Carl Zeiss solutions for spinal surgery, we have your back covered.

ZEISS

Creating Visions in Surgery

"The operating microscope is an invaluable tool for spinal surgery – one with a short learning curve for the benefits derived. With less OR time and fewer complications, hospital costs are reduced and most importantly, patient outcomes are improved."

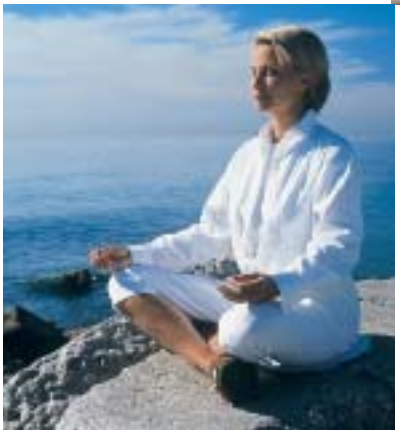
Robert S. Bray Jr., M.D., Institute for Spinal Disorders, Cedars-Sinai Medical Center

outcome

Today's standard of care

The demand for spinal surgery and the demands on spinal surgeons have never been greater. An aging population is driving significant growth in the number of procedures. This new generation of patients expects higher quality of care and a more complete return to normal activity.

At the same time, hospital administrators are under increasing pressure to reduce patient stays, optimize resource utilization and control overall costs. Hospitals have found the surgical microscope to be a key instrument in achieving these goals.



Minimally invasive techniques help patients return more quickly to a fully active, healthy lifestyle.

