

Prostate Cancer Patients' Quality of Relationship with their Physicians Impacts their Treatment Choice

Heather Orom¹

¹Community Health and Health Behavior

Zinan Cheng²

²Touro College of Osteopathic Medicine

I'Yanna Scott¹

Willie Underwood, III³

³Roswell Park Cancer Institute

D. Lynn Homish¹



"THE ECONOMICS BOOK OF THE YEAR"
—David Leonard, The New York Times

Overtreated

WHY TOO MUCH MEDICINE
IS MAKING US
SICKER AND POORER



WITH
A NEW
AFTERWORD
BY THE
AUTHOR

SHANNON BROWNLEE



"First we're going to run some tests to
help pay off the machine."

Reprinted from Funny Times / PO Box 18500 / Cleveland Hts. OH 44118
phone: 216.371.8500 / email: 98funnytimes.com

Background

- U.S. residents may receive only about 55% of guideline care; about 10% of care is unnecessary or harmful (McGlynn et al. 2003)
- Understanding the role of the physician-patient relationship in promoting adherence to physician recommendations will help prevent undertreatment and overtreatment

Prostate Cancer and Overtreatment

- Historically, men with low risk prostate cancer have been over-treated (Loeb et al., 2014)
- Active surveillance rather than radiation or surgery may be a clinically viable option for some

Study Objectives

- Explore whether patient-centeredness is associated with greater influence of physician treatment recommendations
- Determine whether this association is stronger when there is an opportunity for overtreatment, i.e., when aggressive treatment is recommended to men with low risk prostate cancer

Data Source: Live Well Live Long! Study

- 5 sites: 2 comprehensive cancer centers and 3 large group practices in New York and Texas
- Data collected from 2010-2014
- Participants enrolled at diagnosis or second opinion
- All had newly diagnosed clinically localized prostate cancer

Procedure

Assessments at:

- ⇒ ■ Enrollment
- ⇒ ■ After treatment decision but before treatment
 - 6 weeks after treatment/start of active surveillance protocol
 - 6 months after treatment and every 6 months thereafter
- ⇒ ■ Matching chart abstractions

Followed up to 4 years after treatment

Predictor: Patient Centeredness

Participants rated their relationships with up to five physicians (2 urologists, 2 radiation oncologists, 1 primary care physician).

- *Trust in physician*: Kao et al., 1998
- *Closeness with physician*: Inclusion of Other in the Self scale (IOS) (Aron, Aron, and Smollan 1992).
- *Participatory decision-making style*: Participatory Decision-Making (PDM) scale (Kaplan et al. 1995)

Correlated ($r_s=0.25 - 0.53$, $p<.001$); summed z-scores to create composite measure of **patient centeredness**

Outcomes

- *Influence of treatment recommendation:* “How much was your decision influenced by the urologist’s/radiation oncologist’s/primary care physician’s recommendation?” (Not at all/A little/Quite a bit/Very much)
- *Match between treatment recommended and received:* each recommendation coded as either matching or not matching the treatment that the patient received

Covariates/*Moderators

- race/ethnicity
- years of education
- employment status
- marital status
- age
- *D'Amico risk scores (cancer aggressiveness)
- *Type of treatment recommended

Participant Demographic Characteristics (N=1,166)

% or mean (SD)

Income

<25,000	5.86
25,000-49,999	10.81
50,000-74,999	14.34
75,000-99,999	14.65
≥100,000	54.34

Education

<12 years	3.09
12 years	17.07
13-16 years	44.17
17-≥20 years	35.68

Race/Ethnicity

Non-Hispanic White	85.33
Non-Hispanic Black	9.52
Hispanic	5.15

Age at diagnosis

62.81 (SD = 8.03)

