

Evidence based value of meta-analytic studies on Spinal Stenosis

Argospine 2011



University of Navarre. Pamplona. Spain



“Literature is not accurate enough
to lead young surgeons to a
rational learning of correct
diagnosis and appropriate surgical
indication in the treatment of
lumbar spine stenosis”.

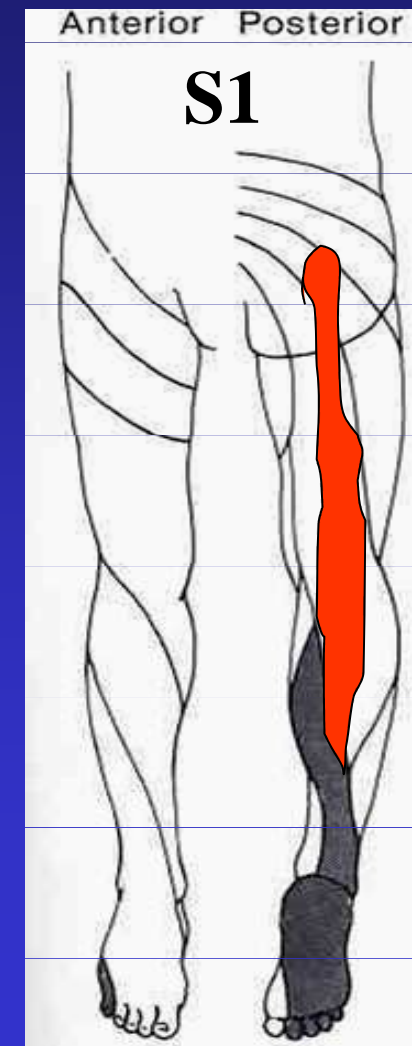
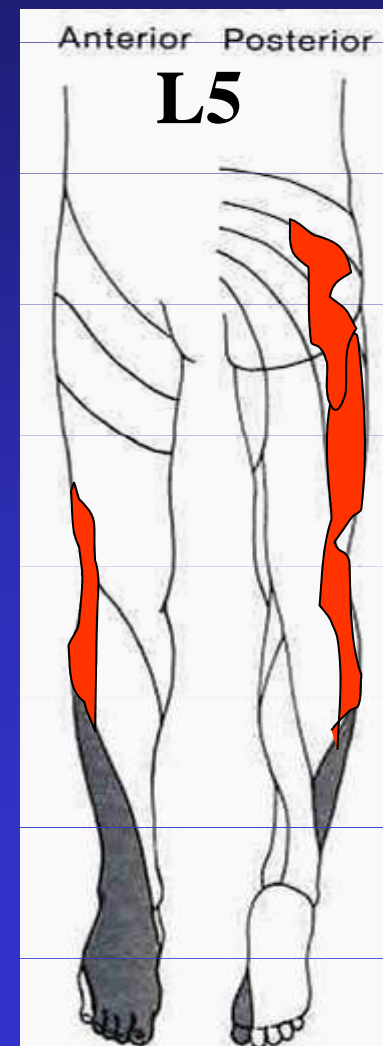
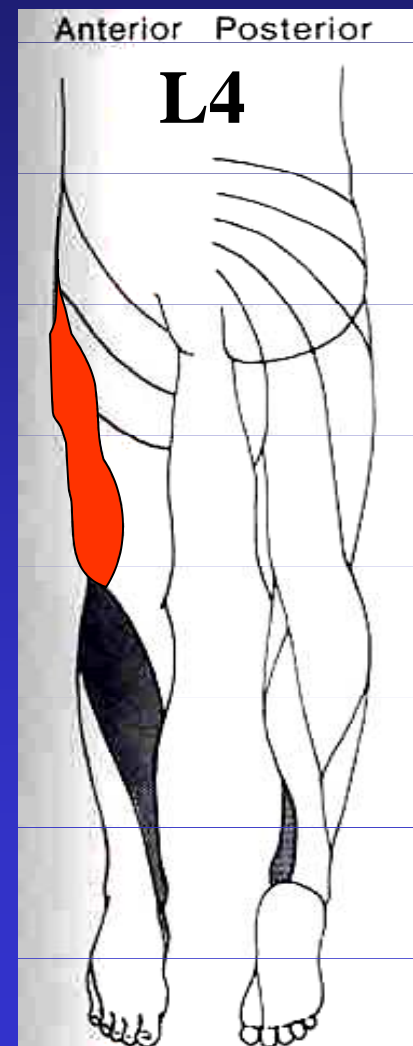
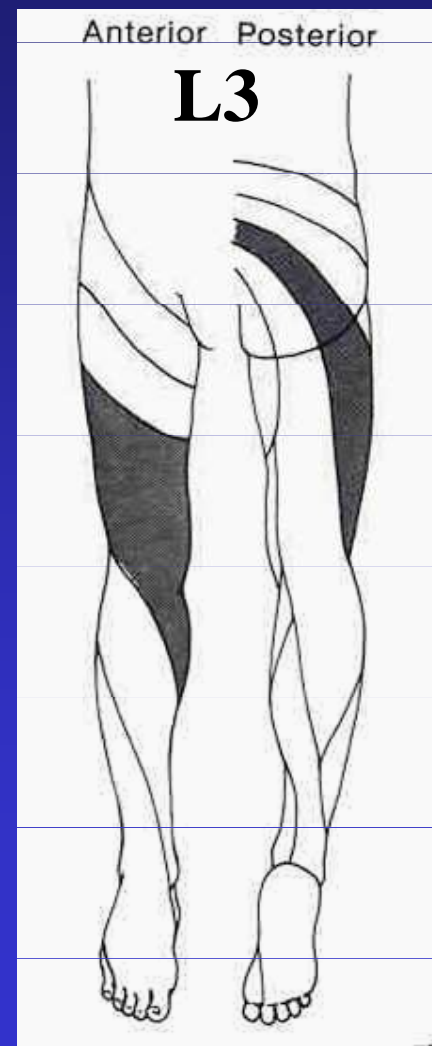
1rst conclusion, PhD thesis, P. Diaz de Rada

