

*Full Length Research Paper*

# Understanding patient and physician perceptions of benign prostatic hyperplasia in Japanese men: The Prostate Research on Behaviour and Education (PROBE) II survey

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**Objectives:** To assess attitudes and beliefs towards benign prostatic hyperplasia (BPH)/lower urinary tract symptoms (LUTS) and its treatment among Japanese patients and physicians. **Methods:** The Prostate Research on Behaviour and Education II quantitative survey used questionnaires to assess perceptions of 200 men with BPH/LUTS receiving drug treatment and 30 physicians treating BPH/LUTS. **Results:** One-quarter of patients reported not being adequately informed about BPH. Over 30% of patients did not consult, or delayed consulting, a physician when faced with initial symptoms. There was a disconnect between patients and physicians in the reasons for delayed consultation: 80% of physicians thought it was because men believed it was due to ageing, whereas only 39% of patients cited this reason. Moreover, physicians were generally less likely than patients to rate symptoms as severe at first presentation. Regarding progression, 70% of patients had never discussed surgery or acute urinary retention with their physician. Importantly, 33% of physicians reported tending not to take prevention of progression into account when deciding treatment. **Conclusions:** Areas of discordance exist between Japanese patients' and physicians' perceptions about BPH/LUTS, highlighting a need to proactively raise awareness to improve timely differential diagnosis and appropriate treatment, taking account of patients' needs and preferences.

**Keywords:** Benign prostatic hyperplasia, lower urinary tract symptoms, Japan, patients, perceptions, physicians.

## INTRODUCTION

Benign prostatic hyperplasia (BPH), defined as prostatic enlargement caused by hyperplasia of stromal and epithelial cells [1], often leads to bothersome lower

urinary tract symptoms (LUTS) [2]. Symptoms of BPH have a significant impact on health-related quality of life, work productivity and healthcare use of Japanese men, particularly among undiagnosed men experiencing LUTS and those experiencing frequent nocturia [1]. Furthermore, as BPH progresses, prostate volume tends to increase, maximum urinary flow rate decreases, symptoms worsen,

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and the likelihood of serious long-term complications of acute urinary retention (AUR) and the need for surgery increases [2].

In recent years, considerable progress has been made in the medical management of LUTS, as well as the prevention of disease progression [3]. However, there is still a need to further define the clinical profile of BPH/LUTS in order that the best evidence-based care is provided, including identifying men at risk of disease progression, and assessing patients' values and preferences [4]. US surveys and the European Prostate Research on Behaviour and Education (PROBE I) study have shown that patient and physician perspectives on BPH management are not fully aligned [5,6]. A survey conducted in Korea also revealed differences in patient and physician perceptions of the risks of BPH and treatment preferences [7]. However, there is limited knowledge of attitudes and beliefs among patients and physicians towards BPH in Japan.

The objective of the PROBE II survey was to explore attitudes of patients and physicians towards BPH and current BPH treatment among men across the Asia Pacific (APAC) region, Latin America, and the Commonwealth of Independent States (CIS) [8]. The survey also aimed to identify health-seeking behavior and treatment preferences of BPH patients and highlight attitudes towards the symptoms and complications of BPH among patients and physicians. This article focuses specifically on data collected in Japan.

## METHODS

PROBE II was a cross-sectional, multinational, qualitative study conducted across APAC, Latin America, and the CIS. Detailed study design and results from the overall population are reported elsewhere [8]. Briefly, questionnaires (structured in similar ways to those used in the first PROBE study [5]) were completed by patients with BPH who were receiving drug treatment for their condition and by their practising physicians. Questionnaires were approved by an ethics committee or Institutional Review Board before subjects could participate in the study. All participants were required to sign an informed consent form before being given the questionnaire. Physicians and patients were mostly recruited from physician and general public market research panels. The study was conducted between December 2014 and September 2015.

The primary objectives of the PROBE II survey in Japan, as elsewhere, were to explore and identify patient and physician attitudes to BPH, and to explore understanding of the BPH condition and treatment. Secondary objectives included the identification of health-seeking behavior and treatment preferences of BPH patients,

evaluation of attitudes towards the symptoms and complications of BPH among patients and physicians.

### Patient questionnaire

The patient questionnaire is provided in Online Resource 1. Key criteria for patient eligibility included men aged 45–80 years; patient self-reported previous diagnosis of BPH, 'enlarged prostate', or 'prostate problems'; patient self-reported consultation with a physician for BPH, 'enlarged prostate', or 'prostate problems' during the last 12 months; known current use of prescription medication for BPH, 'enlarged prostate' or 'prostate problems'. Patient data were collected via structured questionnaires (taking approximately 40 minutes to complete) using an online portal. For Japan, translated questionnaires were provided and patients participating received 2000 Japanese Yen.

### Physician questionnaire

The physician questionnaire is provided in Online Resource 2. Physicians eligible to participate were urologists practising for  $\geq 3$  years but  $< 31$  years who diagnosed or treated  $\geq 5$  patients per month with BPH. Physician data were collected via structured questionnaires (taking approximately 30 minutes to complete) using an online portal. For Japan, translated questionnaires were provided and participating physicians received 5412 Japanese Yen.

