Localized Prostate Cancer: I Choose Radical Prostatectomy

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Management of Prostate Cancer

This interactive feature addresses the diagnosis or management of a clinical case. A case vignette is followed by specific clinical options, none of which can be considered either correct or incorrect. In short essays, experts in the field then argue for each of the options. In the online version of this feature, available at www.nejm.org, readers can participate in forming community opinion by choosing one of the options and, if they like, providing their reasons.

- 63yM with PSA 1.5 ng/mL → 3.8 ng/mL, cT1c
- Normal sexual function, active and healthy
- TRUS: 22cm³
- PNBx: 3+3=6 in 2/12 cores (10%, 20%)
Management of Prostate Cancer — Polling Results

Robert S. Schwartz, M.D.

north america total, 2046

37% expectant management
27% radiotherapy
36% radical prostatectomy

Europe total, 759

39% expectant management
35% radiotherapy
26% radical prostatectomy

Asia and Russia total, 266

38% expectant management
33% radiotherapy
29% radical prostatectomy

South America total, 465

47% expectant management
21% radiotherapy
32% radical prostatectomy

Africa total, 42

48% expectant management
21% radiotherapy
31% radical prostatectomy

Australia and Oceania total, 97

37% expectant management
32% radiotherapy
31% radical prostatectomy

Schwartz RS. NEJM 2009; 360: e4
• The lack of consensus makes it critical to have a detailed and objective conversation with the patient regarding the risks and benefits of each treatment option.

- Radical prostatectomy
- Watchful waiting/active surveillance
- Radiation therapies
- Others (proton beam, cryotherapy, HIFU, etc.)
RP vs. WW/AS

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20-Year Outcomes Following Conservative Management of Clinically Localized Prostate Cancer

- 767 men diagnosed with clinically-localized prostate cancer
- Treatment with observation or delayed ADT
- Median f/u 24 years

Albertson PC et al. JAMA 2005; 293: 2095

MANY MEN WILL DIE OF PROSTATE CANCER
Survival Associated With Treatment vs Observation of Localized Prostate Cancer in Elderly Men

Population-based cohort (SEER-Medicare)
- 44,630 men aged 65-80 years with low/intermediate risk CaP

After 12 years
- 37% died in observation group
- 24% died in treatment group
- Hazard ratio: 0.69 (95% CI 0.66-0.72)
Radical Prostatectomy versus Watchful Waiting in Early Prostate Cancer

- 695 men with early CaP randomized to RP or WW from 1989-1999 (8.2 year median f/u)
- RP reduces
  - Cancer-specific mortality: (RR 0.56; 95% CI 0.36-0.88)
  - Overall mortality: (RR 0.74; 95% CI 0.56-0.99)
Summary: RP vs. WW/AS

- Hard to define inclusion criteria
- Perform AS long-term
- No certain test to signal timing of delayed intervention
- Risk of “missing the window”
RP vs. RT

- Radical prostatectomy
  - Watchful waiting/active surveillance
  - Radiation therapies
  - Others (proton beam, cryotherapy, HIFU, etc.)
Radiotherapy

• Associated with similar 5-year rates of cancer control

• However, RT delays detection of local recurrence
  – Local therapy can be hazardous (salvage RP) or ineffective

• No RCT comparing RP to RT, but population-based studies demonstrate lower OS and CSS for RT
• 1618 men followed in Connecticut Tumor Registry with clinically localized CaP
  – Diagnosed between 1990-2
  – Median f/u: 13.2 years

Proportional hazards model used to minimize confounding from risk-stratification
-- RT: HR 2.2 (95% CI 1.6-3.1)
-- WW: HR 3.4 (95% CI 1.9-5.9)
  (compared with RP)
13-Year Outcomes Following Treatment for Clinically Localized Prostate Cancer in a Population Based Cohort

Peter C. Albertsen,* James A. Hanley, David F. Penson, George Barrows and Judith Fine

From the University of Connecticut Health Center, Farmington and St. Francis Hospital and Medical Center, Hartford, Connecticut, McGill University, Montreal, Quebec, Canada, and University of Southern California, Los Angeles, California

**FIG. 4.** Overall survival in 3 treatment groups with standardization via proportional hazards model to average covariate profile in each D’Amico risk category. S, surgery. R, radiation therapy. O, observation.

RP CONFERS DSS AND OS ADVANTAGE OVER RT

Albertsen PC et al. J Urol 2007; 177: 932
• Health-related QOL outcomes from 1201 patients and 625 spouses/partners before and after RP and RT (EBRT and BT)
  – Data gathered pre-treatment and at 2/6/12/24 months after treatment
  – Median follow-up 30 months
  – All patients with cT1 or cT2 prostate cancer
Quality of Life and Satisfaction with Outcome among Prostate-Cancer Survivors

- **Brachytherapy**
  - Urinary irritation, obstruction and incontinence

- **Radiotherapy and brachytherapy**
  - Rectal urgency, frequency, pain, incontinence, hematochezia

- **Adjuvant hormonal therapy** led to worse outcomes across multiple QOL domains
Summary: RP vs. RT

• No level one evidence favoring either therapy
• Population-based data favors RP
• QOL after RT can vary (just as after RP)
RP vs. others

- Novel therapies are limited by short follow-up, which is a major limitation in assessing outcomes for clinical localized prostate cancer.
The “other” options

• HIFU
  – Not commercially available in the US

• Proton beam therapy
  – No demonstrated superiority to other radiation modalities
  – Most costly treatment, limited facilities

• Cryotherapy
  – Can have significant side effects (ED)
  – Difficult to monitor for recurrence

• Hormonal therapy alone
  – Guidelines from the AUA and the EAU do not recommend its use as first-line therapy
Conclusions

I choose RP because:

• 20-30% will die of disease if untreated
• Surgery today is associated with less morbidity
• Actual pathology guides treatment best
• I can detect disease recurrence much earlier
  – Minimize the need for further unnecessary therapy
• RP offers best long term (>15 years) cure