Lumbar spinal stenosis

Conflict of space leading to
root compression with
neurological symptoms.

Leg radicular pain, weakness,
claudication, sensitive alterations.

Neurogenic claudicacion and radicular pain are not universal concepts...



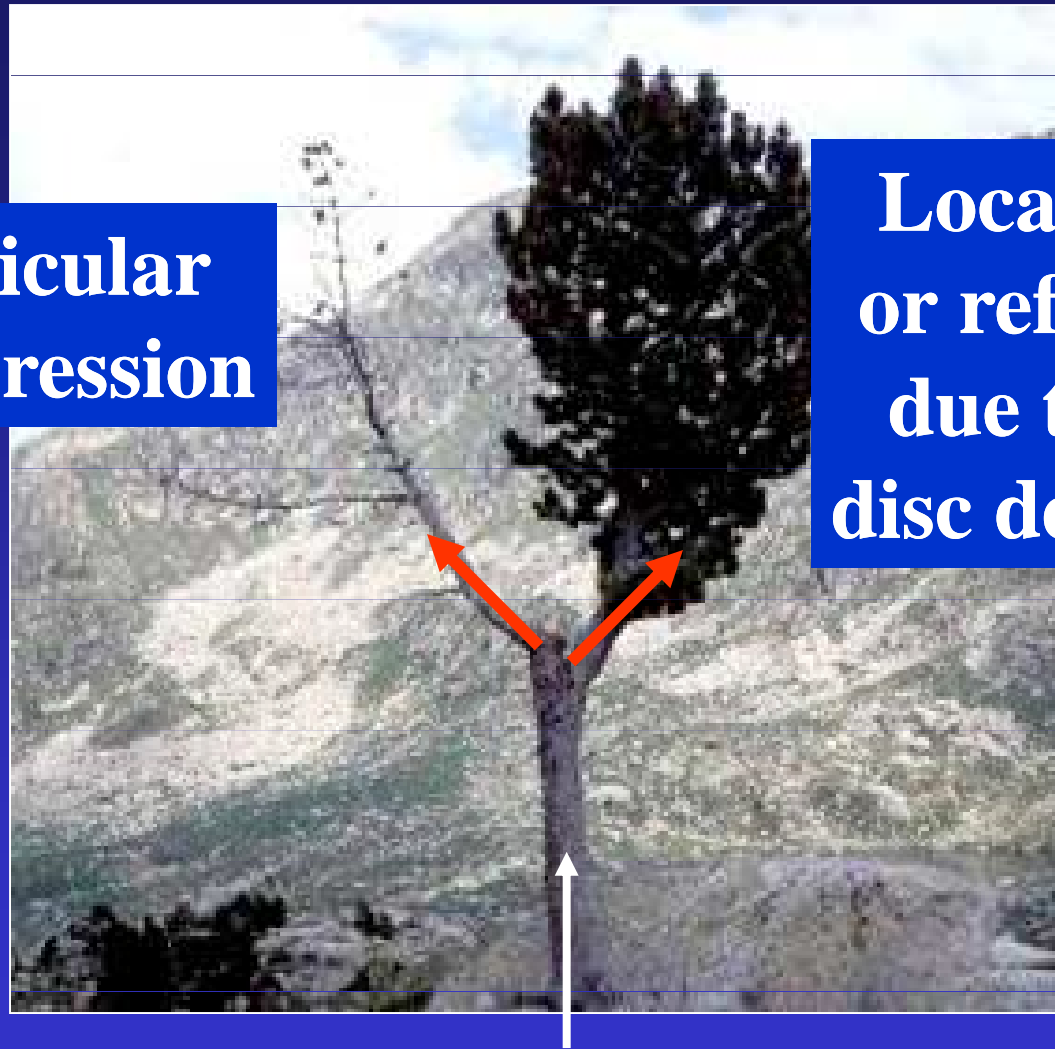
Coxon A et al.: Referred pain can radiate below the knee.