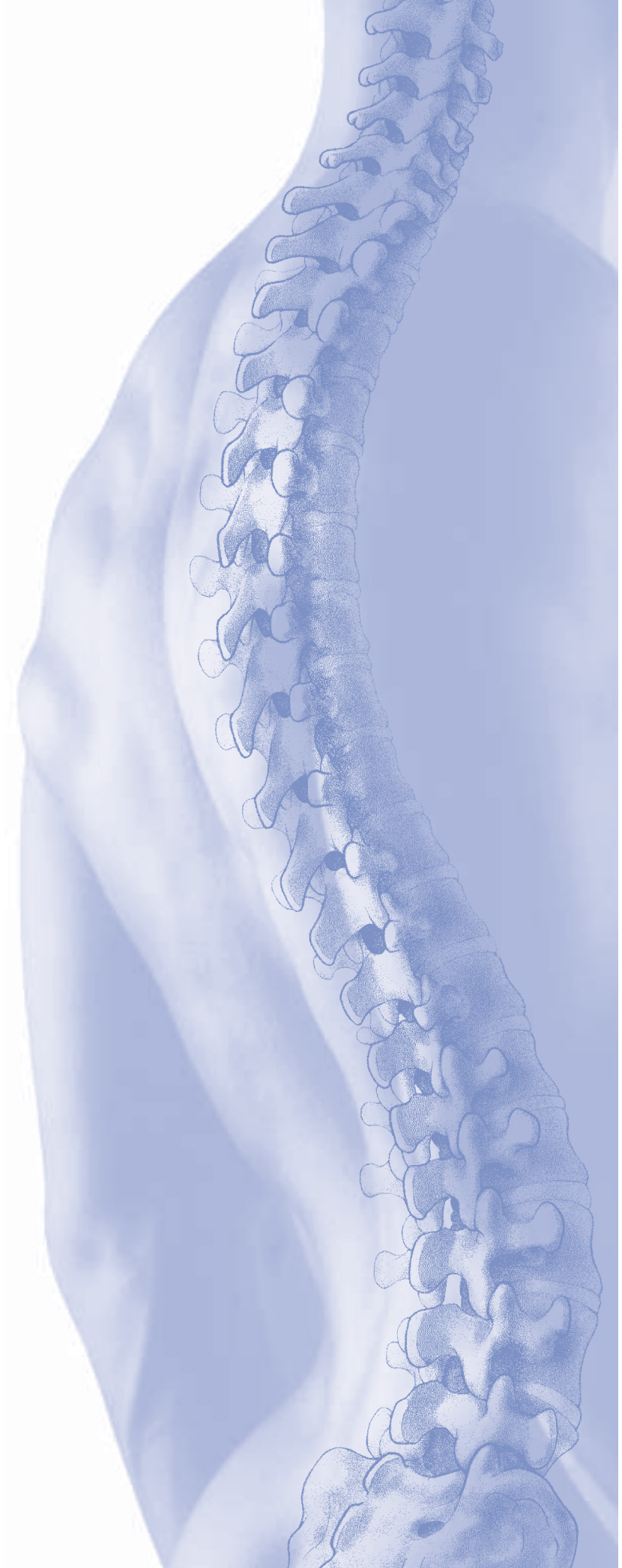
Focus on results

The optics of the surgical microscope bring the deepest anatomical structures into sharp and brilliant magnified detail, enabling surgeons to make the smaller approaches required for minimally invasive procedures. With increased illumination and magnification, critical structures are more easily preserved. This in turn reduces tissue trauma and blood loss.

Leading surgeons report patients experience less pain, have fewer complications, shorter stays and faster recoveries. For example, in a recent quality assurance review of 200 patients with comparable indications found hospitalization reduced from 4.6 days to 1.4 days and overall costs reduced by more than 50 percent for the group whose treatment included microsurgical techniques[1)].

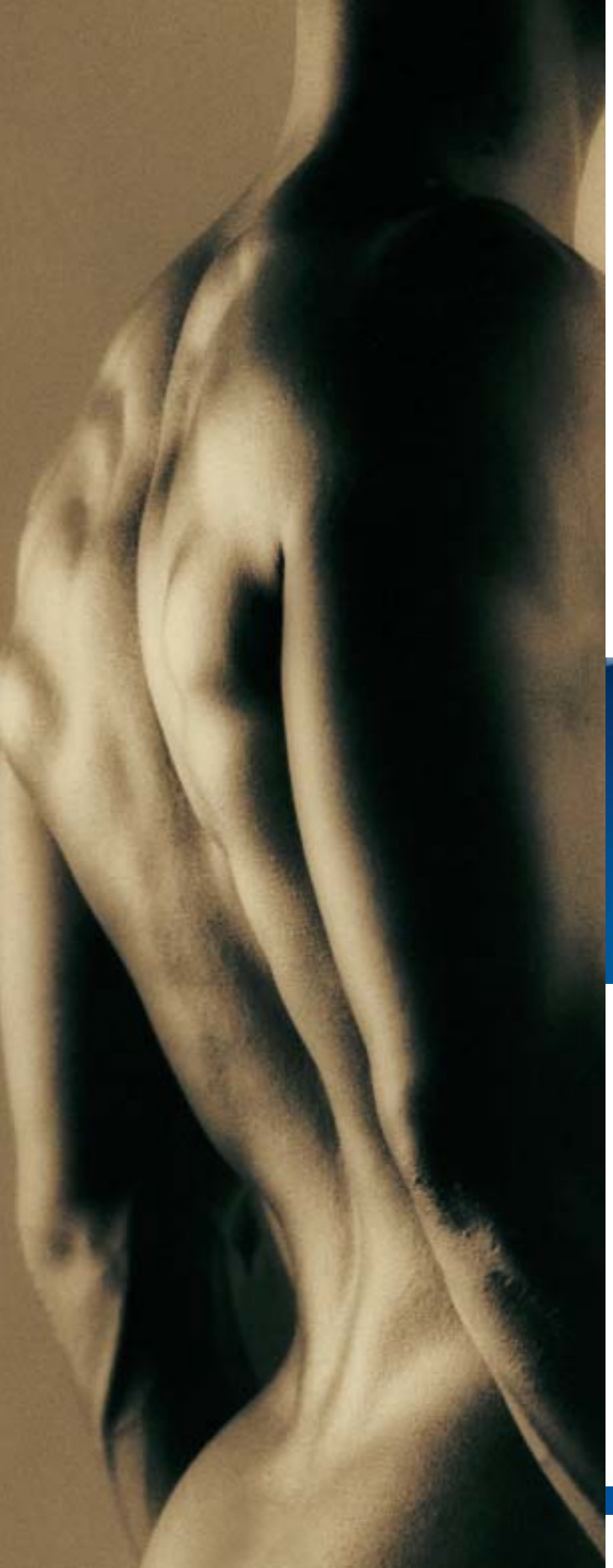
This increased efficiency enables the OR team to schedule facilities and equipment for maximum use and cost-effectiveness. Patient, surgeon and hospital administrators each achieve their desired outcome... just in time for a more demanding future.

