



Virginia Mason™

2016 Joint WSSA/BCAS Scientific Meeting
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**Seeking Quality in Postoperative Epidural
Analgesia- Employing Epidurography**

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Faculty Disclosure

X	No, nothing to disclose
	Yes, please specify:

<i>Company Name</i>	<i>Honoraria/ Expenses</i>	<i>Consulting/ Advisory Board</i>	<i>Funded Research</i>	<i>Royalties/ Patent</i>	<i>Stock Options</i>	<i>Ownership/ Equity Position</i>	<i>Employee</i>	<i>Other (please specify)</i>

Off-Label Product Use

Will you be presenting or referencing off-label or investigational use of a therapeutic product?	
	No
X	Yes, please specify: Use of myelogram safe contrast media for injection in epidural space.

Disclosures

No duality of interest- financial or otherwise

I have **no intention to promote** or discourage the use of any particular device or product.

The **opinions** expressed do not necessarily represent those of WSSA or Virginia Mason Medical Center.

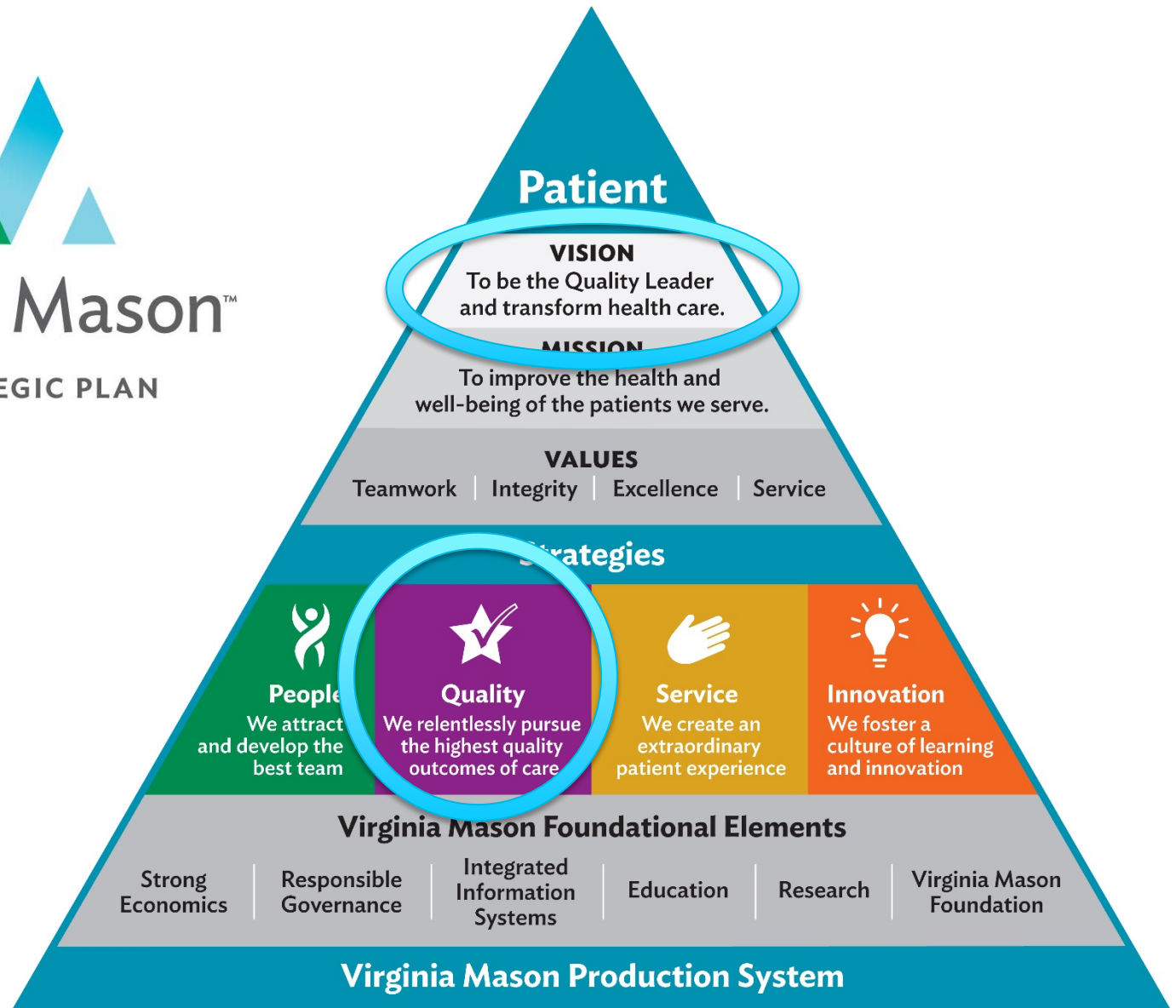
Optimizing Epidural Placement-

**Do We Have a Quality
Problem with Epidural
Analgesia?**