Eur Spine J 18 (suppl 4): 403, 2009

- 720 nerve root compression images:
60 % had no lower leg pain
- 1964 degeneration images with no root compression:
48 % had lower leg pain

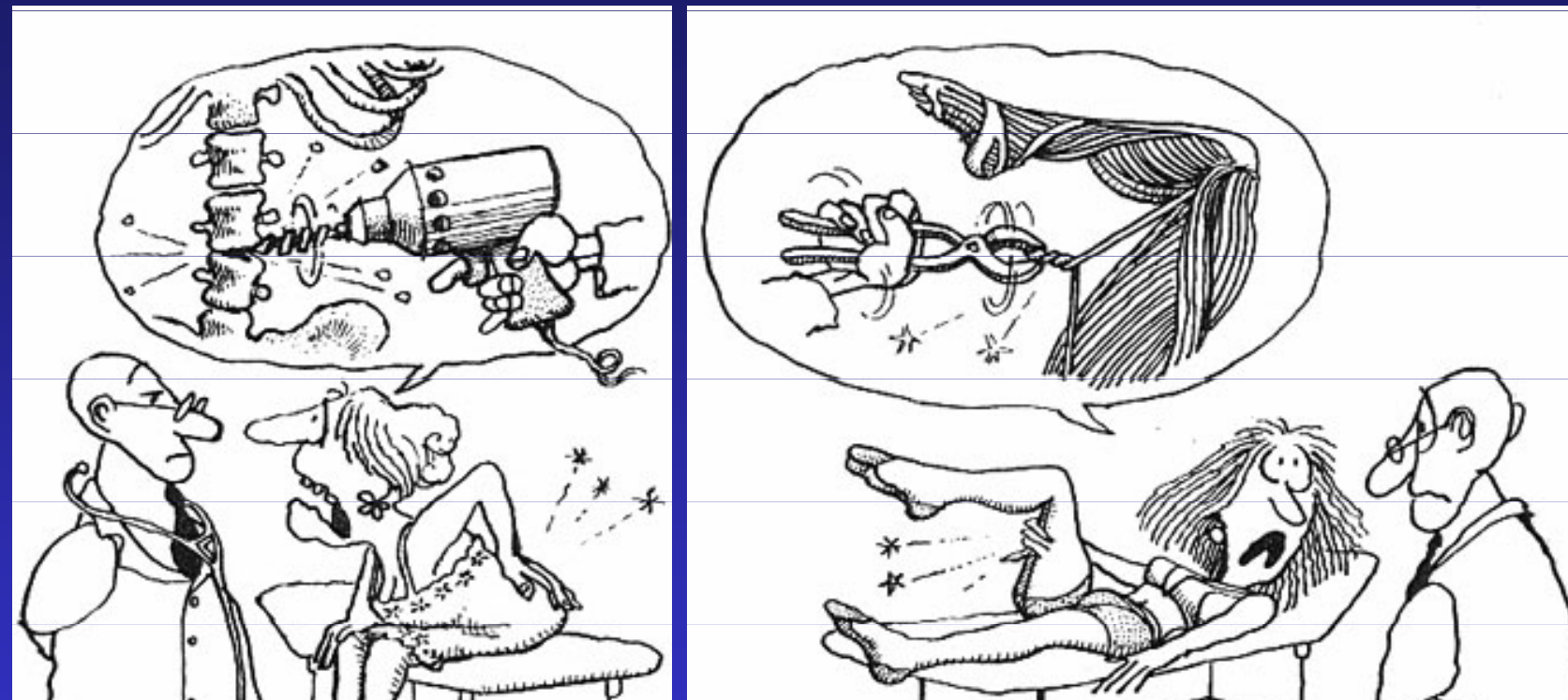
**Radicular
compression**

**Local, regional
or referred pain
due to facet or
disc degeneration**



Spine with stenosis

Currently, symptoms interpretation



We depend too much on MRI!

is difficult... or very difficult!

Weinstein JN et al (16 authors):
Surgical versus nonsurgical treatment for
lumbar degenerative spondylolisthesis.

N Eng J Med 2007; 356: 2257-70.