## RESULTS

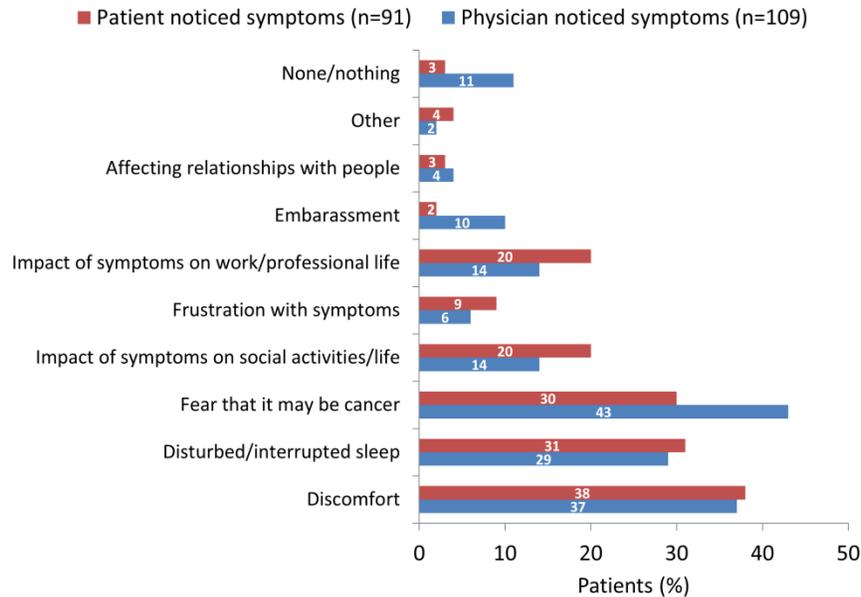
A total of 200 patients and 30 physicians met the inclusion criteria and were interviewed as part of the PROBE II survey in Japan. The mean age of participating patients was 67.2 years.

### General awareness of BPH

Almost two thirds of patients (63%) reported that they were 'very well' or 'fairly well' informed about health issues related to BPH; however, just under one quarter (24%) reported feeling 'not very well' or 'not at all' informed. A similar proportion of physicians (66%) reported that their patients were 'very' or 'somewhat' informed about BPH; one third (33%) of physicians reported that their patients were not well informed.

### Healthcare-seeking behavior

Most patients (82%) first noticed BPH symptoms aged 51–70 years; the mean age (patient-reported) at first

**Figure 1.** Main concerns about initial symptoms of BPH.

appearance of symptoms was 60.5 years. Of note, physicians said men first present with symptoms at a mean age of 67.2 years. When patients were asked who they had spoken to about their BPH or prostate problems, 78% had consulted a specialist physician, 36% had spoken to their partner/spouse, and a further 20% had consulted a family physician; only 3% had consulted a pharmacist or a nurse about their BPH symptoms. Patients were also asked how useful they considered each source to be; 85%, 62%, and 18% of patients regarded specialist physicians, family doctors and partners/spouses, respectively, to be helpful. In total, 71% of patients said they had also consulted the internet regarding their BPH-related problems.

### Diagnosis of BPH

Approximately half (46%) of the patients said they noticed symptoms themselves and around half (49%) said that symptoms were discovered during a routine examination by a physician. However, 90% of physicians said that patients initially visited them specifically to discuss their LUTS. The most common symptoms first noticed by patients were a slower or weaker urinary stream (reported by 70% of patients), the need to urinate more frequently (reported by 50% of patients), and difficulty in starting to void/urinate (reported by 40% of patients). Regardless of whether symptoms were first noticed by the patient or the physician, 'discomfort', 'disturbed sleep', and 'fear of cancer' were reported as the main concerns

regarding initial symptoms (Figure 1), and the most commonly reported reasons for consulting a physician (38%, 31%, and 30% of patients, respectively). However, over 30% of patients did not consult a physician when symptoms first appeared. Among these, the most common reasons for this were that the symptoms were not very bothersome (42%) and that the patient was waiting to see if the symptoms improved (42%) (Figure 2). Almost 40% of patients did not visit the doctor soon after the appearance of symptoms, as they thought the symptoms were a normal part of ageing. Interviewed physicians estimated that only half of men with symptoms of BPH consult their physician and 80% of physicians thought that men avoided consultations because they believed their LUTS were an inevitable part of ageing.

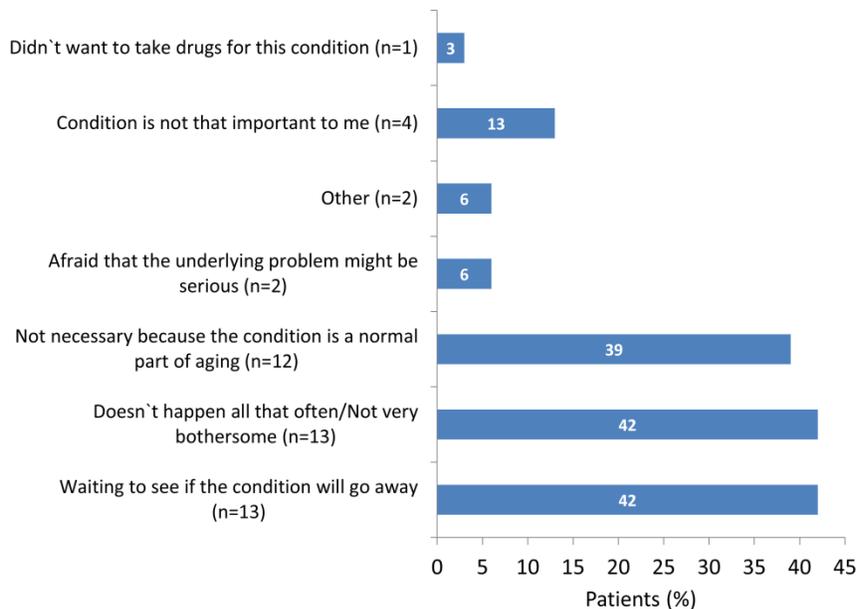
### Severity of BPH symptoms and impact on quality of life

Physicians were generally less likely than patients to rate a symptom as severe at first appearance (Figures 3A and 3B). Almost one quarter of patients who experienced nocturia as one of their first symptoms described the impact on their daily activities as major (Figure 4).

