

Assessing the attitudes to prostate cancer treatment among European male patients

Claude Schulman

Department of Urology, University of Brussels, Belgium

OBJECTIVES

To understand the attitudes of patients with prostate cancer toward the disease in general and to the use of hormone therapy as treatment; to assess unmet needs in the management of prostate cancer; and to gauge patient receptivity to a potential 6-month formulation of a luteinizing hormone-releasing hormone (LHRH) agonist.

PATIENTS AND METHODS

Face-to-face interviews, lasting 50 min on average, were conducted during January and February 2007 with 200 European men who had been diagnosed with prostate cancer.

RESULTS

Most patients were very satisfied with their physician, particularly with specialists, with

94% of men being satisfied with their expertise and 67% fully trusting the recommended treatment. Therapeutic efficacy was considered the most crucial aspect of treatment, although maintaining their lifestyle during treatment was also considered important (83% of patients). In all, 67% of patients believed that consideration should be given to lifestyle needs when selecting treatment; however, over half (55%) had never raised lifestyle issues with their physicians. Most patients would prefer fewer injections, with 68% preferring 6-monthly injections over 3- or 1-monthly depots. Perceived advantages of 6-monthly injections include less discomfort/pain, more quality of life, fewer reminders of the disease and more ability to undertake activities without restriction.

CONCLUSIONS

Patients with prostate cancer are generally very satisfied with their physicians and the information they receive, yet find it difficult to communicate their lifestyle needs. Most patients would prefer 6-monthly LHRH agonist therapy due to the many advantages associated with fewer injections, including its efficacy in reducing testosterone levels. Improving patients' willingness to raise lifestyle issues with their physicians, providing more effective patient-physician communication and less frequent injections might assist in achieving both optimal control of testosterone and optimal management of prostate cancer.

INTRODUCTION

Prostate cancer is the second most common male cancer in Europe [1] accounting for 9% of cancer deaths in European men [2]. Moreover, prostate cancer is now recognized as one of the principal medical problems facing the male population, with an estimated 2.6 million new cases diagnosed in Europe each year [2]. About 7% of men are diagnosed with the disease [3] with an average age of 70 years at the time of diagnosis [4].

To reduce the morbidity and mortality associated with prostate cancer it is important that prostate tumours are diagnosed at an early stage, that the aggressiveness of the tumour is assessed, and that treatment is initiated before the cancer spreads. The earlier the diagnosis, the more positive the outcome will be. There are numerous treatment options available for patients with prostate cancer, with physicians usually establishing a treatment plan tailored

to the patient's stage of cancer and his individual needs.

There are three options for patients who have local-stage prostate cancer, i.e. active surveillance (also referred to as 'watchful waiting') [2], radical prostatectomy (open, laparoscopic or robotic) [2] and radiotherapy [4]. The goal of all of these options is to remove or destroy cancer cells before they can spread to other tissues in the body. However, when cancer has spread beyond the prostate and is considered to be in an advanced stage, surgical removal of the prostate is uncommon [2]. In these patients, hormone therapy has become the recommended option for disease management, and in recent years there has been a shift towards increasing hormone therapy for younger patients in earlier stages of the disease [2].

There are three main types of hormone therapy: LHRH agonists [2], antiandrogens [4] and oestrogens [2]. LHRH agonists act by

preventing the testes from producing testosterone, thus inhibiting the growth of prostate tumours [2], and produce a treatment effect comparable to orchidectomy [2]. LHRH agonists are generally administered as s.c. injections [5,6], which are generally delivered every 1-, 2- or 3-months [2]. However, the development of new delivery systems has recently led to the availability of a convenient 6-month formulation [5]. Antiandrogens block the action of testosterone in the prostate, inhibiting prostate cancer growth. These agents are often used in combination with LHRH agonist therapy [4], and are administered orally. Oestrogens are female hormones that suppress the production of testosterone, but this treatment has been associated with a high rate of cardiovascular side-effects [2] and is thus rarely used. Prostate cancer that is no longer responsive to hormone therapy is referred to as hormone-resistant prostate cancer, and treatment might require systemic radiotherapy or chemotherapy [7].

