

EMERGENCY IN SPINE SURGERY

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BONES AND SPINE

OUTLINE

- Fracture
- Acute infection
- Cauda Equina
- Tumors
- How to avoid litigation in SCI

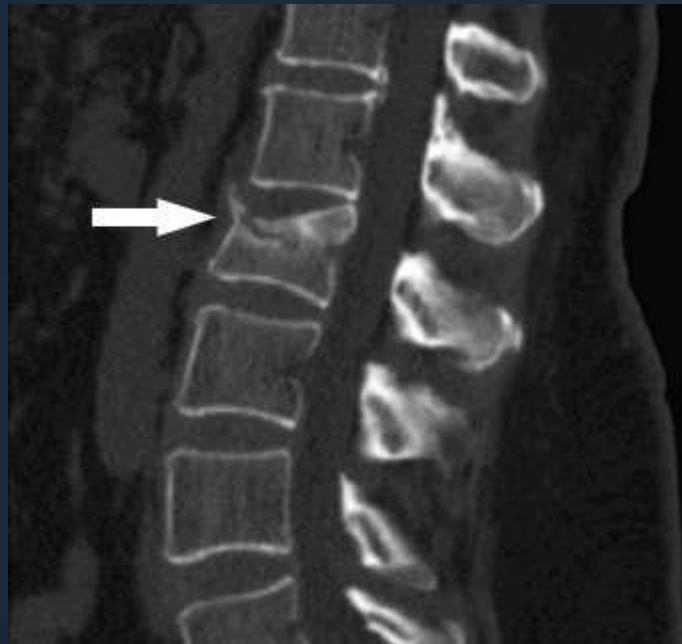


WHEN FX BECOMES EMERGENCY?

- Dislocation or severe compression against spinal cord / cauda equina.



NOT A EMERGENCY!



FLEXION/DISTRACTION - JUMPED FACET

33 YO PASTOR, MVA, C4 QUAD INCOMP

MRI? OR? CLOSE REDUCTION?



