

Overuse of PSA Screening for Prostate Cancer in Older Men

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Screening

- Prostate cancer screening occurs in patients with **no** clinical sign or suspicion of disease
- Screening may lead to diagnostic studies
- Diagnostic studies include biopsies
 - temporary or permanent side effects
 - USPTF reported ~90% of diagnosed men are treated

Screening

- Prostate Cancer risk increases with age
- 10 year lag time between development of cancer and detection of clinical symptoms
- Prostate cancer is usually very slow growing

Screening

- Screening men in the general population with the PSA test has led to overdiagnosis
- This leads to patient harm, including side effects from biopsy procedures
 - bleeding, infection, false positives, psychological distress, and impotence
- As physicians we have sworn to “First, do no harm”

Screening

- In the 1980s the PSA test was initially developed for the management of prostate cancer
- For screening it has a sensitivity of 21%, specificity of 91%, and has poor discriminating ability in men with symptomatic BPH
- Since PSA screening began, incidence has increased but mortality has not decreased

Guidelines

- Despite USPTF recommendations to not use PSA for screening older men in previous guidelines, physicians continued to order this screening test
- The 2012 USPTF guidelines were controversial
 - Recommended against PSA screening in men of any age

Guidelines

- 75% physicians reported their patients expected them to continue testing despite the recommendations
- About half agreed with the recommendations. Less than 2% reported they would follow them
- In 2013 the ACS and AUA guidelines were updated
 - all 3 sets of guidelines agree that men with less than 10 years life expectancy should not be screened
 - 2 agree men over 70 should not be screened

USPTF	ACS	AUA
No PSA screening in any age group.	Men with less than 10 years LE should not be screened.	Discourages routine screening in men over 70 or with LE less than 10-15 years.
	Asymptomatic men with LE at least 10 years should make informed decisions about the PSA test.	Ages 55-69 should have shared decision making. Any screening should be done every two years, not annually.
	Men at average risk should receive this information at 50. men at higher risk should receive this information at 40 or 45.	No screening in men under 40. no screening between 40 and 54.

Variation

- Why do some men get the test and others do not?
- Is it influenced by patient or physician preference?
- We looked at variation in both patient and physician characteristics.

Methods

Complete Medicare A and B data for Texas



Selected PCPs with panels of at least 20 men 75 years or older without prior diagnosis of prostate cancer (



Selected generalist physicians (PCP was identified as generalist physicians on 3 or more occasions in 2009)



Men with HMOs were excluded (approximately 25%)



Assessed screening by any generalist physician and the patients PCP

Methods

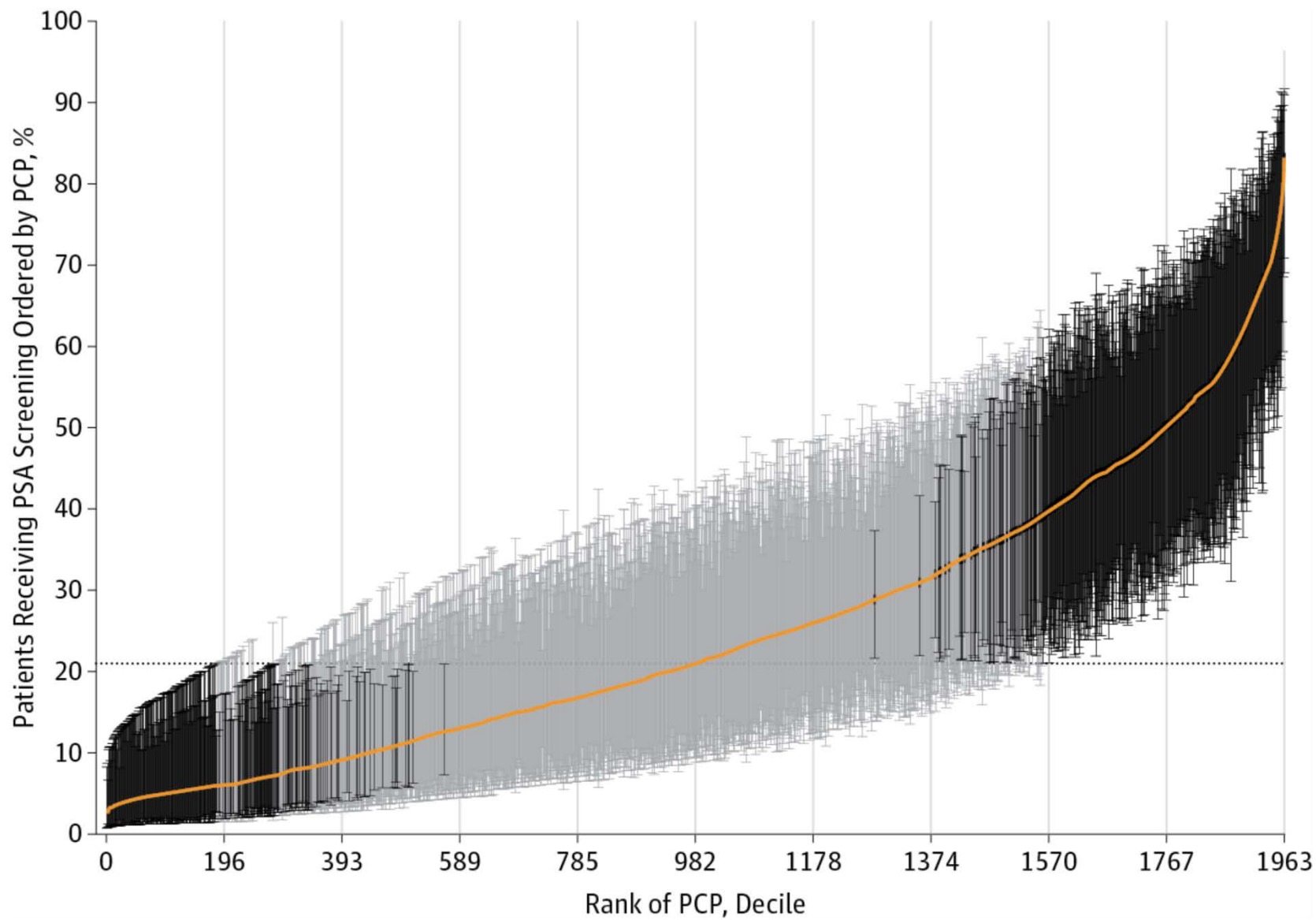
- Multilevel, multivariable logistic regression analysis controlled for patient characteristics
- Patient characteristics:
 - age
 - race/ethnicity
 - number of comorbidities
 - socioeconomic status
 - number of physicians visited