Operating images?

Neurogenic claudication or radicular pain
with no definition.

- Patients with deg. sp. do better with fusion

Weinstein JN et al (14 authors):
Surgical versus nonsurgical therapy for
lumbar spinal stenosis.

N Eng J Med 2008; 358: 794-810.

Operating images?

- Neurogenic claudication or radicular pain with no definition.
- Patients do better with surgical treatment

Why to talk about love...



Anatomical controversies

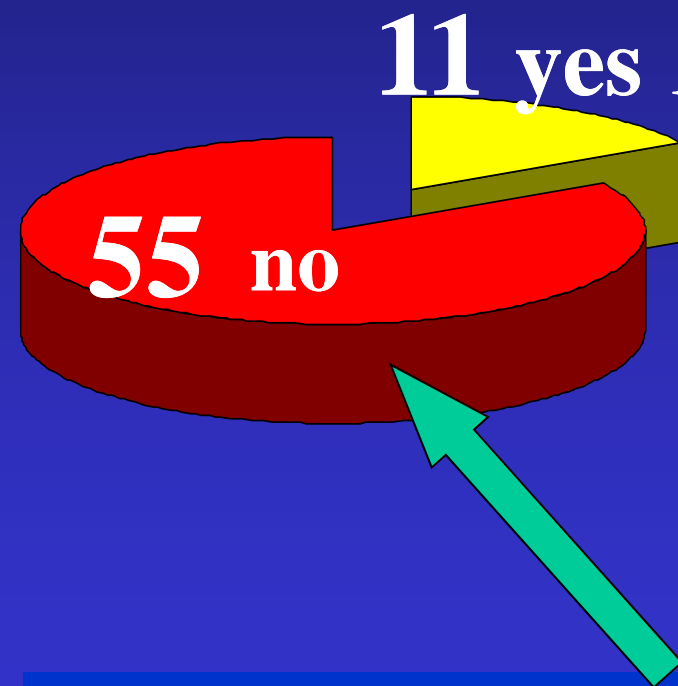
Method

- Evaluation of “Material and Method” section of 66 papers published in indexed journals.
- Looking for:
 1. Explanation about clinical diagnosis
 2. Differentiation of symptoms of painful segment and neurological ones
 3. Indication for fusion

Literature review - 66 papers

- Spine 24
- European Spine J 7
- J Spinal Disorders 5
- Clin Orthop & Rel Res 4
- J Bone Joint Surg (Am)..... 3
- J Bone Joint Surg (Br)..... 2
- 17 other indexed journals... 1

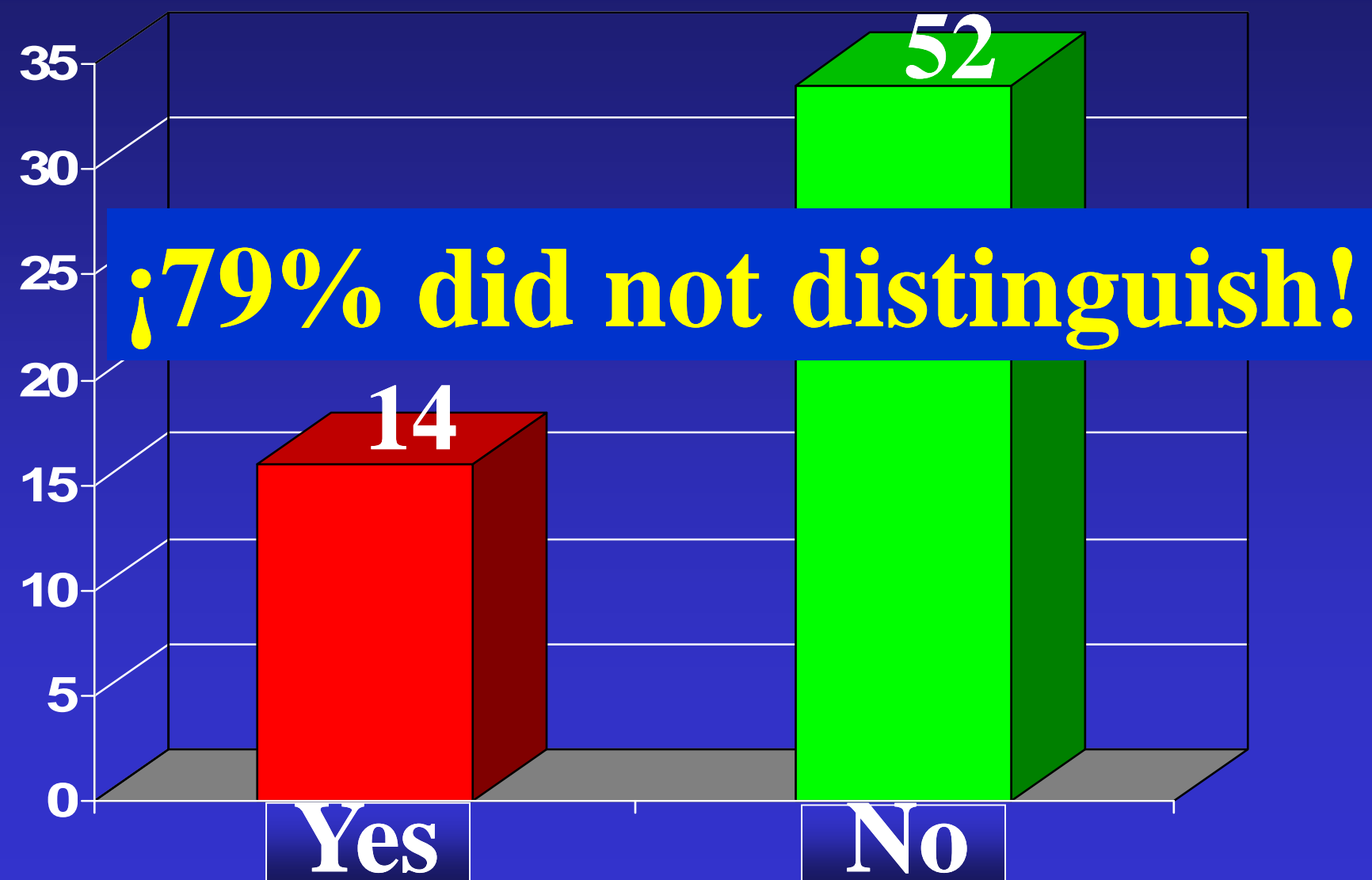
Were the diagnostic criteria defined?