1) Quality Study of the Cedars-Sinai Medical Center



OPMI Vario/NC 33 System

Brilliant optics, incredible ease of use, flexible positioning and plentiful light are brought together in a very compact, stylish design. Combined with other unique features, such as the first graphical touchscreen, the OPMI Vario/NC 33 System is the correct choice for spinal surgery.



comfort

"After 6,000 spinal microsurgeries, I never cease to be amazed how easy the microscope makes my life. Regardless of my approach I can stand comfortably, yet visualize the anatomy every bit as large and clear as if I were in a movie theater."

John A. McCulloch, M.D., Presbyterian St. Luke's Hospital

Surgical microscope's ergonomic design allows the surgeon to work more comfortably for longer periods of time.

Engineered for the surgeon

Besides improved outcomes, ergonomically engineered operating microscopes afford many physical comforts that surgeons quickly learn to appreciate.

The location of the viewing binoculars in relation to the operating field allows the surgeon to maintain a more ergonomically correct posture. Adjusting the binocular's tilt and rotation helps to maintain this comfortable position even as viewing angles change throughout the procedure. And as the dissection progresses, the variable working distance allows the microscope to remain at the same comfortable distance without the surgeon having to pause for repositioning.

See like never before

The physical advantages of using a surgical microscope include not only improvements in how surgeons feel, but also what they see.

Microscopes provide magnifications of up to 18x – three to six times higher than even the best surgical loupes. Regardless of the selected magnification, a microscope's optical design always produces images of the highest clarity and color fidelity. Powerful xenon light is the final element that brings the anatomy brilliantly to life without distorting the tissue's natural colors.

By exposing greater detail, these crisp and brilliant magnified images make it easier to differentiate tissue and localize abnormal pathology. This superior visual experience is demonstrated in the accompanying artist's renderings.

A view to behold for all

An operating microscope offers the ideal way to enable everyone on the surgical team to simultaneously share the surgeon's brilliant view.

Microscopes configured for spinal surgery are equipped with two equivalent viewing binoculars, providing both the main surgeon and the assistant with identical images of the surgical site. When the surgeon and assistant change sides, the microscope's symmetric design allows them to immediately return to the same view without having to reorient themselves.

