

MRI goes from  
the era of gas lights  
to the era of electric lights

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to the era of electric lights

Recumbent

Upright,  
Weight-Bearing

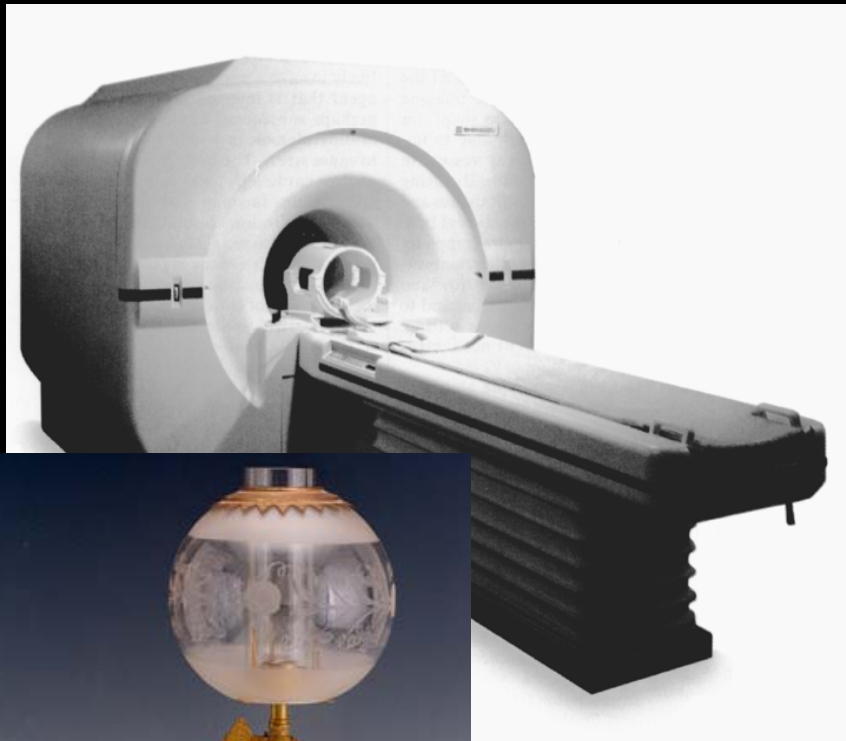
*Gas Light*



*Electric Light*



Traditional  
“High-Field” Superconducting  
Magnet



“Classic” Open MRI

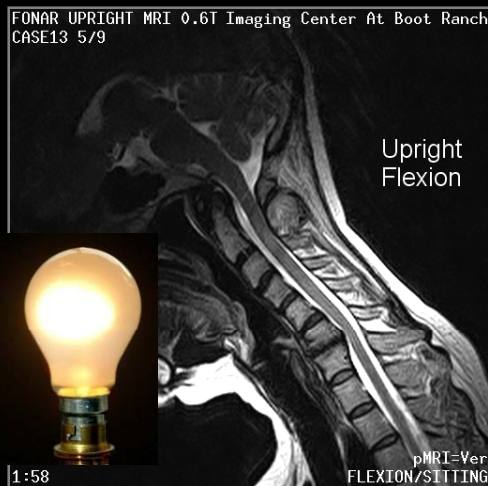
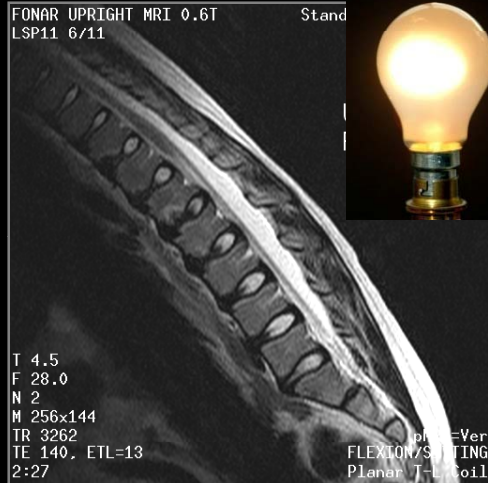


The patients are  
always lying down



**American Medical Association**  
 Guides to the Evaluation of  
 Permanent Impairment  
 Fifth Edition  
 p. 378

"The dominant motions at both  
 the lower cervical and  
 entire lumbar spine,  
 where most clinical pathology occurs,  
**are flexion-extension.**"