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OUR STRATEGIC PLAN



Objectives

- Evaluate methods of assessment for postoperative epidural analgesia.
- Use spinal anatomy to evaluate contrast distribution through epidural and non-epidural catheters.
- Identify clinical scenarios where traditional assessment of epidural analgesia function is unreliable.

Case:

63 year old male undergoing laparotomy for small bowel resection

- Crohn's disease
- Chronic abdominal pain
- Chronic opioids
- Retired, Radiologist

How Do We Define Quality?

$$\text{Value} = \frac{\text{Appropriateness (Service + Outcome)}}{\text{Necessary Cost + Cost of Waste}}$$

The equation defines Value as the ratio of Appropriateness (Service + Outcome) to Necessary Cost + Cost of Waste. The word "Quality" is overlaid in blue text on the numerator, and "Cost" is overlaid in green text on the denominator.

Defects

Technical (Placement) Defects

Assessment Defects

Maintenance Defects

Technical Defects

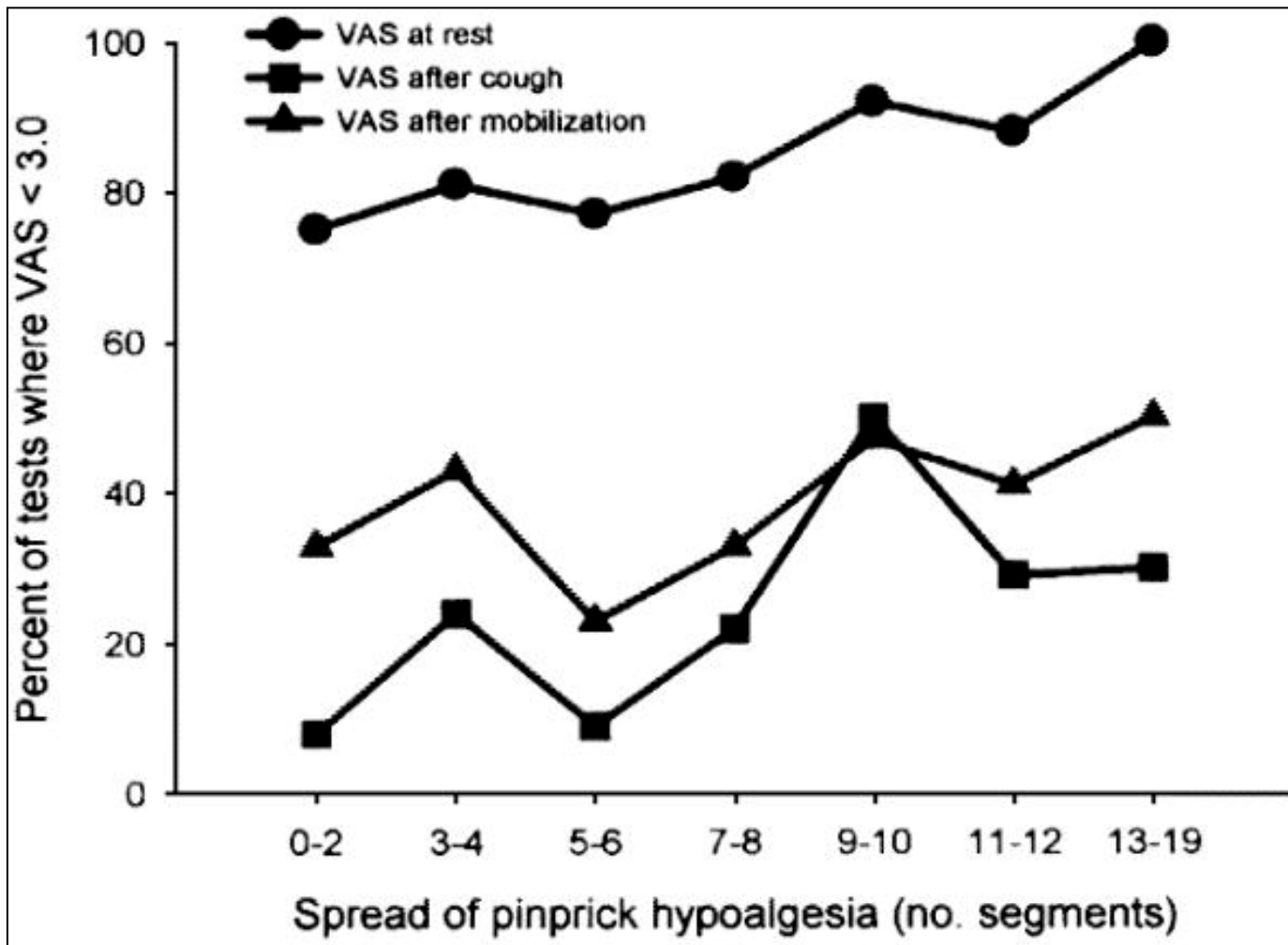
- “Failure” reported as high as 41%
 - Replacement required
 - Additional analgesic modality (PCA)
- Abandonment of placement
- Home institution- 16% defect rate

