National Institute for Health and Care Excellence

IP1956 Transperineal laser ablation for treating lower urinary tract symptoms of benign prostatic hyperplasia

IPAC date: 10th October 2024

Comment 1 is about lay description

Comments 2 to 17 are about section 1 (draft recommendations)

Comments 18 to 20 are about section 2 (the procedure description)

Comments 21 to 24 are about section 3.1 (the evidence)

Comments 25 to 30 are about section 3.5 to 3.6 (committee comments)

Comments 31 to 45 are about the Overview

Comments 46 to 49 are general comments.

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1.	Consultee 1 Company	Lay description.	Please consider to incorporate the following edits that add clarity on the technique: "Benign prostatic hyperplasia (also known as benign prostate enlargement) is a non-cancerous enlarged prostate. It can block or narrow the tube (urethra) that urine passes through to leave the body, causing lower urinary tract symptoms, such as urination problems. In this procedure, optical fibres are inserted into the skin through introducer needles between the anus and scrotum (transperineal) and guided to the target area using ultrasound imaging. The fibres then deliver laser energy to the prostate. The heat from the laser induces cell death of the prostate tissue (ablation). The coagulative necrosis is subsequently resorbed through a physiological healing process, resulting in a prostatic volume reduction. The aim is to increase the flow of urine and reduce the lower urinary tract symptoms."	Thank you for your comments. IPAC considered your comment and amended the lay description as follows: *Benign prostatic hyperplasia (also known as benign prostate enlargement) is a non-cancerous enlarged prostate. It can block or narrow the tube (urethra) that urine passes through to leave the body, causing lower urinary tract symptoms, such as urination problems. In this procedure, optical fibres are inserted into the skin through needles between the anus and scrotum (transperineal) and guided to the target area*

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				using ultrasound imaging. The fibres then deliver laser energy to the prostate The heat from the laser destroys some of the prostate tissue (ablation). The aim is to increase the flow of urine and reduce the lower urinary tract symptoms.
2.	Consultee 1 Company	1.1 People who cannot have TURP or other transurethral procedures	There are papers (e.g. Polverino 2023, Destefanis 2023, Lagana 2022) which confirm that TPLA can be performed safely and successfully on patients who are unfit for TURP or other transurethral surgical approaches. However, these authors do not intend to limit TPLA to those patients, they instead mean the opposite, i.e. that if TPLA can be done safely and successfully on those critical patients, it can equally be done on all patients, even more so on patients who are not critical and so might be eligible for TURP or other transurethral surgical approaches. In fact, there is vast literature confirming that all patients (eligible or not eligible for TURP or other transurethral surgical approaches, like HoLEP, ThuLEP, PVP) can be offered TPLA and no peer reviewed paper suggests that a limitation would be advisable. Available literature includes two RCT studies versus TURP as comparator (Bertolo 2023 and Canat 2023); other prospective studies showed safety and efficacy on patients who were fit for standard transurethral surgery (van Kollenburg R 2024, Bianco 2024, Manenti 2021, Frego 2021, De Rienzo 2021, Lo Re 2024, Patelli 2024); Minafra 2023 paper reported 3 years results of the clinical study previously published with 6 months follow-up (De Rienzo 2021); in Patelli 2024, 85% of patients was sent to TPLA because they desire to avoid standard treatment; the other 15% of patients was sent to TPLA because they are contraindicated to surgical procedure (procedural risk) due to comorbidity; in Lo Re 2024 at least 55% of patients (ASA score; <2) wasn't at surgical risk and was fit for standard transurethral surgery. Consequently, we ask you to condition TPLA under special arrangements for all patients and not just those who are unfit for TURP or other transurethral procedures. Also, please note "other transurethral procedures" should be "other transurethral surgical procedures" like HOLEP, THULEP, PVP. If not	Thank you for your comments. Evidence from all the papers mentioned by the consultee (including 2 RCTs) have been included in the overview. The 2 new prospective studies (Lo Re 2024, Patelli 2024) found in updated searches were added to the overview of evidence and considered by the committee in their deliberations. Patelli 2024 reported long term outcomes (more than 36 months follow-up) in 40 symptomatic patients with BPH, and Lo Re 2024 reported mid-term functional results (median 12 months) in a real world cohort of 100 patients with different prostate volumes and patient characteristics. Both studies reported improvement in symptoms and functional outcomes and that it is well tolerated. The committee noted that data are consistent with the available evidence but lacked large comparative trials. Mid to long-term results of efficacy and safety compared to TURP are very limited and more high quality evidence against current standard techniques is needed. The committee considered comments about whether the recommendation should be broadened to 'TPLA can be done in all

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			specified as we suggest, “other transurethral procedures” would include PUL (Prostatic urethral lift), WVTT (Water Vapor Thermal Therapy) or other unproven techniques which are all transurethral, which is clearly not your intention.	people with benign prostatic hyperplasia’. However, they decided not to amend section 1 because the new evidence does not contradict the recommendations and people who can have TURP or other transurethral procedures are not at disadvantage and there are multiple modalities of treatment available. They noted that the risk benefit ratio is high in this group of people and long-term evidence is needed. IPAC also considered comment on the subheading ‘other transurtheral procedures’ but decided not to change as not all procedures are surgical and a wide range of treatment options are available for these people.
3.	Consultee 2 Clinician (Italy)	1.1 People who cannot have TURP or other transurethral procedures	The fact that the safety of this procedure has been studied and confirmed even in frail patient populations, as demonstrated in the studies by Destefanis (2023) and Polverino (2023), should not limit access to this procedure exclusively to such patient groups. In fact, the majority of patients treated in the available studies, except for the two aforementioned, are actually fit for other types of surgery as well.	Thank you for your comments. Please see response to comment 2.
4.	Consultee 10 Clinician (USA)	1.1 and 1.4	based on my clinical experience I see no need to limit TPLA: although relatively new, the technique is the least invasive I know, the only one with transperineal approach, and therefore does not poses risks for the patients" or "based on my clinical experience I would not limit TPLA to any subset of the patient population; in fact it offers potential relevant benefits like ejaculation preservation against minimal risks, so all eligible patients should be able to access this treatment.	Thank you for your comments. Please see response to comment 2.
5.	Consultee 11 Health	1.1	Thank you for doing such a great review of the technology and is great see new innovations coming to market especially in an area of such need. As someone who has focused on BPH for many years, we need	Thank you for your comments.