Married/cohabitating

84.91

Participant Clinical Characteristics

Disease Risk

Low	37.14 %
Intermediate	47.51 %
High	15.35 %

Treatment received

Active surveillance	26.16 %
Radiation	22.73 %
Surgery	51.11 %

Predictors of perceived influence of recommendation

	RR (95% CI)	
Patient centeredness	1.05^{***}	(1.04, 1.05)
D'Amico risk		
Intermediate	1.01 ^{**}	(1.00, 1.02)
High	1.02 [*]	(1.00, 1.03)
Physician Type		
Urologist 2	1.03 ^{***}	(1.02, 1.03)
Rad Oncologist 1	1.01 ^{**}	(1.00, 1.02)
Rad Oncologist 2	1.03 ^{***}	(1.02, 1.04)
Primary care	0.98 ^{**}	(0.97, 0.99)
Recommendation		
Radiation	0.95 ^{***}	(0.94, 0.96)
Surgery	0.97 ^{***}	(0.96, 0.98)
Race/Ethnicity		
Non-Hispanic Black	1.01	(1.00, 1.02)
Hispanic	1.03 ^{**}	(1.01, 1.05)
Age at diagnosis	1.00	(1.00, 1.00)
Employed	1.00	(0.99, 1.01)
Years of education	1.00	(1.00, 1.00)
Married/cohabitating	1.00	(1.00, 1.01)