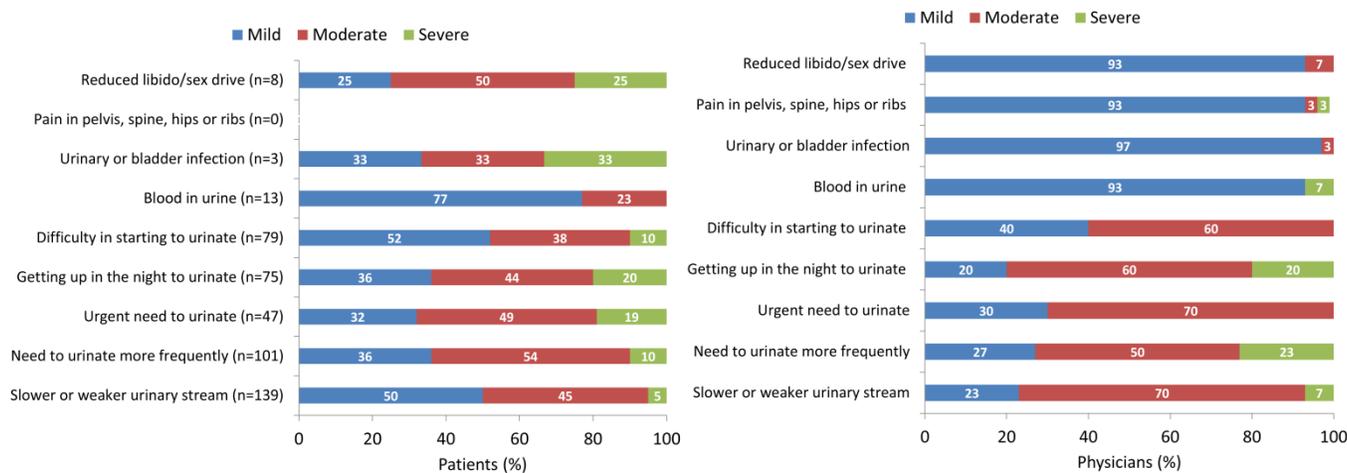
### Treatment experience and satisfaction

Half of the patients received a diagnosis of BPH/LUTS at their first visit to a physician and over half (56%) were

**Figure 2.** Main reasons for not consulting a physician.



**Figure 3.** Patients (A) and physicians (B) ratings of severity of BPH symptoms at first presentation.



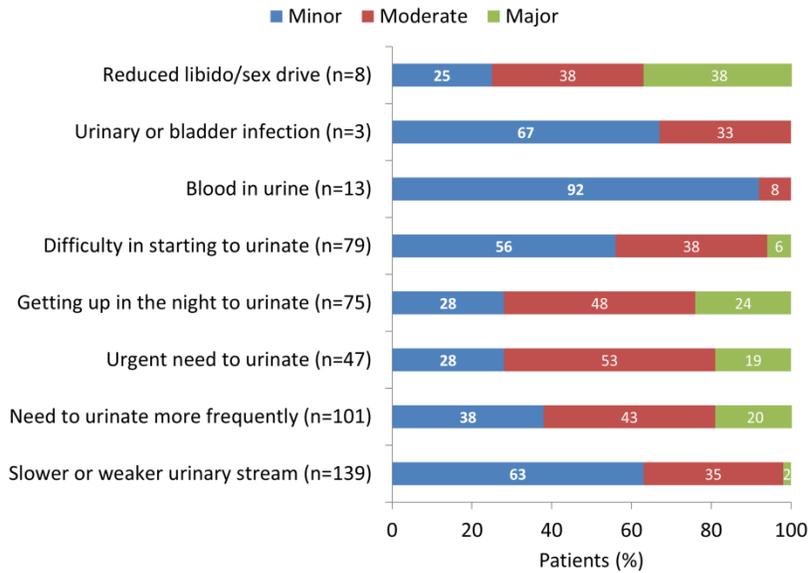
given a prescription medication at their first visit. The most commonly used medications at the time patients completed the survey were: silodosin (62 patients); tamsulosin (50 patients); naftopidil (39 patients); dutasteride (22 patients); anti-cholinergic agents (11 patients) and phosphodiesterase 5 inhibitors (tadalafil [7 patients]). The proportion of patients who reported that they had not previously used other BPH/LUTS medications was 23/62 patients (37%) in the silodosin

group; 30/50 patients (60%) in the tamsulosin group; 23/39 patients (59%) in the naftopidil group; and 10/22 patients (45%) in the dutasteride group.

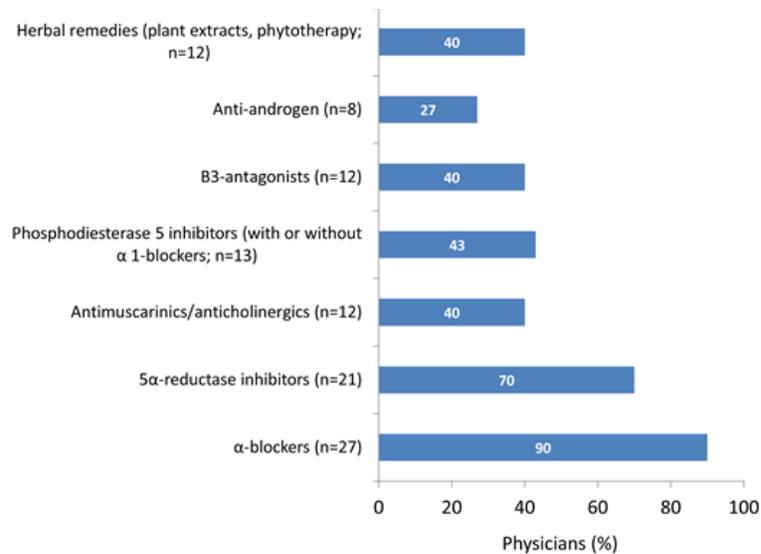
**Treatment satisfaction**

Forty-six percent of patients said they were satisfied with their treatment for BPH/LUTS, while 28% were not. The most commonly cited reason for dissatisfaction was lack