FLEXION/DISTRACTION - JUMPED FACET

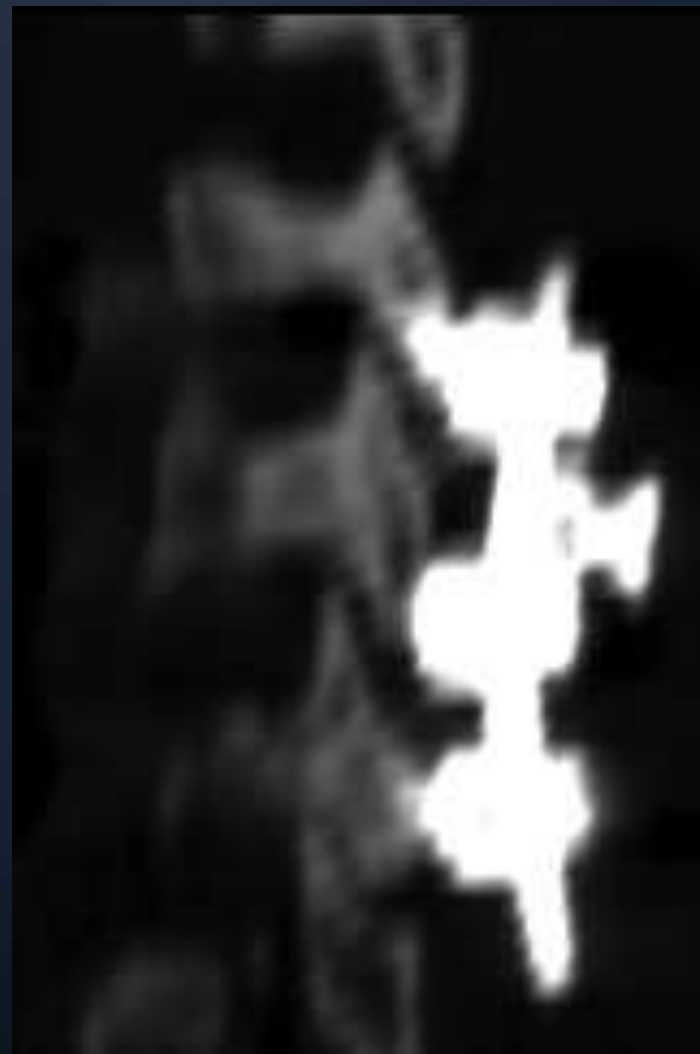
33 YO PASTOR, MVA, C4 QUAD INCOMP



FACET FRACTURE SUBLUXATION: 40 YO WIFE OF ANESTHES. MVA, C5 INCOMP



FACET FRACTURE SUBLUXATION: 40 YO WIFE OF ANESTHES. MVA, C5 INCOMP



HANGMAN FX: TYPE 3

25 YEAR OLD POLICEMAN, T10 COMPLETE



HANGMAN'S FX: TYPE 3

T10 COMPLETE



HANGMAN'S FX: TYPE 3

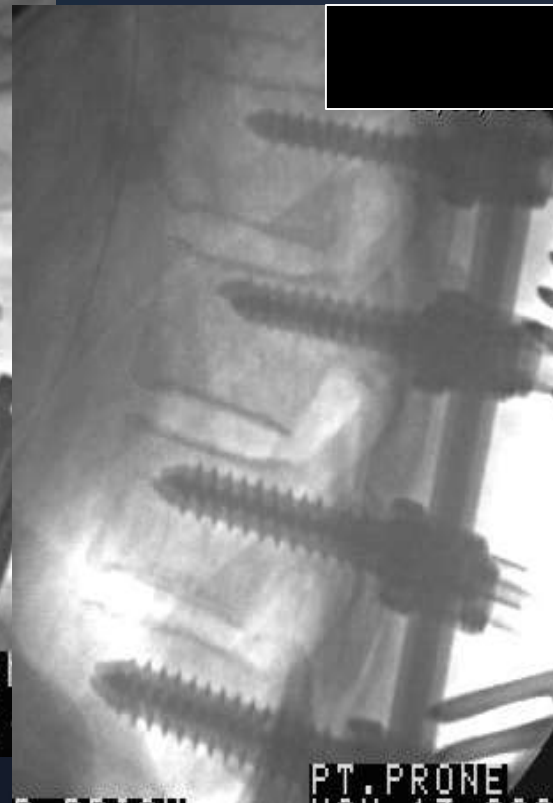
INTRA-OP



PT. P
NOV.
CHENG



PT. PRO
NOV. 13
FENG. M

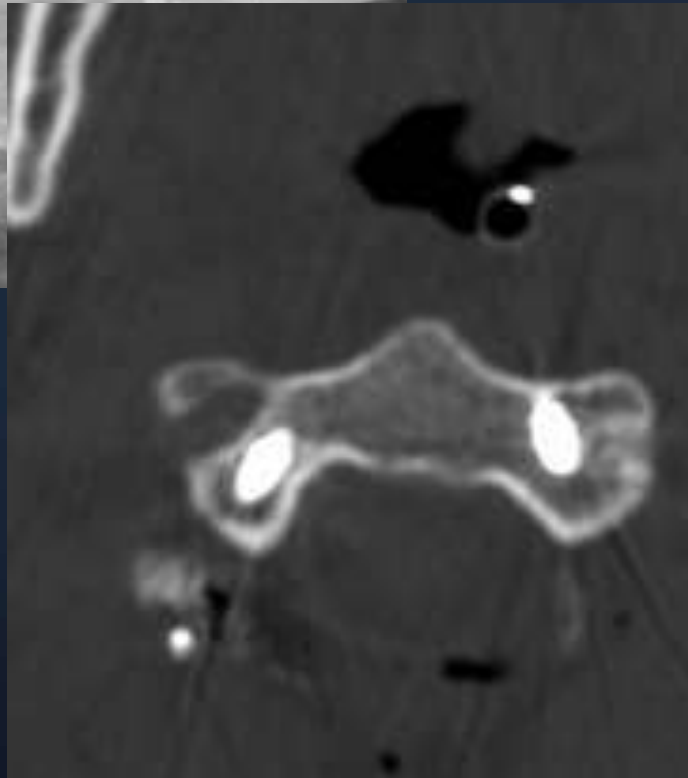


PT. PRONE



HANGMAN'S FX: TYPE 3