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	Analytical Solutions		treatment which is safe and has long term outcome benefits. We thank you for suggesting reach only for this group of patients.	
6.	Consultee 1 Company	1.4 People who can have TURP or other transurethral procedures	There are papers (e.g. Polverino 2023, Destefanis 2023, Lagana 2022) which confirm that TPLA can be performed safely and successfully on patients who are unfit for TURP or other transurethral surgical approaches. However, these authors do not intend to limit TPLA to those patients, they instead mean the opposite, i.e. that if TPLA can be done safely and successfully on those critical patients, it can equally be done on all patients, even more so on patients who are not critical and so might be eligible for TURP or other transurethral surgical approaches. In fact, there is vast literature confirming that all patients (eligible or not eligible for TURP or other transurethral surgical approaches, like HoLEP, ThuLEP, PVP) can be offered TPLA and no peer reviewed paper suggests that a limitation would be advisable. Available literature includes two RCT studies versus TURP as comparator (Bertolo 2023 and Canat 2023); other prospective studies showed safety and efficacy on patients who were fit for standard transurethral surgery (van Kollenburg R 2024, Bianco 2024, Manenti 2021, Frego 2021, De Rienzo 2021, Lo Re 2024, Patelli 2024); Minafra 2023 paper reported 3 years results of the clinical study previously published with 6 months follow-up (De Rienzo 2021); in Patelli 2024, 85% of patients was sent to TPLA because they desire to avoid standard treatment; the other 15% of patients was sent to TPLA because they are contraindicated to surgical procedure (procedural risk) due to comorbidity; in Lo Re 2024 at least 55% of patients (ASA score; <2) wasn't at surgical risk and was fit for standard transurethral surgery. In particular, the two randomized controlled trials vs gold standard (TURP) have in fact shown comparable TPLA efficacy to TURP but superior TPLA safety to TURP, especially on preservation of anterograde ejaculation. Consequently, we ask you to condition TPLA under special arrangements for all patients and not just those who are unfit for TURP or other transurethral procedures. We deem "special arrangements" a fair condition, because TPLA is a relatively new technique, but "research	Thank you for your comments. Please see response to comment 2.

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			study" would be too much based on the body of clinical evidence available.	
7.	Consultee 4 Clinician (Italy)	1.4 People who can have TURP or other transurethral procedures	The current evidence on TPLA in "standard" BPH patients is surely limited to a few small RCTs and/or prospective case series with short follow-up. Medium-term follow-up data are being published in recent times and further long-term data are awaited. Nonetheless, the value of TPLA as an effective "ejaculation-sparing" surgical treatment for BPH in the younger patients should be considered. On the one hand, a large, international, multicenter RCT on TPLA will be needed in the next future to assess the functional outcomes of this technique in the "standard" BPH patients, to which clinicians are currently allowed to offer simple prostatectomy, TUR-P or similar trans-urethral techniques. On the other hand, a bivalent clinical need can be perceived and must be addressed: - the need to offer treatment options to elderly and comorbid patients: in these men, TPLA could represent a safe and reasonably effective option, as reported by this draft guidance; - the need to meet the growing request for ejaculation-preserving surgery in the younger men. In this peculiar context, TPLA demonstrated efficacy (Bertolo et al, 2023), together with the capacity of effectively reducing LUTS and improving the urinary flow. Despite the limits of small sample numbers and short follow-up, this evidence appears supported by a well-conducted RCT. In patients seeking ejaculation-preserving surgery, TURP or other trans-urethral techniques and also simple prostatectomy cannot be considered an option, due to the high rates of post-operative ejaculatory dysfunction. As a consequence, a more extended access to ejaculation-preserving Minimally Invasive Surgical Techniques (MISTs), like TPLA, could be advisable, given the significant,	Thank you for your comments. Please see response to comment 2.

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			detrimental impact of ejaculatory dysfunction on patient-perceived quality of life.	
8.	Consultee 5 Professor (Italy)	1.4 People who can have TURP or other transurethral procedures	Several publications on TPLA, including the latest one from my center (see reference below) are based on patients that can AND cannot have TURP. In our study (with a mean follow up of 12 months), mean age of enrolled patients was 66 and more than half of patients presented an ASA score <2 (therefore, they were good candidate for TURP). Therefore, the recommendation for TPLA - based on our published experience - is that young patients, suitable for TURP, but that want to preserve their ejaculation, are good candidate for this minimally invasive treatment. Lo Re M, Polverino P, Rivetti A, Pecoraro A, Saladino M, Pezzoli M, Siena G, De Nunzio C, Li Marzi V, Gacci M, Serni S, Campi R, Sessa F. Transperineal laser ablation (TPLA) of the prostate for benign prostatic obstruction: the first 100 patients cohort of a prospective, single-center study. World J Urol. 2024 Jul 10;42(1):402. doi: 10.1007/s00345-024-05077-z. PMID: 38985193; PMCID: PMC11236842.	Thank you for your comments. Please see response to comment 2. The study, Lo Re 2024 has been identified in updated searches and has been added to table 2 in the overview.
9.	Consultee 7 NHS clinician	1.4 People who can have TURP or other transurethral procedures	I disagree with this statement. I feel there is sufficient information available and more will no doubt be forth coming. The ability to perform the technique under LA, outside a standard operating theatre as an out-patient procedure could have a significant effect in reducing the sizable backlog of patients wait for BPH surgery in the UK. Having personally used the technique the concepts involved of a transperineal intervention in the prostate are those that urologists are familiar with, especially those involved with prostate brachytherapy and performing transperineal biopsies. There is likely to be a short learning curve for the procedure	Thank you for your comments. Please see response to comment 2.

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10.	Consultee 7 NHS clinician	1.5 People who can have TURP or other transurethral procedures	I think a formal R&D process is unnecessary for this procedure. The concept of ablating BPH tissue within the prostate is well established with other techniques such a Rezum. The perineal LA block is also well established as part of the standard transperineal prostate biopsy approach. I do feel that the clinical outcomes should be considered part of a formal registry however, and the outcomes of the audit reported.	Thank you for your comment. IPAC considered your comments and decided not to amend 1.5. The committee noted that a large study is needed and small studies will not reinforce any change in decision.
11.	Consultee 11 Health Analytical Solutions	1.5	It is clear that full research is needed for this technology hence the requirement under 1.5 of "This procedure should only be done as part of a formal research study and a research ethics committee needs to have approved its use" so to allow patients who are not able to have TURP, to not have full prospective and randomised research and ethic approval, appears to be misaligned here. Recent publications (Kollenberg et al, Lo Re et al) are small patient feasibility studies (20 patients non-randomised) which all conclude that a prospective randomised study with 5 year follow up is required.	Thank you for your comments. IPAC considered your comments and decided not to amend 1.5. The committee noted that a suitably powered study is needed and small studies will not reinforce any change in decision. Also please see response to comment 2. Recent publications (Lo Re 2024, Patelli 2024) have been included in the overview. The study by Kollenberg is already included in the overview.
12.	Consultee 2 Clinician (Italy)	1.6 What evidence generation and	Based on the available evidence in the literature, it is true that the indications for TPLA (Transperineal Laser Ablation) can vary across different studies. However, this variability can be seen more as an advantage rather than a disadvantage, as it allows for the tailoring of	Thank you for your comments. 1.6 currently states that 'Evidence generation and more research is needed on:

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		research is needed	treatment according to the individual patient's needs. Although the treatment modality may vary in terms of energy, treatment of the middle lobe, or catheterization—variability that is primarily due to operator preference rather than intrinsic limitations of the technique—the exclusion criteria for treatment are well-defined. All studies exclude prostates with a volume of less than 30 mL. Furthermore, as highlighted in a consensus published by Cocci and colleagues, the majority of authors agree on excluding patients with urethral strictures, detrusor underactivity, or neurogenic bladder from treatment. As regards long-term outcomes, I would suggest taking into consideration a recent paper by Patelli and collaborators, reporting 5 years followup outcomes (Patelli G, Altieri VM, Ierardi AM, Carnevale A, Chizzoli E, Baronchelli F, Trimarchi R, Carrafiello G. Transperineal Laser Ablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: Long-Term Follow-Up in 40 Patients. J Vasc Interv Radiol. 2024 Aug;35(8):1187-1193. doi: 10.1016/j.jvir.2024.04.023. Epub 2024 May 3. PMID: 38705571)	• patient selection • longer-term outcomes, including reintervention rates. Patelli 2024 reporting long term outcomes has been included in the overview and considered by the committee in their deliberations.
13.	Consultee 2 Clinician (Italy)	1.6 Why the committee made these recommendations	I would suggest considering two recent papers with a large cohort and a long-term follow-up, respectively. Lo Re M, Polverino P, Rivetti A, Pecoraro A, Saladino M, Pezzoli M, Siena G, De Nunzio C, Marzi VL, Gacci M, Serni S, Campi R, Sessa F. Transperineal laser ablation (TPLA) of the prostate for benign prostatic obstruction: the first 100 patients cohort of a prospective, single-center study. World J Urol. 2024 Jul 10;42(1):402. doi: 10.1007/s00345-024-05077-z. PMID: 38985193; PMCID: PMC11236842 Patelli G, Altieri VM, Ierardi AM, Carnevale A, Chizzoli E, Baronchelli F, Trimarchi R, Carrafiello G. Transperineal Laser Ablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: Long-Term Follow-Up in 40 Patients. J Vasc Interv Radiol. 2024 Aug;35(8):1187-1193. doi: 10.1016/j.jvir.2024.04.023. Epub 2024 May 3. PMID: 38705571.	Thank you for your comments. The 2 new studies (Lo Re 2024, Patelli 2024) found in updated searches have been added to the overview of evidence and considered by the committee in their deliberations.
14.	Consultee 1	1.5, 1.6 What evidence	Regarding patients' selection, according to the collected clinical evidence, TPLA can be proposed to: patients with a prostate volume >30ML with no upward volume regulatory limitation; patients who do not	Thank you for your comments.

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	Company	generation and research is needed	want to undergo medical therapy or do not fully respond to it; young patients who have a strong will of preserving the ejaculatory function; high-risk patients with comorbidities; patients with indwelling catheter. See also Cocci 2024 reported in the Appendix B: Other relevant studies. This procedure couldn't be an option for patients with detrusor acontractility or hypocontractility, urethral strictures, neurogenic bladder dysfunctions. Regarding long-term outcomes consider Minafra 2023 and Patelli 2024 (paper that we suggest to add) for 3 and 5 year durability.	1.6 Currently states that 'Evidence generation and more research is needed on: • patient selection • longer-term outcomes, including reintervention rates. The 2 studies on long-term outcomes - Minafra 2023 and Patelli 2024 have been included in the overview and considered by the committee in their deliberations.
15.	Consultee 11 Health Analytical Solutions	1.1 to 1.6	The draft guidance appropriately identifies the need for special arrangements when using TPLA, particularly due to the limited and variable evidence base. According to the supporting documentation, TPLA has been primarily studied in small, non-randomised studies, with inconsistent outcome measures and short follow-up periods. The effectiveness and safety of TPLA remain uncertain, particularly when compared to established treatments like TURP. Therefore TPLA as per the committee recommendation should be restricted to a research-only setting, especially given the lack of any randomised studies (as published by Zhang et al.), and the absence of UK-specific data or large prospective data sets. This technology from a patient perspective is being considered against technologies that all have 5-year Randomised control trials and poses a risk to patient safety.	Thank you for your comments. Please see response to comment 2.
16.	Consultee 1 Company	Why the committee made these recommendations	Please consider the addition of the two new papers (Lo Re 2024, Patelli 2024) that reinforce the clinical profile of TPLA even further, especially on long term durability (5 years). There are papers (e.g. Polverino 2023, Destefanis 2023, Lagana 2022) which confirm that TPLA can be performed safely and successfully on patients who are unfit for TURP or other transurethral surgical approaches. However, these authors do not intend to limit TPLA to those patients, they instead mean the opposite, i.e. that if TPLA can be done safely and successfully on those critical patients, it can equally be done on all patients, even more so on patients who are not critical and so	Thank you for your comments. Evidence from all the papers mentioned by the consultee (including 2 RCTs) have been included in the overview. The 2 new studies (Lo Re 2024, Patelli 2024) found in updated searches have been added to the overview of evidence and considered by the committee in their deliberations.

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			might be eligible for TURP or other transurethral surgical approaches. In fact, there is vast literature confirming that all patients (eligible or not eligible for TURP or other transurethral surgical approaches, like HoLEP, ThuLEP, PVP) can be offered TPLA and no peer reviewed paper suggests that a limitation would be advisable. Available literature includes two RCT studies versus TURP as comparator (Bertolo 2023 and Canat 2023); other prospective studies showed safety and efficacy on patients who were fit for standard transurethral surgery (van Kollenburg R 2024, Bianco 2024, Manenti 2021, Frego 2021, De Rienzo 2021, Lo Re 2024, Patelli 2024); Minafra 2023 paper reported 3 years results of the clinical study previously published with 6 months follow-up (De Rienzo 2021); in Patelli 2024, 85% of patients was sent to TPLA because they desire to avoid standard treatment; the other 15% of patients was sent to TPLA because they are contraindicated to surgical procedure (procedural risk) due to comorbidity; in Lo Re 2024 at least 55% of patients (ASA score; <2) wasn't at surgical risk and was fit for standard transurethral surgery. In particular, the two randomized controlled trials vs gold standard (TURP) have in fact shown comparable TPLA efficacy to TURP but superior TPLA safety to TURP, especially on preservation of anterograde ejaculation. Consequently, we ask you to condition TPLA under special arrangements for all patients and not just those who are unfit for TURP or other transurethral procedures. We deem "special arrangements" a fair condition, because TPLA is a relatively new technique, but "research study" would be too much based on the body of clinical evidence available.	Please see response to comment 2 regarding section 1 recommendations.
17.	Consultee 11 Health Analytical Solutions	1.1 Why the committee made these recommendations	In this section you have said that the technology should be under special arrangements. "It can only be used with special arrangements for clinical governance, consent, and audit or research." However under section of "Why the committee made these recommendations". It was stated "Benign prostatic hyperplasia is a common condition, particularly in older people. It is unclear whether this procedure works as well as other surgical procedures, but there may be fewer side effects. There are some people who cannot have	Thank you for your comments. Please see response to comment 2.