**Figure 4.**BPH symptoms that have an impact on activities.



**Figure 5.** Physician satisfaction with BPH treatment.

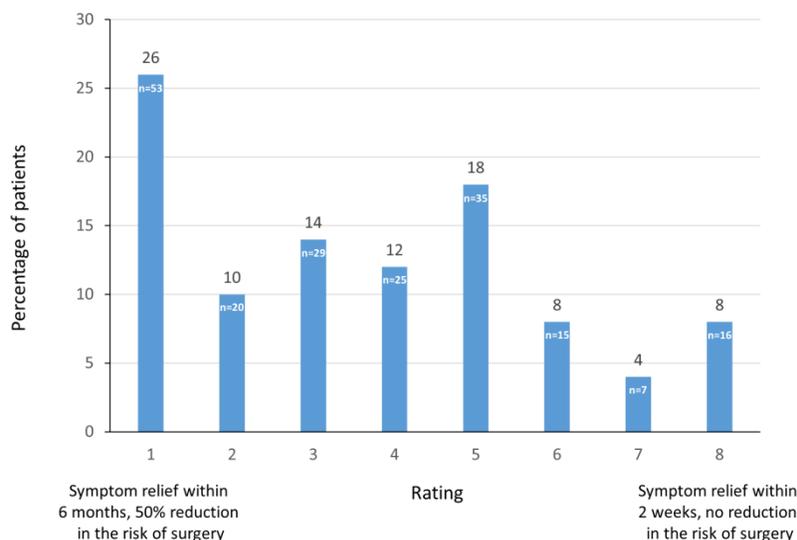


of efficacy (reported by 42% of patients). The percentage of patients satisfied with tadalafil, dutasteride, naftopidil, tamsulosin and silodosin was 71%, 50%, 49%, 42% and 35%, respectively. Fifty-one percent of patients reported 'too slow onset of action' or 'efficacy wearing off' as the reason for changing from one medication to another, while 24% of patients said it was because of the side effects.

Approximately three quarters of patients prescribed dutasteride (77%) or naftopidil (74%) reported feeling 'fairly' or 'very' well informed about BPH/LUTS, compared with 66% and 62% of those prescribed silodosin and tamsulosin, respectively.

Physicians expressed the highest levels of satisfaction with alpha-blockers and 5α-reductase inhibitors (5ARIs) (90% and 70%, respectively) (Figure 5).

**Figure 6.** Patient selection of important drug attributes on a scale of 1–8 (1 is a drug providing a 50% reduction in the risk of surgery and onset of symptom relief within 6 months, 8 is a drug providing relief from symptoms within 2 weeks but no reduction in the risk of surgery).



### Treatment preferences

Forty-two percent of patients said they feel more comfortable knowing the treatment they are receiving targets the underlying cause of their symptoms whereas 46% of patients expressed a preference for more medical treatments to manage the symptoms of BPH. Thirty-two percent of patients said they do not believe in taking medicines when they are not ill.

Patients were asked to indicate which of the following options they agreed with most when thinking about new products for their condition: option 1 was onset of symptom relief within 6 months and 50% reduction in risk of surgery, while option 2 was onset of symptom relief within 2 weeks and no reduction in risk of surgery. Patients were given a scale of 1 to 8, where 1 was an extremely strong preference for option 1 and 8 was an extremely strong preference for option 2. The mean scale score was 3.6, indicating that, overall, patients were slightly more in favour of waiting longer for symptom relief to benefit from a reduced risk of requiring surgery. Only 8% of patients expressed a complete preference for symptom relief within 2 weeks with no reduction in the risk of surgery (Figure 6).

### BPH progression

Nearly a quarter of patients (24%) had discussed prostate-related surgery with their doctor and 12% had

discussed AUR. Fifty-seven percent of physicians estimated that  $\leq 10\%$  of BPH patients progress to AUR within 4 years and 33% of physicians believed that BPH progresses in all patients.

Seventy percent of physicians indicated that they would consider prostate volume when deciding whether to prescribe a drug therapy. Furthermore, 63% of Japanese physicians reported that they would take prevention of BPH progression into account when deciding treatment. Ninety percent of physicians interviewed believed 5-ARIs reduce the risk of BPH progression, while 33% believed alpha-blockers reduce the risk of progression.

### DISCUSSION

PROBE II is the most comprehensive survey conducted to date investigating patient and physician perceptions of BPH in APAC, Latin America, and the CIS. An analysis of Japan was planned separately from APAC Other (Indonesia, Malaysia, and Philippines) due to its unique demographics, large population size, and different health service structures. Some regional variations and unique perceptions were observed in Japanese patients and physicians compared with the other regions/countries included in PROBE II. In Japan, almost one quarter of patients did not feel well informed about BPH, compared with 13% in APAC Other, 10% in China, and 9% in Australia [8], highlighting a possible need for better access

to information resources and awareness programmes for patients in Japan. Such resources and programmes should be tailored to the preferences and backgrounds of Japanese men. In PROBE II, almost three quarters of Japanese patients consulted the internet for information about their LUTS. Unlike other countries, Japanese patients very uncommonly consulted pharmacists or nurses.

Many Japanese men waited after first noticing symptoms before seeking the advice of a physician, consistent with findings from the European PROBE I survey and the overall PROBE II survey [5,8]. The main concerns of Japanese patients who sought medical advice for BPH were discomfort, disruption of sleep, fear of cancer and impact on social activities. These concerns were similar to those expressed by men in the overall PROBE II population [8] and those in the PROBE I study [5].

Japanese patients were among the most likely to receive a diagnosis after just one visit to the physician (50% versus 31% in PROBE I and PROBE II overall) [5,8]. Intriguingly, they were also less satisfied with their first physician visit and were considerably less satisfied with their current medicine compared to patients in other countries in the original survey (46% of Japanese patients were satisfied versus 69% in PROBE II overall) [5,8]. This is possibly because patients' main needs and concerns are not properly and adequately communicated to physicians within the limited counselling time frame.

