PATIENT INFORMATION

YOUR MAP TO RECOVERY

RNZ NEUROSCIENCE

Bringing world –class health care
to your door-step

ExcelsiusGPS™

REVOLUTIONARY ROBOTIC NAVIGATION

Patient Information

This brochure will help you understand more about:

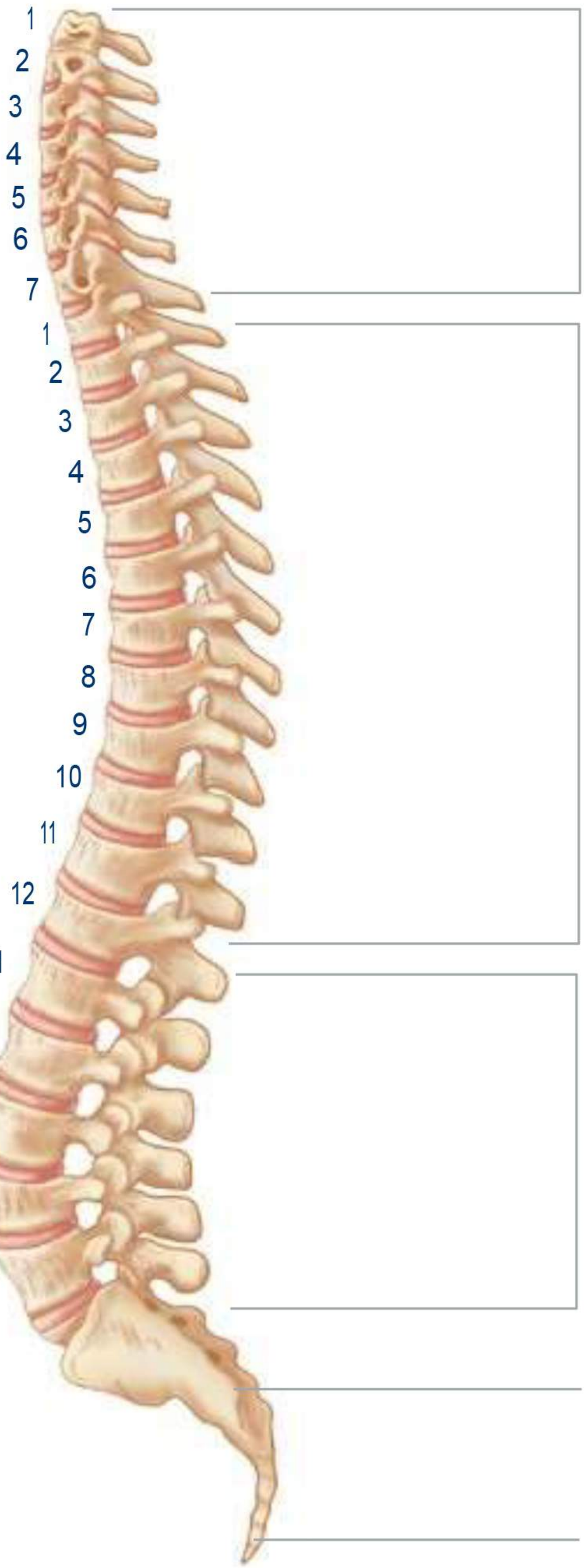
- **General Spine Anatomy**
- **Minimally Invasive Spine Surgery**
- **ExcelsiusGPS™**

The decision to receive medical treatment is individualized to the patient and the patient's symptoms. The information presented within this brochure may not apply to your condition, treatment or its outcome, as surgical techniques vary and complications can occur. It is important to discuss the viability of the procedure with your physician to decide whether this treatment option is right for you.

This brochure is intended to be an educational resource only. It is not meant to be a warranty or to replace a conversation between you and your physician or a member of their health care team. Please consult your physician for a complete list of indications, precautions, clinical results, and other important medical information that pertains tothis procedure.