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			transurethral procedures who could benefit from this procedure, so it can be used with special arrangements for these people. It should be used only in research when a transurethral procedure is an alternative." As this is saying special arrangements for those which cannot have TURP or a transurethral procedure. However for those patients which can have TURP or transurethral procedure then research. Should it not be due to the lack of evidence in general that either group should be research only. As this is more experimental in nature. Patients who cannot have a TURP or are not able to have general anaesthesia, have other options which have 5-year randomised control trial data (Urolift and Rezum). This is a patient safety risk to allow patients to consent or consider another technology with very limited data to be utilised. Also PAE is a none transurethral procedure, so as this has RCT data and is standard arrangements – should this again not be first option for patients and therefore supporting that TPLA should be research only for any cohort of patients	
18.	Consultee 1 Company	2.4 The procedure	As reported in the clinical evidence (evidence overview) the type of anaesthesia is local. In the RCT study (Bertolo 2023), spinal anaesthesia was used to limit potential bias with respect to patients who underwent TURP. We suggest modifying *"Using transrectal ultrasound guidance and real-time monitoring using a dedicated software planning tool, one or two 21-gauge introducer needles per lobe (depending on the basal volume and shape of the prostatic gland) are inserted transperineally into the prostatic tissue. A laser fibre is then introduced through the needle."* In "*Using transrectal ultrasound guidance and real-time monitoring using a dedicated device that allowed the user to pre-visualize and verify the positioning of the needles/fibers, in order to best fit the volume and the shape of the prostate, one or two 21-gauge introducer needles per lobe (depending on the basal volume and shape of the prostatic gland) are inserted transperineally into the prostatic tissue. A laser fibre is then introduced through each needle"* The dedicated device is Echolaser Smart Interface (Elesta SpA) that was developed to help user to visualize needles/fiber in the target tissue	Thank you for your comments. IPAC considered and amended 2.4 as follows: The procedure can be done as a day-case procedure under local, regional or general anaesthesia. Continuous saline irrigation of the urethra and bladder is done with a catheter in place during the entire procedure. The person having the procedure is placed in a lithotomy position. Transrectal ultrasound guidance and real-time monitoring is done using a device to pre-visualise and verify the positioning of the needles to best fit the volume and the shape of the prostate. Then one or two 21-gauge introducer needles per lobe (depending on the basal volume and shape of the prostatic

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			taking into account the safety distance to maintain to critical structures (EchoLaser EVO | Elesta Echolaser (elesta-echolaser.com). The device is supplied with dedicated needle guides to connect to the US probe to help in the insertion of more needles in the same US plane.	gland) are inserted transperineally into the prostatic tissue. A laser fibre is then introduced through the needle.
19.	Consultee 2 Clinician (Italy)	2.4 The procedure	One of the major advantages of this technique is that it can be performed on an outpatient basis, without the need for hospitalization, which also offers significant cost-related benefits.	Thank you for your comments. Section 2.4 states that *'the procedure can be done as a day-case procedure.'*
20.	Consultee 1 Company	2.5 The procedure	We suggest adding that fibres work simultaneously in order to benefit of the synergic effect of multiple use to obtain amplification of ablation volume and reducing treatment time. We suggest changing "a second illumination" with “more illuminations”. In some cases, it’s necessary more than 2 illuminations according to the shape and volume of the prostate (Reference Pacella 2019). In case of the presence of the median lobe, it’s necessary to place another needle/fibre for its ablation (References De Rienzo 2021, Frego 2021).	Thank you for your comments. Section 2 is a simple description of the procedure. IPAC considered your comment and amended section 2.5 as follows: Low powers (3 to 5 watts) and low laser light energy (up to 1800 J per fibre and illumination) are delivered from the diode laser system for several minutes to heat and destroy the prostate tissue around the tip of the fibre, according to a standard protocol. If needed, more illuminations can be done to treat a larger area. The maximum volume treated in a session and the extent of the ablation vary according to the prostatic volume, anatomy and surgeon preference.
21.	Consultee 1 Company	3.1 The evidence	Please add the following papers as reported in the comment on chapter - "1 Draft recommendations": We suggest including two new papers (two prospective single-centre studies, one of this with long term results) that weren’t present in the Interventional procedure overview of image-guided transperineal laser ablation (TPLA) for treating lower urinary tract symptoms caused by benign prostatic hyperplasia: 1. Lo Re M, Polverino P, Rivetti A, Pecoraro A, Saladino M, Pezzoli M,	Thank you for your comments. The 2 studies (Lo Re 2024, Patelli 2024) identified in updated searches have been added to table 2 in the overview and considered by the committee in their deliberations.

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			Siena G, De Nunzio C, Marzi VL, Gacci M, Serni S, Campi R, Sessa F. Transperineal laser ablation (TPLA) of the prostate for benign prostatic obstruction: the first 100 patients cohort of a prospective, single-center study. World J Urol. 2024 Jul 10;42(1):402. doi: 10.1007/s00345-024-05077-z. PMID: 38985193; PMCID: PMC11236842. 2. Patelli G, Altieri VM, Ierardi AM, Carnevale A, Chizzoli E, Baronchelli F, Trimarchi R, Carrafiello G. Transperineal Laser Ablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: Long-Term Follow-Up in 40 Patients. J Vasc Interv Radiol. 2024 Aug;35(8):1187-1193. doi: 10.1016/j.jvir.2024.04.023. Epub 2024 May 3. PMID: 38705571.	
22.	Consultee 2 Clinician (Italy)	3.1 The evidence	I would suggest considering two recent papers with a large cohort and a long-term follow-up, respectively. Lo Re M, Polverino P, Rivetti A, Pecoraro A, Saladino M, Pezzoli M, Siena G, De Nunzio C, Marzi VL, Gacci M, Serni S, Campi R, Sessa F. Transperineal laser ablation (TPLA) of the prostate for benign prostatic obstruction: the first 100 patients cohort of a prospective, single-center study. World J Urol. 2024 Jul 10;42(1):402. doi: 10.1007/s00345-024-05077-z. PMID: 38985193; PMCID: PMC11236842 Patelli G, Altieri VM, Ierardi AM, Carnevale A, Chizzoli E, Baronchelli F, Trimarchi R, Carrafiello G. Transperineal Laser Ablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: Long-Term Follow-Up in 40 Patients. J Vasc Interv Radiol. 2024 Aug;35(8):1187-1193. doi: 10.1016/j.jvir.2024.04.023. Epub 2024 May 3. PMID: 38705571.	Thank you for your comments. The 2 new studies (Lo Re 2024, Patelli 2024) found in updated searches have been added to the overview of evidence and considered by the committee in their deliberations.
23.	Consultee 9 NHS Clinician	Section 1, 3.1 The evidence	We are excited to share that we have recently begun performing Echolaser procedures at the Royal Surrey NHS Foundation trust. This innovative and minimally invasive technique represents a significant advancement in the treatment of benign prostate enlargement. Performed under local anesthesia, Echolaser allows patients to be discharged within an hour, significantly improving patient comfort and reducing recovery time.	Thank you for your comments and sharing your experience. The results of the 5-year follow-up study (Patelli 2024) have been included in table 2 in the overview of evidence. Studies comparing TPLA with TURP were included in the overview.

