



## Prostate Cancer Patients Report on Benefits of Proton Therapy – Follow-on Study

### Executive Summary

The National Association for Proton Therapy (NAPT) commissioned Dobson DaVanzo & Associates, LLC (Dobson | DaVanzo) to investigate clinical outcomes and patient satisfaction among men treated with proton therapy for prostate cancer through a follow-on study to a 2013 report.<sup>1</sup> In this study, we compare patient demographic, satisfaction, and clinical outcome data from those surveyed for the 2013 study to those surveyed for this year's study. We also present new analyses through information captured in our revised and enhanced survey instrument.

With the assistance of representatives from numerous proton therapy centers, we captured survey responses from 3,798 former patients across 12 different proton therapy centers. This was an additional 5 proton therapy centers and almost twice the number of patients who completed last year's survey. In total, we captured responses from approximately 17 percent of all patients who received proton therapy for treatment of prostate cancer since 1991, shortly after the first proton therapy center was established.

#### Key Findings

- Findings of the 2014 survey were highly consistent with the 2013 findings.
- Patients continue to be extremely satisfied with their proton therapy treatment.
  - Of 3,636 responding, 96 percent have recommended proton therapy to others
  - Of 3,653 responding, 98 percent rated their proton therapy experience as “excellent” (88 percent) or “good” (10 percent);
  - Of 3,632 responding, 98 percent believed they made the best treatment decision for themselves;
  - Of 3,637 responding, 96 percent were “satisfied” (15 percent) or “extremely satisfied” (81 percent) with their proton therapy treatment;
  - Of 3,642 responding, 85 percent reported that their quality of life was “better than” (27 percent) or “the same as” (58 percent) before their treatment.
- To measure each patient's post-treatment health condition, we used the Expanded Prostate Cancer Index Composite (EPIC), a validated instrument developed by the University of Michigan and UCLA that measures health related quality of life (HRQOL), specifically among men with prostate cancer. Scores were calculated on a 1-100 scale with 100 indicating the best HRQOL.
  - Urinary incontinence, urinary irritative, and bowel Health-Related Quality of Life (HRQOL) scores were significantly lower among 2014 respondents than 2013 respondents. These differences, however, were in large part attributable to higher age and longer time since treatment in the 2014 survey. On the other hand, sexual HRQOL was significantly higher among 2014 survey respondents compared to 2013 respondents.

**Approximately 97 percent of respondents receiving proton therapy reported no recurrence of their prostate cancer**

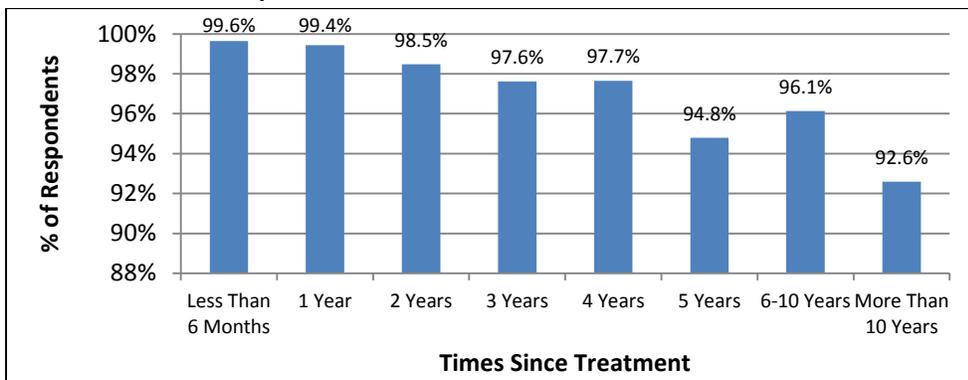
<sup>1</sup> DaVanzo J, Reuter K, Pick A. (2013). Prostate Cancer Patients Report on Benefits of Proton Therapy. Report Submitted to National Association for Proton Therapy (NAPT)



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- In both surveys, we found that patients who received *only* proton therapy for treatment of their prostate cancer did not have significantly different HRQOL scores post-treatment from a prostate cancer-free control group in each category we examined: 1) Urinary incontinence, 2) Urinary irritative, 3) Bowel, and 4) Sexual HRQOL.
- Approximately 97 percent of patients who received only proton therapy treatment for their prostate cancer reported no recurrence of cancer. This is more favorable than the recurrence rates reported for other treatment modalities such as IMRT and surgery.<sup>2,3</sup> A large proportion of proton patients reporting a recurrence were more than 10 years removed from treatment (Exhibit 1).

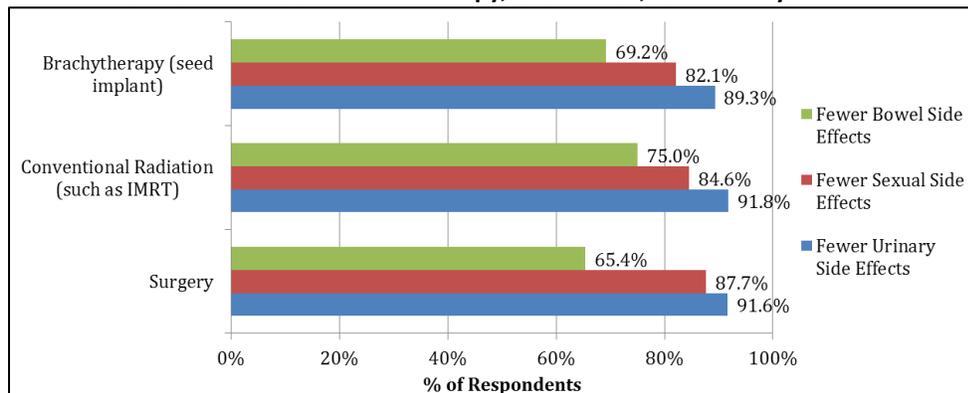
**Exhibit 1. Percent of Respondents with No Recurrence of Prostate Cancer, by Time since Treatment, 2014 Survey Results**



Source: D | D Analysis of Survey Data; Note: Excludes Surgery, Cryo, HIFU, and respondents receiving photon or hormone therapy in addition to their proton therapy. n=3,682

Patients were asked why they chose proton therapy treatment over other treatment modalities, including surgery, conventional radiation such as IMRT, and brachytherapy. Among respondents, the most common reason for choosing proton therapy over other treatment modalities was the desire for fewer side effects (Exhibit 2).

**Exhibit 2. Decision to Choose Proton Therapy, Side Effects, 2014 Survey Results**



Source: D | D analysis of survey data. n= 2,904 (brachytherapy), 3,382 (conventional radiation), 3,387 (surgery)

<sup>2</sup> Zelefsky et. al (2006). Long-Term Outcome of High Dose Intensity Modulated Radiation Therapy for Patients with Clinically Localized Prostate Cancer. The Journal of Urology, 176 (4):1415-1419

<sup>3</sup> Patient Advocates for Advanced Cancer Treatments. (2012). Prostate Cancer Recurrence After Prostatectomy