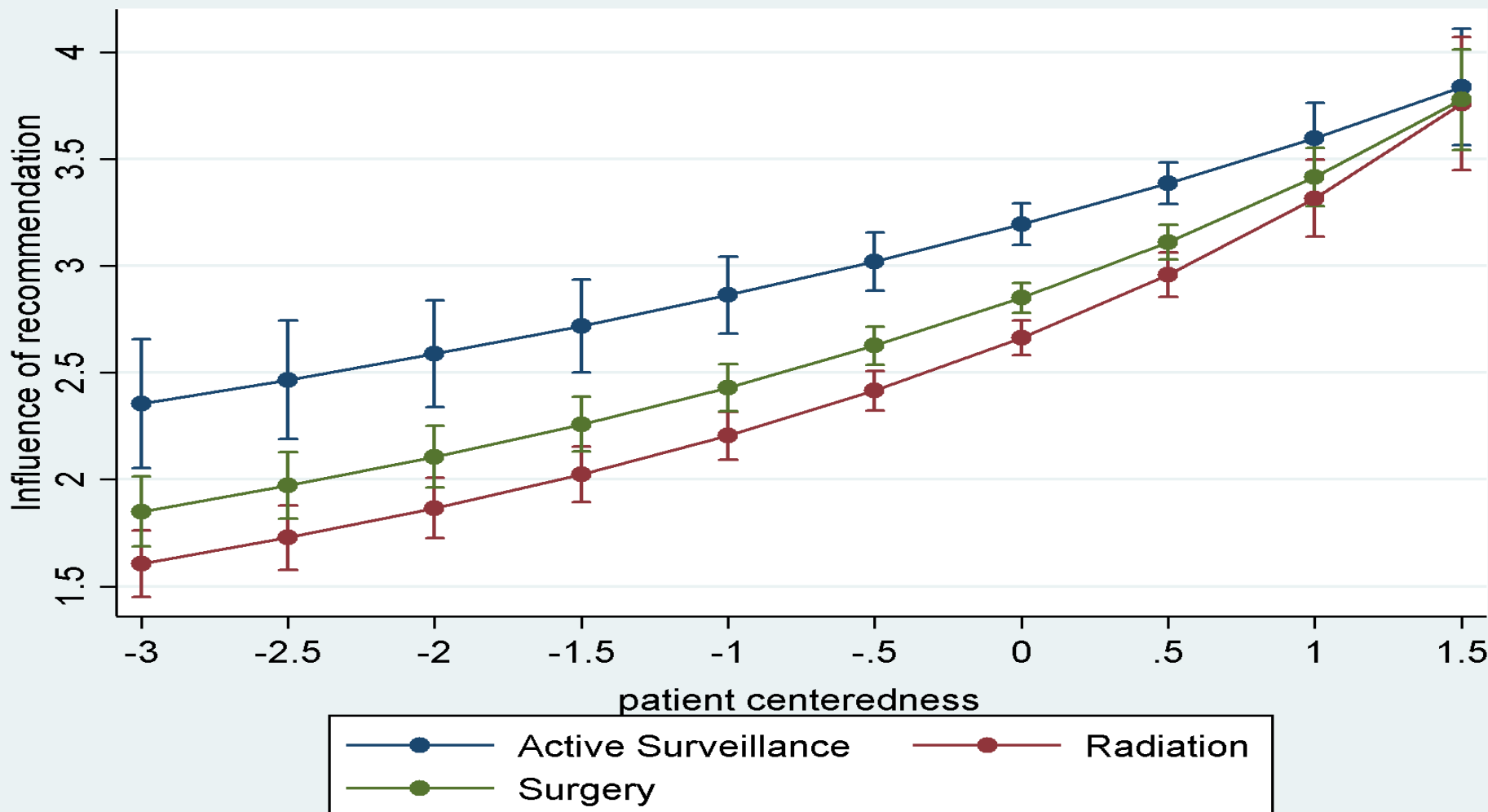
*p<.05, **p<.01, ***p<.001

Predictors of match between treatment recommended and received

	RR (95% CI)	
Patient centeredness	2.92^{***}	(2.39, 3.58)
D'Amico risk		
Intermediate	2.32 ^{***}	(1.64, 3.30)
High	4.33 ^{***}	(2.64, 7.10)
Physician Type		
Urologist 2	1.86 ^{**}	(1.31, 2.65)
Rad Oncologist 1	1.27 [*]	(1.00, 1.60)
Rad Oncologist 2	2.24 [*]	(1.19, 4.18)
Primary care	0.90	(0.54, 1.48)
Recommendation		
Radiation	0.09 ^{***}	(0.05, 0.17)
Surgery	0.85	(0.45, 1.62)
Race/Ethnicity		
Non-Hispanic Black	1.25	(0.71, 2.19)
Hispanic	2.24 [*]	(1.00, 4.99)
Age at diagnosis	1.03	(1.00, 1.05)
Employed	0.82	(0.58, 1.15)
Years of education	0.98	(0.93, 1.03)
Married/cohabitating	1.15	(0.77, 1.73)