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			Our initial cases, conducted in outpatient units, have yielded outstanding results, with patients reporting no pain and experiencing good outcomes. The efficacy and safety of this technology are well-supported by 26 peer-reviewed studies, including a comprehensive five-year follow-up and a comparative analysis against TURP. Given the growing need for effective, minimally invasive treatments that cater to both younger patients and elderly individuals with comorbidities, Echolaser stands out as an ideal solution. There is a pressing need for this technology in the UK to alleviate the burden on operating theatres and reduce waiting lists by utilising our outpatient units more efficiently. I strongly advocate for the broader adoption of this technology so that more patients across the nation can benefit from this treatment.	IPAC considered comments about section 1 and did not amend the guidance. Please see response to comment 2.
24.	Consultee 11 Health Analytical Solutions	General evidence section 3.1 safety summary	These safety concerns below further underscore the need for caution and further research to fully understand the risks associated with TPLA. This aligns with the draft guidance recommendation to limit the procedure to research settings until more robust evidence is available, but in our view should be for both cohorts and not just those which TURP is not suitable. • Prostatic Abscesses: The occurrence of prostatic abscesses was reported in some studies. For example, in the Tafuri (2023) study, a prostatic abscess was reported in one patient, and similar issues were observed in other studies reviewed in the systematic reviews. • Urinary Retention: Acute urinary retention was a relatively common complication across multiple studies. For example, in the study by Frego (2021), 13.6% of patients experienced acute urinary retention after the procedure. • Hematuria and Orchitis: There were reports of transient hematuria (blood in urine) and orchitis (inflammation of the testes) in patients following the TPLA procedure. While some cases were mild and resolved spontaneously, these complications still pose significant concerns for patient safety. • Intraoperative Urethral Burns: In one study (Cai 2021), an	Thank you for your comments that the procedure should be limited to research settings until more evidence is available for all people with benign prostatic hyperplasia. Please see response to comment 2.

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			intraoperative urethral burn was reported, indicating a risk of injury to adjacent structures during the procedure. • Dysuria (Painful Urination): Dysuria was frequently reported as a post-procedural complication. In some studies, it affected a significant percentage of patients (e.g., 36.3% in the Frego study). • Lack of Long-term Safety Data: One of the overarching concerns is the lack of long-term safety data, particularly regarding the potential for late-onset complications or the need for reintervention. Lack of Patient Selection: Recent studies have concluded that TPLA works for well selected patients, but no large scale prospective trial has been initiated to understand the correct and safe patient selection. Based on these unknowns, variability and lack of prospective data with long-term follow-up we recommend this technology should be research-only in order to adequately answer these issues and provide patients with a safe procedure for consideration and in comparison to other technologies that all have 5-year randomised data.	
25.	Consultee 1 Company	3.5 Committee comments	In the Delphi consensus (Cocci 2023) in which 32 experts of the technique participated, the majority of the respondents (recommended the treatment without limit of the prostate volume (<40 mL, volume between 40 mL and 80 mL and >80 mL). In the paper Manenti 2021, patients with a big volume of the Prostate (102.42 ± 36.3 mL (mean ± standard deviation)) were included and treated with effective results. In the paper Patelli 2024 (that we ask to add), a subset analysis demonstrated that the clinical benefits of TPLA were observed in patients with prostates that were “average” (30–80 mL) and large (>80 to 150 mL), as defined in the American Urological Association management guidelines. Regarding the use in median lobe, some studies included patients with median lobe (Patelli 2017, Pacella 2019, Frego 2021, De Rienzo 2021, Van Kollenburg 2024). In the Delphi consensus (Cocci 2023) in which 32 experts of the technique participated, the majority of the respondents report that the treatment can be carried out in presence of a median lobe.	Thank you for your comments. The Delphi consensus paper (Cocci 2023) is added to the appendix B (other relevant studies). Patelli 2024 found in updated searches has been added to the overview of evidence and considered by the committee in their deliberations. Other studies mentioned by the consultee (about people with median lobe, big volume prostate) are already included in the overview of evidence. 3.5 currently states that *‘The upper size limit for a prostate to be treated using this procedure is unknown. There are uncertainties about its use in median lobes and it may be contraindicated in people with heavily calcified prostates.’*

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26.	Consultee 2 Clinician (Italy)	3.5 Committee comments	The absence of an upper limit in terms of prostate volume (while there is a minimum threshold of 30 mL to ensure safety margins during the procedure) is not due to any technical infeasibility. In fact, theoretically, it is possible to treat any prostate volume by adjusting the number of needles, the amount of energy, or the number of illuminations, as thoroughly described in the preceding sections. Moreover, the median lobe can also be treated with this technique, as described in a 2023 review by Sessa et al. (Sessa, F.; Polverino, P.; Siena, G.; Bisegna, C.; Lo Re, M.; Spatafora, P.; Pecoraro, A.; Rivetti, A.; Moscardi, L.; Saladino, M.; et al. Transperineal Laser Ablation of the Prostate (TPLA) for Lower Urinary Tract Symptoms Due to Benign Prostatic Obstruction. J. Clin. Med. 2023, 12, 793. https://doi.org/10.3390/jcm12030793). The decision to treat the middle lobe is a matter of the surgeon's preference rather than feasibility.	Thank you for your comments. Sessa 2023 has been added to the appendix. 3.5 currently states that *'The upper size limit for a prostate to be treated using this procedure is unknown. There are uncertainties about its use in median lobes and it may be contraindicated in people with heavily calcified prostates.'*
27.	Consultee 2 Clinician (Italy)	3.5 Committee comments	As stated above in this paragraph, procedure is potentially suitable for all prostate sizes, the only limit is for prostate sizes < 30mL for the challenge in ensuring safety margins during the procedure	Thank you for your comment. Please see response to comment above.
28.	Consultee 11 Health Analytical Solutions	3.5	The uncertainty about the maximum prostate size that can be effectively treated with TPLA is a major concern noted in the supporting documentation. The document also mentions that the efficacy of TPLA in patients with different prostate shapes and degrees of calcification is unclear. This variability presents a significant risk if the procedure is adopted without clear guidelines and robust evidence. We recommend that NICE maintain a cautious approach and limit the use of TPLA to structured clinical research until these critical questions are answered.	Thank you for your comments that a cautious approach is needed until the uncertainties are addressed and robust evidence is available. Please see response to comment 2.
29.	Consultee 1 Company	3.6 Committee comments	In the absence of adverse effects and in case of spontaneous voiding without significant residual urine, the catheter might be removed before patient discharge. If these conditions are not satisfied, urinary catheter will be maintained some day after the treatment (3-7 days). In particular, clinical conditions, as in the case of catheter carriers' patients or patients with a long history of urinary retention, catheter should be left in place longer. Two clinical studies (Van Kollenburg 2024, Bianco 2024) show at least 50% of treated patients went home the same day of the procedure without catheter.	Thank you for your comments about catheterisation. 3.6 has been amended as follows: *People who have the procedure in the UK may need temporary catheterisation afterwards, but there have been reports of some people who do not need catheterisation.*