Historically, testosterone levels were lowered by surgical removal of the testes (orchidectomy) [2]. This was progressively and almost completely abandoned with the development of LHRH agonists, and hormone therapies have now become the mainstay for treating advanced prostate cancer [2]. However, these therapies can also compromise a patient's quality of life (QoL); e.g. research has shown a link between the frequency of hormone injections and emotional distress [8]. In addition, Potosky *et al.* [9] investigated health-related QoL outcomes after primary androgen deprivation therapy with orchidectomy vs LHRH agonists for patients with prostate cancer. In that study, there was a correlation between hormone injections and negative QoL for patients, with those treated by LHRH agonist more likely to report greater physical discomfort and worry because of cancer or its treatment than those treated by orchidectomy. Moreover, patients on LHRH assessed their overall health as fair or poor more frequently than did those after orchidectomy, and were also less likely to consider themselves free of prostate cancer after treatment [9].

Much research has been conducted exploring the QoL factors that patients with prostate cancer deem important in their treatment decisions. In January 2007, an expert panel of urologists with expertise in prostate cancer met to discuss these issues and concluded that what patients want from treatment is: less frequent injections, fewer visits to the doctor, less worry or emotional distress about cancer, and lower testosterone and PSA levels [8]. In addition, patients also desire more convenience, freedom and control over their cancer, increased time with their families and loved ones, and more involvement from their partners [8]. The aim of the current investigation was to substantiate these beliefs and explore the hypotheses that several barriers exist that prevent patients with prostate cancer from achieving optimal management of their condition. Six such barriers (potentially interrelated) were identified:

- patients and physicians do not communicate effectively;
- patients are reluctant to raise certain issues with physicians, such as those pertaining to their lifestyle or QoL;
- there is a general lack of information about therapy options;

- hormone injections are required too frequently;
- concern, distress or worry negatively affects patients' attitudes and behaviours;
- patients are reluctant to seek support from their partners or family members.

PATIENTS AND METHODS

The sample was designed to receive valid insights into the patient population and in particular, patients receiving LHRH agonists. Due to low incidence rates and the need for pre-screening, respondents were recruited via physicians. The response rate of physicians contacted for recruitment was: Germany 26%; Italy 24%; Spain 78%; the Netherlands 61%; France 13%. The sample provides a solid overview of the relevant population with 40 per country or 200 men in total.

From 8 January to 16 February 2007, GfK Research conducted 200 face-to-face interviews in five European countries (France, Germany, Italy, the Netherlands, Spain) and in the respondents' native language. The average interview time was 45–50 min; respondents were paid an incentive of €10–40 for their participation in the research.

Participants were initially screened in a pre-survey questionnaire to ensure they met selection criteria. The selection criteria for the sample included patients with prostate cancer, receiving LHRH agonist treatment from their physician (urologist/GP), e.g. leuprorelin, goserelin, buserelin or triptorelin. Table 1 lists the demographic characteristics for the sample of participants for each of the five countries.

To explore the patients' attitudes, a 24-item survey was developed, with questions organized into five categories: current treatment experience; patient attitudes toward treatment; patient–physician interactions; and information needs and sources of information on prostate cancer. A variety of ordinal variables was used for many of the questions, many of which included unbalanced 5-point scales, with labels attached to each endpoint (e.g. 'Very much agree' to 'Do not agree at all'; 'Very difficult' to 'Not at all difficult'; and 'Very satisfied' to 'Not at all satisfied'). In addition, eight open-ended questions were included that asked respondents to name or identify their answer; for these questions, verbatim

responses were later coded during data analysis.

Pre-testing took place on 6 December 2006 in Munich, Germany (four samples). The flow of the questionnaire was reviewed and insights gleaned on potential amendments to the questionnaire. All pre-test interviews were conducted in a central location.

Data were reviewed at the end of the survey and discrepancies were resolved and re-coded. All analyses were conducted using Quantum, a professional tabulation software package. To test for differences between sample subpopulations, a *t*-test was used with the level of significance being 95%. The data were analysed using descriptive measures such as frequency, mean value, etc. No correlation or regression models were applied at that time. For the purposes of analysis, urologists, oncologists and radiotherapists were grouped together and defined as 'specialists'.

RESULTS

The demographics of the participants were generally comparable across countries and the mean age was 70.1 years [8] (Table 1). Interviewers also gathered information pertaining to the duration since the respondents' diagnosis and the type of hormone treatment they were currently taking. Of participants, 37% had been diagnosed within the past 2 years, while 37% were diagnosed 2–5 years earlier and the remaining 26% \geq 5 years ago [8]. Only 12% of the participants were unsure which hormone treatment they were receiving. Most participants (82, 41%) were receiving leuprorelin. Other treatments included goserelin (56, 28%), triptorelin (29, 15%) and buserelin (10, 5%). About 80% of respondents (157, 79%) received hormone injections once every 3 months to lower their testosterone levels and 42 (21%) received injections once every month [8].