Assessment Defects

“Loss of pin-prick/cold sensation”

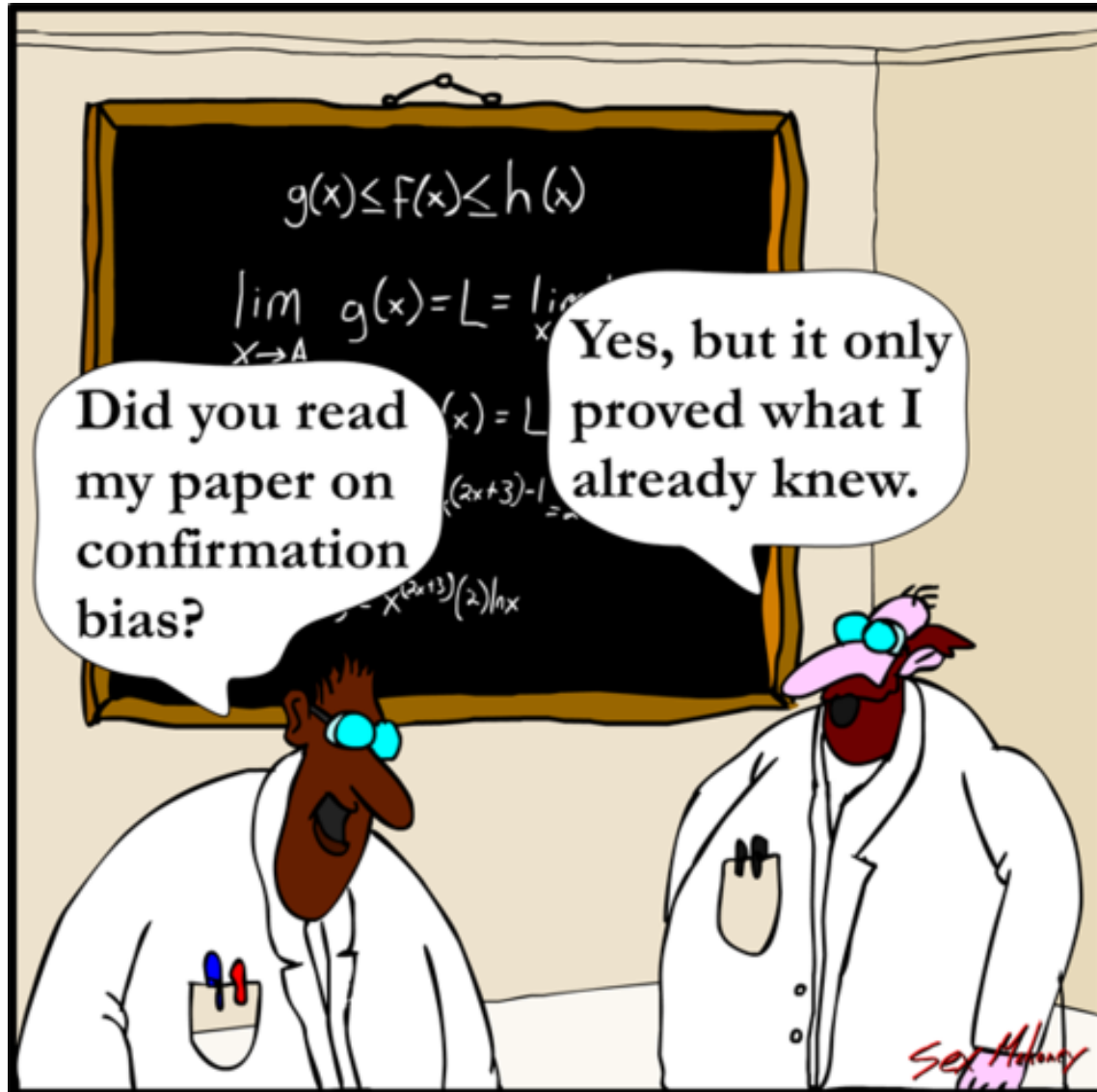
- Time-efficient?
- Accurate in all patient populations?
- Correlate with analgesia?

