Disregard the USPSTF

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Prostate Cancer Facts

- 2nd leading cause of cancer death
- 30,000 deaths in U.S. a year
- 240,000 new diagnoses a year

More Facts

- 16% lifetime risk of diagnosis
- 3.4% lifetime risk of death
- Prostate cancer mortality has declined 30% in U.S. past 30 years since PSA introduced

Key Question 1. Does PSA-Based Screening Decrease Prostate Cancer-Specific or All-Cause Mortality?

- 5 randomized trials. Of these, 3 were considered to have "poor quality" data and 2 were considered to have "fair quality" data.
- 2 meta-analyses

PLCO

- 76,000 men randomized to screening vs usual care
- Significant increase in prostate cancer diagnosis
- 90% of men with diagnosis were treated
- No significant difference in mortality

Critique of PLCO

- Only had 7 year follow up
- Prior to entry into either arm 44% of men had prior PSA
- 52% of men in control arm had PSA testing during study
- The study did not really compare PSA testing in men compared to not testing them

Screened vs Control arm

- 2820 cancers detected in screened arm vs. 2322 in control arm
- 50 prostate cancer deaths in screened arm vs. 44 deaths in control
- So, no surprise there was not a significant mortality in the two groups. The groups were similar.

ERSPC

- 180,000 men
- Screening vs usual care
- Incidence of cancer in screened group 8.2% vs 4.8% in control
- For age group of 55 to 69 there was a statistically significant difference in prostate cancer mortality

Critique of ERSPC

- 9 year follow-up.
- Multiple centers with no consistency on screening schedule, criteria for biopsy, criteria for treatment
- Again, high percentage of men in control arm who did get psa testing
- High percentage of men who had psa before enrollment

USPSTF Conclusion

- "PSA based screening is associated with the detection of additional cases of prostate cancer, but small to no reduction in prostate cancer-specific mortality"

continued

- "The USPSTF recommends against PSA based screening for prostate cancer. This is a grade D recommendation"
- "This recommendation applies to men in the U.S. population that do not have symptoms that are highly suspicious for prostate cancer…"

Problems with data

- Screened groups evaluated inconsistently
- Majority of men in control groups had psa at some point in the studies. The study populations were not distinctly different
- Majority of men had psa testing prior to enrollment in the trial
- Low incidence of positive biopsy. Less than 25% compared to 40% in current practice

Problems

- Goteborg Sweden
- Subset of the ERPSC study. They did a better job
- 20,000 men age 50 to 64. Screen group consistently had psa every 2 years.
- Longer, 14 year follow-up
- 44% relative risk reduction in prostate cancer
- 12 mean treated to prevent one death

Independent analyses of data

- *37% reduction in death rate in Ireland where control group had low rate of PSA testing*
- *"Prostate cancer mortality in screen and clinically detected prostate cancer: Estimating the screening benefit." European Journal of Cancer, October 3, 2009. Van Leeuwen, P.J. et al.*

Correcting for contaminated data

- 31% reduction in prostate cancer death rate.
- *"Prostate cancer mortality reduction by prostate-specific antigen-based screening adjusted for nonattendance and contamination in the European randomised study of screening for prostate cancer (ERSPC)." European Urology, July 28, 2009. Roobol, M.J. et al.*

So, why disregard the USPSTF

- No alternative test for prostate cancer detection
- Data is sketchy and immature
- Data does show decreased mortality
- The suggestion of psa testing only in *symptomatic* men nonsensical
- Disservice to men sending out message that prostate cancer is a non-disease

Why else disregard USPTF

- Patients expect it
- The Law : B&P §2248, H&S §109280 (Grant H. Kenyon Prostate Cancer Detection Act) requires physicians to provide a standardized summary about the availability of appropriate diagnostic procedures when examining a patient's prostate gland during a physical examination
- Liability

Current AUA recommendation

- Informed patient who consents to screening
- Baseline PSA at age 40
- Decision to biopsy multifactorial
- Surveillence as treatment option discussed
- Screen patients with adequate health and life expectency

My interpretation

- PSA screening will detect more cancers
- In the first 10 years, there will only be a modest reduction in mortality
- There will be a trade off between certain risk of side effects with uncertain benefit of survival
- Be careful who you screen, be careful who you treat