



Memorial Sloan Kettering
Cancer Center™

Physician-driven variation in low-value healthcare services in oncology

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Assistant Attending

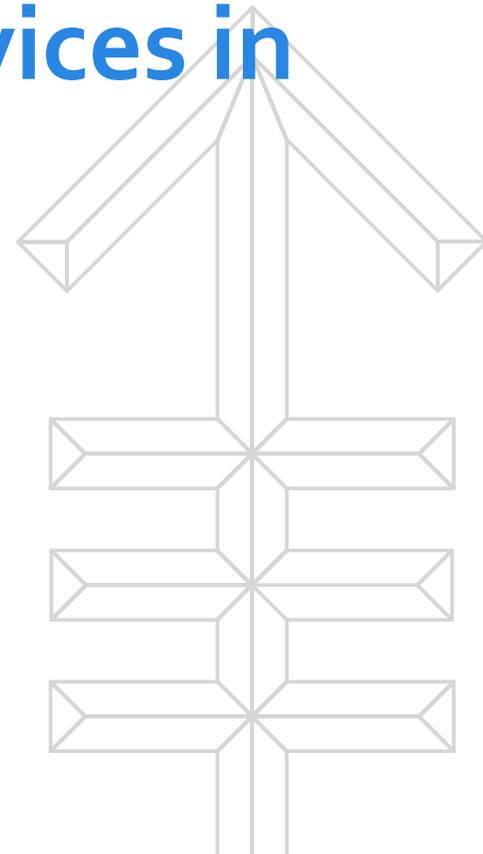
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Thank you

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Study collaborators

- Christopher Anderson, MD
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- Victoria Blinder, MD
- Elena B. Elkin, PhD
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Disclosures

None.



Low-value service use is widespread in oncology

- Low-value services and drugs are associated with patient harm, excess costs to the healthcare system, and other negative effects.
- There is wide variation in the prescribing of low-value healthcare services and drugs across the U.S.
 - Regional, hospital, individual provider level variation. (IOM, 2013)
 - Opportunities to intervene.
- Individual provider level is an actionable level of intervention.



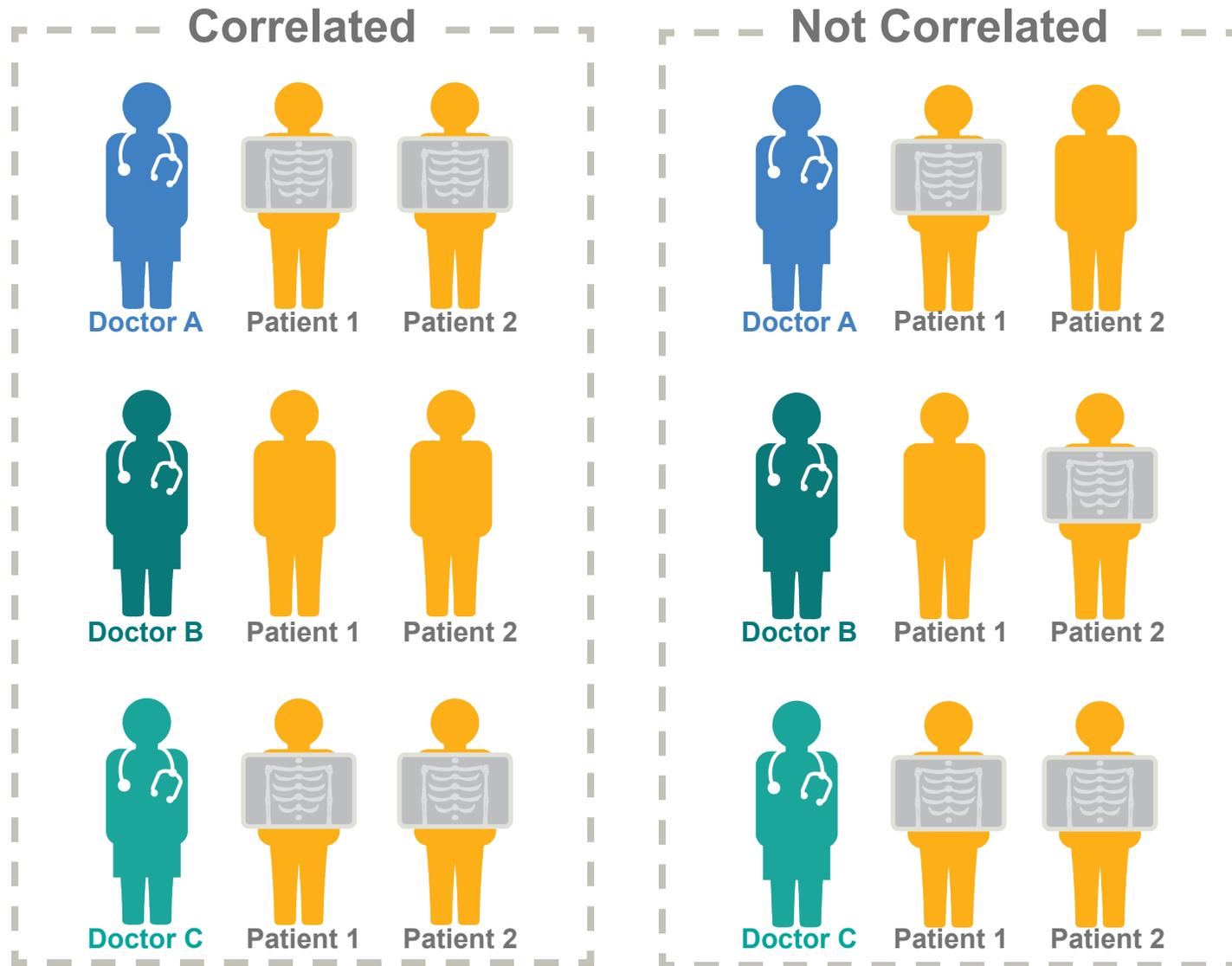
Critical question: What drives physicians to prescribe low-value healthcare services and drugs?

