The Role Primary Care has in Reducing Prostate Cancer Disparities

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Prostate Cancer Disparity
Does it exist?
Prostate Cancer Disparity (AA vs EA)

At presentation

- **Age:** on average 3 years younger
- **Tumor:** increased volume, faster growth
- **PSA:** increased levels
- **Locally advanced features:** Seminal vesicle involvement increased, organ confined disease decreased
- Educational attainment, SES lower, greater likelihood of being underinsured
- **Marital Status:** Greater likelihood of being unmarried

Chornokur, G. et al; 2013
Prostate Cancer Disparities (AA vs EA) Disease Management

- **Decision making:** Fewer options supplied, more unaddressed concerns remain; fear of side effects; family shared decision making is low

- **Staging:** increased risk of not being staged

- **Definitive treatment:** surgery-overall less likely, EBRT- more likely for an early disease

- **ADT therapy for advanced disease:** less likely

Chornokur, G. et al; 2013
Prostate Cancer Disparity (AA vs EA)
Survival and QOL

- **Survival**: generally shorter
- **QOL**: generally lower
- **Increased side effects of treatment**: urinary, bowel, sexual dysfunctions, sleep disturbances, pain and traumatic stress
- **PSA recurrence**: increased risk
- **Mortality**: increased both cancer-specific and overall, increased health care cost, lower Hospice use

Chornokur, G. et al; 2013
Prostate Cancer Disparity
Some Contrast

- Equal Treatment = Equal Outcome\(^1,^2\)
  “Later stages at diagnosis is the primary reason for the higher likelihood of Pca mortality among African American compared to European American men”

\(^1\)Klein, JB et al J Nat Med Assoc. 2010
\(^2\)Merrill, RB Urology. 2000
Overtreatment

Dark Cloud over Prostate cancer
Proportion of colorectal cancer deaths that could be avoided annually in each state by eliminating racial/ethnic, socioeconomic, and geographic inequalities.

Ahmedin Jemal et al. JCO 2015;33:829-835
Proportion of colorectal prostate cancer deaths that could be avoided annually in each state by eliminating racial/ethnic, socioeconomic, and geographic inequalities?
Surgery regrets: I want my prostate back
Was that really necessary? Cancer survivor nagged by doubts

By Laurence Roy Stains
MSNBC and MensHealth
updated 8:32 a.m. ET, Wed., April 28, 2010
Prostate Cancer Iceberg

CRPrCa

Hormone Sensitive
PSA Recurrence
Locally advanced
Local disease
Screening Prevention

Medical Oncology
Urologist
Radiation Oncologist
Primary Care

Samm Hawley 2000
Estimated New Cancer Cases* in the US in 2015

<table>
<thead>
<tr>
<th>Cancer Site</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prostate</td>
<td>26%</td>
<td>29%</td>
</tr>
<tr>
<td>Lung &amp; bronchus</td>
<td>14%</td>
<td>13%</td>
</tr>
<tr>
<td>Colon &amp; rectum</td>
<td>8%</td>
<td>8%</td>
</tr>
<tr>
<td>Urinary bladder</td>
<td>7%</td>
<td>7%</td>
</tr>
<tr>
<td>Melanoma of skin</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Non-Hodgkin lymphoma</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Kidney &amp; renal pelvis</td>
<td>5%</td>
<td>4%</td>
</tr>
<tr>
<td>Oral cavity &amp; pharynx</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Leukemia</td>
<td>4%</td>
<td>3%</td>
</tr>
<tr>
<td>Liver &amp; intrahepatic bile duct</td>
<td>3%</td>
<td>3%</td>
</tr>
<tr>
<td>All other sites</td>
<td>21%</td>
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*Excludes basal cell and squamous cell skin cancers and in situ carcinoma except urinary bladder.
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Cancer Incidence Rates* Among Men, US, 1975-2008

Rate Per 100,000

Prostate
Lung & bronchus
Colon and rectum
Urinary bladder
Non-Hodgkin lymphoma
Melanoma of the skin
Liver

*Age-adjusted to the 2000 US standard population and adjusted for delays in reporting.
Cancer Death Rates* Among Men, US, 1930-2008

*Age-adjusted to the 2000 US standard population.
National Center for Health Statistics, Centers for Disease Control and Prevention.
Incidence of prostate cancer: International comparisons

Randomized Prostate Cancer Screening Studies


"<20% of responding PCP were confident in their knowledge about PSA, with a low correlation between confidence and actual knowledge"
Just stop screening?
Screen every one?
Just stop screening?

No. Potential public health disaster\(^1\)

Screen every one?

No, also a continued public health “disaster”

\(^1\)Gulati, R, Cooperberg, M. Expected impact on discontinued screening Cancer 2014
Gulati, R, Cooperberg, M. Expected impact on discontinued screening Cancer 2014
Model Predictions (for the next 12 years)

• No screening
  – Eliminates all overdiagnosed cases
  – More than doubles metastatic cases at presentation
  – Adds 36,000 – 57,000 PrC deaths (13%-20% increase)

• Continued screening
  – 710,000 – 1,120,000 overdiagnosed cases
  – 130,000 metastatic cases at presentation

• Age restricted (no screening in men >70 years)
  – Prevents 470,000 -720,000 overdiagnoses (↓~65%)
  – Added 58,000 – 73,000 metastatic cases at presentation (~50% increase)
  – Adds 13,000 – 22,000 PrCa deaths (↑5% - 8%)

¹Gulati, R, Cooperberg, M. Expected impact on discontinued screening Cancer 2014
Diagnosis  Treatment
Overdiagnosis linked to Overtreatment

Hamilton, A. et al BJUI 2011
Active Surveillance
Active monitoring, radical prostatectomy, or radiotherapy for localised prostate cancer: study design and diagnostic and baseline results of the ProtecT randomised phase 3 trial


Summary
Background Prostate cancer is a major public health problem with considerable uncertainties about the effectiveness of population screening and treatment options. We report the study design, participant sociodemographic and clinical characteristics, and the initial results of the testing and diagnostic phase of the Prostate testing for cancer and Treatment (ProtecT) trial, which aims to investigate the effectiveness of treatments for localised prostate cancer.