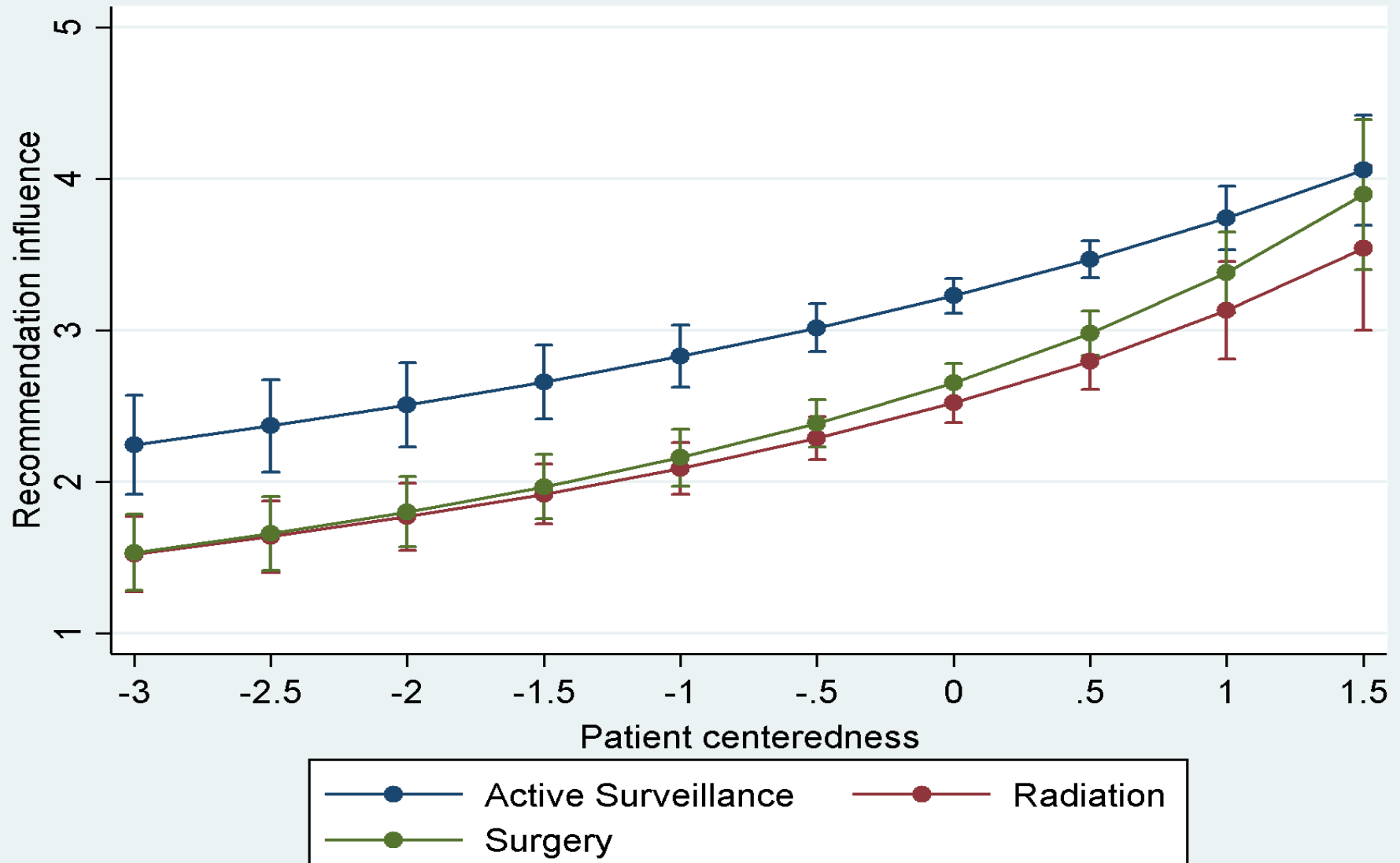
*p<.05, **p<.01, ***p<.001

Is patient centeredness more strongly related to influence of the recommendation when physicians recommend more aggressive treatment?



Radiation vs. AS RR=1.03 (1.01, 1.04), p=.001; Surgery vs. AS RR= 1.02 (1.00, 1.03), p=.02