POST OP



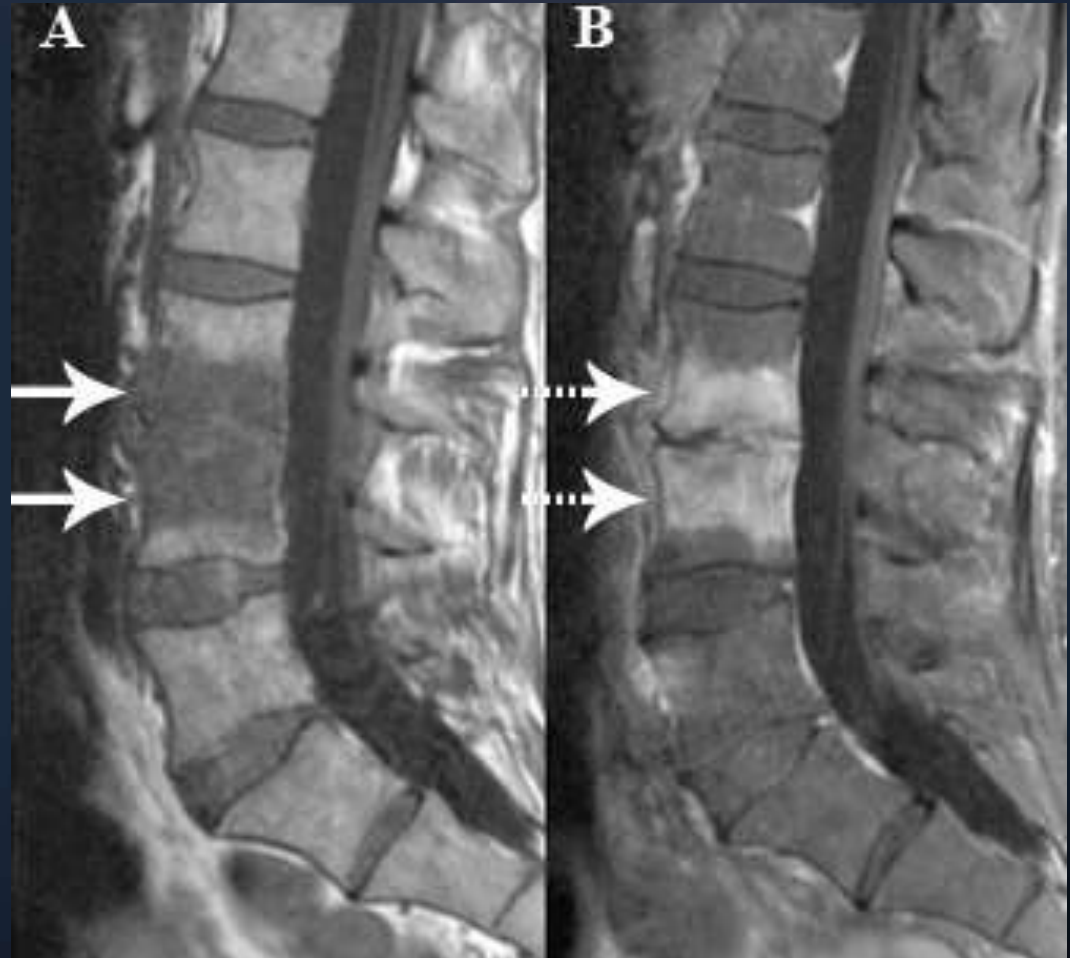
ACUTE INFECTION

- Discitis
- Osteomyelitis
- Epidural abscess



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CLINICAL PRESENTATION

- Hx: F/C/N? IVDA? Recent spine surgery?
- PE: non specific
- Lab: ESR/CRP
 - When does CRP normalize post op?
- Imaging:
 - MRI c gad, CT c

TREAT OF SPINE INFECTION

- IV ABX

INDICATIONS OF SURGERY

- 1. progressive neuro deficit
- 2. Septic shock
- 3. progressive deformity
- 4. intractable pain
- 5. not responsive to antibiotics

