

Case Examples of UCLA Reported “Misses”¹ by Static MRI Detected by FONAR Spondylography™*

(Case studies provided by FONAR owners)

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

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

“Missed” at L3-4

“Missed” at L4-5



Recumbent
(Static)



Upright
(Dynamic)

(Images courtesy of M. Rose, M.D.
Rose Radiology Centers, Tampa, Florida)



Recumbent
(Static)



Standing Flexion
(Dynamic)

(Images courtesy of Melville MRI, P.C.
Melville, New York)

Case Examples of UCLA Reported “Misses” of Cervical Disc Bulges Detected by FONAR Spondylography™

(Case studies provided by FONAR owners)

“Miss Rate” of Cervical Disc Bulges 2 mm or Greater Seen in Flexion and Extension Positions But Not Seen in the Neutral Sitting Position (163 patients)

Position Eliciting Disc Bulge	% of Cervical Disc Bulges Greater Than or Equal to 2 mm That Were “Missed” in the Neutral Sit Position But Seen on Flexion or Extension
Flexion	18.18%
Extension	23.75%



Upright Neutral
(Static)



Upright Extension
(Dynamic)

(Case Study Courtesy of Richard Marks, M.D.
Board-Certified Orthopedic Surgeon
Up and Open Imaging, Dallas, Texas)

¹ Proceedings of the 22nd Annual Meeting of the North American Spine Society, Austin, Texas, October 23-27, 2007, THE SPINE JOURNAL, September/October 2007, Volume 7, Number 5S

*Spondylography™; definition: The name for FONAR UPRIGHT® Multi-Position™ MRI

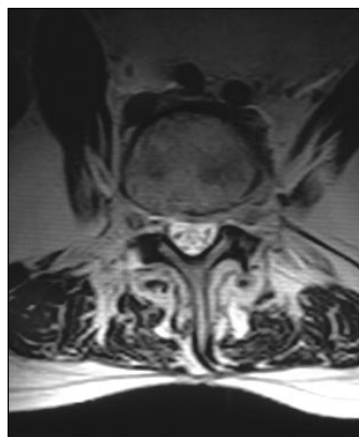
Changes in the Diameter and Cross-Sectional Area of Stenosis of the
Lumbar Central Canal with Flexion and Extension (461 patients)
as Measured by FONAR Spondylography™
(Case studies provided by FONAR owners)



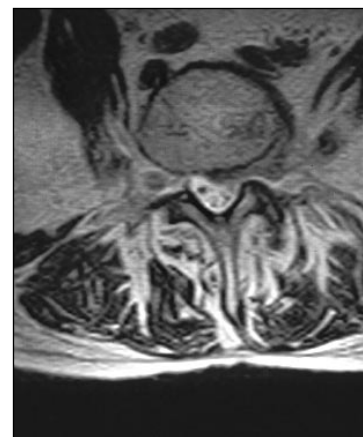
Sitting Flexion



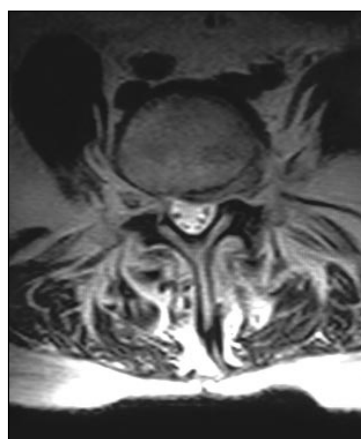
Sitting Extension



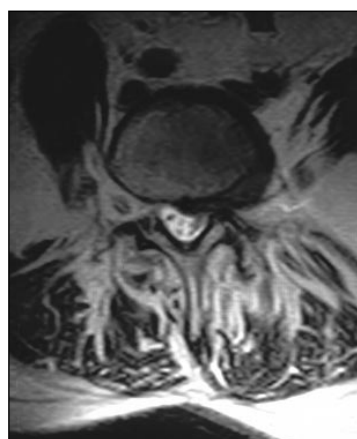
Sitting Flexion



Sitting Extension



Supine



Standing

(Images courtesy of Professor Francis Smith, Woodend Hospital, University of Aberdeen, Scotland)

“Dynamic MRI can demonstrate spinal canal diameter change in lumbar flexion and extension and also show the amount of change in the cross-sectional area with the highest accuracy.” (paper 79)

To see more case studies illustrating the benefits of Spondylography™, visit www.fonar.com
or call 1-888-NEED MRI (1-888-633-3674) and ask for a sales representative.