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30.	Consultee 11 Health Analytical Solutions	3.1 – 3.6	The supporting documentation highlights several critical issues, including the variability in patient selection criteria across studies and the lack of long-term outcome data. These gaps in the evidence underscore the need for restricting TPLA to research contexts for both cohorts and not just those unsuitable for TURP. The document also notes that there are significant uncertainties regarding TPLA's efficacy in prostates with certain anatomical features, such as median lobes or extensive calcifications. Without addressing these uncertainties through rigorous research, broader adoption could lead to suboptimal patient outcomes. Therefore having research classification to both groups would be more advisable.	Thank you for your comments. Please see response to comment 1. Section 3.5 states that 'There are uncertainties about its use in median lobes and it may be contraindicated in people with heavily calcified prostates.'
31.	Consultee 1 Company	The procedure (Overview)	As reported in the clinical evidence (Evidence summary) the type of anaesthesia is local. In the RCT study (Bertolo 2023), spinal anaesthesia was used to limit potential bias with respect to patients who underwent TURP. We suggest modifying "Using transrectal ultrasound guidance and real-time monitoring using a dedicated software planning tool, one or two 21-gauge introducer needles per lobe (depending on the basal volume and shape of the prostatic gland) are inserted transperineally into the prostatic tissue. A laser fibre is then introduced through the needle." In "Using transrectal ultrasound guidance and real-time monitoring using a dedicated device that allowed the user to pre-visualize and verify the positioning of the needles/fibers, in order to best fit the volume and the shape of the prostate, one or two 21-gauge introducer needles per lobe (depending on the basal volume and shape of the prostatic gland) are inserted transperineally into the prostatic tissue. A laser fibre is then introduced through each needle" The dedicated device is Echolaser Smart Interface (Elesta SpA) that was developed to help user to visualize needles/fiber in the target tissue taking into account the safety distance to maintain to critical structures (EchoLaser EVO | Elesta Echolaser (elesta-echolaser.com)). The device is supplied with dedicated needle guides to connect to the US probe to help in the insertion of more needles in the same US plane. We suggest adding that fibres work simultaneously in order to benefit of	Thank you for your comments. IPAC considered and amended 2.4 as follows: The procedure can be done as a day-case procedure under local, regional or general anaesthesia. Continuous saline irrigation of the urethra and bladder is done with a catheter in place during the entire procedure. The person having the procedure is placed in a lithotomy position. Transrectal ultrasound guidance and real-time monitoring is done using a device to pre-visualise and verify the positioning of the needles to best fit the volume and the shape of the prostate. Then one or two 21-gauge introducer needles per lobe (depending on the basal volume and shape of the prostatic gland) are inserted transperineally into the prostatic tissue. A laser fibre is then introduced through the needle.

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			the synergic effect of multiple use to obtain amplification of ablation volume and reducing treatment time. We suggest changing "a second illumination" with “more illuminations”. In some cases, it’s necessary more than 2 illuminations according to the shape and volume of the prostate (Reference Pacella 2019). In case of the presence of the median lobe, it’s necessary to place another needle/fibre for its ablation (References De Rienzo 2021, Frego 2021).	IPAC considered and amended 2.5 as follows: Low powers (3 to 5 watts) and low laser light energy (up to 1800 J per fibre and illumination) are delivered from the diode laser system for several minutes to heat and destroy the prostate tissue around the tip of the fibre, according to a standard protocol. If needed, more illuminations can be done to treat a larger area. The maximum volume treated in a session and the extent of the ablation vary according to the prostatic volume, anatomy and surgeon preference.
32.	Consultee 1 Company	Overview-table 2	Moreover, Minafra 2023 (included in the "Interventional procedure overview of image-guided transperineal laser ablation (TPLA) for treating lower urinary tract symptoms caused by benign prostatic hyperplasia" document) is reported as retrospective case series instead of prospective case series: the paper reports 3 years follow-up results of the clinical study for which the 6 months follow-up results were already published (De Rienzo 2021, see Appendix B: Other relevant studies). We ask to change from retrospective to prospective and modify accordingly the document of the "Interventional procedure overview of image-guided transperineal laser ablation (TPLA) for treating lower urinary tract symptoms caused by benign prostatic hyperplasia".	Thank you for your comments. In the Minafra study, data were retrieved from a prospectively maintained database. The wording for the study design has been corrected, from ‘retrospective’ to ‘prospective.’ The 2 new studies (Lo Re 2024, Patelli 2024) found in updated searches have been added to the overview of evidence and considered by the committee in their deliberations.
33.	Consultee 1 Company	Overview-table 2	Minafra 2023 is reported as retrospective case series instead of prospective case series: the paper reported 3 years follow-up results of the clinical study for which the 6 months follow-up results were already published (De Rienzo 2021, see Appendix B: Other relevant studies). We ask to change from retrospective to prospective and modify accordingly the document of the Overview of the evidence. We suggest including two new papers (two prospective single-centre	Thank you for your comments. In the Minafra study, data were retrieved from a prospectively maintained database. The wording for the study design has been corrected, from ‘retrospective’ to prospective.’

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			studies, one of this with long term results) that weren't present in the Interventional procedure overview of image-guided transperineal laser ablation (TPLA) for treating lower urinary tract symptoms caused by benign prostatic hyperplasia: 1- Lo Re M, Polverino P, Rivetti A, Pecoraro A, Saladino M, Pezzoli M, Siena G, De Nunzio C, Marzi VL, Gacci M, Serni S, Campi R, Sessa F. Transperineal laser ablation (TPLA) of the prostate for benign prostatic obstruction: the first 100 patients cohort of a prospective, single-center study. World J Urol. 2024 Jul 10;42(1):402. doi: 10.1007/s00345-024-05077-z. PMID: 38985193; PMCID: PMC11236842. 2- Patelli G, Altieri VM, Ierardi AM, Carnevale A, Chizzoli E, Baronchelli F, Trimarchi R, Carrafiello G. Transperineal Laser Ablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: Long-Term Follow-Up in 40 Patients. J Vasc Interv Radiol. 2024 Aug;35(8):1187-1193. doi: 10.1016/j.jvir.2024.04.023. Epub 2024 May 3. PMID: 38705571	The 2 new studies (Lo Re 2024, Patelli 2024) found in updated searches have been added to the overview of evidence and considered by the committee in their deliberations.
34.	Consultee 1 Company	Overview-table 2	We suggest to change in Table 2 the Study design of the paper Minafra 2023: the study is prospective not retrospective. We suggest to change this information every time the study is mentioned in the document. We suggest to add the following papers : 1. Lo Re M, Polverino P, Rivetti A, Pecoraro A, Saladino M, Pezzoli M, Siena G, De Nunzio C, Marzi VL, Gacci M, Serni S, Campi R, Sessa F. Transperineal laser ablation (TPLA) of the prostate for benign prostatic obstruction: the first 100 patients cohort of a prospective, single-center study. World J Urol. 2024 Jul 10;42(1):402. doi: 10.1007/s00345-024-05077-z. PMID: 38985193; PMCID: PMC11236842. • First author, date country Lo Re 2024 Italy • Characteristics of people in the study (as reported by the study): 100 people affected by BPH related symptoms. Median age was 66 (IQR 60-75) years • Study design: prospective, single-center study • Inclusion criteria: Inclusion criteria were (1) age ≥ 45 years; (2) moderate to severe LUTS due to BPO with an International Prostate Symptom Score, (IPSS) score ≥ 8; (3) prostate volume ≥ 30 mL and	Thank you for your comments. In the Minafra study, data were retrieved from a prospectively maintained database. The wording for the study design has been corrected, from 'retrospective' to prospective.' The 2 new studies (Lo Re 2024, Patelli 2024) found in updated searches have been added to the overview of evidence and considered by the committee in their deliberations.

