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OPEN JOURNAL OF Pain Medicine

ISSN: 2640-8104 DOI: https://dx.doi.org/10.17352/ojpm

Research Article

Breakthrough cancer pain: A delphi consensus study on expert recommendations for barriers that prevent the proper management of BTcP in Spain

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Received: 25 June, 2020
Accepted: 11 July, 2020
Published: 14 July, 2020

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Keywords: Barriers; Breakthrough cancer pain; Expert consensus; Management; Recommendations

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Abstract

Background: The management of Breakthrough cancer Pain (BTcP) remains unsatisfactory. Although many barriers to BTcP management have been identified, oncologists have not been able to overcome them. The aim of this study is to identify the barriers preventing proper BTcP management that Spanish medical oncologists have found, and to reach a consensus in order to draft the appropriate recommendations to overcome them.

Methods: This study is based on two surveys conducted by oncologists. The first survey was designed to reach a consensus on the main barriers (related to patients, physicians and healthcare organizations) that stand in the way of BTcP control. The second survey (a Delphi questionnaire) was based on the barriers evaluated in the first survey, including recommendations assessed using the two-round Delphi methodology.

Results: The identification of the main barriers to BTcP management to be assessed showed a high consensus regarding the need for greater involvement from health organizations. Eighty-eight experienced oncologists evaluated the proposed recommendations. A consensus was reached on 93% of these recommendations, always in terms of agreement. Only three recommendations did not reach a consensus, one in each block of barriers (patients, physicians and healthcare organizations).

Conclusion: Showing a high degree of consensus, the results of this study reflect that there are over-worked medical oncologists, which results in more time and training being taken away from proper BTcP management. Although oncologists considered cancer pain management to be suitable in oncologist consultations, they also revealed that more support and resources are necessary in order to improve BTcP control.

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Abbreviations

BTcP: Breakthrough cancer Pain; CI: Confidence Interval; CPG: Clinical Practice Guidelines; MO: Medical Oncology; NC: No Consensus; PA: Primary Attention; PCP: Primary Care Physician; QoL: Quality of Life; RECs: Research Ethics Committees; SEOM: Spanish Society of Medical Oncology

Introduction

Breakthrough cancer Pain (BTcP) is commonly defined as the transient exacerbation of pain that occurs either spontaneously or in relation to a predictable or unpredictable trigger (an incident), despite stable, controlled background pain [1,2]. Currently, there is no universally accepted definition of BTcP [1,3]. This lack of worldwide agreement may make it difficult to adequately discriminate BTcP from uncontrolled background pain and lead to under diagnosis, despite the existence of diagnostic algorithms [1-4].

BTcP is a heterogeneous pain [5], that can be related to multiple causes. It can be a consequence of neoplasm (70%-80%) or a result of anticancer treatment (10%-20%) [1,6]. In less than 10% of all cases, the pain is not related to either the malignant disease or its treatment [6]. This variability complicates its diagnosis and treatment [4,5,7].

The prevalence of BTcP is high [8,9]. Recently, its prevalence has been reported at 59.2% [9], although previous prevalence rates ranged from 35% to 95% [1]. In Spain, BTcP is present in 48% of the patients with cancer-related pain [10].

BTcP is a major indicator of poor clinical outcome and lower efficacy of opioid treatment [4]. Moreover, it promotes functional deterioration and has a negative impact on Quality of Life (QoL) [5] and bears a significant physical, psychological and economic burden [9]. Therefore, BTcP should be adequately identified and treated (along with anti neoplastic treatment) to minimize the intensity and severity of the episodes and to lessen the impact on patients' QoL [1].

BTcP is still a little-known problem with serious consequences on patients' health; it is not well researched and may be incorrectly treated [8,11]. Various evidence suggests that it is often managed suboptimally [4]. Several barriers that prevent proper BTcP management have been identified [1], which arise from healthcare professionals, patients themselves and healthcare settings [5]. Even so, diagnostic and therapeutic inertia makes it necessary to identify more barriers and find solutions to eliminate the deficiencies or problems detected in BTcP management.

The objectives of the BARDIO consensus were to explore and identify the main barriers preventing the correct management of BTcP in standard Spanish clinical practice, and to provide solutions to the highest-priority problems by developing recommendations.

For this purpose we used the Delphi method, an accepted methods available for attaining expert consensus [12]. It is a structured process that starts defining a problem, and then involve: developing questions for experts to resolve, selecting a panel of experts, using open-ended questionnaires, performing controlled assessment and feedback (qualitative and quantitative analysis), and follow-up (reassessment) using multiple rounds of surveys until a consensus is reached [12].

Materials and methods

This study was carried out through a survey of doctors' opinions (the Delphi method). The validity of the Delphi method is supported by the participation of a large number of experts who have knowledge and an interest in the topic and the use of successive rounds of the questionnaire [13,14]. This justify that it is one of the reasonably well accepted methods available for attaining expert consensus [12].

In Spain, this type of study is not among those that require the approval or written consent of Research Ethics Committees (RECs).

A scientific committee comprised of five leading oncologists in this field reviewed the objective of the study and developed an initial questionnaire concerning the main barriers of BTcP management (which were dependent on patients, physicians or healthcare professionals and health organizations).

Subsequently, a coordinating panel (made up of 23 oncology specialists selected by the scientific committee) reviewed and validated the questionnaire and proposed solutions to the barriers. The scientific committee then reviewed the results and comments and used them to develop a Delphi questionnaire, which would later be answered by an expert panel to reach a consensus on the proposed solutions. The scientific committee also selected the members of the expert panel (n=88 oncologists) using the snowball sample technique. This panel, stratified among autonomous communities based on the group size in each territory, participated without remuneration.