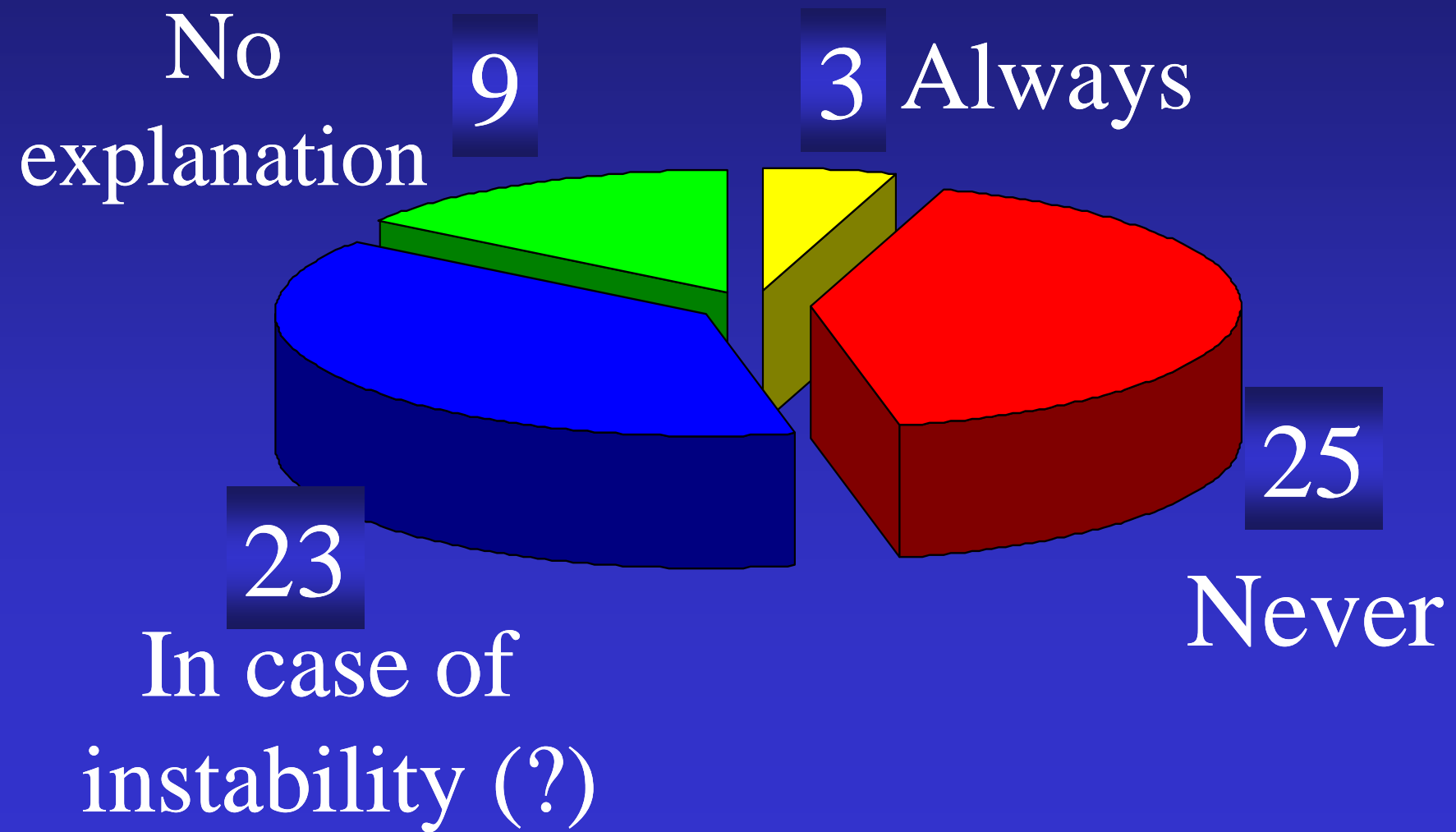
- Pain at low back, buttock or lower extremity: **8**
- Back pain and pain at the lower extremity : **1**
(No matter localization)
- Back pain irradiated to the lower extremity: **2**
(No matter localization, compatible image)

