

# Low Back Pain and Cancer: Are we imaging in a Timely Manner?

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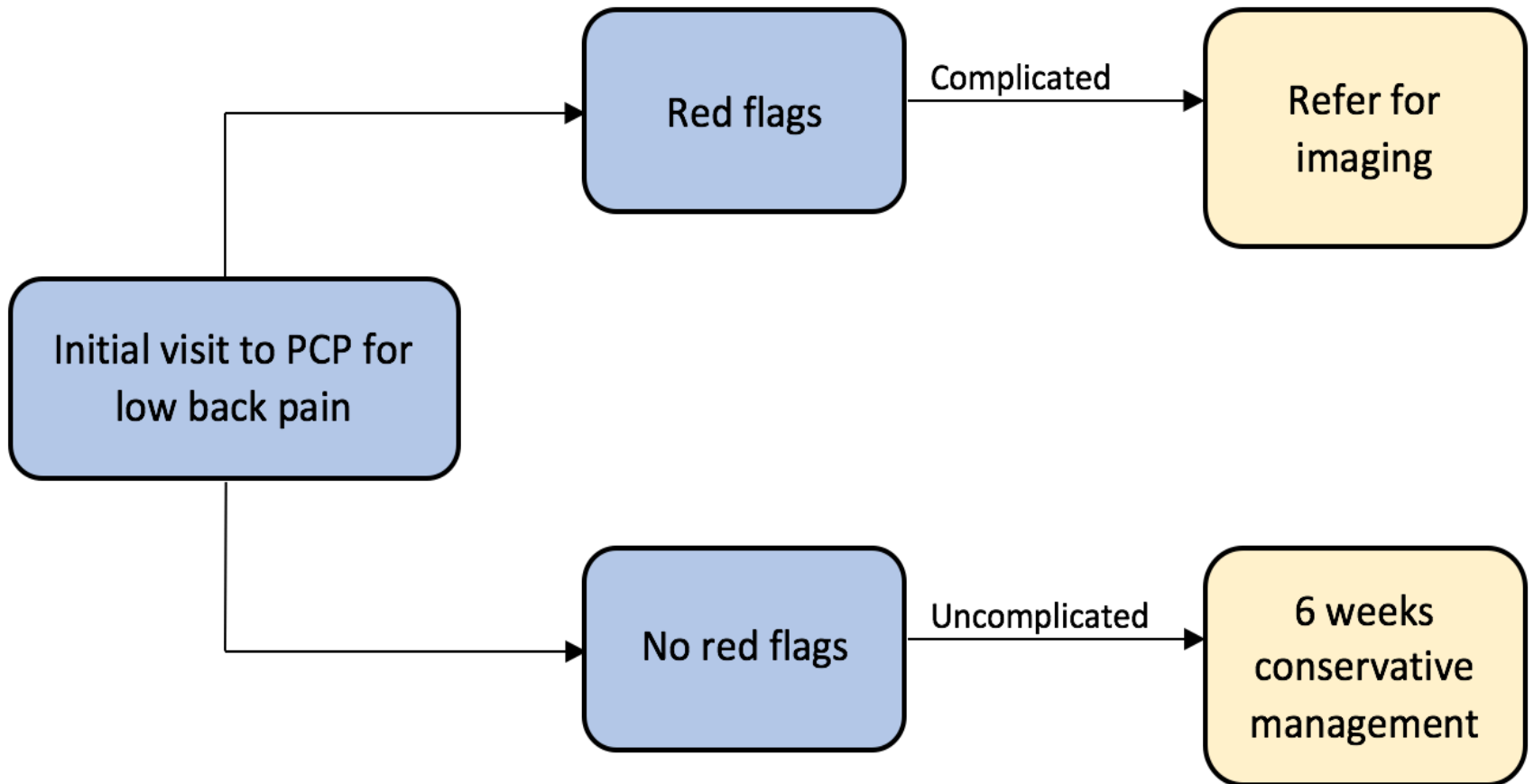
# Disclosures

- None

# Acknowledgements

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# Purpose

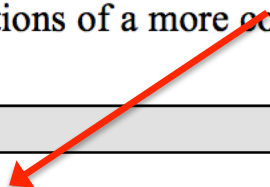


# ACR Red Flags

**Table 1. Red Flags:** Indications of a more complicated status include back pain/radiculopathy in the following settings (adapted from [7]).