A technical team was responsible for the method implementation (editing and dissemination of the questionnaires, analysis of responses and statistical interpretation of the consensus reached). The study design and all participants are shown in Figure 1.

Each questionnaire item was formulated as an assertion and assessed on a 9-point, single, ordinal, Likert-type scale: 1-3= disagree; 4-6= neither agree nor disagree; 7-9= agree. Individual observations and new proposals for consideration could be added.

We used the modified Delphi method (a technique of professional consensus performed through written surveys) in two rounds [15]. The Delphi questionnaire (an online survey) had 41 items distributed in proposals for improvement on 1) patient-dependent barriers (9 items); 2) barriers dependent on the physician/healthcare personnel (22 items); and 3) barriers dependent on the health organization (10 items). The survey rounds were performed between May and June 2017.

The median score of each item was evaluated. Consensus was considered to be reached when at least two-thirds of the panel ranked the item within three points of the median: 1-3

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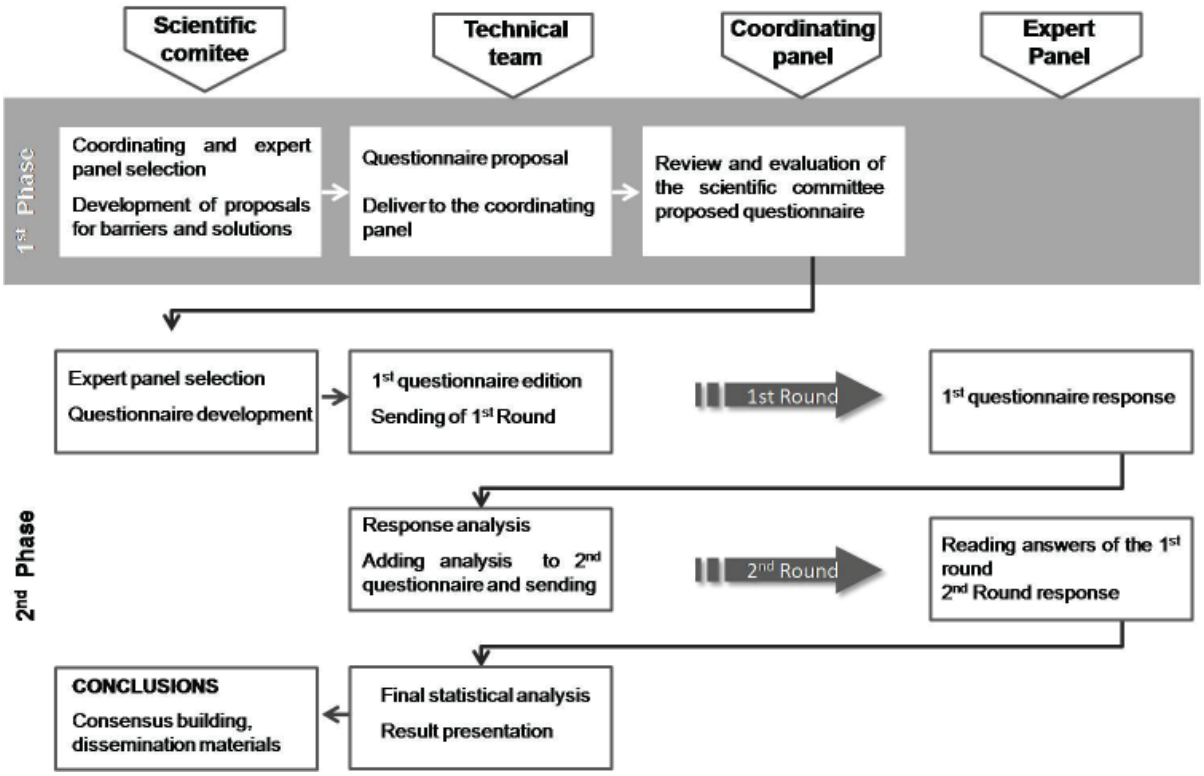

Figure 1: BARDIO consensus: design and participants.

points in the case of "disagreement" and 7-9 in the case of "agreement." Items with a median score located in the region of 4-6 were considered "indeterminate." When the scores of a third or more of the panelists were within the region of 1-3 and the scores of another third or more were within the region of 7-9, the item was considered "without consensus."

After the first Delphi round, panelists were informed of aggregate-level summary statistics of the individual responses (mean, median, percentage of distribution of the respondents situated outside the region of median) and the type of consensus reached. This summary also included any written comments made by panelists. The items without consensus, those with a high dispersion of opinions and those marked "indeterminate" were considered for reassessment in the second Delphi round. The panelists then submitted a new individual assessment on these items.

After the second round, the results were analyzed according to the same criteria of the first round. Items without consensus were analyzed descriptively in order to distinguish those that reflected opinions that were markedly different between the panelists from those that fell within the "indeterminate" region.

The mean score of each item was also calculated, with a 95% Confidence Interval (CI). The lower amplitude of CI is explained by greater unanimity of opinions in the group. A more extreme mean score indicated a more evident consensus in terms of agreement or disagreement.

Results

Of the 27 items included in the first proposal of the questionnaire about the barriers preventing BTcP management, the coordinating panel reached consensus in six items (Table 1); none of them in the block of patient-dependent barriers. The consensus was in terms of "disagreement" in one item (11, regarding the specialist's lack of interest in controlling the patient's symptoms), and in terms of agreement in the remaining items (14, 17, 23, 25 and 26). The highest degree of agreement was reached in the items on the health organization barriers.

Taking into account the results and the comments obtained about the proposed barriers, the number of recommendations was adjusted and included in the Delphi questionnaire that was sent to the expert panel. Eighty-eight experienced oncologists were surveyed. Response rates were high: 97.8% (n=88/90) in the first round of the Delphi questionnaire and 100% (n=88) in the second round.