Dutasteride is the only 5ARI approved in Japan for the treatment of BPH/LUTS. Its mechanism of action (reduced prostate size) is different and complementary to that of alpha-blockers, which act to relax smooth muscle. Several different alpha-blockers are available to Japanese physicians, and while these generally share a common mechanism of action, there may be differences in their adverse effect profiles. In particular, differences may be observed in sexual adverse effects; this is probably due to differences in affinity for alpha-1 adrenergic receptor subtypes [9,10]. Therefore, there may be instances when it may be beneficial for physicians to inform patients about the different adverse effect profiles and actions of available medications, so that they can make informed treatment choices. It is of note that over 40% of patients said they feel more comfortable knowing the treatment they are receiving targets the underlying cause of their symptoms.

Based on the reported use of previous BPH/LUTS medications, silodosin appears to be used less often as a first treatment than tamsulosin and naftopidil. As indicated above, alpha-blockers available in Japan have different (in particular sexual) adverse effect profiles, and this may help to explain the selection of first-line medication. Forty-five percent of patients receiving dutasteride reported no use of any previous BPH/LUTS

medication, suggesting that dutasteride is also used as first-line treatment in real-life clinical practice. This is in agreement with current Japanese guidelines, which support an individualized treatment approach that considers an enlarged prostate as a predictor of clinical progression [11].

The views of patients and physicians differed in the perceived severity of BPH symptoms on initial presentation, with physicians less likely than patients to rate a symptom as severe. This discordance may lead to delays in starting the most appropriate treatment as physicians underestimate the severity of the symptoms. Improvements in nocturia, urgency, and frequency of urination are likely to be important for improving quality of life, satisfaction and, thus, adherence, as these symptoms were most bothersome for patients.

Japanese patients were generally in favour of waiting longer for symptom relief to benefit from a reduced risk of surgery. This is in agreement with data from the overall PROBE II study and other previous research showing patients generally preferred therapies affecting long-term disease progression over those providing short-term symptom improvement [8,12]. Taking such preferences into account may improve overall patient satisfaction with treatment.

Despite patients' preferences in favor of therapies that reduce the risk of surgery, less than one third had discussed AUR or surgery with their physician. This is lower than the overall proportions from PROBE II and most other participating countries/regions [8]. However, these results are broadly in line with previous findings regarding patient perceptions of disease progression; a survey in Korea found that 60% of patients questioned did not understand the risk of BPH progression [7].

Furthermore, in the current study, about one third of Japanese physicians reported that they tend not to consider prostate volume or prevention of BPH progression when deciding treatment (higher than the overall proportion from PROBE II and most other participating countries/regions [8]). The fact that alpha-blockers were the most commonly used medications suggests that Japanese physicians are focused more on symptom improvement than preventing disease progression, although 33% believed that alpha-blockers reduce the risk of progression. Few data exist in Japanese patients, however in a systematic review of placebo arms of international trials of medical therapy for BPH, rates of surgery were 2.6–10.2% in trials of 2 years' duration and 0.4–6.6% for AUR over 1–4 years' follow up [13]. Further, the risk of BPH progression is likely to be higher in the real-world clinical setting and over longer duration than in trials. Japanese physicians were less

likely to consider their patients to be very concerned about progression compared with other countries/regions. Taken together, these findings indicate that Japanese physicians could give more consideration to discussing progression with patients in order to fully appreciate and address their concerns.

The limitations of our study should be noted, including the lack of longitudinal follow-up, possible recall bias, and the fact that physicians and patients were invited using market research databases, which may indicate potential bias related to their willingness to participate in the survey. It is also possible that there was potential for misinterpretation of answers provided via the online survey. Furthermore, no account was taken of the academic status of the included physicians, or whether they were office or hospital based or the potential for different practice patterns.

The PROBE II survey provides valuable insights into the attitudes and beliefs of patients and physicians in Japan about BPH and its management. This survey also highlights important areas of discordance between patients' and physicians' perceptions and beliefs. There is a need to raise awareness of BPH and its symptoms, and for physicians to adopt more proactive counselling approaches to ensure that men with this condition receive appropriate treatment that takes account of their needs and preferences and quality of life.

### Acknowledgements

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### Conflicts of Interest

Satoru Takahashi is a consultant for, and has received honoraria payments from, GlaxoSmithKline.

Yukiko Shima and Juan-Manuel Palacios are employees of GlaxoSmithKline.

Winston Wong is an employee of Ipsos Healthcare, who carried out the study on behalf of GlaxoSmithKline.

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**Electronic Supplementary Material**

**Article title:** Understanding patient and physician perceptions of benign prostatic hyperplasia in Japanese men: The Prostate Research on Behaviour and Education (PROBE) II survey

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**Content:** Physician and Patient questionnaire used in the PROBE II study

**ESM1. Patient questionnaire**

**Screener**

S1. Do you or any of your close friends or family work in any of these occupations?

Marketing / Market Research

Public relations

Advertising

Journalism

Medical Profession

Pharmaceutical Industry

Soap manufacturing

Cigarette manufacturing

Banking

None of these

S2. We are looking to interview people in a range of different age groups – how old are you?

S3a. The study concerns the experiences of people who have experienced a number of common medical conditions. Have you been diagnosed by a doctor as suffering from any of the following conditions?

Arthritis

High Blood pressure

Vision/ eye problems

Prostate problems

Benign Prostatic Hypertrophy [BPH]

Enlarged prostate

Insomnia/sleep problems

Asthma

Prostate cancer

S3b. And have you consulted a doctor for your [prostate problems/BPH/enlarged prostate] in the last 12 months?

S3c. Have you ever had surgery to remove your prostate?

S3d. Has a doctor ever told you that you have prostate cancer (cancer of the prostate gland, prostatic adenocarcinoma)?

