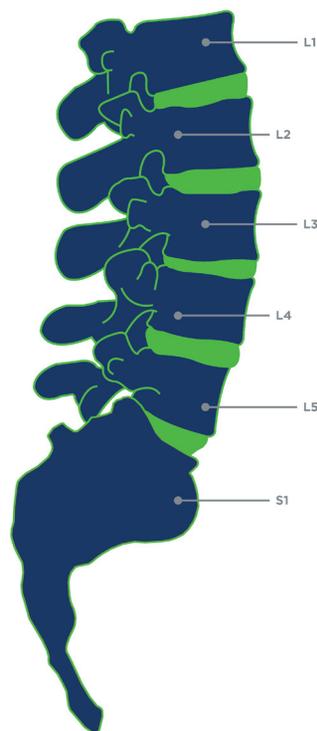
# PATIENT INFORMATION



If you've been living with back pain then you know the impact it can have on your life. VTI offers solutions that can help ease your pain and get you back to living. The following patient information is intended to help you understand the anatomy of the spine and treatment options. This information should not replace your doctor's opinion or recommendation for treatment. Consult with your surgeon and/or your primary care doctor to address any questions or concerns before deciding the best solution for your back pain.

## TREATMENT OF BACK PAIN

There are a number of methods to treat lower back pain, including surgical and non-surgical options. Your physician will work with you to determine the source of your pain and recommend the most appropriate treatment for you, the patient. Non-surgical treatments include weight loss, exercise, medications, injections or physical therapy. While non-surgical treatments may address the pain for some patients, others may not see improvement. In these cases, surgical treatment may be recommended by your physician. The most common surgical treatment is lumbar spinal interbody fusion. The procedure is used to restore lost disc height, remove pressure from nerves and stabilize the spine. After removing the diseased portion of the disc, a surgical implant is placed between two adjacent vertebrae. The implant can be filled with bone graft material to stimulate bone growth creating a bridge of bone that joins the two vertebrae together. Additional posterior fixation is then added to increase spinal stability.



## SPINE KNOWLEDGE

The spine is a complex structure of bones, joints, ligaments and muscles that support the body enabling us to perform activities of daily living. It is composed of a series of bone segments (vertebrae) that are stacked on top of each other like blocks along with cushions called discs located between the segments that assist with absorbing loads. The disc allows motion of the spine and maintains separation between adjacent vertebrae. Each disc has an outer fibrous ring, called the annulus fibrosis, which keeps the disc intact. The inner portion of the disc is called the nucleus pulposus or the nucleus. It consists mostly of water and provides the cushion needed to absorb the forces exerted on the spine during activities. The spine is divided into three regions including the cervical (neck), thoracic (chest) and lumbar (lower back) regions. The lumbar region of the spine supports the majority of the body's weight during movement and is commonly the source of low back pain.

## ANATOMY OF THE SPINE

The location of a particular vertebrae in the spine is defined by the region (C = cervical, T = thoracic, L = lumbar) and corresponding location number in the spine (head to toe). The lumbar spine consists of five (5) vertebrae numbered L1 to L5. The sacrum, located below the L5 vertebra, is often referred to as S1. The diagram to the side illustrates the lumbar spine and the sacrum. VTI's InterFuse® system may be used in the lumbar spine from L2 to S1, but is ideally suited for treating the L4/L5 and L5/S1 levels due to surgical access challenges (See Indications section for a complete list of InterFuse use criteria).

## WHAT IS MINIMALLY INVASIVE SPINE SURGERY (MIS)

Minimally Invasive Spine Surgery (MIS), often referred to as less invasive spine surgery, utilizes a surgical approach in which access to the spine is achieved via a small surgical incision and the use of specialized surgical instruments. This is in contrast to traditional open spine surgery in which a large incision is created and the surrounding muscles are retracted to provide a clear view of the spine. This extensive retraction often results in soft tissue injury. With MIS, surgeons can achieve the same effective goals as an open procedure, but in a less invasive way.

