Quality of Life After Open or Robotic Prostatectomy, Cryoablation or Brachytherapy for Localized Prostate Cancer

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HIGHLIGHTS
• Highest urinary function and bother scores were reported with cryotherapy
• Cryoablation post treatment scores exceeded 100% of baseline, presuming reduction in outlet obstruction with subsequent improvement in obstructive and irritative symptoms
• Largest prospective, single center study evaluating HRQOL profiles for cryotherapy, ORP, RAP, BT

BACKGROUND
• Operative treatments for prostate cancer may produce comparable oncological outcomes
• Patient reported quality of life outcomes – important measures – vary among options

OBJECTIVE
• To prospectively compare the health related QOL impact and recovery profiles for four common prostate treatment modalities

METHODS
• Prospective, longitudinal cohort study of HRQOL outcomes
• Evaluated cryoablation, open radical prostatectomy (ORP), robotic assisted laparoscopic radical prostatectomy (RAP) or brachytherapy (BT)
• Participants completed a self-administered UCLA-PCI questionnaire
  - Questionnaires pre treatment and 3, 6, 12, 18, 24, 30 and 36 months post treatment
  - HRQOL urinary, sexual and bowel function and bother scored using a 100-point scale
• Baseline and longitudinal data compared across treatment types
  - Low baseline scores excluded participants from domain specific analyses
  - Survival analysis evaluated rate of return to 90% baseline for each treatment modality

RESULTS AND DISCUSSION

![Urinary Function Graph]

- Cryotherapy
- Brachytherapy
- Open Radical
- Robotic Radical
• HRQOL data for 785 patients analyzed (excluded patients with insufficient follow up and multi-modality treatments)
• 23.8 months mean follow up for entire cohort (median 30, range 3 to 36)
• Substantive variations among treatment modalities for HRQOL domains
• Cryotherapy had a 3-fold higher rate of return to baseline urinary function
  - Use of current generation cryosurgery systems minimizes damage to the sphincter
  - Low rates of urinary incontinence / high urinary function scores
  - Post treatment bother scores exceeded 100% baseline scores
    • Improvement possibly from reduced outlet obstruction, leading to improved obstructive and irritative symptoms

• Sexual function and bother scores were higher in men treated with BT
• Nerve sparing status did not appear to affect sexual function outcomes
• Sexual function poorest after cryotherapy
  - Over half of these patients started with low baseline sexual function
• Minimal changes in bowel function and bother for all treatments
  - Difference from other studies may be explained by use of different questionnaires, data analysis and study design

CONCLUSIONS
• Treatment of prostate cancer with cryotherapy, in contrast with use of open or robotic assisted radical prostatectomy modalities, results in higher urinary function and bother QOL outcome scores