S4. And are you currently taking any prescription medication for your [prostate problems/ BPH/ enlarged prostate]?

S5. Are you currently taking a SINGLE product for your [prostate problems / BPH / enlarged prostate] on its own, or a COMBINATION of two or more products for this condition?

S6. And which prescription medication are you currently taking for this condition [prostate problems/ BPH/ enlarged prostate]?

### **Main questionnaire**

Q1. Before we start, how well informed do you feel you are about health issues related to [prostate problems/ BPH/ enlarged prostate]?

Q2a. Who, if anyone, have you spoken to about your [prostate problems/ BPH/ enlarged prostate]?

Q2ai. Now, please tell me how helpful you feel each person is (or how helpful you think they would be) in providing information on your [prostate problems/BPH/enlarged prostate] and possible solutions, even if you haven't spoken to that person.

Q2bi. I will now read out a list of other sources that can be used to get information about [prostate problems/ BPH/ enlarged prostate] affecting men. Please tell me which sources you have consulted about your [prostate problems/ BPH/ enlarged prostate].

Q2bii. Now, please tell me how helpful you feel each source is (or how helpful you think it would be) in providing information on your [prostate problems/BPH/enlarged prostate] and possible solutions, even if you haven't consulted it.

Q3a. Thinking back, how did you discover your [prostate problems/ BPH/ enlarged prostate]?

Q3b. Now, how old were you when you first noticed symptoms associated with your [prostate problems/ BPH/ enlarged prostate]?

Q4. And which symptom(s) did you first notice?

Slower/weak urinary stream

Need to urinate more frequently

Urgent need to urinate

Getting up in the night to urinate

Difficulty in starting to void/urinate

Blood in urine

Urinary infections/bladder infections

Pain in pelvis, spine hips or ribs

Reduced libido / sex drive

Q5. What action, if any, did you take before you decided to consult a doctor?

Q6a. And approximately how many weeks did you wait before seeking the advice of a doctor?

Q6b. And what kind of doctor did you FIRST visit for these symptoms?

Q7. And why did you wait before seeking the advice of a doctor?

Q8. And thinking about these symptoms, that you FIRST experienced, how severe would you say they were at the time you consulted the doctor? For each symptom I read out, please tell me whether it was mild, moderate or severe.

Slower/weak urinary stream

Need to urinate more frequently

Urgent need to urinate

Getting up in the night to urinate

Difficulty in starting to void/urinate

Blood in urine

Urinary infections/bladder infections

Pain in pelvis, spine hips or ribs

Reduced libido / sex drive

Other (specified by the patient)

Q9. Again thinking about these symptoms, how would you describe their impact on your day-to-day activities at the time you consulted the doctor? For each symptom I read out, please tell me whether the impact was minor, moderate or major.

Slower/weak urinary stream

Need to urinate more frequently

Urgent need to urinate

Getting up in the night to urinate

Difficulty in starting to void/urinate

Blood in urine

Urinary infections/bladder infections

Pain in pelvis, spine hips or ribs

Reduced libido / sex drive

Other (specified by the patient)

Q10ai. What were your main concerns as a result of the symptoms you first experienced which prompted you to visit the doctor FOR THE FIRST TIME?

Q10aai. What were your main concerns as a result of the symptoms you first experienced?

Q10b. Now looking at this list, which, if any, of these concerns did you have at first which prompted you to visit the doctor FOR THE FIRST TIME?

Impact of symptoms on work / professional life

Impact of symptoms on social activities/life

Disturbed/interrupted sleep

Fear that it may be cancer

Frustration with symptoms

Embarrassment of symptoms

Discomfort

Affecting relationships with people

Other (please specify)

None / Not relevant

Q11a. Now thinking about that FIRST VISIT to the doctor, which of the following did your doctor do at that first visit?

Perform a DRE – physical (finger) rectal examination of prostate

Take a sample for a PSA (Prostate-Specific Antigen) blood test

Refer/perform ultrasound scan

Complete a symptom questionnaire

Take a sample for a urine test  
Asked family history  
None of the above  
Other (please specify)

Q11b. And how satisfied were you with how the doctor dealt with your problem during your FIRST VISIT?

Q12a. How many visits to the doctor did you make before you were given a diagnosis for your symptoms?

Q12b. And approximately how long, in days (weekdays and weekends), was the process between the first visit to the doctor and the visit at which the doctor gave you a DIAGNOSIS for your symptoms?

Q13. Now which of the following have EVER been done by a doctor since your first visit?

Had a DRE – physical rectal examination of prostate  
Had a PSA blood test  
Had a needle biopsy of the prostate  
Had an ultrasound scan  
Take a sample for a urine test  
Watchful Waiting – periods of no medication but monitored regularly  
Discussed options for surgery – to remove prostate  
Discussed options for surgery – to relieve symptoms of BPH  
Completed a symptom questionnaire  
None of the above

Q14a. When did watchful waiting (periods of no medication, but regular monitoring) commence?

Q14b. And why, would you say, was watchful waiting the approach preferred over other approaches?

Q15. And which of the following do you have undertaken routinely?

DRE – physical rectal examination of prostate 1  
PSA blood test  
Needle biopsy of the prostate  
Ultrasound scan  
Urine test  
Complete a symptom questionnaire  
None of the above

Q16a. At what intervals (in months) do you have a PSA blood test routinely conducted?

Q16b. And can you remember your most recent PSA test result?

Q16c. Please tell me this test result.

Q16d. And what changed as a result of your last PSA test?

Q17a. And at which consultation were you FIRST given a PRESCRIPTION for medicine for your symptoms by the doctor?

Q17b. And why do you think the first prescription was given? (What was discussed with your doctor)?

Q17ci. And for this first prescription, did you...?

Take the medication immediately  
Wait before taking the medication

Not take the medication at all

Q17cii. Why did you do that?