Methods

- Estimated PSA screening rate in 2010 for men 75 or older, adjusted for patient characteristics and for each PCP
- Intraclass correlation coefficient was calculated for each PCP

Table. Prostate-Specific Antigen Screening by Characteristics of Older Male Medicare Beneficiaries in Texas

Patient Characteristics ^a	Patients, No. (%) (N = 61 351)	Patients Received PSA Screening in 2010, % (95% CI) ^b	
		Any PSA Screening	PSA Screening Ordered by Patient's Primary Care Physician
Overall		41.1 (40.7-41.5)	28.8 (28.4-29.2)
Age, y			
75-79	28 102 (45.8)	48.7 (48.1-49.3)	34.8 (34.2-35.4)
80-84	19 264 (31.4)	39.8 (39.1-40.5)	27.4 (26.8-28.0)
≥85	13 985 (22.8)	27.8 (27.1-28.5)	18.7 (18.1-19.3)
Race/ethnicity ^c			
White	50 716 (82.7)	41.3 (40.9-41.7)	29.0 (28.6-29.4)
Black	1696 (2.8)	39.5 (37.2-41.8)	28.5 (26.4-30.6)
Hispanic	7912 (12.9)	40.9 (39.8-42.0)	27.6 (26.6-28.6)
Other	999 (1.6)	39.7 (36.7-42.7)	29.5 (26.7-32.3)
No. of comorbidities			
0	7998 (13.0)	43.2 (42.1-44.3)	31.6 (30.6-32.6)
1	16 876 (27.5)	45.0 (44.2-45.8)	32.6 (31.9-33.3)
2	15 441 (25.2)	42.5 (41.7-43.3)	30.1 (29.4-30.8)
3	9584 (15.6)	38.6 (37.6-39.6)	26.2 (25.3-27.1)
≥4	11 452 (18.7)	34.2 (33.3-35.1)	21.9 (21.1-22.7)
Medicaid eligible			
Yes	5738 (9.4)	39.9 (38.6-41.2)	26.8 (25.7-27.9)
No	55 613 (90.6)	41.3 (40.9-41.7)	29.0 (28.6-29.4)
Location ^d			
Metro	47 797 (77.9)	41.0 (40.6-41.4)	29.2 (28.8-29.6)
Nonmetro	12 442 (20.3)	41.5 (40.6-42.4)	27.7 (26.9-28.5)
Rural	1106 (1.8)	43.5 (40.6-46.4)	26.6 (24.0-29.2)
High school graduates in zip code area, %			
≤74	13 660 (22.3)	40.7 (39.9-41.5)	27.8 (27.0-28.6)
75-83	14 705 (24)	39.8 (39.0-40.6)	26.4 (25.7-27.1)
84-90	14 819 (24.2)	40.0 (39.2-40.8)	28.8 (28.1-29.5)
>90	16 371 (26.7)	43.5 (42.7-44.3)	31.8 (31.1-32.5)
No. of physicians visited			
1	15 909 (25.9)	40.4 (39.6-41.2)	32.6 (31.9-33.3)
2	18 278 (29.8)	40.6 (39.9-41.3)	29.9 (29.2-30.6)
3	13 168 (21.5)	42.4 (41.6-43.2)	28.4 (27.6-29.2)
≥4	13 996 (22.8)	41.5 (40.7-42.3)	23.6 (22.9-24.3)



Variation

- Variation among PCPs for PSA testing was 27%
- The variation among PCPs for ordering mammography and colonoscopy are 10% and 9% respectively
- Which PCP a man saw explained approximately 7 times more of the variance in PSA screening than patient characteristics
- Patient characteristics accounted for only 3.7% of the variance

Limitations include:

- accuracy of identifying the PCP
- exclusions of patients with HMOs
- lack of information on patient preference
- use of data from a single year in Texas

Limitations include:

- Southern states tend to have higher utilization rates for test and procedures
- Only assessed screening PSA tests but some symptoms may not have been coded

Further Research

- Which PCP characteristics lead to this variation?
 - Age?
 - Years of practice?
 - Board certification?
 - Area of practice?
 - Gender?

Conclusion

- PSA test is a poor screening test for prostate cancer
- Men with life expectancy less than 10 years should not have PSA test
- Physicians should counsel men that adamantly want the PSA test despite recommendations
 - Do they want a biopsy and possibly treatment if PSA is positive?
 - Do they know what the possible treatments entail?

Questions?