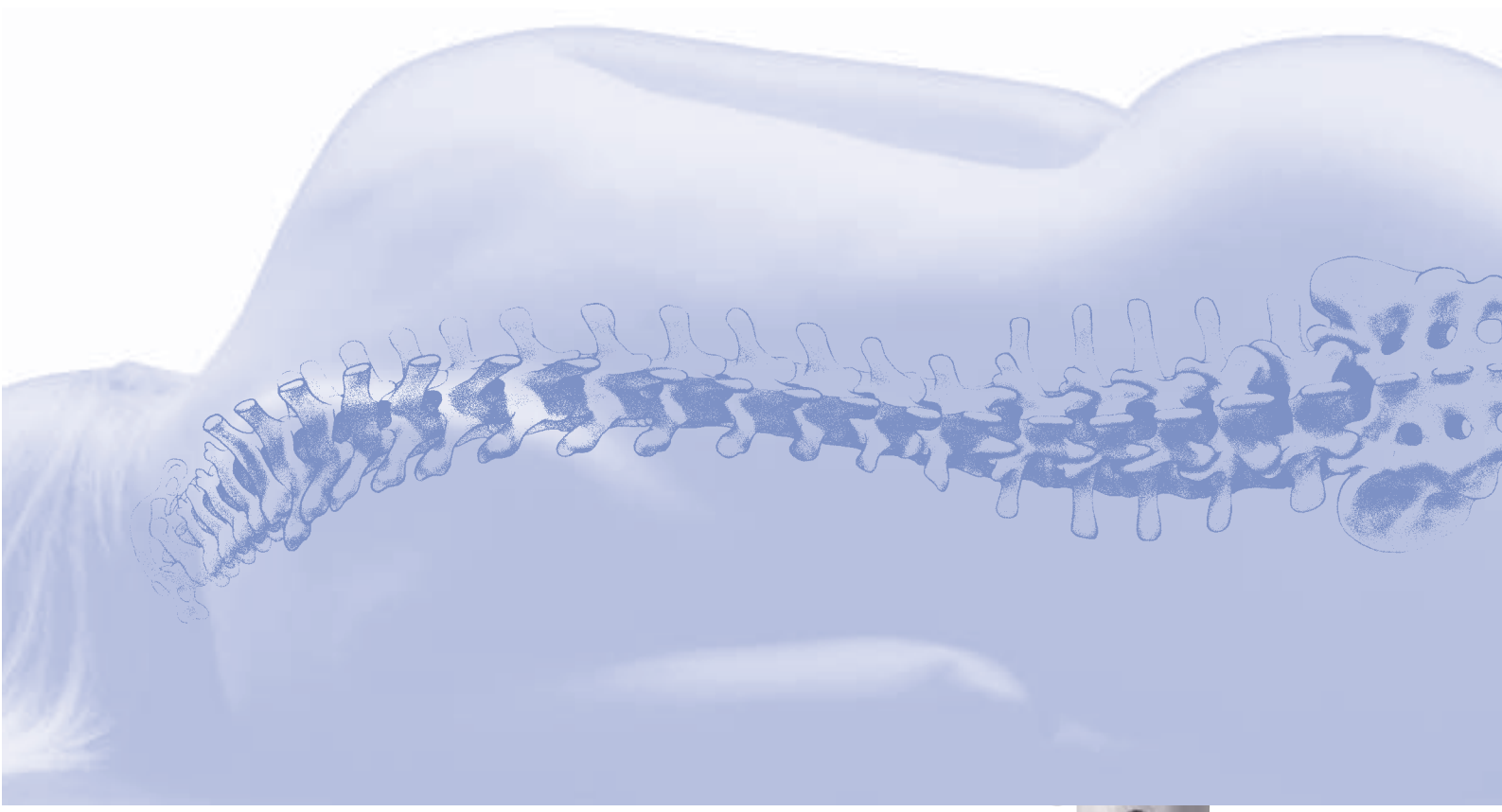
In addition, a video camera delivers the microscope's image to the nursing staff and anesthesiologist. With the surgical team following every stage of the procedure, a more efficient surgical workflow can result. These unique features are especially beneficial in a teaching environment.

Providing an undeniable sense of comfort, the microscope is simply the best choice for surgical visualization.

Higher magnification and increased light found in microscopes more readily expose anatomical details.