Q17di. And after starting the medication did you...?

Continue taking the medication as prescribed

Stop taking the medication before completed/advised by my doctor

Q17dii. Why did you do that?

Q18a. Have you filled out a questionnaire like this one or similar to this one for your doctor?

Q18b. This questionnaire [SELF COMPLETION FORM 1] is a recognised tool for measuring BPH symptoms – please can you complete it as it will help us better understand your symptoms

Q18c SHOW SELF COMPLETION FORM II – (Morisky 8-Item Adherence Questionnaire). This questionnaire is a recognised tool for understanding how medication is taken by people- please take some time to complete it.

Q19a. How long have you been taking [CITE NAME of DRUG]?

Q19b. How many times per day do you take this product?

Q19c. I would now like to get your experiences with this/these products

ALLOW AS MANY SELF COMPLETION FORMS III AS NEEDED, AS APPROPRIATE BASED ON USAGE AT S6:

Q19e. On a scale of 1-9, where 1 is 'not at all interested' and 9 is 'extremely interested', to what extent would you say you are interested in a single tablet that delivered both an alpha blocker, such as [ALPHA BLOCKER THAT PATIENT IS ON] and a 5ARI, such as [5ARI THAT PATIENT IS ON]

Q20. Have you changed from ONE PRESCRIPTION MEDICATION TO ANOTHER for your [prostate problems/BPH/enlarged prostate] while under treatment?

Q21. And what were the main reasons for changing?

Q22. You mentioned that you are currently taking [PRODUCT(S) CHOSEN AT QS6] – what other products have you ever taken previously?

Q23a. Have you ever asked your doctor for a SPECIFIC prescription product for this condition [prostate problems/BPH/enlarged prostate]?

Q23c. What specific product/brand did you request from your doctor?

Q23d. And why did you request this specific product/brand from your doctor?

Q23di. And did your Doctor prescribe this product to you?

Q24. Which of the following has your doctor ever discussed with you?

Prostate-related surgery

Acute urinary retention

None

Q25a. To what extent are you concerned about surgery for your [prostate problems/BPH/enlarged prostate]?

Q25b. Why do you feel this way about the option of SURGERY?

Q26a. To what extent are you concerned about Acute Urinary Retention?

Q26b. Why do you feel this way about Acute Urinary Retention?

SHOWCARD J. Here are a list of things that people like you have told us about their [prostate problems/BPH/enlarged prostate]. I would like you to tell me the extent to which you agree or disagree with these statements where 1 means 'not at all agree' and 7 means 'completely agree'.

- a) [prostate problems/BPH/enlarged prostate] are more serious than most people realise
- b) My [prostate problems/BPH/enlarged prostate] disrupt my family life
- c) Treatments for [prostate problems/BPH/enlarged prostate] are very inconvenient to take
- d) Treatments for [prostate problems/BPH/enlarged prostate] take too long to start working
- e) I don't feel the same man since I was diagnosed with this condition
- f) I have [prostate problems/BPH/enlarged prostate], but I don't let it rule my life
- g) I would feel more comfortable knowing I was on a product that targeted the cause of the symptoms
- h) I think my [prostate problems/BPH/enlarged prostate] will get better
- i) I worry that my [prostate problems/BPH/enlarged prostate] will get worse over time
- j) There are other things more important for me to worry about than my [prostate problems/BPH/enlarged prostate]
- k) I feel embarrassed by my [prostate problems/BPH/enlarged prostate]
- l) My doctor doesn't understand what it's like to have [prostate problems/BPH/enlarged prostate]
- m) I don't believe in taking medicines when I am not ill
- n) There's nothing I can do about my [prostate problems/BPH/enlarged prostate] it's just part of ageing
- o) I'd like to see more about [prostate problems/BPH/enlarged prostate] in the mass media
- p) I prefer to use natural or homeopathic remedies rather than prescription medicines for my [prostate problems/BPH/enlarged prostate]
- q) I worry about the long term effects of taking medication for [prostate problems/BPH/enlarged prostate]
- r) The best path for my [prostate problems/BPH/enlarged prostate] is to watch and wait
- s) I wish there were more medical treatments available to me for my [prostate problems/BPH/enlarged prostate]
- t) I worry about needing surgery for my [prostate problems/BPH/enlarged prostate]
- u) I am constantly frustrated by my [prostate problems/BPH/enlarged prostate] symptoms
- v) I count myself lucky that it's not something more serious

Q27. Overall, how satisfied are you with the medicines you are CURRENTLY taking for your [prostate problems/BPH/enlarged prostate]?

Q28. And why do you feel [CITE RESPONSE AT Q27]?

Q28A. SELF-COMPLETION FORM IV – ASK RESPONDENT TO INDICATE THE EXTENT TO WHICH THEY PREFER ONE OPTION OVER THE OTHER WHEN THINKING ABOUT NEW PRODUCTS FOR THEIR CONDITION

Q28B. SELF-COMPLETION FORM V - ASK RESPONDENT TO INDICATE THE EXTENT TO WHICH THEY PREFER ONE OPTION OVER THE OTHER WHEN THINKING ABOUT NEW PRODUCTS FOR THEIR CONDITION

#### Classification and Demographics

- P1. Country
- P2. Health insurance
- P3. Ethnicity
- P4. Employment status
- P5. Education
- P6. Marital status
- P8. Comorbidities

**ESM2. Physician questionnaire****Screeners**

S1. Which of the following best describes your primary specialty?

Urologist      Primary care/general practitioner      Other

S2. How many years have you been practising since completion of your specialist training?

S3. Have you participated in any market research in the field of prostate health in the last 3 months?

S4. Are you, or any member of your family directly involved with any healthcare or pharmaceutical company as a paid consultant or researcher?

**Main questionnaire**

Q1. In a typical four-week period, how many patients do you see presenting for the first time with symptomatic BPH?