In the first round, panelists reached consensus in 35 out of 41 items/barriers, in terms of agreement. The six items without consensus were: Block 1) item 9, regarding educational campaigns about pain control for the general population; Block 2) item 25, about the availability of multidisciplinary consultations for supportive treatment in oncology, and items 29 and 30, regarding the lack of appropriate drugs for BTcP treatment in the hospitals' pharmacy services; Block 3) item 34, about distance medication adjustments (for example, remote titration by telephone), and item 39, regarding the existence

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Table 1: Initial survey about barriers answered by the coordinating panel: items and results.

	Items	Mean	Median	% into the median region	Result
	Patient-dependent barriers				
1	Patient's lack of understanding of the concept "Breakthrough Cancer Pain" (BTcP).	5.96	7	52.17	NC
2	Patient's lack of information concerning BTcP treatment.	5.43	6	34.78	NC
3	Patient's symptom minimization due to the short duration of the pain.	4	3	65.22	NC
4	Symptom omission due to the complex context of the oncology consultation (predominance of data which permit or do not permit the specific oncological treatment -a new cycle of treatment.	5.87	7	56.52	NC
5	Patient's resistance to the use of other opioids besides those prescribed for baseline pain.	3.91	4	39.13	NC
6	Patient's difficulty assuming the time period from the BTcP drug's prescription and its optimal titration.	5.52	6	39.13	NC
7	Patient's difficulty in accessing the oncology consultation to adjust the treatment prescribed during the titration phase.	5.96	7	60.87	NC
8	Patient's lack of self-evaluation in order to adequately explain symptoms in the medical consultation (triggers, etc.).	5.74	6	47.83	NC
9	Cognitive or expressive difficulties (dementia, senility, language barriers).	4.91	4	21.74	NC
10	Patient's lack of information regarding the use of transmucosal analgesic formulations.	4.22	4	26.09	NC
	Physician/healthcare personnel barriers				
11	Medical specialist's lack of interest in controlling the oncological patient's symptoms.	3.17	2	78.26	Disagreement
12	Involved health staff's lack of specific BTcP training.	4.96	6	26.09	NC
13	Conceptual confusion between poorly controlled basal pain and BTcP by the doctor/health staff.	5.48	6	30.43	NC
14	No systemic anamnesis of BTcP in patients with baseline cancer pain.	6.22	7	65.22	Agreement
15	Specialist doctor's insecurity regarding opioid management.	3.83	3	65.22	NC
16	Fear of abusive behaviors when prescribing transmucosal fentanyl.	3.65	3	60.87	NC
17	Lack of time in medical consultation for treating BTcP.	6.65	8	73.91	Agreement
18	Complexity of the transmucosal fentanyl titration.	3.22	3	73.91	NC
19	Absence of knowledge of Clinical Practice Guidelines.	5.43	5	34.78	NC
20	Lack of follow-up on Clinical Practice Guidelines.	5.35	6	30.43	NC
21	Impossibility of doing an efficacy/toxicity follow-up on the drugs used to control BTcP.	5.04	5	30.43	NC
22	Non-availability of all effective drugs for BTcP through hospital prescription, making the initial learning of the junior residents who work in the oncology department difficult.	4.7	5	21.74	NC
	Health organization barriers				
23	Lack of resources to control symptoms between regular oncologist visits (telephone service, nursing consultation, day hospital, etc.).	7.04	7	78.26	Agreement
24	Dissuasive effect of the necessary visit to the hospital emergency room in case of BTcP.	3.74	3	52.17	NC
25	Lack of contact and coordination between care levels (for example, between the primary care physician and the oncologist).	7.48	7	91.3	Agreement
26	Lack of specific training on BTcP for primary care and outpatient specialists.	6.96	7	82.61	Agreement
27	Absence of control of prescribed treatments, correct indications, precise guidelines and null development of the information available in the electronic prescription.	4.91	5	43.48	NC

of a healthcare professional who acts as a bridge between the primary attention (PA) physician and the oncologist. These items were proposed for reconsideration in the second Delphi round, and consensus was reached on 3 items (25, 30 and 39). In the remaining items (n=3 [6, 29 and 34], each in a different block; 7% of the total) there was no consensus due to disparity of professional opinion or lack of criteria (Table 2).

Eventually the expert panel reached consensus on 38 of 41 items (93%), all of them in terms of agreement with the assertion of the barrier (Figure 2) (Table 2).

The proposed items in the block of the patient-dependent barriers were those with the highest degree of consensus: 4 of 9 items (3, 4, 6 and 7) with less than 10% of the panelists' scores outside the median region.

With regard to the results, the scientific committee gathered in a face-to-face work session during the meeting of the Spanish Society of Medical Oncology (SEOM; Oct 25-27, 2017) to establish some recommendations (Table 3).

Discussion

Although BTcP and its proper management have been widely researched, evidence shows that it is still managed suboptimally [4-6,16-18]. The aim of this study was to establish consensus on the barriers present in Spanish clinical practice for BTcP management, and to suggest recommendations to address them. The use of the Delphi technique allowed for the anonymous participation of a large number of experts distributed throughout Spain, thus avoiding the risk of some experts dominating responses, and without the time/geographical restraints of other methods [19].

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Table 2: Delphi questionnaire answered by the expert panel regarding proposals for overcoming barriers: items and results after two rounds.