! No mention at all!

Did the author separate back pain (and...) neurological alterations?



**What about indication for fusion...
Was it clearly specified? (60 papers)**



Authors	Patients	Follow-up	Good results
Kleeman TJ	48	2,5 a	96 %
Ragab A	118	7,5 a	92,3%
Díaz De Rada P CUN	49	10,8 a	79,2% back p
Cirak B	300	2 a	90%
Senegas J	32	2a	88%
Solini A	48	0,5 a	83,3%
Louis LG	65	2,7 a	83%
Lassale B	128	5 a	83%
Kalbarczyk A	148	0,5 a	82%
Postachini F	40	8,6 a	80%
McCulloch J	21	3,1 a	76%
Patond KR	16	2,5 a	73,3

But... may we compare our results?

Scholz M	72	8 a	62,1%
----------	----	-----	-------

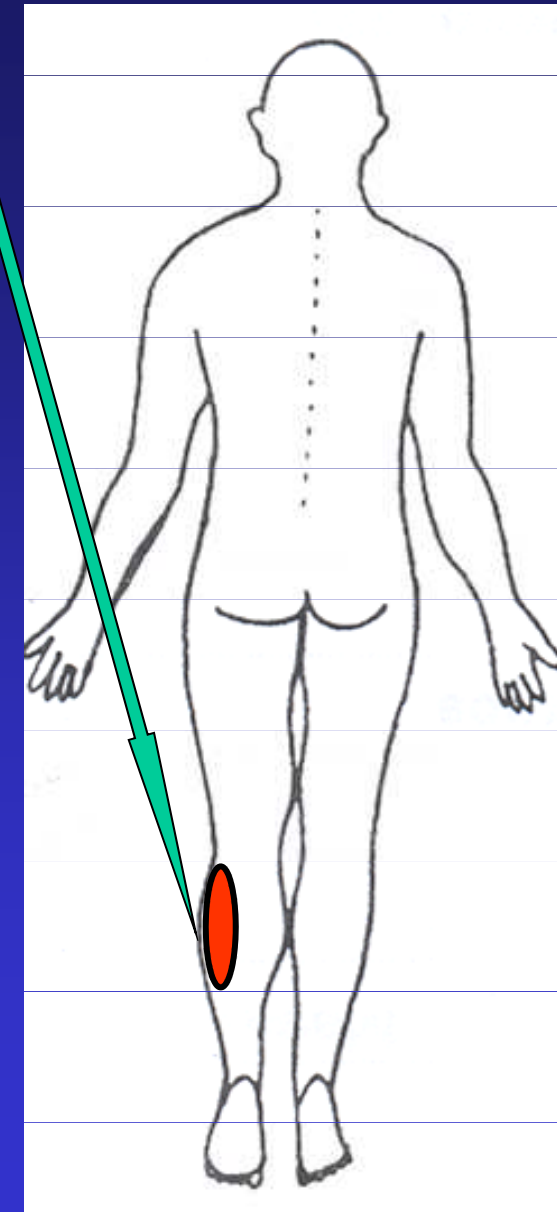
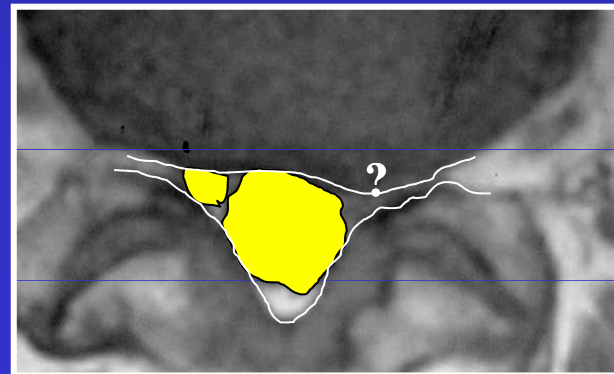
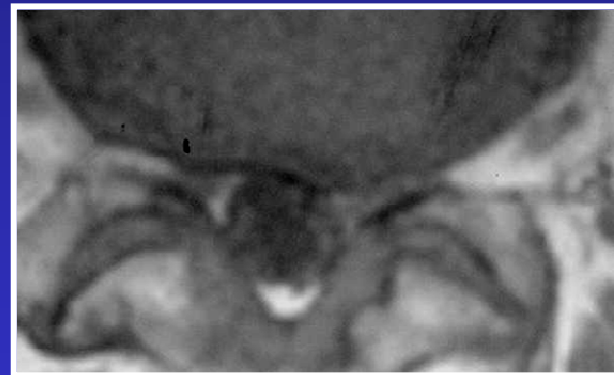
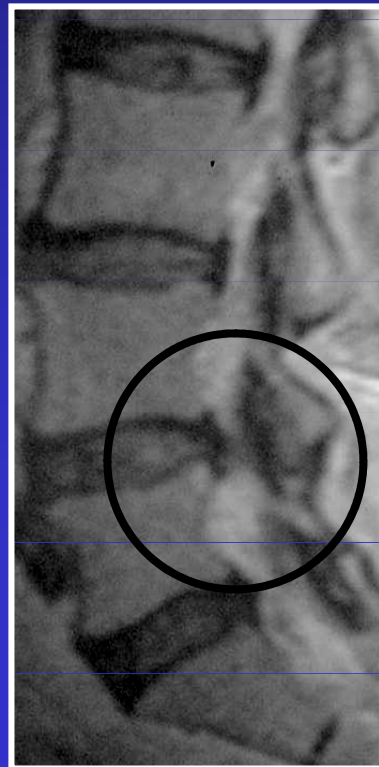
All authors operated on patients with
images showing a narrow canal ...



