

Prostate Cancer Treatment

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Active Surveillance

- Small tumors ~ slow growth
- Found on PSA screening
- Incidental finding in BPH treatment
- NCCN advises active surveillance in younger male with slow-growing disease and likely to live more than 10 years.

Noteworthy: 'Observation' is recommended if expected to live less than 10 years.

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Surgical Treatment

- Radical prostatectomy
 - Open
 - Radical retropubic (RRP)
 - Radical perineal
 - Laparoscopic radical
 - Robotic-assisted lap prostatectomy (RALP)
- Pelvic lymph node dissection (PLND)

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Code	Surgery
20	Local tumor excision
21	TURP NOS
22	TURP – incidental finding for benign disease
23	TURP – suspected/known cancer
	Any combo of 20-23 WITH
	24 Cryosurgery
	25 Laser
	26 Hyperthermia
30	Subtotal, segmental or simple prostatectomy, may leave capsule intact. [SEER NOTE: May include suprapubic prostatectomy]
50	Radical prostatectomy, NOS; total prostatectomy, NOS Includes excision of prostate, prostatic capsule, ejaculatory ducts, seminal vesicle(s); and may include a narrow cuff of bladder neck.
70	Prostatectomy WITH resection in continuity with other organs; pelvic exenteration. [SEER NOTE: "in continuity with" or "en bloc" means all tissue removed during same procedure, not just single specimen]
80	Prostatectomy NOS

Radiation Therapy

- External Beam Radiation Therapy [EBRT] common
 - ADT (androgen deprivation therapy) given with EBRT
- 3D-CRT (three dimensional conformal radiation therapy)
 - IMRT precise type of 3D-CRT
- Brachytherapy common
 - LDR Brachytherapy
 - HDR Brachytherapy

Radiation Treatment Modality Phase I, II, III

Code	Description
00	No radiation treatment
01	External beam, NOS
02	External beam, photons
03	External beam, protons
04	External beam, electrons
05	External beam, neutrons
06	External beam, carbon ions
07	Brachytherapy, NOS
08	Brachytherapy, intracavitary, LDR
09	Brachytherapy, intracavitary, HDR
10	Brachytherapy, interstitial, LDR
11	Brachytherapy, interstitial, HDR
12	Brachytherapy, electronic
13	Radioisotopes, NOS
14	Radioisotopes, Radium-223
15	Radioisotopes, Strontium-89
16	Radioisotopes, Strontium-90
99	Treatment radiation modality unknown, Unknown if radiation treatment administered

EBRT just means no radioactive source inserted. Can use seeds for EBRT as markers.

Radioactive seed placement in prostate tissue different than using seeds as markers for EBRT!

TIPS

- PHOTONS: X, Mv, MeV means megavoltage. Example 6x beam=photons
- ELECTRONS: E stated as 6e.
- PROTONS rarely used in treating prostate cancer because few proton units in U.S. There is one in Boston, but very large, very expensive units.

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CAUTION

✓ SEEDS

- ✓ Used less: Prostate brachytherapy uses RADIOACTIVE seeds inserted into prostate tissue
- ✓ Used often: Prostate EBRT uses seeds for placement/markers to align treatment. Usually placed in OR. These are not radioactive.

IMRT seeds used for placement/treatment planning. These are not truly brachytherapy because these seeds are NOT radioactive.

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Cryosurgery

- Option if radiation therapy fails
- Freezes prostate tumors
- Outpatient
 - Tiny needles inserted into prostate through perineum
 - Argon gas flows through needles and freezes prostate, killing cancer cells
- Surgery code 13 per Appendix C

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HIFU

- High-intensity focused ultrasound
- Given if radiation fails
- Heat kills cancer cells
- Probe inserted in rectum and sound waves directed at cancer
- Surgery code 17 per Appendix C

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Hormone Therapy

- Bilat orchiectomy [coded 30 in Heme/Endo Proc NAACCR #3250]
- LHRH Luteinizing hormone-releasing hormone
 - Agonists—drugs that lower testosterone made by testicles (Lupron, Zoladex)
 - Antagonists – works similar to agonist but lowers testosterone more quickly and doesn't cause flare. "Medical castration" (Firmagon)
- Antiandrogens – Eulexin, Casodex (often used with orchiectomy or LHRH agonist) Called 'combined androgen blockade' (CAB).
- Estrogens
- Corticosteroids

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Immunotherapy

- Sipuleucel-T uses WBC to destroy prostate cancer cells
- Pembrolizumab approved with certain DNA changes, i.e. MSI-H or MMR

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Chemotherapy

- Docetaxel
- Cabazitaxel if docetaxel fails

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Radiopharmaceuticals

- Radium-223 to treat prostate ca with bone mets
- 89Sr and 153Sm relieve pain cause by bone mets

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Others

- Clinical Trials
- Cryosurgery or high-intensity focused ultrasound
- Vascular-targeted photodynamic therapy – VTP

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Neoadjuvant Therapy

- Hormones: Lupron before surgery
- Radiation therapy with Hormone before surgery
- NADT (Neoadjuvant androgen deprivation therapy)
 - Given prior to RP
- Uncommon – some clinical trials

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JNCCN Update on Prostate NCCN.org/patients



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Questions

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