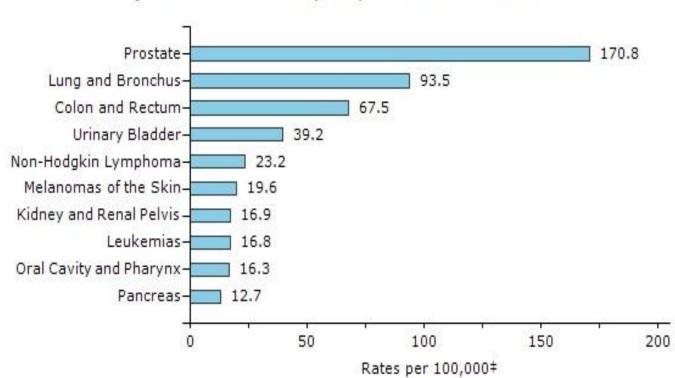
Contemporary Prostate Cancer Screening

Henry P. Gottsch MD, MS
Central Wyoming Urology Associates

History and Epidemiology of Prostate Cancer

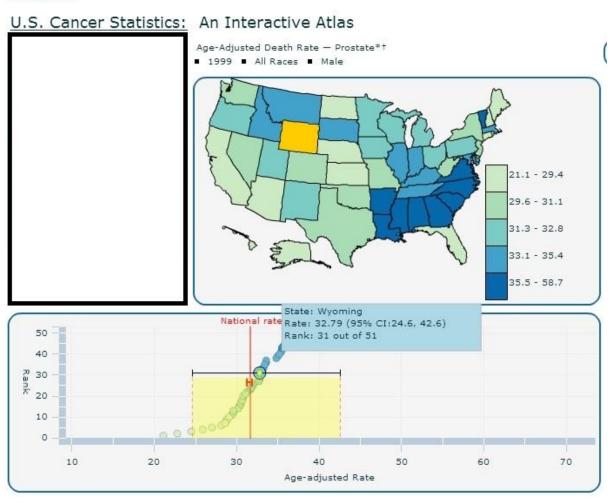
Top 10 Cancer Sites: 1999, Male, United States-All Races



S . F . V. I_ V. .

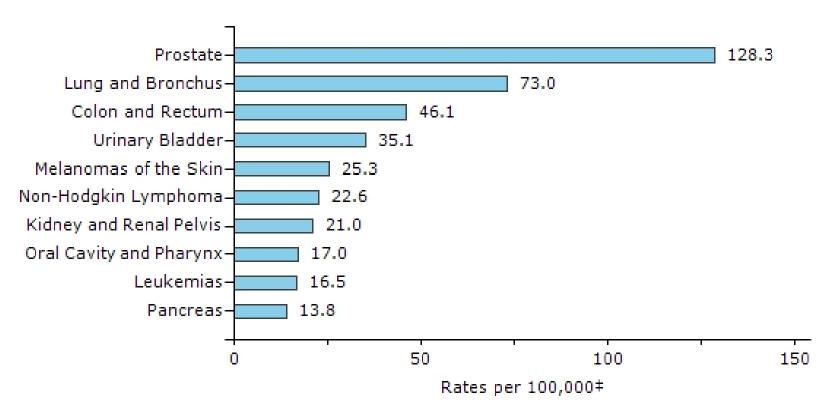
Historical Prostate Cancer Mortality





Epidemiology of Prostate Cancer

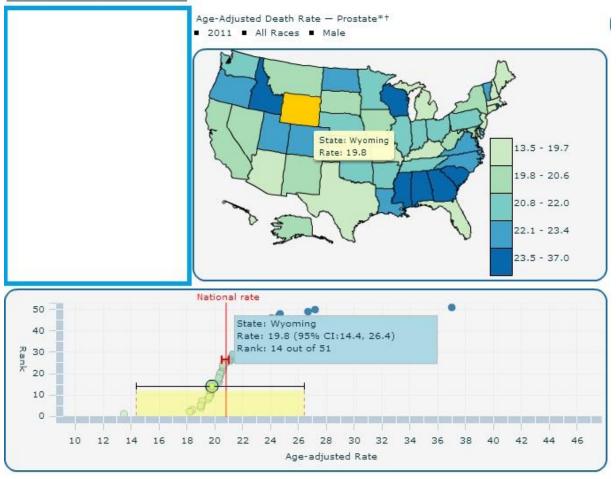
Top 10 Cancer Sites: 2011, Male, United States—All Races



Prostate Cancer Mortality







Prostate Cancer Screening

- Digital Rectal Exam
- Prostate specific antigen

What is PSA

- Prostate Specific Antigen
 - Human kallikrein 3: serine protease release in semen
 - Liquefy semen following coagulation of the ejaculate following emission

