

Comparisons of Definitive Treatment Options for Localized* Prostate Cancer

	Description	Selected Risks	Recovery and Quality of Life (QoL)
HIFU**	Outpatient transrectal delivery of focused acoustic energy.	Low risk of incontinence and impotence due to 3D ultrasound and doppler application.	Outpatient. Patient leaves with small suprapubic catheter and can expect good QoL.
Cryoablation	Outpatient percutaneous placement of cryoprobes into prostate for freeze-thaw cycles to iceball prostate.	Low to moderate risk for incontinence and impotence.	Possible overnight stay with catheter in penis for one week. Generally good QoL.
Radiation options	Radiation delivery in various formats including percutaneous radioactive seed placement.	Radiation beam entry and exit injury causing collateral damage. Low to moderate risk of irritable bladder, bowel dysfunction and impotence.	Eight week outpatient treatments often followed by radioactive seed placement. Generally good QoL may need HIFU** or cryo for recurrence.
Robotic or surgical options	Various surgical options including open, laparoscopic and robotic surgery.	Disruption of prostate from adjacent urinary sphincter and adjacent nerves for erection results in moderate to high risk of incontinence, impotence, shortened penis and positive margins.	Recovery depends on complications and blood loss. Overnight hospitalization required. Patient will need catheter in penis several days and may need surgery for complications. Fair QoL due to incontinence and impotence.

* Localized is generally seen in low risk prostate cancer with PSA<10ng/ml and Gleason score <6 and for T1-T2a stages, as well as some low volume intermediate risk prostate cancer with PSA 10-20ng/ml and a Gleason score of 7.

** HIFU, although performed worldwide, is undergoing FDA evaluation with clinical trials in the US. No other definitive treatment option for localized prostate cancer has been scrutinized through an FDA trial.

Cure rates, outcomes and results were not listed as they are not always meaningful for three main reasons:

- 1) Few if any studies include independently validated prostate pathology.
- 2) Constant evolution and refinement of a particular technology makes comparisons of cure rates with other treatment options, or even with the same but earlier versions of that technology, spurious.
- 3) Men with the same clinical stage prostate cancer may in fact, have prostate cancers with very different tumor volumes and Gleason scores, as well as cancers involving very different regions of the prostate.

Recurrence of prostate cancer may be seen after any of the four definitive treatment options for localized disease.