Curlato et al.



Clinical Journal of Pain. 15(1):6-12, March 1999.

Assessment of Epidural "Block"

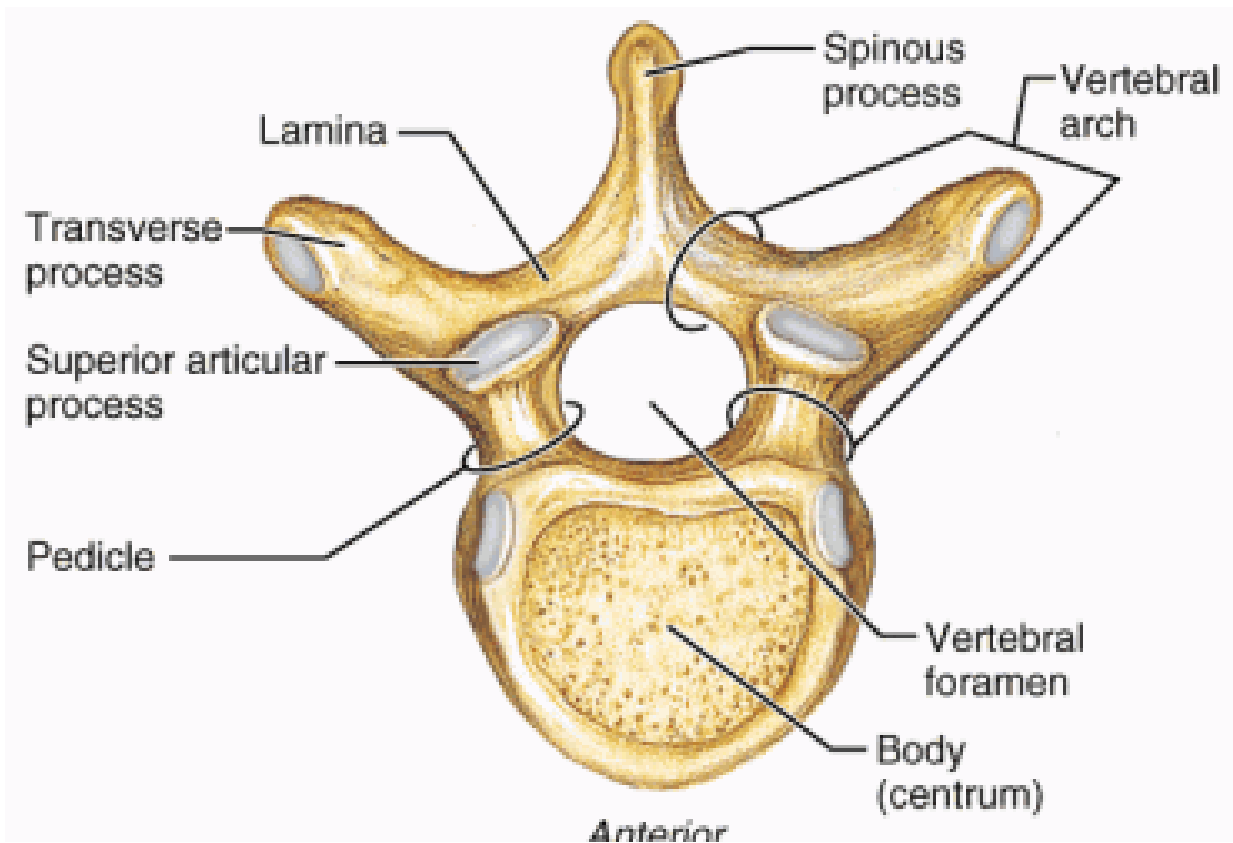


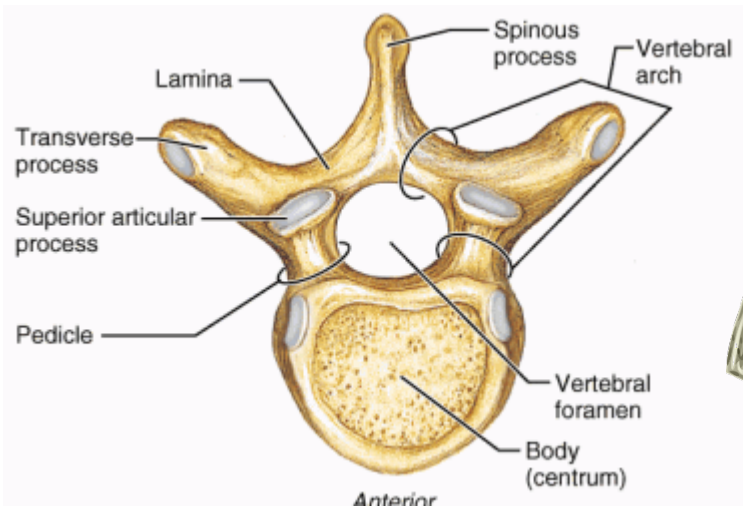
Assessment of Epidural “Block”

