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Due to improved early detection more prostate cancers are discovered at an early stage. At the same time the uncertainty whether all tumors diagnosed require invasive therapy, such as radical surgery, grows because now we know that many of these tumors would never cause problems, let alone lead to death. Swedish and U.S. scientists have attempted to clarify in a model calculation, for which men with a tumor limited to the prostate the operation is actually beneficial and for which men it is not beneficial. They analyzed data from a total of 695 men who either underwent surgery or whose tumors were monitored without active treatment (Active Surveillance).

### **Questionable benefits of the surgery**

The study<sup>2</sup> showed that a majority of men do not, as previously believed, benefit from the surgery. Foremost included were prostate cancer patients with non-palpable, less aggressive tumors (T1 tumors with Gleason score 6) and men over 70 years of age. But also for patients whose tumor condition were less favorable (T1 tumors with Gleason score 7 and T2 tumors with Gleason score 6), the value of a surgery cannot according to the scientist clearly be evidenced. The situation is different for young men who have an aggressive tumor. Here the risk to die from the effects of prostate cancer is reduced by an invasive therapy.

This raises the question whether radical treatment is warranted in every case? "It makes little sense to those affected, who, because of the favorable condition of their tumor or based on their age do not have to expect a clinically relevant tumor growth, to have the prostate removed

completely", says Dr. Derakhshani, urologist at the West German Prostate Center. A radical prostate surgery is the wrong approach here, especially since the procedure can be associated with significant side effects. For example, up to 50 percent of the operated patients suffer after surgery from stress incontinence and 30 to 100 percent from erectile dysfunction.<sup>1</sup>

If at all, the goal of treatment should be to achieve the best possible cure with minor side effects. Suitable for this purpose, are especially minimally invasive treatment methods like internal radiation. In the so-called brachytherapy ultrasound guidance smallest radiation sources (seeds) are placed directly into the prostate. Thus the brachytherapy has a significant advantage over radical prostatectomy: "Through a precise distribution of the radiation dose, we can irradiate the tumor without damaging surrounding structures such as urethra or sphincter", says Dr. Derakhshani.

Moreover, the equivalence of brachytherapy compared with radical surgery has to be considered in terms of the recovery rate, says the urologist. Thus, a current meta-analysis<sup>3</sup> was able to demonstrate that brachytherapy alone or in combination with an additional radiation or hormonal therapy in all disease stages of localized prostate cancer compared to radical surgery is at least equivalent or even better. "The patient can combine the advantage of an optimal tumor treatment with the in comparison to the operation, fewer occurring side effects", concludes Derakhshani.

*1 Naselli A, Simone G, Papalia R, Gallucci M, Introini C, Andreatta R, Puppo P: Late-onset incontinence in a cohort of radical prostatectomy patients. Int J Urol. 2011 Jan;18(1):76-9.*

*2 Vickers A, Bennette C, Steineck G, Adami HO, Johansson JE, Bill-Axelson A, Palmgren J, Garmo H, Holmberg L. : Individualized Estimation of the Benefit of Radical Prostatectomy from the Scandinavian Prostate Cancer Group Randomized Trial. Eur Urol. 2012 Apr 19. [Epub ahead of print]*

*3 Grimm P, Ignace Billiet I, Bostwick D et al. Comparative analysis of prostate-specific antigen free survival outcomes for patients with low, intermediate and high risk prostate cancer treatment by radical therapy. Results from the Prostate Cancer Results Study Group. BJUI 109, Suppl. 1, 22-29, 2012*