Research Questions:

1. Do physicians exhibit consistent behavior?
 2. Does oncology practice setting influence physicians' behavior?
- Clinical context: cancer care
 - A clear understanding of patterns of physicians' behavior is needed to inform interventions.
 - If service use *is* consistent → interventions should be physician-specific.
 - If service use *is not* consistent → interventions should be service-specific.



Hypothesis: physicians' past use predicts current use



Test of hypothesis using ABIM Foundation's Choosing Wisely Campaign

Medical specialty society	Item description
ASCO	Don't perform PET, CT, and radionuclide bone scans in the staging of early prostate cancer for patients at low risk for metastasis
ASCO	Don't perform PET, CT, and radionuclide bone scans in the staging of early breast cancer for patients at low risk for metastasis
ASCO	Don't perform surveillance testing or imaging for asymptomatic individuals who have been treated for breast cancer with curative intent
ASTRO	Don't routinely use IMRT to deliver whole breast radiotherapy as part of breast conservation therapy
ASTRO	Don't routinely use extended fractionation schemes (>10 fractions) for palliation of bone metastases.

Study Methods

- Data source: population-based Surveillance, Epidemiology, and End Results (SEER) Medicare linked data.
 - Study sample and time period:
 - Medicare beneficiaries ages 66+, diagnosed with cancer, 2004 - 2009.
 - Example: early stage imaging, Stage 0-II breast cancer, with surgery within 6 months of diagnosis and no neoadjuvant treatment.
 - Each patient was assigned to an accountable physician.
 - Analysis: Multivariable logistic regression, accounting for patient characteristics.
 - Outcome: patient's receipt of low-value service.
 - Likelihood that physician's patient received service conditioned on the physician's last patient having received that service.
 - Key exclusion criterion: Patients whose physician had only patient in dataset.
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Results

	Imaging, early stage prostate	Imaging, early stage breast	Imaging post-treatment surveillance, breast	IMRT for whole breast radiotherapy	Extended fractionation schemes, palliation bone metastasis
Total # of patients	32,093	89,006	44,216	25,271	3,464
Total # of physicians	2,559	4,285	2,596	1,428	695
Proportion of overall use	0.41	0.14	0.26	0.18	0.35
Prior patient received service, adjusted odds ratio [95% CI]					
No	ref	ref	ref	ref	ref
Yes	3.90 [3.70-4.10]	3.02 [2.88-3.17]	1.12 [1.07-1.18]	24.91 [2.86-2.15]	1.48 [1.26-1.75]

Source: Lipitz-Snyderman et al, JAMA Internal Medicine, 2016

What is driving this behavior?

Research Questions:

1. Do physicians exhibit consistent behavior?
 2. Does oncology practice setting influence physicians' behavior?
- Shift in outpatient oncology care from independent physicians' offices to hospital outpatient departments.
 - Different reimbursement structures prompt questions about impact on cost and quality.
 - Clinical context: outpatient cancer care for patients with advanced disease.
 - *Hypothesis: physicians in private practice oncology settings order more low-value, expensive drugs than physicians in hospital outpatient settings.*



Conclusions and Implications

- Findings support the notion that physicians exhibit consistent behavior with regards to using low-value services in oncology.
 - Early insight into these patterns in claims.
- Incomplete understanding of mechanisms through which patterns exist.
 - Support that oncology practice setting matters.
 - Further study is warranted to disentangle the mechanisms through which oncology practice setting and other factors influences physicians behavior.
- Implications for interventions at the physician level to reduce avoidable patient harm and costs.



Thank you

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