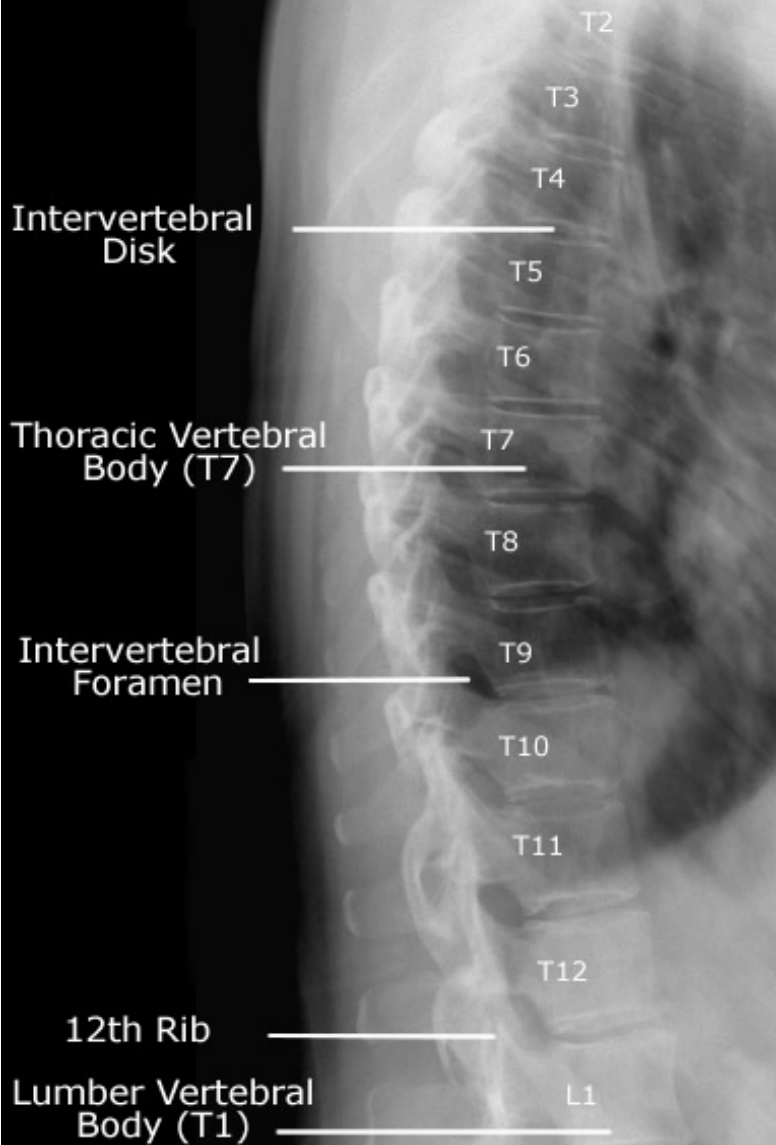
**What to make of a
“patchy block?”**

Confirmation Bias











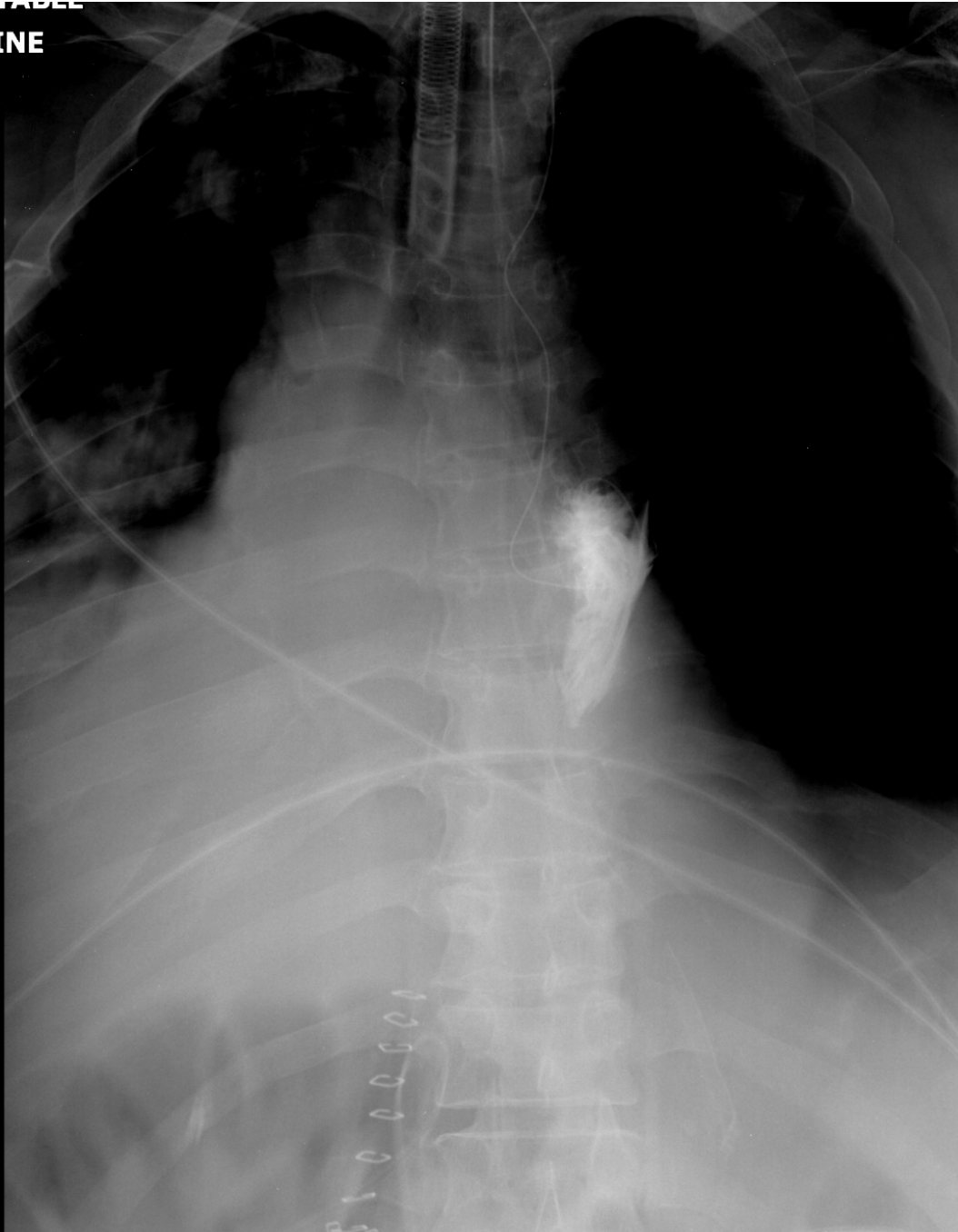
L







PORTABLE
SUPINE







L

Maintenance Defects

- Failure to actively manage, adjust
- Dislodgement during intended therapy period
 - Neal et al.- 14%
 - Increased risk in obese patients

Reg Anesth Pain Med 2003; 28: 124–34

Patient Satisfaction

- Lack of rigorous data to assert higher satisfaction rates with epidural analgesia
- Dissatisfaction includes:
 - Pruritus
 - Encumberment
 - Urinary catheter
 - Sensation of numbness?

How Do We Define Quality?

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Appropriateness

- Evidence-based application?
 - Lower abdominal surgery?
 - Low transverse incisions?
 - Comparison to other techniques?
- How does payment model influence utilization?
- What would you pay for in out-of-pocket scenario?

How Do We Define Quality?

$$\text{Value} = \frac{\text{Appropriateness (Service + Outcome)}}{\text{Necessary Cost + Cost of Waste}}$$

Thank you!