	Items	Mean	Median	% out of median	Interquartile range	Result
	Proposals for overcoming patient-dependent barriers					
1	Elaboration of informative material in clear language aimed at the patient, Including the definition, characteristics and treatment of BTcP.	7.63	8.0	10.23	2.0	Agreement
2	Development of educational/informational programs aimed at the patient and their caregivers.	7.14	7.0	28.41	2.0	Agreement
3	A structured and complete clinical interview to improve the patient's understanding of the BTcP concept.	7.94	8.0	6.82	2.0	Agreement
4	The interview must include a pain-specific anamnesis, identifying situations that trigger BTcP in order to help prevent it and/or treat it at an early stage.	8.47	9.0	1.14	1.0	Agreement
5	Support for specific medical consultations (on-site or remote) that cover the patient's needs and facilitate the understanding of BTcP and the follow-up.	7.67	8.0	15.91	2.0	Agreement
6	Implementation of oncological nursing consultations to improve the knowledge, control and follow-up of cancer patients' symptoms.	8.10	8.5	9.09	1.0	Agreement
7	Time extension of medical oncology consultation to improve the medical staff's explanation to the patient and the patient's understanding of BTcP.	8.02	8.0	7.95	1.0	Agreement
8	Provision of accurate written instructions to prescribe analgesics, and continuous follow-up of the patient by the specialized nurse in order to improve the time for the optimal titration of the patient with BTcP.	7.89	8.0	11.36	2.0	Agreement
9	Educational campaigns for the general population that transmit the concept that any pain is controllable (campaign type: "Zero symptoms=Quality of life").	6.49	7.0	38.64	2.0	NC
	Proposals for overcoming barriers dependent on the physician/healthcare personnel					
10	Introduction of the concept of pain as a main symptom of cancer.	7.45	8.0	19.32	2.0	Agreement
11	Creation of specific consultations for symptom control or support in order to improve the BTcP approach.	7.34	8.0	22.73	2.0	Agreement
12	A quick outpatient consultation for patients with BTcP in order to improve the titration of drugs.	6.81	7.0	29.55	2.0	Agreement
13	Creation of a patient diary in which the patient indicates rescue doses and the accurate time to reduce the intensity of pain (according to the VAS scale) in order to help adjust the patient's titration.	7.65	8.0	13.64	2.0	Agreement
14	Incorporation of specific questionnaires, visual scales or easy applications that allow the medical site staff to understand the information transmitted or described by the patient, in order to improve the self-assessment of pain and its subsequent management.	7.49	8.0	14.77	1.0	Agreement
15	The presence of caregivers during the consultation, which is of primary importance for BTcP control in the case of patients with cognitive deterioration.	8.42	9.0	3.41	1.0	Agreement
16	The vital role of the specialized oncology nurse in explaining the use of transmucosal analgesic formulations to the patient.	7.93	8.0	10.23	2.0	Agreement
17	Insistence on physicians' control of symptoms from the beginning of the formative medical oncology specialty.	8.51	9.0	2.27	1.0	Agreement
18	Development of clear and practical information, which is the most appropriate method for medical professionals' updates and training.	7.81	8.0	10.23	2.0	Agreement
19	Execution of hospital clinical sessions focused on BTcP by the Oncology Service, including the assistance of other specialists, which is an adequate measure for the control of symptoms.	7.42	8.0	19.32	2.0	Agreement
20	Promotion of the development of an accurate anamnesis by the professional, in order to avoid confusion between poorly controlled basal pain and BTcP.	8.00	8.0	7.95	1.0	Agreement
21	Provision of a short informational brochure along with a questionnaire prior to the medical visit (to be filled out in the waiting room) in order to improve the systematic anamnesis of BTcP in patients with baseline cancer pain.	6.81	7.0	32.95	2.0	Agreement
22	Review of medication during each visit to improve the systematic anamnesis of BTcP in patients with baseline cancer pain.	7.99	8.0	9.09	2.0	Agreement
23	Development of resources that facilitate consultation management (material, code system, specialized nursing, etc.) in order to increase the amount of time for in-depth treatment of BTcP and other symptoms related to cancer.	7.59	8.0	19.32	2.0	Agreement
24	Proper management of revisions during medical oncology treatment, which is fundamental in order to facilitate the care of patients with poorly controlled symptoms who require more attention.	7.38	8.0	17.05	1.0	Agreement
25	Development of specific multidisciplinary consultations for oncological and support treatment, to compensate for the lack of time for in-depth treatment of BTcP and other cancer-related symptoms in the oncology consultation.	6.62	8.0	31.03	2.0	Agreement
26	Early referral of patients from the Palliative Care Units, to compensate for the lack of time for in-depth treatment of BTcP in patients with advanced cancer (lung).	7.03	8.0	31.82	3.0	Agreement
27	Early detection of poorly controlled patients by the specialized nursing staff, so that the information provided to the physician and the corresponding time for each consultation allow for effective management of these patients' treatment and follow-up.	7.72	8.0	11.36	2.0	Agreement

