

# INPLASY PROTOCOL

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**Corresponding author:**  
Lucilla Violetta Sciacqua

luvisci97@gmail.com

**Author Affiliation:**  
University of Milan.

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submission:** Completed but  
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**Conflicts of interest:**  
None declared.

## Minimally invasive treatment in Benign Prostatic Hyperplasia (BPH)

Sciacqua, LV<sup>1</sup>; Vanzulli, A<sup>2</sup>; Di Meo, R<sup>3</sup>; Pellegrino, G<sup>4</sup>;  
Lavorato, R<sup>5</sup>; Vitale, G<sup>6</sup>; Carrafiello, G<sup>7</sup>.

**Condition being studied:** Review efficacy and safety of minimally-invasive treatments for Low Urinary Tract Symptoms (LUTS) in patients affected by Benign Prostate Hyperplasia (BPH). These minimally invasive techniques represent a valid alternative for patients who can no longer continue medical therapy or are ineligible to surgery.

**Eligibility criteria:** The inclusion criteria concern the most relevant clinical trials on minimally invasive interventions for Benign Prostatic Hyperplasia (BPH) from January 1993 to January 2022.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 01 December 2022 and was last updated on 01 December 2022 (registration number INPLASY2022120004).

### INTRODUCTION

**Review question / Objective:** PICOS not applicable.

**Condition being studied:** Review efficacy and safety of minimally-invasive treatments for Low Urinary Tract Symptoms (LUTS) in patients affected by Benign Prostate

Hyperplasia (BPH). These minimally invasive techniques represent a valid alternative for patients who can no longer continue medical therapy or are ineligible to surgery.

### METHODS

**Participant or population:** Not applicable.

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**Intervention:** In our review we focused on patients suffered from Low Urinary Tract Symptom (LUTS) due to Benign Prostate Hyperplasia (BPH).

**Comparator:** We considered Transurethral Resection of the Prostate (TURP) as a benchmark against minimally invasive treatments for Low Urinary Tract Symptom (LUTS) of Benign Prostatic Hyperplasia (BPH).

**Study designs to be included:** We performed a systematic review of the literature from January 1993 to January 2022 leveraging original research articles, reviews and case-studies published in peer-reviewed journals and stored in public repositories among which PubMed and the Cochrane Library. We revised relevant clinical trials on minimally-invasive treatment of BPH published in peer-reviewed journals.

**Eligibility criteria:** The inclusion criteria concern the most relevant clinical trials on minimally invasive interventions for Benign Prostatic Hyperplasia (BPH) from January 1993 to January 2022.

**Information sources:** Research and selection of relevant studies was conducted via multiple search systems: PubMed, Google Scholar, MEDLINE and Scopus.

**Main outcome(s):** Each one of the approaches described in this review possesses unique features, strengths, and drawbacks. One may object such a wide range of possibilities might translate into an undesirable degree of variability in terms of clinical decisions and outcomes, with individual centers making arbitrary decisions based on their specific expertise, availability of qualified personnel and presence of dedicated facilities.

The existence of several treatment options will and should be a fundamental asset in the era of so-called “precision medicine”, in which each patient is treated as a unique individual with peculiar features and needs, worthy of receiving a bespoke customized treatment.

**Quality assessment / Risk of bias analysis:** Not applicable.

**Strategy of data synthesis:** Not applicable.

**Subgroup analysis:** Not applicable.

**Sensitivity analysis:** Not applicable.

**Language restriction:** English.

**Country(ies) involved:** Italy.

**Keywords:** Prostate; Low Urinary Tract Symptom; Benign Prostatic Hyperplasia; minimal invasive treatments; Interventional Radiology.

**Contributions of each author:**

Author 1 - Lucilla Violetta Sciacqua - Author 1 drafted the manuscript.

Email: [luvisci97@gmail.com](mailto:luvisci97@gmail.com)

Author 2 - Andrea Vanzulli - Author 2 provided a careful review of the article.

Email: [andreavanzulli96@gmail.com](mailto:andreavanzulli96@gmail.com)

Author 3 - Rosario Di Meo.

Email: [rosario.dimeo92@gmail.com](mailto:rosario.dimeo92@gmail.com)

Author 4 - Giuseppe Pellegrino.

Email: [giuseppe.pellegrino@unimi.it](mailto:giuseppe.pellegrino@unimi.it)

Author 5 - Roberto Lavorato.

Author 6 - Giovanni Vitale.

Email: [giovanni.vitale@unimi.it](mailto:giovanni.vitale@unimi.it)

Author 7 - Gianpaolo Carrafiello.

Email: [gianpaolo.carrafiello@unimi.it](mailto:gianpaolo.carrafiello@unimi.it)