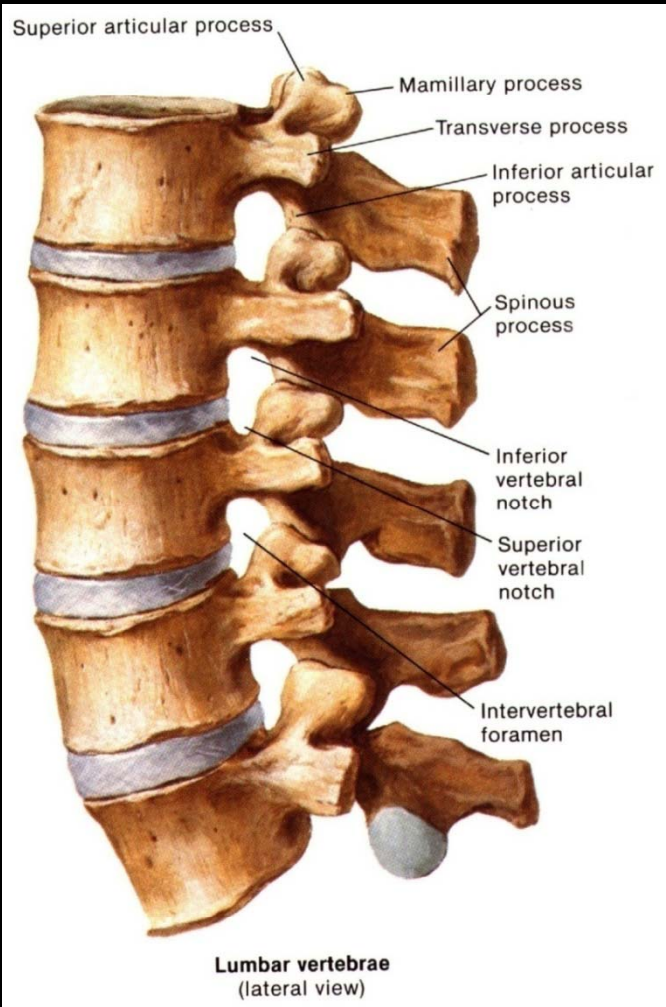


# FONAR Corporation Annual Shareholders' Meeting 2008

## Technology Highlights

# The FONAR UPRIGHT® Multi-Position™ MRI

## *Why Settle for a Partial View of the Spine ?*





# Installations



**ALABAMA**

**CALIFORNIA**

**CONNECTICUT**

**FLORIDA**

**IDAHO**

**INDIANA**

**LOUISIANA**

**MINNESOTA**

**NEW MEXICO**

**NEW YORK**

**ORGEON**

**TENNESSEE**

**VIRGINIA**

***SCOTLAND***

***SPAIN***

***GERMANY***

***PUERTO RICO***

**ARIZONA**

**COLORADO**

**DELAWARE**

**GEORGIA**

**ILLINOIS**

**KENTUCKY**

**MARYLAND**

**NEVADA**

**NEW JERSEY**

**OHIO**

**PENNSYLVANIA**

**TEXAS**

**WASHINGTON**

***ENGLAND***

***SWITZERLAND***

***NETHERLANDS***

*Exceptional  
Patient  
Comfort*



Patients watch a 42-inch flat screen TV  
during their scans

How can we scan patients in  
their position of symptoms ?