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28	Increased dissemination of schematic guidelines with clinical recommendations for the management of BTcP or algorithms to facilitate the optimal use and application of treatments.	7.30	8.0	22.73	1.0	Agreement
29	The non-availability of all effective drugs for BTcP for hospital prescription: this is a problem for both the residents' learning and the patients' self-confidence.	6.61	7.0	34.48	3.0	NC
30	The non-availability of all effective drugs for BTcP for hospital prescription: it complicates the patient's compliance with the administration of a new treatment that was not taken during their admission.	7.00	7.0	21.84	1.0	Agreement
31	The non-availability of all effective drugs for BTcP for hospital prescription: it makes it difficult to assess the drugs' toxicity, titration and effectiveness, as a hospital is the best place to do this.	6.84	7.0	30.68	3.0	Agreement
	Proposals for overcoming barriers dependent on the health organization					
32	Sensitization of the health administration regarding the consequences of the poor management of cancer symptoms (cost, patients' quality of life, etc.), in order to increase the resources allocated to their control during regular visits to the oncologist.	7.93	8.0	5.68	2.0	Agreement
33	Access to the outpatient hospital during the morning and afternoon, to facilitate symptom management between regular visits to the oncologist.	7.45	8.0	19.32	2.0	Agreement
34	Remote titration of medications for BTcP control (for example, by telephone) is not suitable for the safety of the oncological patient.	4.68	3.0	45.45	4.0	NC
35	Participation of an area health center with adequate and trained personnel for the correct management of opioids, in order to evaluate their toxicity and effectiveness, would be an adequate measure for BTcP management.	7.42	8.0	15.91	2.0	Agreement
36	A hospital support team and perfect coordination with primary care would improve the monitoring of the efficacy and toxicity of BTcP treatments.	8.05	8.0	5.68	1.0	Agreement
37	Multidisciplinary meetings and more effective coordination mechanisms between PCP and MO should be encouraged by the respective management, in order to allow for common planning regarding the therapeutic control of pain.	7.42	8.0	19.32	2.0	Agreement
38	The figure of the PCP must be established as a nearby reference to which the patient can go in order to control oncological BTcP.	6.89	8.0	30.68	2.0	Agreement
39	A clinician with a link between the PCP and MO and specific training in this context improves access and the control of cancer pain.	7.01	8.0	21.59	1.0	Agreement
40	Specific training for PCPs in basic oncology, oncological pain treatment and opioids management helps to control BTcP in cancer patients.	7.80	8.0	11.36	2.0	Agreement
41	The integration of informatics should be promoted between primary and hospital care, as electronic prescription is an adequate tool for treatment control, drug interactions and patient comorbidities.	7.98	8.0	6.82	1.5	Agreement

Abbreviations: NC: No Consensus; PCP: Primary Care Physician; MO: Medical Oncology

Among the barriers preventing BTcP control that were initially proposed by the scientific committee, those related to patients were met with the most doubt. It is known that patient assessment is poor in oncologist consultations [20]. Effective physician-patient communication and the promotion of patient participation in consultations are very important [7] in order to better understand patient-dependent barriers. However, the estimated reduced consultation time available in Spain (first and second visit: 60-90 minutes; successive visits: 15 minutes; follow-up/check-up visits: 20 minutes; hospitalization: 20 minutes; interconsultation: 30-60 minutes) [21] and the large amount of information that physicians must provide to patients (about the disease, treatment, side effects, etc.) [22], justify this situation. The lack of time available during the consultation was one of the two proposed physician-related barriers that demonstrated agreement in the coordinating panel reflection. It has been previously reported [23] and identified as one of the reasons for the non-implementation of recommendations from clinical practice guidelines in Spain [24].

The other physician-related barrier that demonstrated agreement was the lack of adequate BTcP anamnesis, which is essential for BTcP diagnosis [7] and has been highlighted in previous Spanish consensus recommendations [25]. The only proposed barrier with consensus in terms of disagreement

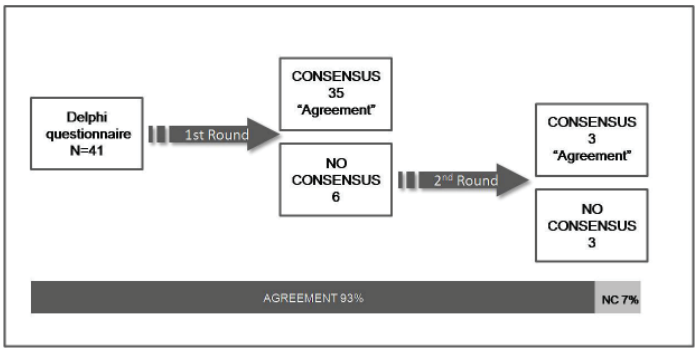

Figure 2: Results of the Delphi questionnaire.

was the lack of the specialist's interest in the control of BTcP symptoms. Supporting this consensus, a recent study reflects how Spanish oncologists are increasingly guided by evidence-based Clinical Practice Guidelines (CPG) for BTcP management [24]. With reference to health organization barriers, the coordinating panel stated its agreement with the lack of support outside of scheduled oncology consultations, the absence of contact and coordination between levels of care, and the training deficiencies in PA and ambulatory settings.

Cancer pain management required a multidisciplinary

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Table 3: Final recommendations created by the scientific committee to properly manage BTcP: BARDIO consensus.

BARDIO Consensus. BTcP MANAGEMENT – Recommendations.	
1	The effective inclusion of pain, both chronic and irruptive, as the fifth vital sign in the assessment of oncological patients.
2	The development of training/informative programs for patients and their caregivers. Informational material in simple language including the definition, characteristics and treatment of BTcP may be part of these programs.
3	The creation of specific palliative medical consultations (either face-to-face or via phone) and quick outpatient consultations, in order to meet patients' needs and facilitate the understanding and management of BTcP. The extension of oncological consultation time could improve physicians' explanations and patients' understanding. Access to day hospital (both mornings and afternoons) to help control symptoms between scheduled visits to the oncologist.
4	The creation of specific oncology nursing consultations would improve the understanding, management and monitoring of cancer pain symptoms. Accurate written instructions could be used for pain management. In order to optimize the time for BTcP patient titration, continuous monitoring by a specialist nurse is recommended.
5	For symptom control, it must be emphasized that it is essential to train the physicians from the beginning of the oncologists' Internal Medical Residency Program. In order to achieve pain control, accurate and practical training/information sessions, together with hospital clinical sessions based on BTcP and promoted by the Medical Oncology service with the assistance of other specialized doctors, is recommended. It is essential to introduce the concept of pain as a critical cancer symptom
6	Provision of specific training on BTcP for nurses with expertise in oncology services.
7	To improve the training of healthcare professionals, it is necessary to increase the availability of guidelines with clinical recommendations for BTcP management (with schemes or algorithms facilitating the use of the treatments).
8	Recommended solutions for optimizing BTcP management: - A complete and organized interview in each visit, with specific and accrual pain anamnesis to avoid any confusion between poorly managed baseline pain and BTcP. A review of the medication should also be recorded. - BTcP targeted anamnesis, using fast and simple tools (such as the Davies algorithm) to rule out its presence. - The use of informational leaflets and questionnaires prior to the consultation to facilitate systematic BTcP anamnesis. - The use of patient diaries to adjust patients' titration (including rescue medication at times to reduce pain intensity). - Specific questionnaires, visual scales and simple applications to allow healthcare professionals to interpret patient-reported information. - The presence of caregivers during consultations in the case of cognitive impairment.
9	Frequent re-evaluation of the analgesic effect and drug toxicity of the medications received
10	In order to make up for time in the oncology consultations: - Development of specific transversal and multidisciplinary consultations. - Facilitation of the referral to supportive care. - Nurses with expertise in patient care. - Resources to facilitate consultation management.
11	Availability of all effective drugs for BTcP treatment through hospital pharmacy services
12	Optimization of primary care participation: - Encourage multidisciplinary meetings and coordinating mechanisms between PAP and MO. - Specific PAP training (oncology, cancer pain management and opioid use). - Establish the PAP as a figure close to BTcP patients. - Establish a trained clinician who links PAP and MO. - Encourage computing integration between primary attention and hospitals (e-prescription).
13	Sensitization of the health administration to the consequences of the poor management of cancer symptoms, in order to increase the resources available between scheduled oncology consultations.