Red Flag	Potential Underlying Condition as Cause of LBP
<ul style="list-style-type: none"> <li>• History of cancer</li> <li>• Unexplained weight loss</li> <li>• Immunosuppression</li> <li>• Urinary infection</li> <li>• Intravenous drug use</li> <li>• Prolonged use of corticosteroids</li> <li>• Back pain not improved with conservative management</li> </ul>	<ul style="list-style-type: none"> <li>• Cancer or infection</li> </ul>
<ul style="list-style-type: none"> <li>• History of significant trauma</li> <li>• Minor fall or heavy lift in a potentially osteoporotic or elderly individual</li> <li>• Prolonged use of steroids</li> </ul>	<ul style="list-style-type: none"> <li>• Spinal fracture</li> </ul>
<ul style="list-style-type: none"> <li>• Acute onset of urinary retention or overflow incontinence</li> <li>• Loss of anal sphincter tone or fecal incontinence</li> <li>• Saddle anesthesia</li> <li>• Global or progressive motor weakness in the lower limbs</li> </ul>	<ul style="list-style-type: none"> <li>• Cauda equina syndrome or severe neurologic compromise</li> </ul>

**History of Cancer**



# Purpose

- Potential benefit in imaging cancer patients early.
- Our aim is to describe the timing of imaging for primary care patients with a history of cancer who sought care for LBP.



# Materials & Methods

- Used data from patients already enrolled in the Lumbar Imaging with Reporting of Epidemiology (LIRE) study (~240,000 pts), a pragmatic, cluster randomized trial
- Retrospectively identified those with/without ICD-9/10 code indicating hx of cancer who sought care for LBP
- Determined if PCPs obtained L-spine imaging within 2 wks of a visit with an ICD-9/10 code indicating LBP.

# Materials & Methods

- Exclusion
  - ICD-9/10 codes for non-melanoma skin CA
  - Back pain 6-12 months prior to index image
  - No back pain 6 months prior to index image
  - If CT was index image, included radiographs and MRI
- Adjusted logistic regression
  - Study site, age, gender, race, and ethnicity



# Results

**No Cancer  
Diagnosis**

161,662

Imaged within 2  
wks= 131,115 (81%)

**Cancer  
Diagnosis**

4,817

Imaged within 2  
wks= 4,027 (83.6%)

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**LIRE Index Image: X-ray AND MRI**  
**n=166,479**

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**Predictor variable**

**Odds ratio (95% CI)**

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**Cancer history months -12 to -6**

1.1 (1.0-1.2)

**Site**

1

Referent

2

1.3 (1.2-1.3)

3

1.5 (1.4-1.7)

4

1.0 (0.9-1.1)

**Female**

0.93 (0.91-0.95)

**Race**

Black

Referent

White

1.4 (1.3-1.5)

Other

1.3 (1.2-1.3)

**Hispanic**

0.95 (0.92-0.99)

**Age (continuous)**

1.005 (1.004-1.005)

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# Conclusions

- Patients with a diagnosis of cancer were slightly more likely to be imaged within 2 weeks than patients without a diagnosis of cancer.
- 660 (16.4%) of patients with a diagnosis of cancer did not receive imaging within 2 weeks.

# Limitations

- Relied on ICD-9/10 codes.
- Could only analyze those who received imaging.
- Only could go back 12 months for diagnosis of cancer.

# Future Directions

- Ordering provider
- Insurance coverage
- Positive imaging results

# References

- 1. Jarvik JG, Comstock BA, James KT, et al. Lumbar Imaging With Reporting Of Epidemiology (LIRE)-Protocol for a pragmatic cluster randomized trial. *Contemp Clin Trials* 2015; 45(Pt B):157-63.