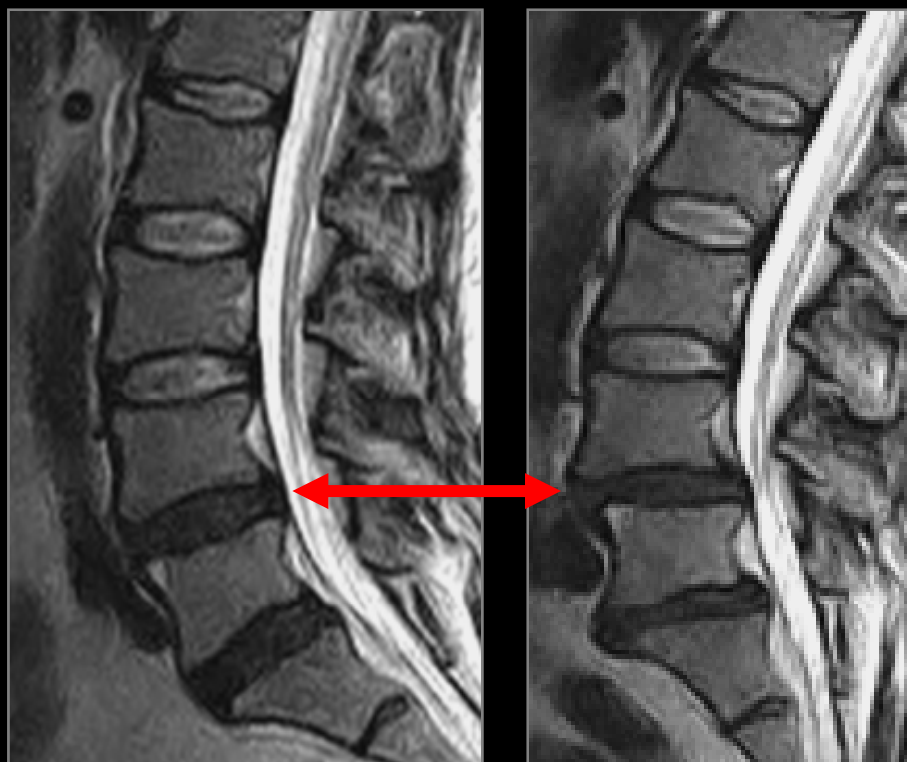
What is the appropriate technology  
for evaluating low back pain and  
for choosing the best surgical repair ?

# The FONAR UPRIGHT<sup>®</sup> Multi-Position<sup>™</sup> MRI





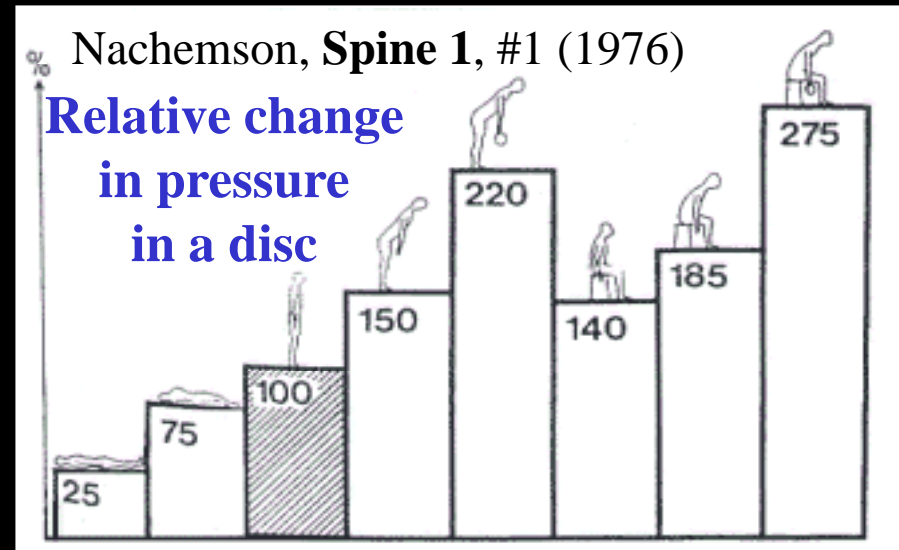
Recumbent



Upright,  
Weight-Bearing

## Scientific Data

Disc pressure measurements demonstrate that the pressure on the disc is much greater when the patient is erect