team involving many healthcare professionals (oncologists, pharmacists, nurses, etc.) in different clinical settings (inpatient-outpatient [ambulatory and primary care]). However, in this study the role of pharmacists was not mentioned, despite the fact that they can provide a broad scope of services that may be very useful for cancer pain management [26]. As stated by the panel, effective interactions between specialists are crucial for adequate pain management [26].

When the expert panel assessed the recommendations suggested by the scientific committee (using the Delphi questionnaire), a high degree of consensus was observed, always in terms of agreement. Only three recommendations did not reach consensus: one in the block of patient-dependent barriers (about the execution of educational campaigns for the general population), another in the block of physician/healthcare personnel barriers (about problems related to the non-availability of all effective BTcP drugs in hospitals) and the last one in the block of health organization barriers (about the inappropriateness of remote titration of drugs for BTcP control).

The lack of consensus on the execution of educational campaigns for the general population may reflect the questionable utility of these campaigns for cancer patients without pain or with multifactorial pain, despite the fact that pain management education has been shown to rectify patients' misconceptions of pain, reduce pain and improve QoL [5]. When the recommended educational/informative programs were meant for patients and caregivers, the degree of consensus was very low (with dispersed opinions). The difficulty in carrying out this program, due to time and space constraints and a shortage of professionals available for sessions, could justify this result [5]. On the other hand, the recommended patient-dependent barriers with the highest degree of consensus were those on the need for structured interviews including pain-specific anamnesis. Considering the importance of this, the latest Spanish Society of Medical Oncology (SEOM) guideline for the treatment of cancer pain listed the minimum information to be included in each medical history for the evaluation and management of BTcP [1]. The need for more time in consultations and the importance of

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the oncological nurse also showed a high degree of consensus. However, nurses' understanding of BTcP is currently considered insufficient and, despite the existence of specific guidelines [27], more training is needed [28].

With respect to the second recommendation without consensus—the impact of the non-availability of all effective BTcP drugs in hospitals on residents' learning and patients' self-confidence—it must be taken into account that there are different options and a wide variety of formulations [16,29], and that the new galenic preparations are considerably more expensive than existing alternatives [30]. Each delivery system required the patients to be trained by the physicians, and the experts did not reach consensus on whether the resident physicians would find it difficult to learn about the systems not available in hospitals, nor whether it might affect the patients' trust in their treatment. However, there was agreement, albeit with dispersed opinions, on the difficulty entailed by this unavailability for treatment titration and toxicity evaluation. A program for healthcare professionals (other than the oncologists) to support patients outside of the hospital could solve these problems, although the recommendation of drug titration in a quick outpatient consultation also had high dispersion. There was controversy about the personnel involved (nurses, primary care, etc.) and the duration, perhaps because some forms of titration demand high levels of expertise and knowledge of the drugs involved, making them very difficult for non-pain-specialists to manage [7,30]. Other recommendations with a low degree of consensus in the block of physician/healthcare personnel barriers included several that dealt with addressing the lack of time in consultations. Panelists agreed that it is recommended the early referral of patients from the palliative care units and the creation of specific palliative medical consultations (either face-to-face or via phone). These recommendations indicate the relevance of palliative care for oncologist in these setting but the dispersion of opinions reflects the doubts of the panelists on the possibility of improperly overburdening the palliative care service with patients that should still be subject to follow-ups by oncologists. Furthermore some doubts on the term "multidisciplinary" consultation was also observed.

The recommendations with the highest degree of consensus in the physician/healthcare personnel block regarded the need for specific BTcP education right from the beginning of specialty oncology training, and the presence of caregivers during consultations for patients with cognitive deterioration. The need for education on cancer pain management has been extensively reported in the past [31] and this need still persists [1]. Therefore, an early and specific BTcP education program could improve the situation. On the other hand, the fact that the patient was the main source of information for the BTcP assessment, coupled with the need to educate patients and relatives in order to maximize its control [4,5,29], reflect the requirement of the patient's adequate cognitive functioning and the presence of a caregiver (when necessary). The high degree of consensus that was also reached on the need for accurate anamnesis and medication reassessment clearly demonstrates the panelists' knowledge of the relevance of information collection during consultations, and also the need to improve it. Better physician-patient communication and greater implementation of BTcP guidelines could address these needs, requiring more time and physician education [24].