High incidence of images with no symptoms!

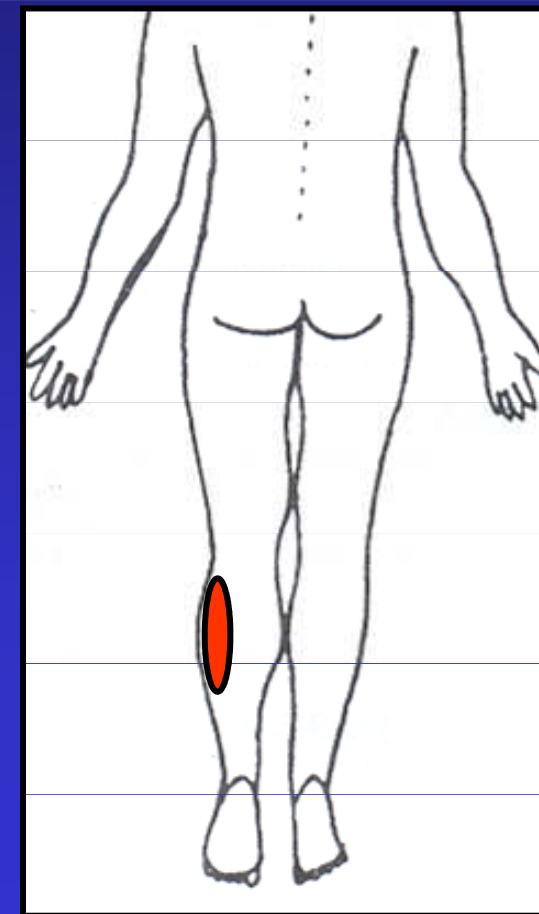
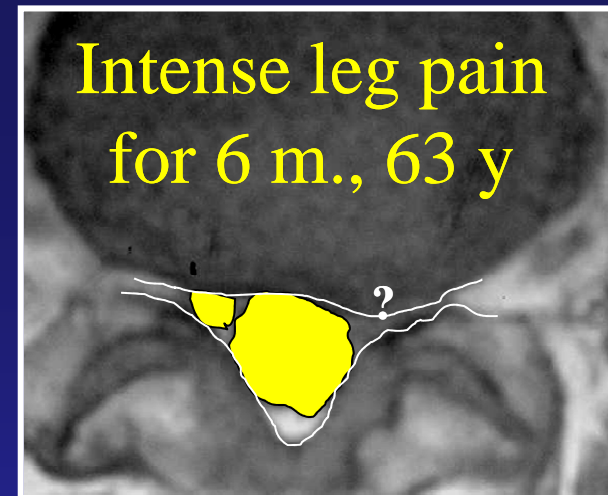
Lumbar spinal stenosis 482006

- Female, 63 y.
- Intense leg pain, 6 mo., stop walking at 500m
- Minor back pain, 5y.



