

Annual PSA Screening Provides Economical and Social Benefits for the Management of Prostate Cancer in Saga Prefecture, Japan

Introduction and Objective: The clinical benefit of PSA screening to detect early stage prostate cancer is generally recognized. However, economical and social benefit of PSA screening is not well evaluated. We compared the clinical background of asymptomatic prostate cancer detected by PSA screening with that of symptomatic prostate cancer to determine the economical and social benefits of PSA screening.

Materials and Methods: Between January 2000 and December 2011, a total of 928 out-patients with suspected prostate cancer visited Saga University Hospital and 586 patients were diagnosed as prostate cancer. Their clinical data including age, PSA, clinical stage, pathological diagnosis, initial therapy were reviewed retrospectively. Short-term economical impact of each treatment option were evaluated by hospital fees and drug fees for 3 years from initial treatment.

Results: Mean PSA value of screened patients was 6.9 ng/ml and significantly lower than that of symptomatic patients with 17.1 ng/ml respectively. Cancer detection rates in screened patients and symptomatic patients were 57.2% and 69.2%, respectively. The screening group tended to involve lower grade and earlier stage prostate cancer than symptomatic cancer group. Among all therapeutic options, proportions of patients treated with radical prostatectomy, radiotherapy and active surveillance have been increased annually. The average short-term medical expenses for each cancer patient decreased by approximately 25%, from 1.94 million yen in 2000 to 1.57 million yen in 2011. Average short-term medical expenses of each patient in the screening group and the symptomatic group were 1.32 million yen and 1.77 million yen, respectively. The patients with PSA 10 ng/ml or more showed 1.9 times higher cost (1.83 million yen) than the patients with PSA less than 10 ng/ml (1.09 million yen).

Conclusions: The present study indicated the economical and social benefits of PSA screening for prostate cancer.