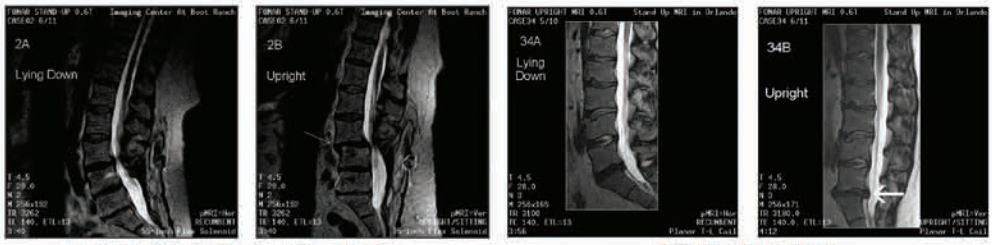
Discover the Power of Upright Imaging

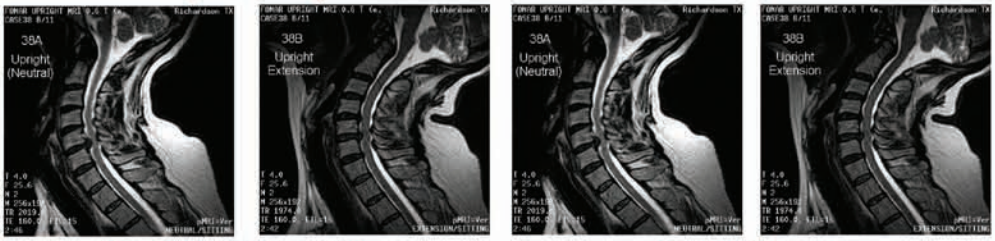
A NEW ERA IN DIAGNOSIS:

WEIGHT-BEARING, FULL RANGE-OF-MOTION MRI (ROM).



Upright Weight-Bearing Visualization of Spinal Instability

Position-Dependent Disc Herniation



Unsuspected Disc Herniation On Extension

Chiari Malformation Visualized When Upright

Today, radiologists and surgeons are seeing revealing images they've never seen before, diagnosing spinal and other problems that have often been invisible on recumbent-only MRI's, and improving surgical outcomes to a degree never before possible – all thanks to the first MRI that lets you put the body in motion, so scans can be done the way people live and experience problems, instead of just lying flat.

This new era in diagnosis is possible because of the unique capabilities of the Fonar Upright™ Multi-Position™ MRI. It's the first MRI that provides full range-of-motion diagnosis – with the nerves, discs, and other soft tissue in clear view. It achieves truly physiologic MRI, instead of recumbent-only, static MRI.

To share the exciting new capabilities the Fonar Upright™ Multi-Position™ MRI brings you, we've selected four case histories that compare recumbent images with upright images of the same patients. The pictures speak for themselves.

For the first time, patients can be scanned in flexion and extension, which is vital, as indicated by the following: *"The dominant motions at both the lower cervical and entire lumbar spine, where most clinical pathology occurs, are flexion-extension" (p. 378).1*

With the Fonar Upright™ Multi-Position™ MRI, patients can be scanned with the spine fully loaded with the weight of the body – which studies indicate creates 11 times more pressure on the discs than when the patient is lying flat (A. L. Nachemson, 1976; H. J. Wilke et al, 1999)2.

Since most MRI exams are still performed in a recumbent-only MRI, it's no wonder that *"… in up to 85% of individuals who report back pain, no pain-producing pathology can be identified"* (p. 566).3

The necessity of seeing pathology in the position the patient experiences symptoms is made even more evident by the high incidence of failed back surgery. The major identifiable cause of Failed Back Surgery Syndrome (FBSS) is *"… failure to identify the structural sources of the pain correctly."*4

There are many more breakthrough applications, such as imaging a child without anesthesia because the child can sit on his or her mother's lap, imaging claustrophobic patients, and overweight patients, who fit right in.

We've also included photographs of patients in six different positions. Actually, The Fonar Upright™ Multi-Position™ MRI allows a patient to be scanned in a continuous full range of positions from upright to recumbent and in flextion, extension, and rotation. So you can see exactly what the problem is. Differential diagnosis has never been more accurate. Most patients can be scanned sitting, because it exerts as much pressure on the spine as standing and is more comfortable for patients.

Become part of the new era in diagnosis. After all, isn't a technology that lets you see spinal and other pathology better an invaluable enhancement of your practice – in fact, a necessity?

A NEW ERA IN MRI COMFORT: WALK IN, SIT DOWN, WATCH TV.

Upright, Weight-Bearing Imaging Flexion and Extension Imaging Multi-Positional Imaging Walk-In, Sit-Down Comfort

The Fonar Upright™ Multi-Position™ MRI marks a new era in patient comfort, too. The patient simply walks in, sits down, and watches TV during the scan. So anxious patients relax and even claustrophobic patients comply with ease.

No wonder the Fonar Upright™ is the best choice for accurate diagnosis and patient comfort.

For the scanner nearest you, for additional information or to purchase a Fonar Upright™ Multi-Position™ MRI, call and ask to speak to a sales representative at **1-888-NEEDMRI (1-888-633-3674).**

Become part of the new era in MRI diagnosis and comfort now.

1 H. J. Wilke, P. Neef, M. Caimi, T. Hoogland and L. E. Claes, Spine 24, #8, p. 755-762, 1999. A. L. Nachemson, Spine 1, #1, p. 59-71,

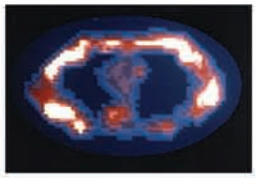
2 Case study courtesy of Richard Marks, MD, Board-Certified Orthopedic Surgeon, Up and Open Imaging, Dallas, Texas.

Fonar Heritage

The Inventor of MR Scanning
Timeline, Inventor Contributions

The world's first MR scanner, (Downstate Medical Center, 1977)

- **1969** Original Idea for MR Scanner (Grant Application to Health Research Council of the City of New York)
- **1969** Realizes Need for a Compelling Application to Justify Building Human Scanner
- **1970** Key Discovery Makes the MRI Possible (T1 and T2 signal differences that supply soft-tissue image detail). "NMR developed into a laboratory spectroscopic technique capable of examining the molecular structure of compounds, until Damadian's ground-breaking discovery in 1971." (*MRI From Picture to Proton*, Cambridge University Press, 2003).
- **March 1971** First Article Published *(Science)*
- **Spring 1971** First Ever Scanning Method Proposed *(Downstate Reporter)*
- **March 1972** First MR Patent Filed (3D Serial Voxel Scanning Method). Patent Issued 1974.
- **1976** The Struggle Begins – Expert Declares "any further discussion of an MR (NMR) body scanner is visionary nonsense."
- **1976** Construction of First Human MR Scanner Commences
- **1977** Construction Completed; First Human Scan Achieved: Thoracic MRI Image at T-8



- **1980** Fonar Installs First Commercial MRI; Initiates MRI Industry
- **1997** Patent Upheld by High Court on U. S. Patents and the U. S. Supreme Court (1.1 Million Pages of Documentary Evidence Scrutinized and Argued)

Special offer for physicians; free book about the discovery of the MRI: *A Machine Called Indomitable* by Sonny Kleinfield, Reporter for The New York Times, Times Books. Call Fonar to order: 631-694-2929.

"This book is the account of the development of NMR technology and a profile of one man, Dr. Raymond Damadian, who dreamed of NMR as a weapon against cancer and struggled almost obsessively against great odds to build the first human scanner Indomitable."
– Library Journal

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