The last recommendation without consensus was the inappropriateness of remote titration of drugs for BTcP control. The suitability of telephone assessments for the titration of drugs for BTcP control (such as fentanyl) has already been described in the literature [32,33]. However, various aspects led to non-consensus, such as the availability of personnel to perform this task, the need to carefully select the appropriate patients and the possibility of bias in the interpretation of information. Of the recommendations with consensus in the block of health organization barriers, the one with the lowest degree of consensus was that which regarded the figure of the primary care physician as a reference for the patient with BTcP. The dispersion of opinions once again reflected the lack of time and insufficient BTcP-specific training, this time in the primary care setting. On the other hand, the recommendations with the highest degree of consensus included the need for the health administration to facilitate more resources between the scheduled oncology consultations. The results of this study reflect the needs of the oncologists (time and training) and the usefulness of support outside of consultations to improve BTcP control. In concordance with this, panelists reached a high degree of consensus on the need for hospital support and coordination with primary care, including through digital technologies that cancer patients are already using to support personalized symptom monitoring and communication between patients and healthcare professionals [34].

The main strength of this study is the fact that it is based on responses (response rate: first round 97.8%, second round 100%) from a national panel of experts. However, limitations must be recognized; there could be a disparity between the responses of the oncologists from the different Spanish autonomous communities, yet our findings aim to be representative of the overall population. Additionally, it should be noted that the study has been addressed to oncologists; it could be appropriate to discuss this subject with other healthcare professionals (primary care services, palliative care units and other hospital teams).

Conclusions

Our results demonstrate that Spanish oncologists are aware of the main barriers for BTcP management. A strong consensus was reached on most of the proposed recommendations that were evaluated, reflecting the oncologists' opinions of the convenience of BTcP management that is centralized in oncologist consultations. However, due to lack of time and training, oncologists consider more support (including trained personnel outside of the oncologist consultations, such as nurses, primary care physicians, etc.) and more resources to be necessary in order to improve BTcP control.

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Acknowledgements

The authors gratefully acknowledge all experts who have participated in this study.

Funding

This project was funded by Kyowa Kirin Farmacéutica, SLU, as were all article processing charges. Kyowa only provided the funds necessary to develop the study, without intervention in the design and management of the study. All authors had full access to all of the data in this study and take full responsibility for the integrity of the data and accuracy of the data analysis.

References

1. Jara C, Del Barco S, Gravalos C, Hoyos S, Hernandez B et al. (2018) SEOM clinical guideline for treatment of cancer pain (2017). Clin Transl Oncol 20: 97-107. Link: https://bit.ly/2OdXLZv

2. Mercadante S, Portenoy RK (2016) Breakthrough cancer pain: twenty-five years of study. Pain 157: 2657-2663. Link: https://bit.ly/2Walmi5

3. Deandrea S, Corli O, Consonni D, Villani W, Greco MT, et al. (2014) Prevalence of breakthrough cancer pain: a systematic review and a pooled analysis of published literature. J Pain Symptom Manage 47: 57-76. Link: https://bit.ly/2ZXSBX9

4. Vellucci R, Mediati RD, Gasperoni S, Mammucari M, et al. (2017) Assessment and treatment of breakthrough cancer pain: from theory to clinical practice. J Pain Res 10: 2147-2155. Link: https://bit.ly/38NDIL6

5. Koh SJ, Keam B, Hyun MK, Ju Seo J, Uk Park K, et al. (2018) Cancer Pain Management Education Rectifies Patients' Misconceptions of Cancer Pain, Reduces Pain, and Improves Quality of Life. Pain Med 19: 2546-2555. Link: https://bit.ly/328e8z6

6. Margarit C, Julia J, Lopez R, Anton A, Escobar Y, et al. (2012) Breakthrough cancer pain - still a challenge. J Pain Res 5: 559-566. Link: https://bit.ly/300aR1P

7. Working Group Nientemale DEI, Vellucci R, Fanelli G, Pannuti R, Peruselli C, et al. (2016) What to Do, and What Not to Do, When Diagnosing and Treating Breakthrough Cancer Pain (BTcP): Expert Opinion. Drugs 76: 1063-1065. Link: https://bit.ly/2ZihM7t

8. Breivik H, Cherny N, Collett B, de Conno F, Filbet M, et al. (2009) Cancer-related pain: a pan-European survey of prevalence, treatment, and patient attitudes. Ann Oncol 20: 1420-1433. Link: https://bit.ly/2W7QcId

9. Cortesi PA, D'Angiolella LS, Vellucci R, Allegri M, Casale G, et al. (2017) Cost-effectiveness analysis of oral fentanyl formulations for breakthrough cancer pain treatment. PLoS One 12: e0179523. Link: https://bit.ly/38MExUr

10. Pérez-Hernández C, Blasco A, Gándara Á, Mañas A, Rodríguez-López MJ, et al. (2019) Prevalence and characterization of breakthrough pain in patients with cancer in Spain: the CARPE-DIO study. Scientific reports 9: 17701. Link: https://bit.ly/32dMpwC

11. Gomez-Batiste X, Madrid F, Moreno F, Gracia A, Trelis J et al. (2002) Breakthrough cancer pain: prevalence and characteristics in patients in Catalonia, Spain. J Pain Symptom Manage 24: 45-52. Link: https://bit.ly/3emGJ5Y

12. Hohmann E, Brand JC, Rossi MJ, Lubowitz JH (2018) Expert Opinion Is Necessary: Delphi Panel Methodology Facilitates a Scientific Approach to Consensus. Arthroscopy 34: 349-351. Link: https://bit.ly/2ZjcatR

13. Njuangang S, Liyanage C, Akintoye A (2017) Application of the Delphi technique in healthcare maintenance. Int J Health Care Qual Assur 30: 737-754. Link: https://bit.ly/2Odf9xk