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			≤ 100 ml measured via transabdominal Ultrasound or MRI; (4) ineffectiveness of medical therapies due to lack of efficacy, intolerance, poor compliance or strong desire to preserve antegrade ejaculation or very high risk for standard surgery due to comorbidities. • Intervention: TPLA was performed in an outpatient setting using local anaesthesia (20mL Lidocaine 2%) and low-dose oral benzodiazepine administration according to patients' preference, using EchoLaser™ multisource diode laser generator for the ablation. • Follow up: 12 months 2. Patelli G, Altieri VM, Ierardi AM, Carnevale A, Chizzoli E, Baronchelli F, Trimarchi R, Carrafiello G. Transperineal Laser Ablation of the Prostate for Symptomatic Benign Prostatic Hyperplasia: Long-Term Follow-Up in 40 Patients. J Vasc Interv Radiol. 2024 Aug;35(8):1187-1193. doi: 10.1016/j.jvir.2024.04.023. Epub 2024 May 3. PMID: 38705571. o First author, date country Patelli 2024 Italy o Characteristics of people in the study (as reported by the study): 40 people affected by BPH related symptoms. Age (y), mean ± SD 65.1 ± 8.3 o Study design: prospective, single-center study o Inclusion criteria: Eligible patients had LUTS and at least 1 of the following criteria: (a) male aged >50years with symptomatic BPH, (b) International Prostate Symptom Score (IPSS) of >13, (c) prostate volume of >30 mL on transrectal US images, (d) peak urinary flow rate (Qmax) of ≥5 to ≤15 mL/s, and (e) postvoid residual (PVR) of >50 mL. o Intervention: TPLA was performed with a 1,064-nm continuous-wave diode laser (EchoLaser XVG system;Elesta, Florence, Italy). Treatment was performed under moderate sedation with intravenous midazolam and with local anesthesia of the superficial tissues of the perineal region and periprostatic nerve plexus using 20 mL of 2% lidocaine o Follow up: median duration of follow-up was 57 months (range, 36-76 months)	
35.	Consultee 1	Overview - page 35-	We suggest modifying "A dedicated smart planning tool (Echolaser Smart Interface) was used to plan the treatment and to place laser	Thank you for your comments.

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	Company	procedure technique	optical fibres in the prostate in a safe manner" in "A dedicated device (Echolaser Smart Interface) was used to support needle/fibre positioning in the prostate in a safe manner. The device assists in needle placement by safety margins projection on the ultrasound image". We suggest modifying "Additional fibres were used depending on the size of the prostrate" in "One or two 21-gauge introducer needles per lobe (depending on the basal volume and shape of the prostatic gland) are inserted transperineally into the prostatic tissue. Laser fibres are then introduced through each needles and deliver laser energy simultaneously." We suggest adding that in case of the presence of the median lobe, it's necessary to place another needle/fibre for its ablation (see De Rienzo 2021, Frego 2021). For the guidance of the treatment in all publications, Ultrasound is used. I suggest to delate "but one study used MRI". In the paper Manenti 2021 MRI is used after the procedure to evaluate the effect of the treatment ("One hour after the procedure, patients underwent 3-T biparametric MRI (using only the first four sequences listed in Table 2) to evaluate the extension of the coagulation zone at each laser fibre tip" and "At 1, 3, 6, and 12 months, each patient also underwent biparametric MRI, using only the first four sequences").	This is summary of the technique used across studies. The section has been amended as follows: TPLA was done using the SoracteLite EchoLaser, Elesta laser ablation system. A dedicated device (Echolaser Smart Interface) was used to support needle positioning in the prostate in a safe manner. The device assists in needle placement by safety margins projection on the ultrasound image. The procedure was done as a day-case procedure, mostly under local anaesthesia with or without sedation in a few small pilot studies. People could be discharged in 6 hours after the procedure. Additional needles were used depending on the size of the prostrate. Ultrasound guidance was used mainly across studies, but one study used postprocedural MRI. Low power laser light energy between 3 to 5 watts was used across studies.
36.	Consultee 2 Clinician (Italy)	Overview - page 35- procedure technique	In the paper reported by Manenti et al., MRI has been used in order to evaluate the effect of the treatment on the prostatic tissue, while the procedure has been performed under TRUS guidance.	Thank you for your comments. Reference to MRI (under the section 'procedure technique') in the overview has been amended.
37.	Consultee 1 Company	Overview page 8, 12, 36, 38, 39, 41, 43, 44, 46 efficacy	We suggest changing "retrospective case series of 21 people" to "prospective case series of 21 people". This change should be performed also in PV and Quality of life paragraphs	Thank you for your comment. This text (related to Minafra 2023) has been amended across the Overview.

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38.	Consultee 1 Company	Overview page 36 efficacy	We suggest to add information related to the following papers: • Frego 2021 (included in Tafuri 2023 review): Ejaculatory function was preserved in 21 out of 22 patients (95.5%). • Sessa 2022 (included in Tafuri 2023 review): The ejaculatory function was preserved in all patients.	Thank you for your comment. This information is already presented in Tafuri 2023 paper included to table 2.
39.	Consultee 2 Clinician (Italy)	page 39 - Overview (efficacy summary)	In the cited study by Polverino et al. (2023), 12 patients experienced an IPSS (International Prostate Symptom Score) improvement significant enough to result in a change in symptom classification according to the questionnaire's parameters, while 1 patient did not benefit from the procedure. However, the remaining 8 patients, as emphasized in the paper, still showed a significant improvement in their IPSS scores, even though it was not sufficient to warrant a change in symptom class.	Thank you for your comment. The text in the overview has been amended as follows: In a preliminary single-centre experience study of 21 people who had TPLA for BPH, 57% (12/21) people reported an improvement in IPSS symptom class, 38% (8/21) had significant improvement in IPSS scores but symptom class remained stable, and one person experienced worsening of symptom status at median 12 months follow-up (Polverino 2023).
40.	Consultee 1 Company	Overview efficacy - page 47	Question number 32 of the Expanded Prostate Cancer Index Composite (EPIC) questionnaire was posed during the 1- month follow-up visit ('Overall, how satisfied are you with the treatment you received for your prostate disease intervention?'). I suggest reporting the month of the evaluation because the effect of the TPLA treatment is not immediate like TURP, so the questionnaire would be better to submit at least 2-3 months follow up. In fact, the effects of treatment are not immediate, as it takes a few days before starting the cytoreduction process. 4-8 weeks after treatment, the body will gradually resorb the tissue treated, the pressure on the urethra decreases, and the BPH symptoms start to improve.	Thank you for your comments. The text in this sentence in the overview has been amended as follows: *In the RCT of 51 people, based on EPIC question 32, a statistically significantly smaller proportion of people were satisfied with treatment in the TPLA group compared with the TURP group at 1 month follow-up (50% [13/26] compared with 80% [20/25], p=0.02; Bertolo 2023).*
41.	Consultee 1 Company	Procedure outcomes-	Regarding the RCT study of 51 people, this aspect need to be considered: "Patients who underwent TPLA could have been discharged on postoperative day 1 but stayed for two nights to avoid missing reimbursement in case of overnight stay"	Thank you for your comment.