65 YO. QUAD INCOMP



65 YO, QUAD INCOMP



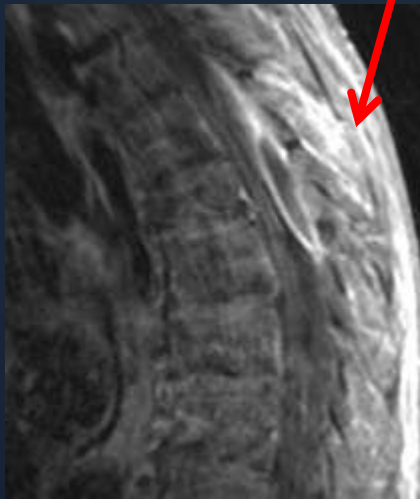
40 YO, AUTO DETAIL, RAPID ONSET



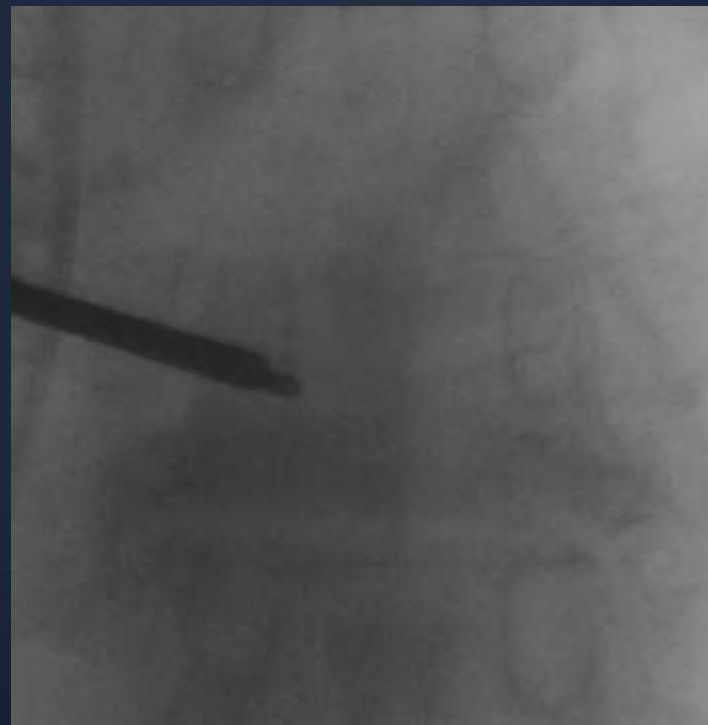
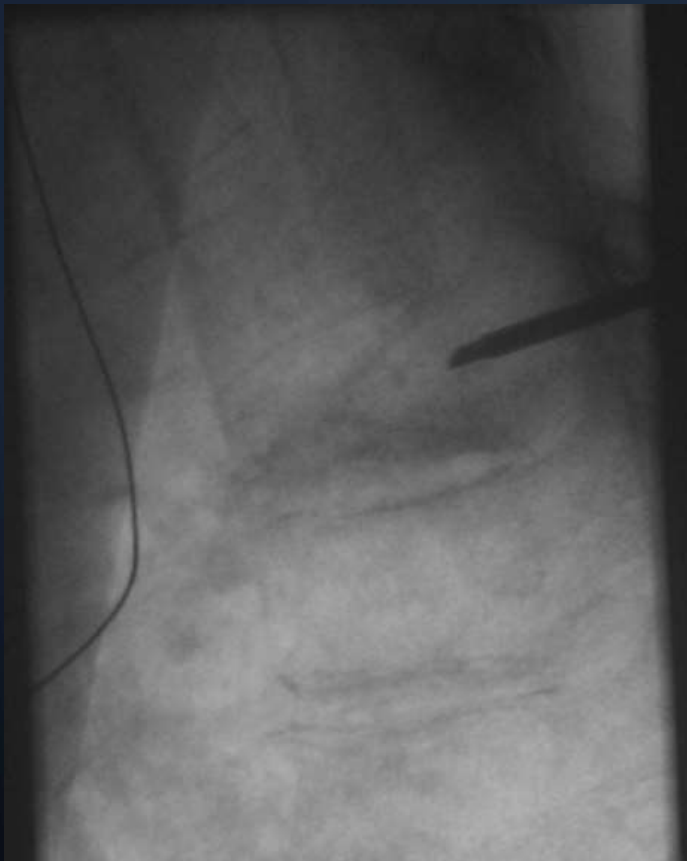
40 YO, AUTO DETAIL, RAPID ONSET