14. Hasson F, Keeney S, McKenna H (2000) Research guidelines for the Delphi survey technique. Journal of advanced nursing 32: 1008-1015. Link: https://bit.ly/2CmcizN

15. Dalkey N, Brown B, Cochran S (1969) The Delphi Method, III: Use of Self Ratings to Improve Group Estimates, vol. RM-6115-PR. Santa Monica (California): Rand Corporation. Link: https://bit.ly/3iOsudl

16. Mercadante S (2018) Treating breakthrough pain in oncology. Expert Rev Anticancer Ther 18: 445-449. Link: https://bit.ly/3fi2K7i

17. Mercadante S (2018) Non pharmacological interventions and non-fentanyl pharmacological treatments for breakthrough cancer pain: A systematic and critical review. Crit Rev Oncol Hematol 122: 60-63. Link: https://bit.ly/2W8bbKW

18. Olarte JM (2017) Breakthrough cancer pain and rational drug use. Support Care Cancer 25: 11-17. Link: https://bit.ly/2OgAbeI

19. de Meyrick J (2003) The Delphi method and health research. Health Education 103: 7-16. Link: https://bit.ly/2ZXQgvl

20. Muller-Schwefe G, Ahlbeck K, Aldington D, Alon E, Coaccioli S, et al. (2014) Pain in the cancer patient: different pain characteristics CHANGE pharmacological treatment requirements. Curr Med Res Opin 30: 1895-1908. Link: https://bit.ly/2W9NodE

21. Gravalos C, Salvador J, Albanell J, Barnadas A, Borrega P, et al. (2012) Functions and workload of medical oncologists in Spain. Clin Transl Oncol 14: 423-429. Link: https://bit.ly/3gNssRp

22. Rivera F, Andres R, Felip E, Garcia-Campelo R, Lianes P, et al. (2017) Medical oncology future plan of the Spanish Society of Medical Oncology: challenges and future needs of the Spanish oncologists. Clin Transl Oncol 19: 508-518. Link: https://bit.ly/2W9zjNh

23. Boceta J, De la Torre A, Samper D, Farto M, Sanchez-de la Rosa R (2016) Consensus and controversies in the definition, assessment, treatment and monitoring of BTcP: results of a Delphi study. Clin Transl Oncol 18: 1088-1097. Link: https://bit.ly/3ek4A6c

24. Lopez Lopez R, Camps Herrero C, Khosravi-Shahi P, Guillem Porta V, Carrato Mena A, et al. (2017) Oncologist's knowledge and implementation of guidelines for breakthrough cancer pain in Spain: CONOCE study. Clin Transl Oncol. Link: https://bit.ly/2W8oonc

25. Escobar Y, Biete A, Camba Rodríguez M, Galvez R, Mañas A, et al. (2013) Diagnosis and treatment of breakthrough cancer pain: Consensus recomendations. Rev Soc Esp Dolor 20.

26. Ratka A (2002) The role of a pharmacist in ambulatory cancer pain management. Curr Pain Headache Rep 6: 191-196. Link: https://bit.ly/2Of73V8

27. Wengstrom Y, Geerling J, Rustoen T (2014) European Oncology Nursing Society breakthrough cancer pain guidelines. Eur J Oncol Nurs 18: 127-131. Link: https://bit.ly/325MyT1

28. Porta-Sales J, Perez C, Escobar Y, Martinez V (2016) Diagnosis and management of breakthrough cancer pain: Have all the questions been resolved? A Delphi-based consensus assessment (DOIRON). Clin Transl Oncol 18: 945-954. Link: https://bit.ly/3007nwh

29. Mercadante S, Cuomo A (2016) Breakthrough Cancer Pain: Ten Commandments. Value Health 19: 531-536. Link: https://bit.ly/2Cmbo6n

30. Hans GH (2013) Treatment of breakthrough cancer pain: to titrate or to proportionate? Curr Med Res Opin 29: 1523-1526. Link: https://bit.ly/3egbGsx

Citation: Álvarez YE, Espinosa JC, Salcedo JM, Las Peñas RD, Martínez FC, et al. (2020) Breakthrough cancer pain: A delphi consensus study on expert recommendations for barriers that prevent the proper management of BTcP in Spain. Open J Pain Med 4(1): 024-033. DOI: https://dx.doi.org/10.17352/ojpm.000020

31. Von Roenn JH, Cleeland CS, Gonin R, Hatfield AK, Pandya KJ (1993) Physician attitudes and practice in cancer pain management. A survey from the Eastern Cooperative Oncology Group. Ann Intern Med 119: 121-126. Link: https://bit.ly/38Q6muP

32. Rauck R, Bull J, Parikh N, Dillaha L, Stearns L (2015) Effective Dose Titration of Fentanyl Sublingual Spray in Patients With Breakthrough Cancer Pain. Pain Pract 16: 1012-1018. Link: https://bit.ly/2ZfMKgu

33. Alberts DS, Smith CC, Parikh N, Rauck RL (2016) Fentanyl sublingual spray for breakthrough cancer pain in patients receiving transdermal fentanyl. Pain Manag 6: 427-434. Link: https://bit.ly/3iW7fH8

34. Adam R, de Bruin M, Burton CD, Bond CM, Giatsi Clausen M, et al. (2017) What are the current challenges of managing cancer pain and could digital technologies help? BMJ Support Palliat Care 8: 204-212. Link: https://bit.ly/3iV1clR

Citation: Álvarez YE, Espinosa JC, Salcedo JM, Las Peñas RD, Martínez FC, et al. (2020) Breakthrough cancer pain: A delphi consensus study on expert recommendations for barriers that prevent the proper management of BTcP in Spain. Open J Pain Med 4(1): 024-033. DOI: https://dx.doi.org/10.17352/ojpm.000020