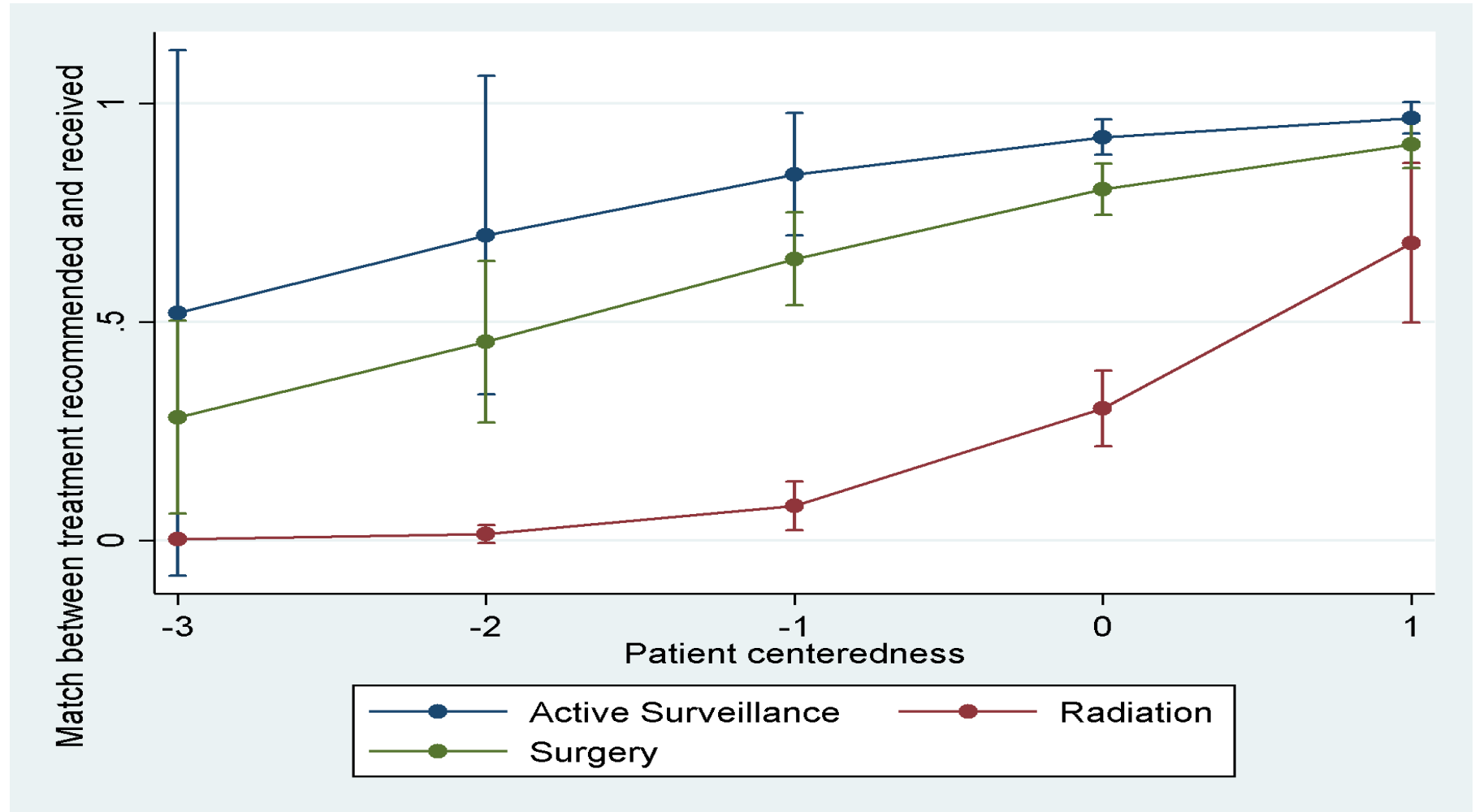
Is the same pattern found in men with low risk disease?



Radiation vs AS RR=1.02 (1.00, 1.05), $p=.05$

Surgery vs. AS RR=1.03 (1.00, 1.05), $p=.02$

Is patient centeredness more strongly related to match between treatment recommended and received when physicians recommend more aggressive treatment to men with low risk disease?



Radiation vs. AS OR=2.79 (0.86, 9.03), $p=.09$



- There were no interactions between type of treatment recommended and patient centeredness in men with moderate risk disease
- Type of treatment recommended and patient centeredness interacted for men with high risk disease in the same way they did for men with low risk disease; however cells were small

Summary of findings

- Patient centeredness is associated with influence of physician recommendations
- Patient centeredness may play a bigger role in the influence of physician recommendations when more aggressive treatments are recommended
- In particular, patient centeredness may play a bigger role in the influence of physician recommendations in men with low risk (compared to moderate risk) disease for whom less aggressive treatment may be clinically appropriate



Discussion

- Findings underline the importance of patient centeredness for adherence to physician recommendations
- This is a powerful tool in reducing undertreatment such as medication non-adherence

Discussion (cont.)

- The impact of a high quality physician-patient relationship may not be universally positive, such as when patients are recommended unnecessary diagnostic tests and treatments or treatments that are inconsistent with the patients' values and preferences
- Efforts to increase patient centered care may sometimes need to be paired with strategies for reducing overtreatment

Acknowledgements

The LiveWell LiveLong! research group includes:

- Integrated Medical Professionals (site-PIs, Carl A. Olsson and CEO Deepak A. Kapoor)
- Memorial Sloan Kettering Cancer Institute (site-PI, Christian J. Nelson)
- Urology San Antonio (site-PI, Juan A. Reyna)
- Houston Metro Urology, P.A. (site-PI, Zvi Schiffman)
- Roswell Park Cancer Institute (site-PI, Willie Underwood, III)
- University at Buffalo (site-PI, Heather Orom)

Funded by the National Cancer Institute (R01#CA152425)

THANK YOU

horom@buffalo.edu