Most patients in this research sample had their prostate cancer diagnosed by a urologist (153, 77%); a further 17% (34) were diagnosed by their GP or an internist, while just 5% (nine) were diagnosed by an oncologist; In all, 53% of respondents (106) were diagnosed with prostate cancer after consulting a physician for their symptoms, while 23% (46) were diagnosed by chance and 21% (42) as a result of general screening [8].

Current treatment providers included urologists (178, 89%), GP (47, 24%), oncologists (37, 19%) and radiotherapists (nine, 5%); 36% of the sample named more than one healthcare provider as providing them with treatment [8].

Most patients were highly satisfied with the healthcare professional who treated them, particularly specialists, whose medical expertise and the information they provided were highly appreciated. Only the physician's consideration of patients' lifestyle was rated slightly lower [8]. When rating their satisfaction with their physicians on a 5-point scale (1, not at all satisfied; 5, very much satisfied), 94% of participants (188) rated satisfaction with their specialist's medical expertise as '4' or '5', with 93% (186) also rating the information that their specialist provided as '4' or '5', and 87% (174) being satisfied or very satisfied with the level of consideration given to their lifestyle needs when the specialist decided on treatment [8]. However, satisfaction with GPs was not as high; more than half of the participants rated their satisfaction with the information their GP provided (111, 56%) and their GP's medical expertise (110, 55%) as '4' or '5'. Just under half (89, 45%) applied the same satisfaction rating to the level of consideration given to their lifestyle needs when the GP decided on treatment [8].

Participants were asked to describe their attitude towards the physician currently treating them for prostate cancer. Two-thirds of patients (134, 67%) stated that they fully trusted their physician and the treatment they recommended without question, although this confidence varied across countries, ranging from 48% in France to 88% in Spain. Just under a third (63, 32%) explained that they trust their physician, but also questioned the suggested treatment and its possible side-effects [8]. Table 2 presents the findings across the five countries.

Although patients had a high level of confidence in their physicians, 69% (137) also indicated that it is important to them that their physician discusses treatment options with them, and that they are involved in the decision process. Furthermore, nearly two-thirds of the 174 respondents in a relationship (109, 63%) indicated that it is important to them that their partner is involved in treatment decisions; however, attitudes varied across countries, ranging from only 53% (17

TABLE 1 The socio-demographic characteristics of study participants (40 in each) by country

Characteristic, %	France	Germany	Italy	Netherlands	Spain
Age, years					
≤50	2.5	5.0	2.5	–	2.5
51–60	2.5	7.5	25.0	2.5	12.5
61–70	27.5	42.5	40.0	25.0	25.0
71–80	67.5	45.0	32.5	72.5	60.0
≥80	–	–	–	–	–
Educational attainment					
No qualifications	5.0	–	5.0	2.5	45.0
Primary school	22.5	42.5	20.0	22.5	35.0
Secondary school	42.5	25.0	27.5	50.0	5.0
Sixth form	10.0	12.5	25.0	7.5	5.0
College/University	5.0	17.5	20.0	15.0	7.25
Post-graduate	15.0	2.5	2.5	2.5	2.5
Size of household, persons					
1	22.5	17.5	5.0	12.5	7.5
2	72.5	67.5	40.0	85.0	60.0
3	5.0	2.5	32.5	2.5	25.0
≥4	–	10.0	22.5	–	7.5
N/A	–	2.5	–	–	–
Household income, (monthly), €					
≤999	12.5	5.0	5.0	2.5	22.5
1000–1999	45.0	45.0	35.0	45.0	27.5
2000–2999	15.0	30.0	37.5	27.5	2.5
3000–3999	10.0	7.5	15.0	7.5	–
≥4000	5.0	12.5	7.5	7.5	–
N/A	12.5	–	–	10.0	47.5
Size of town, population					
≤20 000	10.0	32.5	–	32.5	5.0
20 000–100 000	35.0	17.5	–	30.0	7.5
100 000–250 000	17.5	12.5	2.5	35.0	15.0
≥250 000	35.0	37.5	97.5	2.5	72.5
N/A	2.5	–	–	–	–
Employment					
(self-)Employed	12.5	35.0	50.0	15.0	17.5
Unemployed	–	–	–	2.5	80.0
Retired	82.5	65.0	50.0	82.5	2.5
N/A	5.0	–	–	–	–
Product usage					
Leuprorelin	42.5	52.5	32.5	40.0	37.5
Goserelin	30.0	17.5	22.5	47.5	22.5
Triptorelin	20.0	7.5	35.0	–	10.0
Buserelin	–	12.5	2.5	7.5	2.5
Do not know	7.5	10.0	7.5	5.0	27.5

of German respondents with partners feeling this way to 85% (30) of Dutch respondents [8].