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		Overview page		IPAC noted this statement and stated that the decision was not made around hospital stay.
42.	Consultee 1 Company	Pain-Overview page 48	We suggest to insert the time points at which the pain was evaluated. Bianco 2024 and Bertolo 2023 studies evaluated periprocedural pain; Van Kollenburg 2024 evaluated pain at baseline, 3,6,12 months after the treatment. In Bertolo 2023 the pain score could be influenced by the use of spinal anaesthesia for both procedures (TURP and TPLA)	Thank you for your comments. This sentence in the overview has been amended to add follow-up periods at which pain was assessed.
43.	Consultee 1 Company	Appendix B (other relevant studies)-in the Overview.	The evidence for IPG 617 (essential tremor) was from 11 sources and included 1 systematic review, 1 randomised controlled trial (2 publications providing 1- and 2-year follow-up data), 2 non-randomised comparative studies and 6 case series, and is presented in table 2 of the interventional procedures overview.	Thank you for your comments. The 3 studies (Sessa 2022, De Rienzo 2021, Frego 2021) are already included in appendix B (other relevant studies). Minafra 2023 reporting long term outcomes has been added to table 2 and 3 in the overview.
44.	Consultee 2 Clinician (Italy)	Ongoing studies-overview	Another prospective, multicentre, international registry has been recently registered by University of Florence and is available on ClinicalTrials.gov (Identifier: NCT06564415)	Thank you for your comments. The prospective international registry (Identifier: NCT06564415) has been added to the list of ongoing studies in the overview.
45.	Consultee 2 Clinician (Italy)	unmet need -overview	on anticoagulants .. and/or antiplatelets	Thank you for your comment. This point in the unmet need section (in the overview) has been amended to include 'antiplatelets'.
46.	Consultee 2 Clinician (Italy)	General	i agree with the committee regarding the potential influence of medical therapy on baseline ejaculatory function. However, in a real-life setting, candidates to surgery for BPO are usually treated with alpha-blockers. In this view, TPLA could offer a potential advantage in treating LUTS minimizing the potential impact on ejaculatory function	Thank you for your comments. IPAC considered this statement.
47.	Consultee 3 NHS clinician	General	This appears to be a promising new treatment for BPH with the benefit of being minimally invasive and easily done under LA. This would be particularly useful for high risk patients. The short term improvements	Thank you for your comments.

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			seem impressive for MIST with all the benefits of a reduced side-effect profile. Medium to long term results would obviously be desirable for widespread adoption. The learning curve is short with the potential for it to be done by radiologist or even nurse specialist and physician associates. Improvements in patient selection and refinement of technique would not only improve outcomes but help minimise risk such as urinary retention and prostatic abscesses. This also has the potential for NHS cost savings and waiting list reduction with the procedure easily carried out in an out patient setting.	
48.	Consultee 6 Clinician (USA)	General	As a practicing [redacted], FL, USA, with two years of experience using TPLA, I strongly support the continued and unrestricted use of this innovative procedure. My clinical experience and the supporting evidence highlight several key aspects of TPLA that warrant its broader adoption: 1. Clinical Effectiveness and Safety: TPLA has consistently demonstrated significant improvements in lower urinary tract symptoms (LUTS) associated with benign prostatic hyperplasia (BPH). The procedure's safety profile is exemplary, with minimal complications such as bleeding, infection, and sexual dysfunction. Notably, TPLA offers a high rate of ejaculatory function preservation, with studies reporting retention of antegrade ejaculation in over 95% of cases. 2. Patient Acceptance and Quality of Life: Patients have responded overwhelmingly positively to TPLA, reporting significant relief from symptoms and an improved quality of life. The procedure has led to substantial reductions in IPSS (International Prostate Symptom Score) and enhanced overall patient satisfaction, highlighting its efficacy and the value it brings to patient care. 3. Broader Accessibility and Application: TPLA should be available to all eligible patients without restriction. Its minimally invasive nature makes it suitable for patients who may not be candidates for more invasive surgeries due to medical comorbidities or those who prefer to avoid the risks associated with traditional procedures. TPLA is especially beneficial	Thank you for your comments and highlighting several key aspects of TPLA. Section 1.5 suggests further research. IPAC considered your comments but did not amend 1.4 and 1.5. Please see response to comments 2 and 10.

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			for younger patients who wish to preserve sexual function and older patients with significant comorbidities. 4. Unmet Need and Comparisons with Other Treatments: TPLA addresses the unmet need for a safe, effective, and minimally invasive treatment for BPH. It compares favorably with traditional surgical options like TURP, offering similar or superior outcomes with fewer risks. The reduction in complications such as incontinence and sexual dysfunction, coupled with the procedure's feasibility as an outpatient option, underscores its value. 5. Support for Continued Research and Data Collection: While the current evidence supports the efficacy and safety of TPLA, continued research and data collection will help refine patient selection criteria and optimize treatment protocols. It is essential to encourage the use of TPLA in clinical practice while gathering long-term data to further validate its benefits. 6. Favorable Learning Curve and Patient Experience: The learning curve for TPLA is very favorable, building upon the existing and increasingly preferred transperineal prostate biopsy approach, commonly performed in an office-based setting under local anesthesia. Feedback from patients who have experienced both transperineal prostate biopsy and TPLA consistently indicates that TPLA is better tolerated and less impactful than the biopsy, further supporting its minimally invasive nature. 7. Potential for Targeted Focal Therapy for Prostate Cancer: TPLA's application can be extended with minimal modification to targeted focal therapy for prostate cancer. This versatility enhances its value as a therapeutic tool in urology. 8. Major Paradigm Shift in Urological Practice: TPLA represents a major paradigm shift by offering a single therapeutic modality that builds upon urologists' existing experience with transperineal prostate biopsy. It	

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			provides a safe, comfortable, and economical option for treating the two most common prostate conditions—BPH and prostate cancer—in an office setting. This approach significantly enhances the quality and accessibility of care for patients. In conclusion, based on my clinical experience and the available evidence, I see no reason to restrict the use of TPLA. It offers a highly effective, safe, and patient-preferred treatment option for BPH. I urge NICE to consider the positive real-world outcomes and patient experiences with TPLA in finalizing the guidance. Thank you for considering my comments and for your commitment to promoting high-quality patient care.	
49.	Consultee 8 NHS clinician	General	Using transperineal laser ablation for treating LUTs is an attractive concept utilising skills gained from other transperineal procedures. I'd be interested to see data on this approach as it develops.	Thank you for your comment.

"Comments received in the course of consultations carried out by NICE are published in the interests of openness and transparency, and to promote understanding of how recommendations are developed. The comments are published as a record of the submissions that NICE has received, and are not endorsed by NICE, its officers or advisory committees."