Methods In this randomised phase 3 trial, men aged 50–69 years registered at 337 primary care centres in nine UK cities were invited to attend a specialist nurse appointment for a serum prostate-specific antigen (PSA) test. Prostate biopsies were offered to men with a PSA concentration of 3·0 μg/L or higher. Consenting participants with clinically localised prostate cancer were randomly assigned to active monitoring (surveillance strategy), radical prostatectomy, or three-dimensional conformal external-beam radiotherapy by a computer-generated allocation system. Randomisation was stratified by site (minimised for differences in participant age, PSA results, and Gleason score). The primary endpoint is prostate cancer mortality at a median 10-year follow-up, ascertained by an independent committee, which will be analysed by intention to treat in 2016. This trial is registered with ClinicalTrials.gov, number NCT02044172, and as an International Standard Randomised Controlled Trial, number ISRCTN20141297.

Findings Between Oct 1, 2001, and Jan 20, 2009, 228,966 men were invited to attend an appointment with a specialist nurse. Of the invited men, 100,444 (44%) attended their initial appointment and 82,429 (82%) of attenders had a PSA test. PSA concentration was below the biopsy threshold in 73,538 (89%) men. Of the 8566 men with a PSA concentration of 3·0–19·9 μg/L, 7414 (87%) underwent biopsies. 2896 men were diagnosed with prostate cancer (4% of tested men and 39% of those who had a biopsy), of whom 2417 (83%) had clinically localised disease (mostly T1c, Gleason score 6). With the addition of 247 pilot study participants recruited between 1999 and 2001, 2664 men were eligible for the treatment trial and 1643 (62%) agreed to be randomly assigned (545 to active monitoring, 545 to radiotherapy, and 553 to radical prostatectomy). Clinical and sociodemographic characteristics of randomly assigned participants were balanced across treatment groups.

Interpretation The ProtecT trial randomly assigned 1643 men with localised prostate cancer to active monitoring, radiotherapy, or surgery. Participant clinicopathological features are more consistent with contemporary patient characteristics than in previous prostate cancer treatment trials.

Funding UK National Institute for Health Research Health Technology Assessment Programme.
Very low risk group
Hopkins retro.1801 men
256 A.A. and 1473 E.A.
Upgrading (27.3 vs 14.4%) P < 0.001

Low risk group
UCSF 4231 men
273 A.A. 3771 E.A.
Upgrading NS (34 vs 33%)
PSM (31 vs 21%) p < 0.03

African American Men With Very Low–Risk Prostate Cancer Exhibit Adverse Oncologic Outcomes After Radical Prostatectomy: Should Active Surveillance Still Be an Option for Them?

Debasish Sundi, Ashley E. Ross, Elizabeth B. Humphreys, Misop Han, Alan W. Partin, H. Ballentine Carter, and Edward M. Schaeffer

Platinum Priority – Prostate Cancer
Editorial by Alexandre R. Zlotta and Cynthia Kuk on pp. 458–459 of this issue

Racial Variation in Prostate Cancer Upgrading and Upstaging Among Men with Low-risk Clinical Characteristics

Mohamed Jalloh, Frank Myers, Janet E. Cowan, Peter R. Carroll, Matthew R. Cooperberg

University of California, San Francisco, San Francisco, CA, USA
So, what is a Primary Care Physician to do about PrCa Screening?

Decision Tool
Decision Tool for Prostate Cancer Screening

• **Key Facts** about PrC and screening
  – PrC is common, most men will develop it if they live long enough
  – Although only a small proportion of men with PrC die of the disease, the best evidence shows that screening reduces the risk for PrC death.
  – Screening detects many low-risk cancer or “indolent” cancer cases
  – In the U.S., most low-risk cancer is treated and the treatment itself can lead to complications, such as incontinence, erectile dysfunction, and bowel problems
Key take-home messages

- The goal of screening is to find aggressive PrC early and cure it before it spreads beyond the prostate.
- Most cancer cases found by screening do not need to be treated and can be safely managed by a program of careful monitoring known as “Active Surveillance”.
- If you choose to be screened, there is a good chance that you will be diagnosed with low-risk cancer and you may face pressure from your physicians or family to treat it.
Decision Tool for Prostate Cancer Screening

• Discrete decision
  – If you are concerned that you would be uncomfortable knowing that you have a cancer and not treating it, screening may not be for you
  – If you are confident that you would only accept treatment for aggressive cancer and would not be unduly worried about living with a diagnosis of low-risk disease, you are probably a good candidate for screening.
African American Male Priorities

- Health
- Education
- Economic Empowerment
- Criminal Justice
- Civic Participation

Areas identified to address by the State of African American Male (SAAM) initiative, set up by the Congressional Black Caucus Foundation.
This year thousands of men will die from stubbornness.

Learn the preventive medical tests you need. ahrq.gov