69 YO, FAILED IV ABX TX.



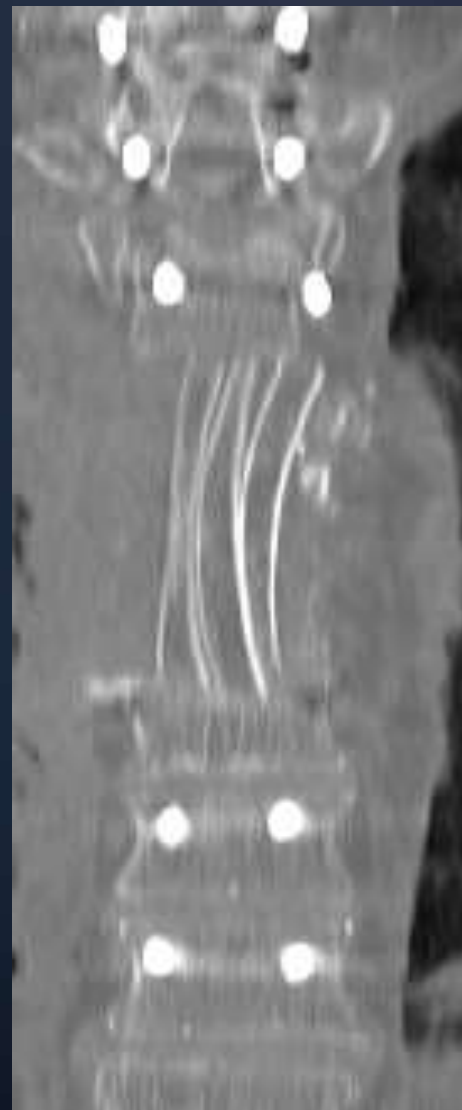
BONE BIOPSY



PROGRESSION



RECONSTRUCTION



CAUDA EQUINA SYNDROME

- **Saddle anesthesia**
- **Bowel and bladder dysfunction**
- **Weakness**
- Sexual dysfunction
- Absent s1 reflex

TIME LIMIT

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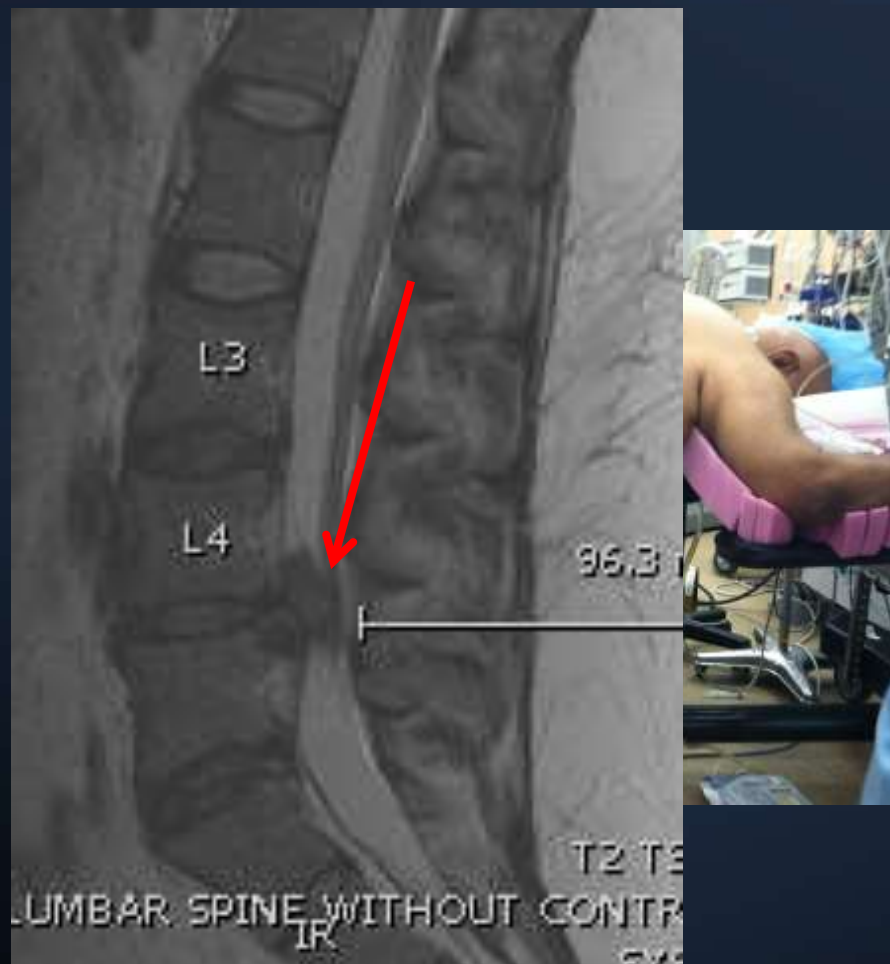
Cauda Equina Syndrome Secondary to Lumbar Disc Herniation