Q2. On average, how old are men when they first present to you with symptomatic BPH?

Q3. What percentage of men over the age of 60 years do you believe suffer from symptomatic BPH?

Q4. What percentage of men over the age of 80 years do you believe suffer from symptomatic BPH?

Q5. What percentage of men with symptoms of BPH do you think consult their physician about their symptoms?

Q6. What do you think is the main reason why men with urinary symptoms do not visit, or delay visiting, their physician?

Q7. In your experience, what is the most common reason why men with BPH visit their physician?

Q8. In your opinion, what are the top 3 symptoms that trigger men with BPH to first visit their doctor?

Q9. What percentage of your BPH patients...

a. Initially visited specifically for urinary symptoms

b. Initially visited for another reason / part of a routine health check and BPH was subsequently discovered

Q10. On average, what is the severity of the following symptoms patients are experiencing when first visiting you about BPH?

Slower/weak urinary stream

Need to urinate more frequently

Urgent need to urinate

Getting up in the night to urinate

Difficulty in starting to void/urinate

Blood in urine

Urinary infections/bladder infections

Pain in pelvis, spine hips or ribs

Reduced libido / sex drive

Q11. How often do you perform a DRE (digital rectal examination) when a man presents with the symptoms of BPH?

Q12. How often do you perform a PSA (prostate-specific antigen) test when a man presents with symptoms of BPH?

Q13. In what proportion of your BPH patients did:

1. You diagnose their BPH

2. A General/Family practitioner diagnose their BPH

3. Another HCP diagnose their BPH?

Q14. On average, how many times do patients with urinary symptoms tend to visit you before being given a diagnosis of BPH?

Q15. What percentage of your patients do you prescribe “watchful waiting” to when they first present with BPH?

Q16. What percentage of your patients do you prescribe “lifestyle advice” (education, fluid management, toileting and bladder re-training) to when they first present with BPH?

Q17. What percentage of your patients with BPH receive a prescription treatment when they first present with BPH?

Q18. On average, how many visits does a patient with BPH make to you before being prescribed a treatment?

Q19. Do you take into account the size of a man’s prostate when deciding whether to prescribe a drug therapy?

Q20. Do you take into account the size of a man’s prostate when deciding which drug therapy to prescribe?

Q21. Of your patients receiving a prescription treatment, what proportion receive each of the following:

$\alpha$ -blockers

5 $\alpha$ -reductase inhibitors

Antimuscarinics

Phosphodiesterase 5 inhibitors (with or without  $\alpha$  1-blockers)

Vasopressin analogue (desmopressin)

Combination therapy ( $\alpha$ -blockers + 5 $\alpha$ -reductase inhibitors)

Combination therapy ( $\alpha$ -blockers + muscarinic receptor antagonists)

B3-antagonists [**JAPAN ONLY**]

Anti-androgen [**JAPAN ONLY**]

Vitaprost (suppository) [**KAZAKHSTAN ONLY**]

Herbal remedies

Q22. How satisfied are you with each of the following types of treatment for BPH?

$\alpha$ -blockers

5 $\alpha$ -reductase inhibitors

Antimuscarinics

Phosphodiesterase 5 inhibitors (with or without  $\alpha$  1-blockers)

Vasopressin analogue (desmopressin)

Combination therapy ( $\alpha$ -blockers + 5 $\alpha$ -reductase inhibitors)

Combination therapy ( $\alpha$ -blockers + muscarinic receptor antagonists)

B3-antagonists [**JAPAN ONLY**]

Anti-androgen [**JAPAN ONLY**]

Vitaprost (suppository) [**KAZAKHSTAN ONLY**]

Herbal remedies

Q23. How informed do you think your male patients are about BPH?

Q24. How valuable do you think it would be to raise awareness of BPH and encourage men with symptoms to consult a physician?

Q25. Do you believe that BPH progresses?

Q26. Do you think that your patients believe that BPH progresses?

Q27. What does BPH progression mean to you?

Q28. What percentage of men with BPH do you believe will progress to acute urinary retention within four years of diagnosis?

Q29. What percentage of men with BPH do you believe will progress to BPH-related surgery within four years of diagnosis?

Q30. To what extent do you think your patients are concerned about...

1. Surgery for BPH
2. Acute Urinary Retention?

Q31. Is prevention of BPH progression a factor that you take into account when deciding how to treat a patient with BPH?

Q32. Which of the following drug classes do you believe reduces the risk of BPH progression?

$\alpha$ -blockers

5 $\alpha$ -reductase inhibitors

Antimuscarinics

Phosphodiesterase 5 inhibitors (with or without  $\alpha$  1-blockers)

Vasopressin analogue (desmopressin)

Combination therapy ( $\alpha$ -blockers + 5 $\alpha$ -reductase inhibitors)

Combination therapy ( $\alpha$ -blockers + muscarinic receptor antagonists)

B3-antagonists [**JAPAN ONLY**]

Anti-androgen [**JAPAN ONLY**]

Vitaprost (suppository) [**KAZAKHSTAN ONLY**]

Herbal remedies

Q33. Do you believe that adherence to BPH treatment is high in patients due to the nature of their disease?

Q34. To what extent do you believe that adherence to BPH treatment is an important factor in preventing BPH from progression?

Q35. Which three of the following drug classes do you believe have the highest adherence in BPH patients?

$\alpha$ -blockers

5 $\alpha$ -reductase inhibitors

Antimuscarinics

Phosphodiesterase 5 inhibitors (with or without  $\alpha$  1-blockers)

Vasopressin analogue (desmopressin)

Combination therapy ( $\alpha$ -blockers + 5 $\alpha$ -reductase inhibitors)

Combination therapy ( $\alpha$ -blockers + muscarinic receptor antagonists)

B3-antagonists [**JAPAN ONLY**]

Anti-androgen [**JAPAN ONLY**]

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Herbal remedies