Table of Contents

Anatomy of the Spine



The Healthy Spine

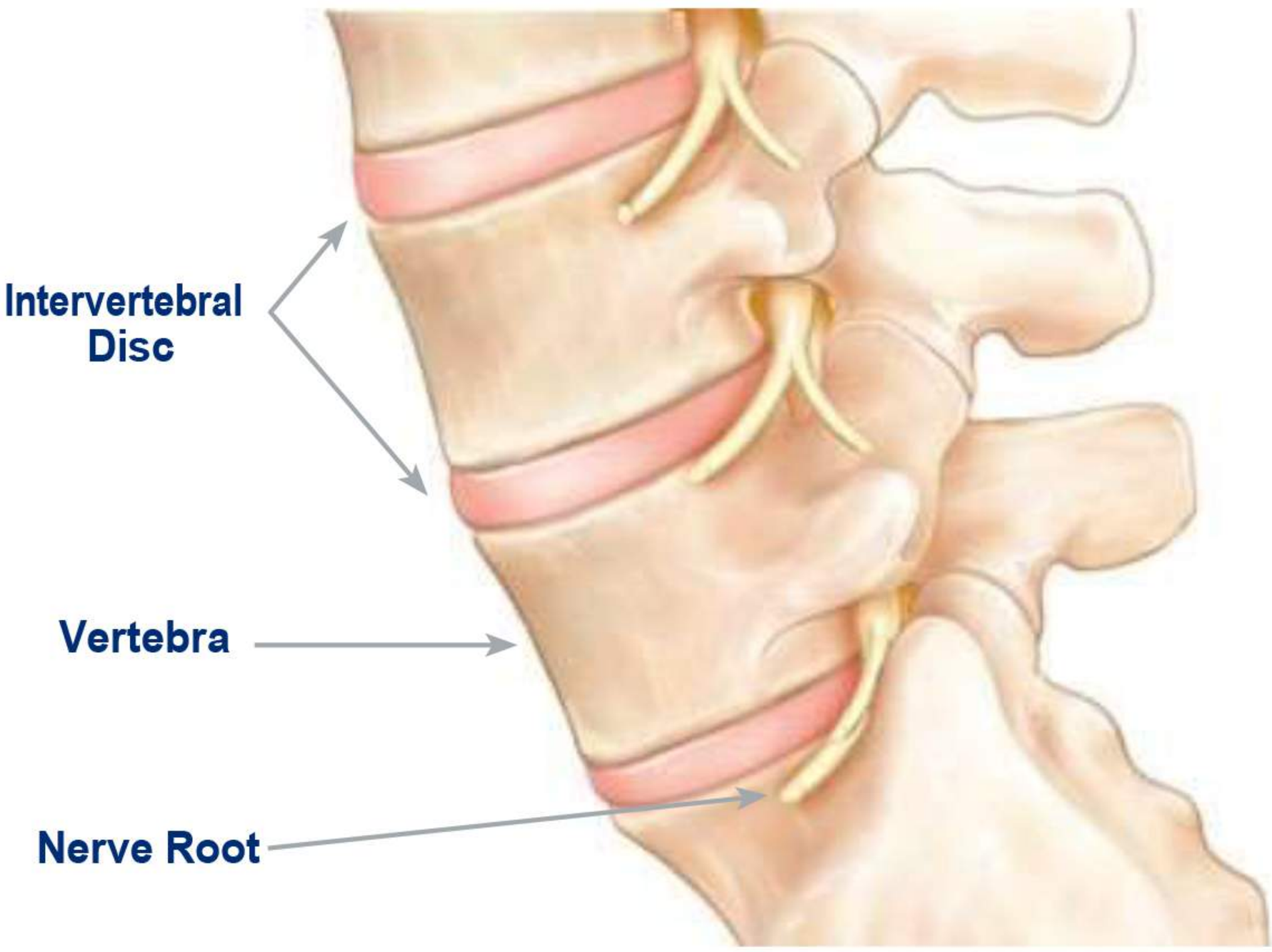
The spine is one of the most important structures in the human body. It supports much of the body's weight and protects the spinal cord, which carries information from the brain to the rest of the body. The spine is strong but flexible, allowing for a wide range of movements.

The spine is made up of vertebrae and is divided into three main sections:

- Cervical (7 vertebrae)
- Thoracic (12 vertebrae)
- Lumbar (5 vertebrae)

Below the lumbar spine is the sacrum, which is comprised of five fused vertebrae. At the end of the spine is the coccyx or the tailbone.

Individual vertebrae are separated by intervertebral discs, which act as cushions or shock absorbers between the vertebral bodies.



What is Minimally Invasive Spine Surgery?

Minimally invasive surgery combines your surgeon's understanding of anatomy with x-ray imaging to treat spine conditions using small incisions. A minimally invasive technique permits the surgeon to separate the muscles surrounding the spine rather than cut through them. The surgeon operates through small incisions along the spine.

It is important to understand that the decision to receive minimally invasive surgery is individualized to the patient and the patient's symptoms. It is important to discuss with your physician whether minimally invasive surgery is right for you.

What are the Potential Benefits of Minimally Invasive Spine Surgery?

- **Shorter hospital stay**[1]
- **Less tissue damage**[1]
- **Smaller incisions, which may lead to smaller scars**[2]

1. Tian, Nai-Feng, et. al. Minimally invasive versus open transforaminal lumbar interbody fusion: a meta-analysis based on the current evidence. *Euro Spine J* 22 (2013): 1741-1749.
2. O'Toole, John. Surgical Site Infection Rates after Minimally Invasive Spine Surgery. *J Neurosurg Spine 11* (2009): 471-476.

How Does ExcelsiusGPS™ Work?

ExcelsiusGPS™ is the next revolution in robotic spine surgery from Globus Medical, a developer of spinal and orthopedic implants and surgical instruments for patients with spine disorders.

ExcelsiusGPS™ is designed to improve accuracy and optimize patient care by using robotics and navigation, much like a GPS in your car.

On the day of surgery medical images are taken and imported into ExcelsiusGPS™. The surgeon uses these images to determine the size and placement of implants and creates a patient plan based on your anatomy. This is used to guide the rigid robotic arm to a specific region of your spine, similar to a planned route or pathway on a GPS. The surgeon uses this pathway or route to accurately place the implants using instruments.

Throughout the procedure, the surgical instruments and implants are continuously displayed on the screen for the surgeon and staff to monitor. This display allows the surgeon to view live feedback during your procedure for more precise implant placement.

Questions to Ask Your Surgeon

If you are experiencing chronic back pain that is unresponsive to non-surgical treatment, you may be a candidate for minimally invasive spine surgery in conjuction with ExcelsiusGPS™. Talk to your doctor to learn more and find out if this option is right for you.

- **Am I a candidate for minimally invasive spine surgery with ExcelsiusGPS™?**
- **How can I benefit from minimally invasive spine surgery with ExcelsiusGPS™?**
- **What can I expect the day of the surgery?**
- **What can I expect post surgery?**

For additional information about the ExcelsiusGPS™ system, visit *www.Excelsius-GPS.com*.

RNZ
NEUROSCIENCE

www.rnzglobal.com
info@rnzglobal.com

Bringing world –class health care
to your door-step