A Meta-Analysis of Surgical Outcomes

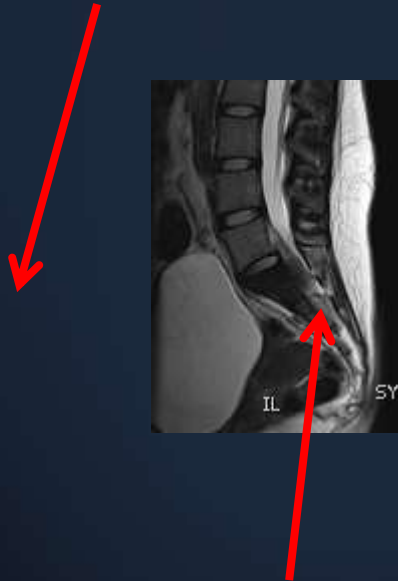
Uri Michael Ahn, MD,* Nicholas U. Ahn, MD,* Jacob M. Buchowski, MS,*
Elizabeth S. Garrett, PhD,† Ann N. Sieber, RN, MSN,* and John P. Kostuik, MD*

48 hours

CAUDA EQUINA 56 YO , 300 LBS, HNP



19 YO F, URINARY RETENTION/ BLE WEAKNESS TUMOR



DECOMPRESSION



LAWSUIT IN SPINAL CORD INJURY – HOW TO AVOID IT?