Patients' lifestyle needs and their attitudes toward how a variety of QoL factors affected their treatment were explored. On average, the total sample of 200 respondents ranked six lifestyle-related issues as follows:

spending time with family, 97%; staying active and pursuing hobbies, 80%; spending time with friends, 65%; trying to forget having cancer, 57%; travelling, 48%; and maintaining a sex life, 22% [8]. However, on this question, there were strong variations among countries. In particular, the time spent with the family appears to matter the most to patients in Germany and the Netherlands,

TABLE 2 Attitudes toward physician's treatment recommendations by country

Statement, n (%)	France	Germany	Italy	Netherlands	Spain
I fully trust my physician and the treatment he recommends without question	19 (48)	21 (53)	27 (68)	32 (80)	35 (88)
I trust my physician, but I also question him about the suggested treatment and possible side-effects	20 (50)	19 (48)	13 (33)	8 (20)	3 (8)
If I am not convinced of the diagnosis/treatment decision made by my physician, I will get a second opinion	1 (3)	0	0	0	2 (5)

TABLE 3 General patient lifestyle attitudes according to country; percentages represent the proportion of participants who answered 'agree' or 'very much agree' ('4' or '5' on a 5-point scale, where 1 = do not agree at all and 5 = very much agree)

Statement, n (%)	France	Germany	Italy	Netherlands	Spain
The time I spend with my family is an important part of my life	37 (93)	39 (98)	39 (98)	39 (98)	39 (98)
Staying active/pursuing my hobbies is an important part of my life	34 (85)	33 (83)	29 (73)	29 (73)	35 (88)
The time I spend with my friends is an important part of my life	34 (85)	29 (73)	22 (55)	21 (53)	23 (58)
I wish I could forget about my disease (prostate cancer)	25 (63)	26 (65)	31 (78)	18 (45)	14 (35)
The ability to travel is very important for me	23 (58)	20 (50)	14 (35)	22 (55)	17 (43)
Sex is an important part of my life	11 (28)	9 (23)	14 (35)	2 (5)	7 (18)

whereas both family life and being active are considered similarly important in Spain and France [8]. Conversely, in Italy, patients are divided between family life, hobbies and the wish to forget the disease when considering what is important to them; Table 3 presents the findings across the five countries.

In general, maintaining lifestyle during treatment is deemed important by patients; 83% of patients (165) said they agree that it is important to maintain their lifestyle during treatment and 67% (134) agree that it is important that their physician considers their lifestyle needs when deciding on treatment options [8]. These findings were consistent across the five countries.

Despite two-thirds of patients expressing that it is important that their physician considers their lifestyle needs [8], more than half (74, 55%) had never raised this issue during their consultations. The reasons cited for not raising such concerns, in rank order, are that lifestyle needs are: too personal or private to

mention, 23%; not important for treatment, 16%; not relevant, 15%; and not important because the doctor could not help, 8% [8]. Nevertheless, when lifestyle issues had been raised with physicians, 22% reacted very positively, 20% stated that the patient's lifestyle would not be affected, and a further 12% said that they had already selected therapy to match the patient's lifestyle.

When questioned on what they considered to be the most important factors in making decisions on hormone therapy for their prostate cancer, most patients considered clinical criteria to be the more important than lifestyle or convenience issues; 66% (131) of patients stated that they considered lowering their testosterone levels to be most important criterion, as they believe that it controls their cancer, while lifestyle maintenance and treatment convenience through fewer and simpler injections were deemed to be the most important factors for 24% (48) and 11% (21) of patients, respectively. This pattern was consistent across countries.

Regarding the frequency of hormone injections, 86% (172) of patients would prefer to receive injections once every 3 months rather than every month (assuming that the two treatments had equal efficacy and side-effect profiles), while 68% (135) would prefer injections once every 6 months rather than every 3 months or every month.

The inclination to recognize the benefits of fewer injections was more apparent in younger patients, with 92% (82/89) of those aged ≤ 70 years preferring hormone injections once every 3 months to every month, and 81% (72/89) preferring 6-monthly injections over 3- or 1-monthly formulations, vs 81% (90/111) and 57% (63/111) of those aged 71–80 years, respectively [8]. Other perceived advantages of a 6-month formulation of hormone therapy were also appreciated more by the younger men, with the benefits ranked by those aged ≤ 70 years and 71–80 years age groups as follows: produces less discomfort/pain, 61% vs 39%, respectively; provides more QoL, 64% vs 30%; produces fewer reminders of the disease, 56% vs 32% and it allows for more ability to undertake activities without restriction, 58% vs 29% [8].