Recumbent



Upright,  
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*Gas Light*

*Electric Light*



# Clinical Case Study:

## Upright Weight-Bearing Visualization of Postoperative Spinal Instability

FONAR STAND-UP 0.6T Imaging Center At Boot Ranch  
CASE02 6/11

2A

Lying Down

T 4.5  
F 28.0  
N 2  
M 256x192  
TR 3262  
TE 140, ETL=13  
3:40



pMRI=Hor  
RECUMBENT  
55-inch Flex Solenoid

Recumbent

FONAR STAND-UP 0.6T Imaging Center At Boot Ranch  
CASE02 6/11

2B

Upright

T 4.5  
F 28.0  
N 2  
M 256x192  
TR 3262  
TE 140, ETL=13  
3:40



pMRI=Ver  
UPRIGHT/SITTING  
65-inch Flex Solenoid

Upright

# Clinical Case Study:

## Unsuspected Disc Herniation on Extension



Upright-Neutral



Upright-Extension

# Important New Publications



## “Missed Spondylolisthesis in Static MRIs But Found in Dynamic MRIs in the Patients with Low Back Pain”

S.W. Hong, M.D. et al., UCLA School of Medicine, Albert Einstein College of Medicine & Hacettepe University  
*The Spine Journal* 7 (2007) p. 69S

“In the [510] patients with back pain, **missed spondylolisthesis in neutral MRIs but found in flexion MRIs is 18.1%** for all the levels in the condition that the spondylolisthesis is considered as more than 3 mm translation”

% Spondylolistheses “Missed” by Static MRI (510 patients)  
 40° Flexion

Minimum Slip	L2-3	L3-4	L4-5	L5-S1
3 mm	30.8%	<b>38.7%</b>	<b>35.1%</b>	4%
4 mm	33.3%	<b>53.8%</b>	17.9%	3.5%



## “Dynamic MRI of the Lumbar Spine in the Upright Position Modifies Patient Management”

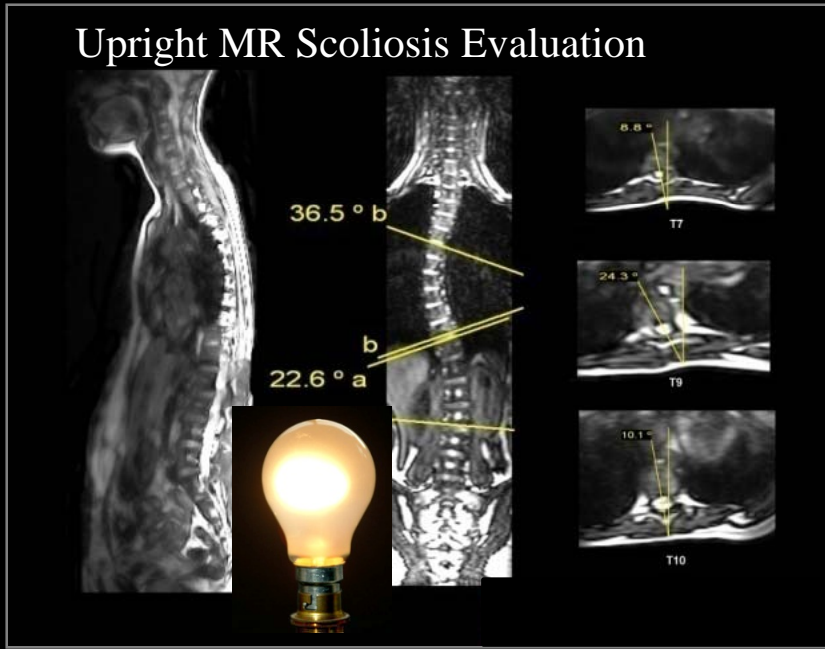
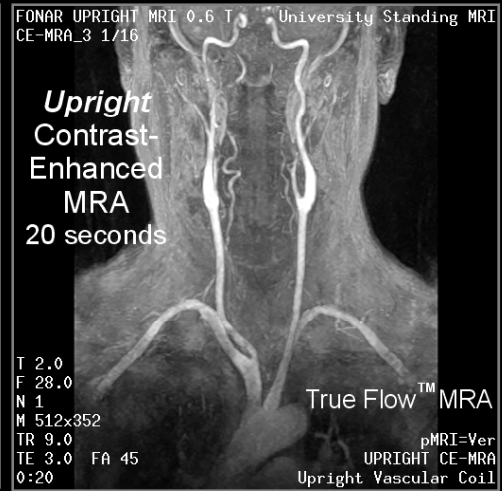
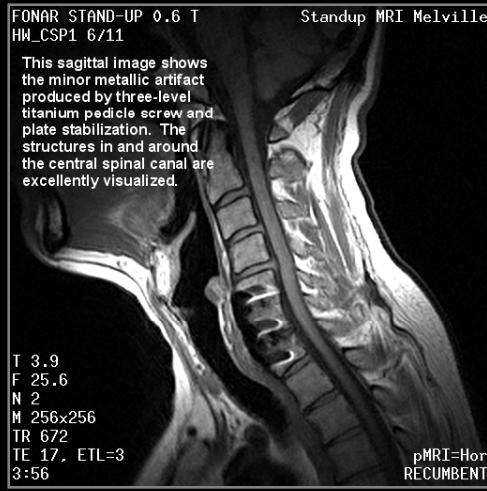
Francis W Smith, MD and Sandro Galea-Soler M.D.  
Department of Radiology, University of Aberdeen, MRI Centre,  
Woodend Hospital, Eday Road, Aberdeen AB15 6XS, Scotland, U.K.