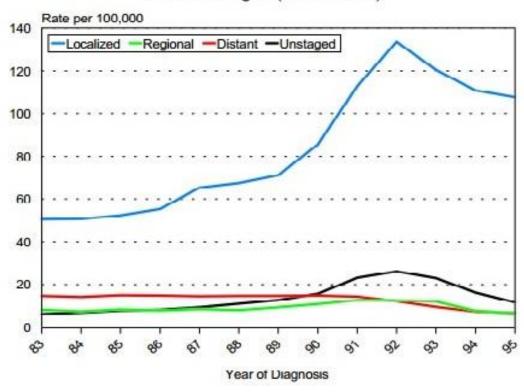
History of Prostate Specific Antigen

- FDA Approval
 - 1986 to monitor progression

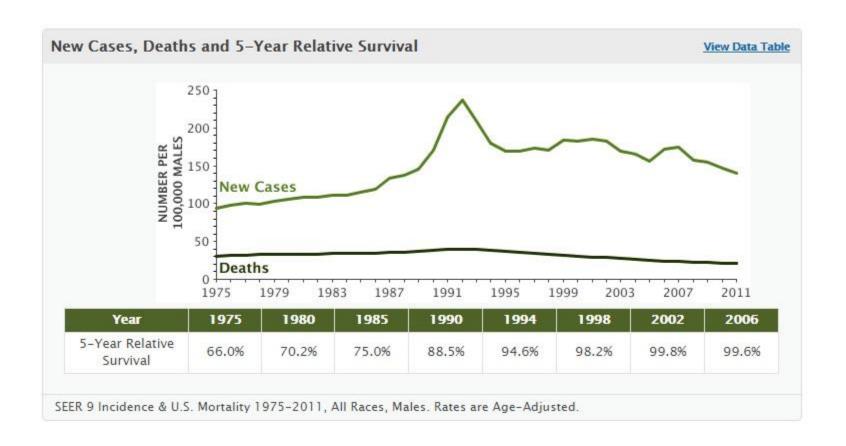
 1994 PSA in conjunction with digital rectal exam for asymptomatic men

Advent of the PSA Screening Era

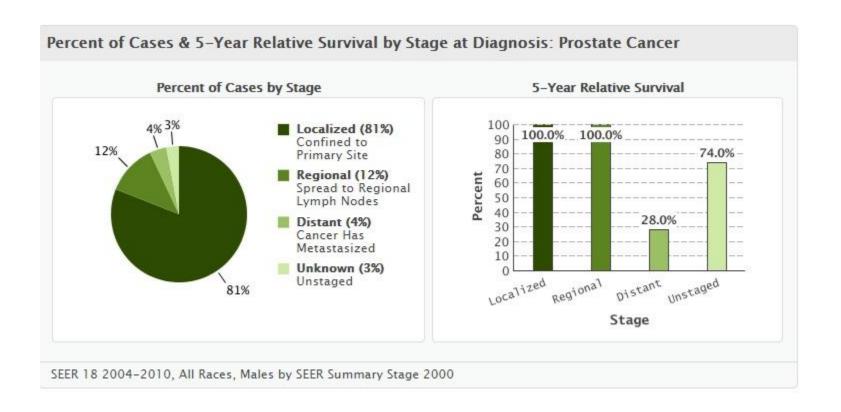




Advent of the PSA Screening Era



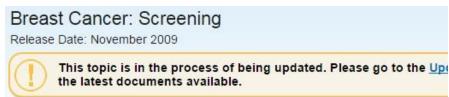
Mortality by Stage



U.S. Preventive Services Task Force 2012



U.S. Preventive Services Task Force



| Summary of Recommendations | | | |
|--------------------------------------|---|----------------------------|--|
| Population | Recommendation | Grade (What's This?) | |
| Women, Age 50-74 Years | The USPSTF recommends biennial screening mammography for women 50-74 years. | B | |
| Women, Before the Age of 50 Years | The decision to start regular, biennial screening mammography before the age of 50 years should be an individual one and take patient context into account, including the patient's values regarding specific benefits and harms. | C | |
| Women, 75 Years and Older | The USPSTF concludes that the current evidence is insufficient to assess the benefits and harms of screening mammography in women 75 years and older. Go to the Clinical Considerations section for information on risk assessment and suggestions for practice regarding the I statement. | I | |
| All Women | The USPSTF recommends against teaching breast self-examination (BSE). | D | |
| Women, 40 Years and Older | The USPSTF concludes that the current evidence is insufficient to assess the additional benefits and harms of clinical breast examination (CBE) beyond screening mammography in women 40 years or older. | I | |

U.S. Preventive Services Task Force

Human Immunodeficiency Virus (HIV) Infection: Screening

Release Date: April 2013

| Summary of Recommendations and Evidence | | | |
|--|--|----------------------------|--|
| Population | Recommendation | Grade (What's This?) | |
| Adolescents and Adults 15-65 Years Old | The USPSTF recommends that clinicians screen for HIV infection in adolescents and adults aged 15 to 65 years. Younger adolescents and older adults who are at increased risk should also be screened. Go to the Clinical Considerations for more information about screening intervals. | A | |
| Pregnant Women | The USPSTF recommends that clinicians screen all pregnant women for HIV, including those who present in labor who are untested and whose HIV status is unknown. | A | |

Cochrane Review

Published 2013

 No cancer specific mortality benefit in 2 of the five studies

European trial w/ demonstrated 21% relative reduction risk

European Randomized Screening at 13 year follow-up

- 13 year follow-up reported December of 2014
 - 162,387 men from 7 European countries
 - Reduction in death of 1 per 781 men(95% CI 490-1929)
 - 1 per 27(Cl 17-66) cancer detected
 - Reduction in mortality for screened men .73(CI .61-.88)

Swedish Trial of Prostatectomy versus Observation

- 15 year Data
- Number needed to treat 15 to prevent cancer death
 - For men <65 years of age number needed to treat
- Local progression
 - Surgery 21.5 %
 - Observation 49.3%

American Urology Association Recommendations

Men aged 50-70

Annual to biannual PSA

Annual DRE

European Prostate Screening Recommendations

Men with 10-15 year life expectancy

High risk men earlier

Summary

 PSA screening has likely led to improved survival and decreased mortality and morbidity of prostate cancer

 Treatment and management of prostate cancer has known side effects that need to be addressed and case-by-case basis