

## **Prospective analysis of long-term health-related quality-of-life after permanent brachytherapy for prostate cancer**

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### **Background and purpose:**

Important criteria for patients seeking non-surgical treatment options for localized prostate cancer are expected influences on their quality of life. Aim of our study was to prospectively evaluate long-term urinary, bowel and sexual function status after permanent brachytherapy (PB) with I125-seeds using validated quality-of-life (QoL) questionnaires.

### **Materials and methods:**

939 patients were treated in a single European institution with permanent seed implants between December 2000 and June 2006 using iodine stranded seeds. Out of those 506 consecutive patients (treated between July 2004 and June 2006) were separated and followed in terms of QoL, urinary function and sexual status. Validated questionnaires (IPSS, EORTC QLQ-C30, PR25-Prostate-Module, IIEF5) were administered to patients before and at 1, 3, 6, 12, 24, and 36 months after treatment.

### **Results:**

Median follow-up of patients was 32.4 months (16 to 41 months). Urinary function (before PB mean IPSS 6.7) significantly worsened at 3 and 6 months after PB (mean IPSS 13.2/9.9) but returned to pre-treatment levels after 12 months (mean IPSS 8.2). Urinary bother score (UB) in PR25 was significantly worse at 3 and 6 months after PB and reached baseline at 12 months. 67.7% of patients had normal erectile function in IIEF5 before PB. In potent patients erectile dysfunction was noted at intervals 12, 24 and 36 months after PB in 35.3%, 31.8% and 33%. General health status (GHS) before PB was excellent (score 88.85) and remained stable at all intervals after PB (mean score 89.82). There was no change in bowel function (BF) throughout the study period (before PB score 3.06, after PB mean score 5.1).

### **Conclusions:**

General health status of patients after permanent prostate implant is excellent throughout treatment period. The rate of long-term erectile dysfunction remains low. The results of our study show that permanent brachytherapy leads to only minor deterioration in quality of life and transient urinary symptoms.