Objective: To determine the pre-treatment and treatment related factors that influence 17-year cause-specific survival (CSS) in men undergoing permanent seed implantation (PSI) for localized prostate cancer.

Materials/Methods

- 1776 men followed a minimum of 6 years (mean 10.3, range 6-22.4) 705 (39.7%) had PSI alone, 123 (6.9%) had PSI plus external beam irradiation (EBRT), 434 (24.4%) had PSI plus neoadjuvant hormone therapy (NHT) and 514 (28.9%) had and PSI plus NHT/EBRT.
- 948 (53.4%) received NHT for a median of 6 months (75%ile 3-9). NHT was given in men with NCCN1 (798, 44.9%) for 3 months for prostate volume > 50 cc, in NCCN2 (413, 23.3%) for 6 months and for 9 months in men with NCCN3 (565, 31.8%). 123 men received EBRT boost instead of NHT (NCCN2) and 434 of the NCCN3 received both NHT and EBRT.
- Radiation doses were converted to the biological equivalent dose (BED) using an α/β of 2.
- CSS was determined by the absence of clinical recurrence at the time of death. Means were compared by ANOVA. Survival estimates were calculated by Kaplan-Meier method with comparison of variables by log rank and hazard rates (HR) computed by Cox regression.

Conclusions

- Substantial decrease in CSS after 10 years in GG5
- Higher radiation doses improve survival
- No apparent benefit to hormonal therapy