Microscope view

Loupes view



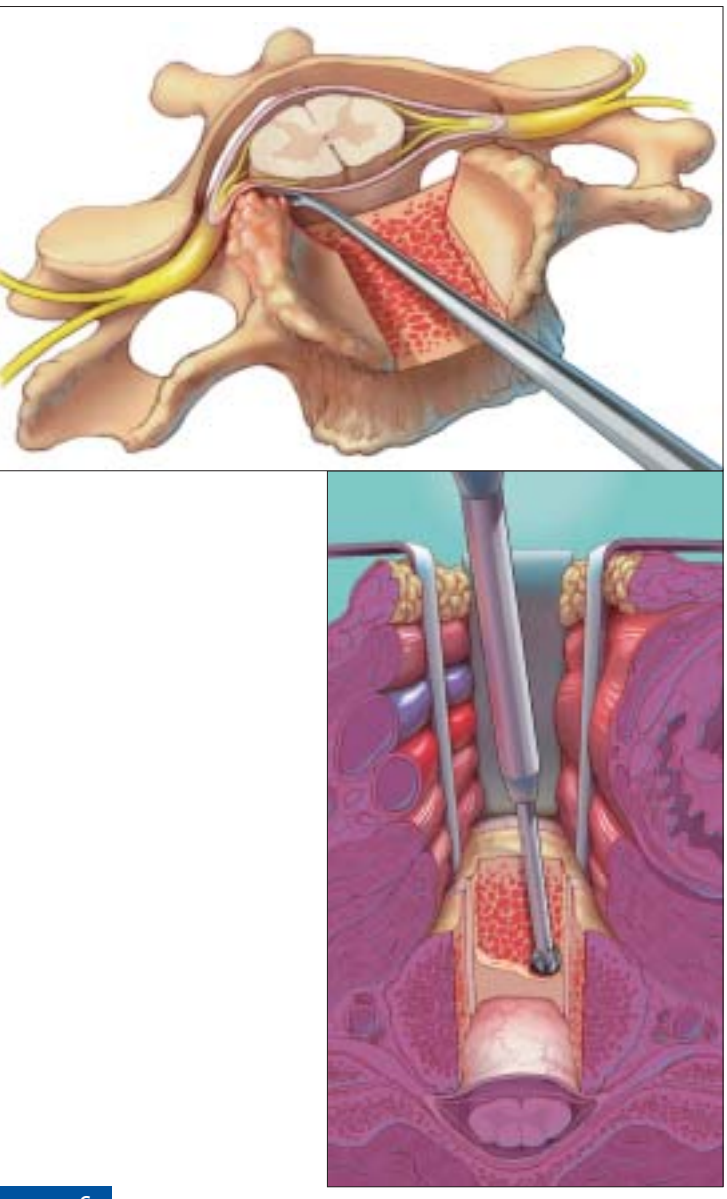
Zeiss Optical Excellence

Legendary Zeiss optics form the heart of the OPMI Vario microscope, delivering extraordinary image quality, improved resolution and incredible color fidelity. A Varioscope that can range from 200 to 415 mm coupled with the renowned 1:6 Zeiss zoom ensures that these incredible optics are always ergonomically at your service. Combined with our Superlux light source, even the finest details are readily visible.

"Whether resecting a tumor or performing microdiscectomies, I always use the operating microscope. I see the anatomy better, which lets me make smaller and less invasive incisions."

