

IQWiG Reports – Commission No. N15-07

# **Non-drug local procedures for treatment of benign prostatic syndrome – update<sup>1</sup>**

**Extract**

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<sup>1</sup> Translation of the key statement of the rapid report *Nichtmedikamentöse lokale Verfahren zur Behandlung des benignen Prostatasyndroms – Aktualisierung* (Version 1.1; Status: 2 August 2016). Please note: This translation is provided as a service by IQWiG to English-language readers. However, solely the German original text is absolutely authoritative and legally binding.

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## **Key statement**

### ***Research question***

The aim of the present investigation is the benefit assessment of the 3 laser techniques photoselective vaporization of the prostate (PVP), thulium laser enucleation of the prostate (TmLEP), and thulium laser resection of the prostate (TmLRP) in the treatment of benign prostatic syndrome (BPS) with regard to patient-relevant treatment goals. This rapid report is an update of 2 earlier reports (N04-01 and N09-01) [1,2] based on literature published in the meantime.

### ***Conclusion***

It has to be taken into account for all 3 local procedures for the treatment of benign prostatic syndrome that first the benefit or the non-inferiority of the procedures under assessment in comparison with standard treatment has to be proven before possible differences in perioperative outcomes and adverse events in comparison with standard therapy or further procedures can be claimed as advantages.

The present benefit assessment produced the following results:

#### ***PVP***

No hint of greater benefit of PVP in comparison with standard treatment was shown for the outcomes “symptoms”, “health-related quality of life” and “sexual functioning”. Non-inferiority of PVP in comparison with standard treatment was not proven for symptoms.

Regarding perioperative outcomes, there was an indication of shorter hospital stays and catheterization times (indication of greater benefit of PVP in comparison with standard treatment). In addition, regarding adverse events, there was an indication that blood transfusion was needed less frequently in PVP and that lesions of neighbouring organs were less frequent under this treatment than under standard treatment (indication of lesser harm of PVP). Regarding the outcome “re-intervention”, there was an indication of greater harm of PVP in comparison with standard treatment.

In spite of the described advantages of PVP in comparison with standard treatment regarding perioperative outcomes and adverse events, the relevance of these results remained unclear (as was the case in project N09-01) because the non-inferiority regarding symptoms was unclear, i.e. it was not proven that PVP was maximal irrelevantly inferior to standard treatment.

The comparison of PVP with 2 holmium laser techniques showed no hint that benefit or harm of PVP differed from those of both holmium laser techniques for any outcome.

*TmLEP*

The comparison of TmLEP with standard treatment showed no hint of benefit or harm for any outcome. Non-inferiority of TmLEP in comparison with standard treatment was not proven for symptoms.

The comparison of TmLEP with holmium laser enucleation of the prostate (HoLEP) also showed no hint of benefit or harm for any outcome.

As was the case in project N09-01, benefit and harm of TmLEP cannot be conclusively assessed based on the available small database of only 3 studies.

*TmLRP*

No hint of greater benefit of TmLRP in comparison with standard treatment was shown for the outcomes “symptoms”, “health-related quality of life” and “sexual functioning”. Regarding irritative and obstructive symptoms, TmLRP was shown to be maximal irrelevantly inferior to standard treatment; hence non-inferiority of this procedure was confirmed. Regarding perioperative outcomes, there was an indication of shorter hospital stays and catheterization times in comparison with standard treatment (indication of greater benefit of TmLRP in comparison with standard treatment). In addition, regarding adverse events, there was an indication that blood transfusion was needed less frequently in TmLRP and that severe bleeding events were less frequent under this treatment than under standard treatment (indication of lesser harm of TmLRP). In addition, there was a hint of lesser harm of TmLRP in comparison with standard treatment for the outcome “irritative postoperative micturition symptoms”.

Compared with project N09-01, the results for TmLRP now have a broader base. Non-inferiority of TmLRP in comparison with standard treatment was shown. Hence the described advantages regarding perioperative outcomes and adverse events become relevant.

**Keywords:** prostatic hyperplasia, transurethral resection of prostate, laser therapy, benefit assessment, systematic review

**References for English extract**

Please see full rapid report for full reference list.

1. Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen. Nichtmedikamentöse lokale Verfahren zur Behandlung der benignen Prostatahyperplasie: Abschlussbericht; Auftrag N04-01 [online]. 02.06.2008 [Accessed: 11.03.2013]. (IQWiG-Berichte; Volume 33). URL: [http://www.iqwig.de/download/N04-01\\_Abschlussbericht\\_Nichtmedikamentoese\\_lokale\\_Verfahren\\_zur\\_Behandlung\\_de\\_BPH.pdf](http://www.iqwig.de/download/N04-01_Abschlussbericht_Nichtmedikamentoese_lokale_Verfahren_zur_Behandlung_de_BPH.pdf).

2. Institut für Qualität und Wirtschaftlichkeit im Gesundheitswesen. Nichtmedikamentöse lokale Verfahren zur Behandlung des benignen Prostatasyndroms: Update; Rapid Report; Auftrag N09-01 [online]. 14.12.2009 [Accessed: 11.03.2013]. (IQWiG-Berichte; Volume 69). URL: [http://www.iqwig.de/download/N09-01\\_Rapid-Report\\_Nichtmedikamentoese\\_lokale\\_Verfahren\\_zur\\_Behandlung\\_des\\_BPS-Update.pdf](http://www.iqwig.de/download/N09-01_Rapid-Report_Nichtmedikamentoese_lokale_Verfahren_zur_Behandlung_des_BPS-Update.pdf)

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