*Paper presented at SpineWeek2008 Geneva, Switzerland 30-May-2008*

A study of 111 patients with “a previous non-diagnostic supine MRI scan, or a scan with inconclusive findings”

“Of the 111 patients, 47 [42%] demonstrated abnormalities, in one or more of the erect or seated positions, correlating with their symptoms and not evident on the supine scan. Abnormalities detected included 26 cases of spinal instability, 28 lateral disc prolapse and 10 circumferential disc prolapse with fluctuating spinal stenosis.”

# Unique & Powerful Applications

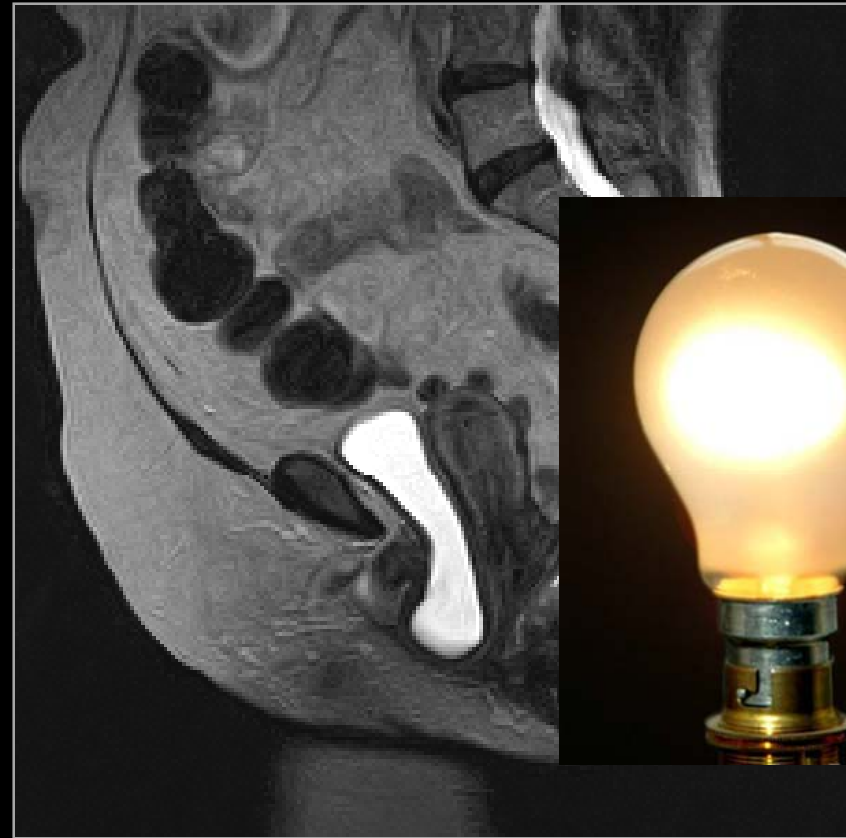


# Position-Dependent Changes in the Pelvis

## Pelvic Floor Dysfunction (PFD)

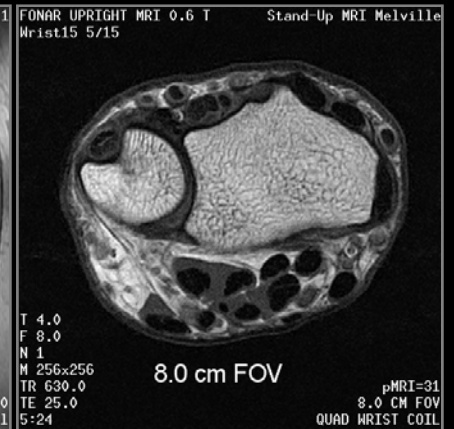


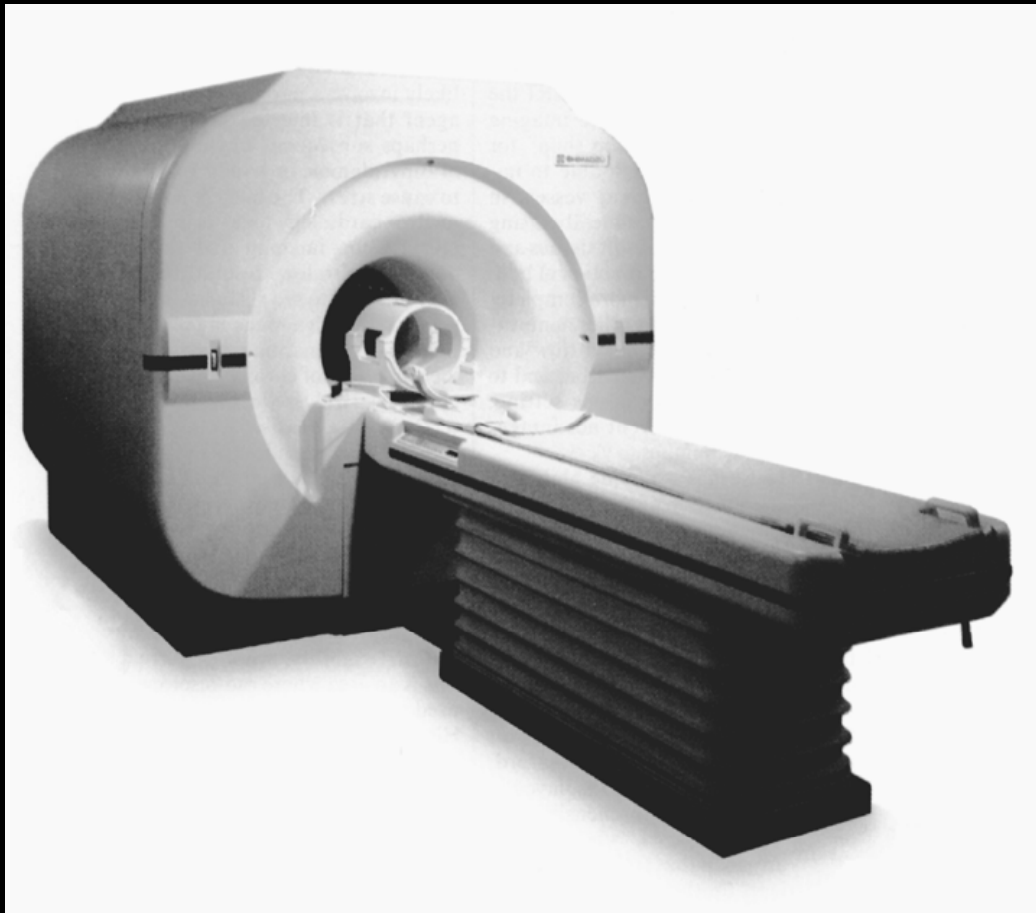
Recumbent



Upright

# Excellent Image Quality





# Welcome to the era of electric lights



# Reshape the way patients and doctors perceive MRI

Patients

Hospitals

Surgeons &  
Referring  
Physicians

**Six-Point  
Marketing Strategy**

Radiologists

Independent  
MRI Practice  
Owners

# Reshape the way patients and doctors perceive MRI

## Six-Point Marketing Strategy

- Advertising
- Telemarketing
- Direct Sales
- Distributors
- Trade Shows
- Case Reports

Another product in  
the pipeline...





# The FONAR 360°

## The world's future operating room



If you *think* you might have a flat tire ...



This position gives you  
the right diagnosis



# FONAR Corporation Annual Shareholders' Meeting 2008

Thank You For  
Your Attention