DISCUSSION

The findings of the patient survey confirm the initial hypotheses that there are several barriers preventing patients with prostate cancer from achieving optimal management of their condition. The main barrier identified was poor communication between physicians and patients, particularly on emotional issues, although other barriers to the optimum treatment of prostate cancer were also uncovered.

Patients with prostate cancer were found to be treated primarily by urologists, with oncologists and GPs generally playing a more minor role in the management of their condition. Importantly, patients were found to be highly satisfied with their treating physicians and the information they receive from them, with most finding no reason to doubt the treatment decisions made on their behalf. Although this might simply be due to patients' trust in their physicians' expertise, it might also be due to their attitudes to cancer. Indeed, a previous survey of the information needs of patients with cancer, conducted in the UK, found that placing faith in doctors'

expertise was a way of coping with their illness [10].

Furthermore, the survey found that hope is essential to enable patients to carry on with life as normal; avoidance of detailed information allows them to maintain this hope. Nevertheless, the current survey suggests that most patients would value greater input and involvement during discussions with the treating physician when deciding on treatment options. It thus appears that patients wish to be kept informed of their treatment options, although not all want extensive information about their condition and treatment at all stages of their illness. Individual differences are likely to exist in the type and amount of information preferred by different patients, and these preferences might change over the course of their illness [11]. It is thus necessary for physicians to try to understand each patient's needs, as well as gaining their perspective on the usefulness of new sources of information.

The study suggests that spending time with their families is the main priority of patients with prostate cancer, with staying active and pursuing hobbies also forming an essential part of their lives. However, about two-thirds of patients do not communicate these needs to their physician, with the personal nature and relevance of these issues being cited as the principal reasons for not raising such concerns. Nevertheless, most patients found that, when they did discuss lifestyle issues with their physician, the response was very positive. This suggests that, despite patients' perceptions, physicians are receptive to their emotional needs. For patients with cancer, it is believed that effective patient-provider collaboration contributes to improved patient outcomes by promoting greater agreement on patient-specific treatment goals and strategies [12,13]. For example, improved communication with physicians has been associated with a greater sense of choice and satisfaction with care for patients with breast cancer [12]. However, it is recognized that, in oncology, the communication between physicians and patients is not always as good as it could be [14,15]. To improve this situation, patients need to feel empowered to raise lifestyle issues with their physicians and more effective patient-physician communication is needed to bridge this gap.

Efficacy was found to be the most relevant aspect of therapy to patients with prostate

cancer, with maintaining the lifestyle they want to lead being the second most important consideration. However, assuming equal efficacy and side-effects, patients would prefer to receive less frequent treatment, with more than two-thirds of patients stating a preference for a 6-monthly formulation of hormone therapy over 3- or 1-monthly injection. This preference was based on the perception that fewer injections are associated with several benefits, e.g. less discomfort and pain, improved QoL and fewer reminders of the disease.

An association between hormone therapy injections and negative QoL was previously reported for patients with prostate cancer [9]. In addition, treatment regimens with high frequencies of dosing have been shown to reduce patients' compliance with treatment [16]. Nevertheless, use of long-acting formulations have been associated with both improved compliance and treatment outcome in a range of therapy areas [17–19]. The introduction of sustained-release formulations has also been important in the acceptance of LHRH agonist therapy in the prostate cancer setting. LHRH agonist treatment was previously only available as 1- or 3-monthly formulations; however, the availability of a new 6-monthly formulation provides even greater flexibility of treatment [5]. Indeed, a recent expert consensus meeting concluded that 6-monthly LHRH agonist treatment provides patients with the convenience of a full year of therapy with just two injections, allowing them the freedom to stop thinking about their cancer for up to 6 months [8].

It is clear from the findings of this survey that there is a need for more effective communication between physicians and patients with prostate cancer, particularly on the emotional aspects of patients' QoL. Although much progress has been made in the treatment of prostate cancer, with resulting improvements in survival, QoL issues have not been well studied [20]. We have now identified that patients find it difficult to express their emotional needs to their physicians. Additional research is now required to investigate appropriate ways of improving patient-physician communication to bridge this gap and optimize the overall management of patients with prostate cancer. Provision of a new 6-monthly formulation of LHRH agonist therapy might also assist in improving the treatment of these patients.

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Correspondence: Claude Schulman, Professor of Urology, University of Brussels, Belgium.
e-mail: Claude.Schulman@ulb.ac.be

Abbreviations: QoL, quality of life.