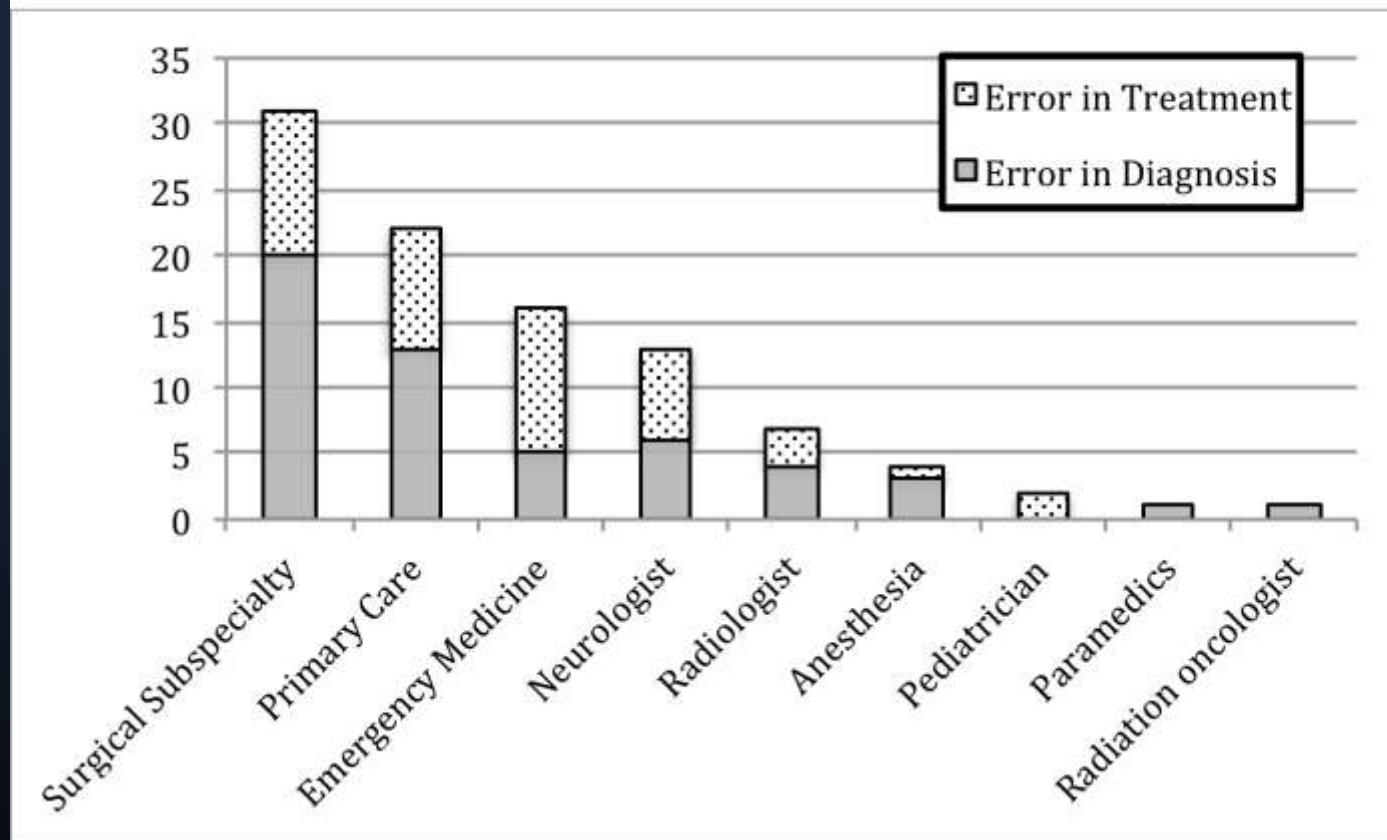
- Verdict search 170,000 cases, 10 years, 73 cases
- Who? Where? Why? How much?

WHO?

	Plaintiff Verdict	Defense Verdict	Total	<i>p Value</i>
Age	47 (± 16.6)	50.6 (± 17.6)	-	0.38
Sex				0.94
Male	31	15	46	
Female	18	9	27	
Job				0.48
Student	4	0	4	
White Collar	13	9	22	
Blue Collar	15	5	20	
Retired	6	4	10	
Unknown	11	6	17	
Level of Injury				0.27
Cervical	19	14	33	
Thoracic	18	8	26	
Lumbar	9	1	10	
Unspecified	3	1	4	

WHO DO THEY SUE?

Figure 1: Reason of lawsuit compared to physician specialty.



BODY REGION

	Median	25%	75%	<i>p</i>
Cervical	\$1,800,000	\$1,000,000	\$8,300,000	0.301
Thoracic	\$1,900,000	\$831,250	\$3,950,000	
Lumbar	\$750,000	\$596,324	\$1,812,500	
Unknown	\$1,200,000	\$1,025,000	\$1,622,500	

HOW MUCH\$?

	Median	25%	75%	<i>p</i>
Plaintiff Verdict (n=23)	\$2,900,000	\$1,500,000	\$12,500,000	0.008
Settlement (n=26)	\$1,447,500	\$1,000,000	\$2,900,000	

WHY?

Reason	N
Error in Diagnosis Cohort	
Delay in Diagnosis	24
Failure to Diagnose	24
Error in Treatment Cohort	
Improper Treatment	13
Surgical Error	12

WHY?

	Plaintiff Verdict (pt win)	Defense Verdict (MD win)	<i>p</i>
Error in Diagnosis	38	10	0.003
Error in Treatment	11	14	
Relative Risk of getting defense verdict for error in treatment: 2.69 (95% CI 1.40-5.16)			

TAKE HOME

- Index of suspicion (better to order diagnostic tests)
- Follow up with your test result
- Take action, don't wait!

THANK YOU

