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# **I125 low-dose-rate brachytherapy in localized prostate cancer: preliminary results after 4 years**

*Ledas Giedrius<sup>1</sup>, Makevicius Jurijus<sup>2</sup>, Rimas Audrius<sup>2</sup>, Sniureviciute Milda<sup>3</sup>,  
Zeimyte Roberta<sup>4</sup>*

<sup>1</sup>Vilnius University, Faculty of Medicine, Vilnius, Lithuania <sup>2</sup>Vilnius University, Clinic of Gastroenterology, Nephrourology and Surgery, Urology, Vilnius, Lithuania <sup>3</sup>Vilnius University, Department of Radiology, Nuclear Medicine and Physics of Medicine, Vilnius, Lithuania <sup>4</sup> Lithuanian University of Health Sciences, Faculty of Medicine, Kaunas, Lithuania

**Background.** Prostatic brachytherapy by permanent implant of I125 is a therapeutic option in the treatment of organ-confined prostate cancer. We analyse preliminary results and complications after four years in the group of patients who received I125 low-dose-rate brachytherapy as the only intention-to-cure treatment and evaluate the differences with the standard treatment (surgery).

**Aim.** The evaluate results of I125 low-dose-rate brachytherapy treatment for localized prostate cancer.

**Methods.** The study group includes 69 patients enrolled between 2008 and 2011. The mean follow-up is 48 months. Biochemical failure was defined in accordance to the EAU criteria. Statistical survival analysis was carried out with the SPSS statistical software using the Kaplan Meyer method. Urinary and gastrointestinal complications were evaluated in accordance to the RTOG criteria.

**Results.** The mean age was 61 years (range 46–78 years). 100% of the patients presented a clinical stage  $\leq$  T2a with 97.2% of the cases having a PSA  $\leq$  10 ng/ml. Gleason score was  $\leq$  6 in 100% of the cases. All cases had a prostate volume  $<$  50 cc. Overall, 4-year survival was 100%, with a 100% disease-free survival and a 100% biochemical failure-free survival.

**Conclusion.** Low-dose brachytherapy offers good short-term cancer control in selected men with localized PCa. The further studies are needed for safety analyses and for comparison with other treatment modalities.