Surgical indication?

1. Simple decompression
2. Disc prosthesis
3. Postero-lateral fusion
4. 360° fusion
5. Dynamic stabilization



Lumbar spinal stenosis 482006

- Indication: **Facet nerve blocking**
- Asymptomatic for 2 h, no limit walking
- Indication: **Facet denervation.**
- Asymptomatic 2 y. later.

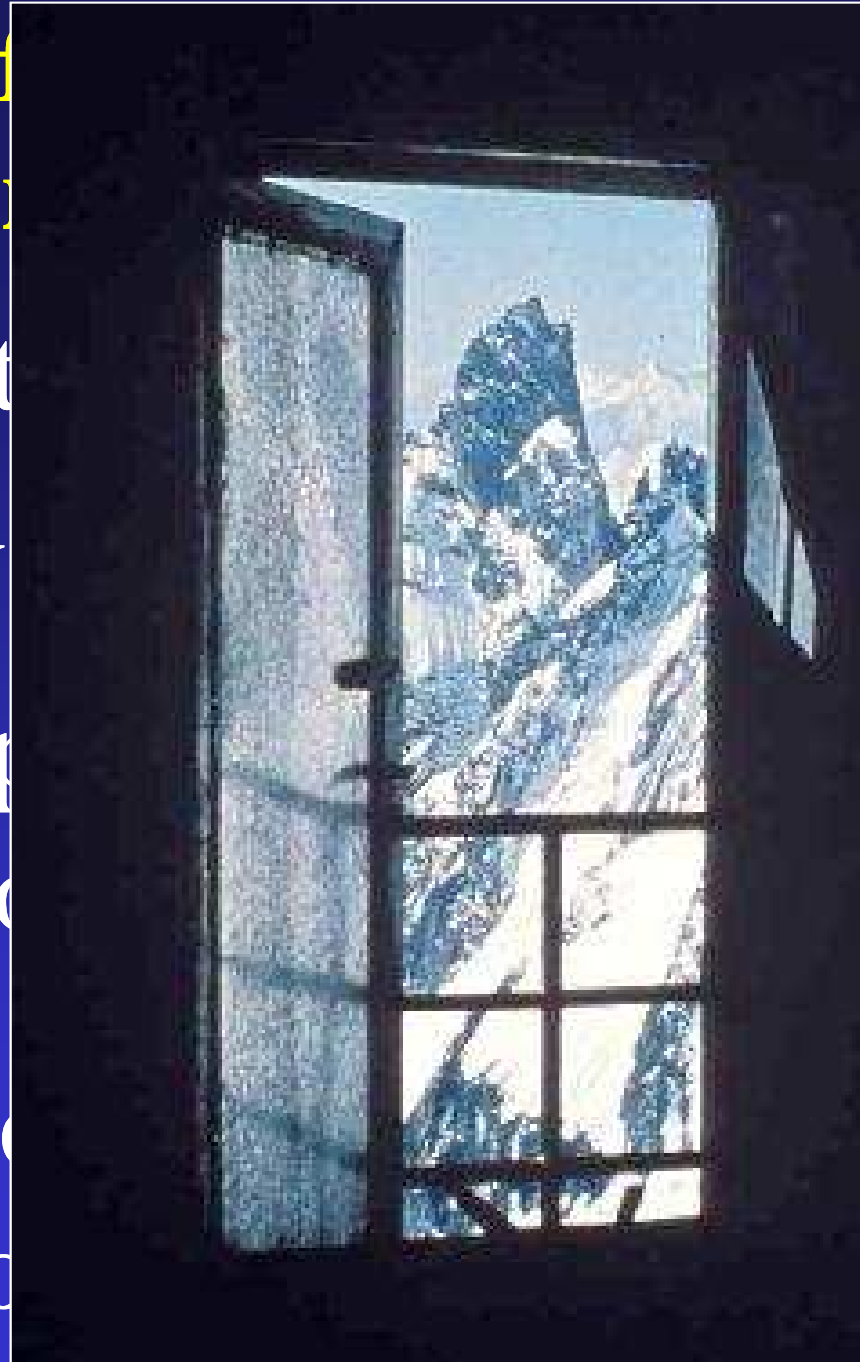
If I was operated on...

Proud surgeon, satisfied patient!

Proposal for

W

- Different pain and
- Explain p
every roo
- Explain c
pattern to



ns, paper

..

pudosciatic
ns

ory of

king