Volker K. Sonntag, M.D., Barrow Neurological Institute

applications



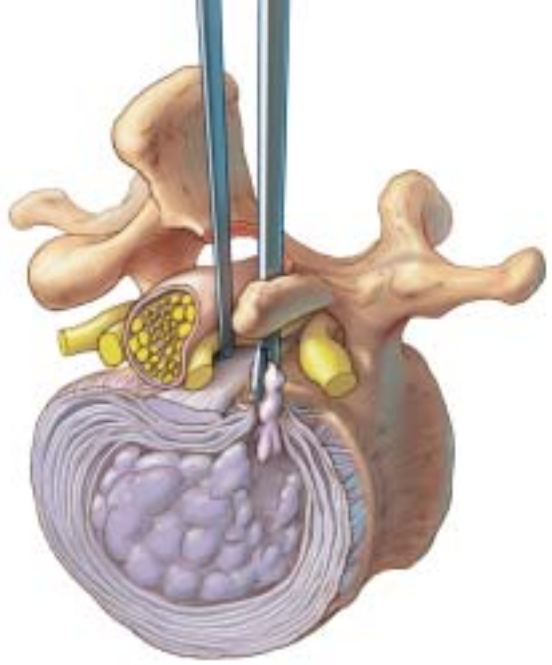
When a closer look is indicated

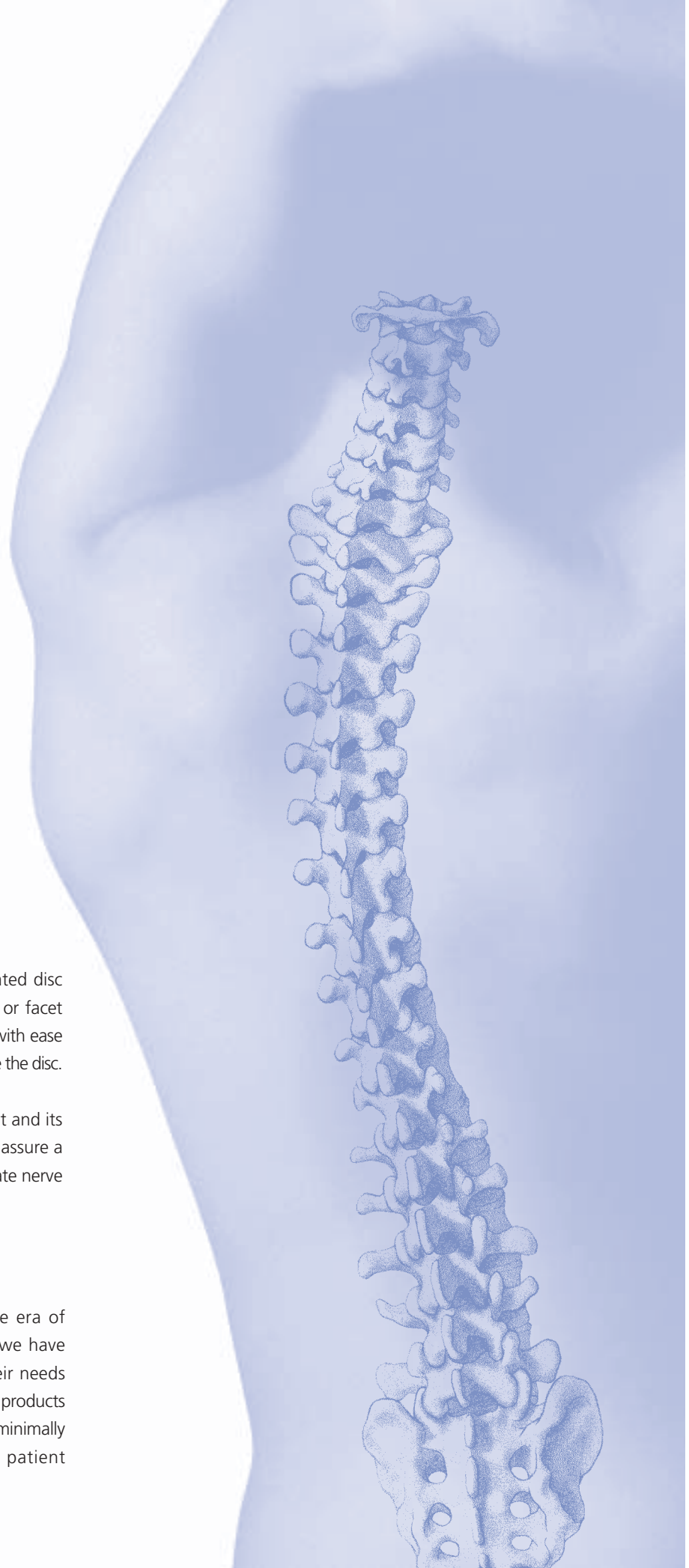
Of the tools used to achieve minimally invasive techniques, the surgical microscope is the most powerful of all. Surgeons today use the microscope in a wide range of spinal disorder treatments. Dr. Volker K. Sonntag, for example, employs the microscope in 80 to 90 percent of his caseload, including:

- Anterior cervical discectomy
- Microdiscectomy
- Spinal tumor removal
- Lumbar decompression
- Laminectomy

In the case of anterior cervical discectomy, the microscope enables the surgeon to easily remove the osteophyte that encroaches on the nerve root in its foramen. After corpectomy, the microscope provides a well-illuminated pathway – free from shadows and with very bright light – all the way down to the dura, enabling complete decompression of the spinal cord. The curet is inserted without hesitation. Then, with the microscope's enhanced visual assistance, the surgeon makes lateral bites to confidently remove the osteophyte and relieve the stenosis.

Enhanced visualization through smaller incisions and openings in the lamina is a benefit for microdiscectomy. Once the ligamentum flavum is removed and the lamina opened, the contents within the canal and foramen are distinguishable without question under the microscope.





Whether the area of interest is the herniated disc material, the collapse of intervertebral space or facet hypertrophy, the surgeon is able to maneuver with ease and inspect the anatomy and then properly excise the disc.

The microscope's shadow-free environment and its ability to let surgeons see around the corner assure a safe and accurate decompression of the delicate nerve root and spinal cord.

Expanding your vision

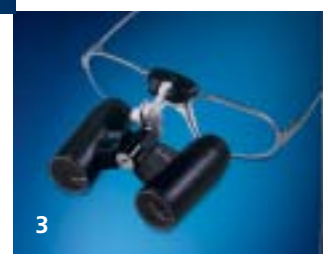
From the time Carl Zeiss ushered in the era of microsurgery with the first OPMI in 1953, we have partnered with surgeons and translated their needs into effective visualization solutions. Carl Zeiss' products have enabled surgeons to develop innovative, minimally invasive techniques that have improved patient outcomes and quality of life.

OPMI Vario/S 8 System

By combining a modern balancing system with magnetic locking brakes, the S 8 can be repositioned with almost effortless ease. Once the brakes are closed the system remains steadfastly locked in place. An easy-to-use LCD interface stores and displays all relevant information for up to nine surgeons.

The amazing line of neurosurgical microscope systems from Carl Zeiss:

1. OPMI Vario/NC 33 System
2. OPMI Vario/S 8 System
3. Prism Loupes



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