

ORIGINAL RESEARCH

Management of lung cancer patients' quality of life in clinical practice: a Delphi study

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Available online xxx

Background: The assessment of health-related quality of life (HRQoL) has seen exponential growth in oncology clinical trials. However, the measurement of HRQoL has yet to be optimised in routine clinical practice. This study aimed at exploring the operationalisation of HRQoL in clinical practice with the goal of reaching a consensus from a panel of physicians.

Materials and methods: Physicians involved in the management of lung cancer patients in France were recruited to participate in a Delphi study. The study involved three rounds of iterated queries to gain consensus on management aspects of HRQoL, including timing of discussion on HRQoL, which specific domains of HRQoL should be discussed, and what was the most appropriate method of assessment. The threshold adopted for consensus was at least 70% agreement among physicians. A scientific committee reviewed results following each round of the Delphi study.

Results: A representative panel of 60 physicians participated in this study. Consensus was obtained for HRQoL management at all time points in the patient care pathway. Panellists agreed that HRQoL discussions should occur during routine visits and hospitalisation. The involvement of patients' relatives was also recognised as important, except when discussing side-effects and involvement of a multidisciplinary team. There was a lack of consensus on a systematic assessment for all patients at each visit and no consensus on how HRQoL should be measured in clinical practice.

Conclusions: HRQoL discussions are considered an integral part in the management of lung cancer patients, and are deemed key to success in patient—physician interaction. Further research is required to harmonise how best to implement HRQoL assessment.

Key words: quality of life, lung cancer, clinical practice, Delphi study

INTRODUCTION

Over the past two decades, the treatment paradigm in oncology has seen a shift in many indications from traditional chemotherapies to more personalised treatment approaches using targeted therapies, and more recently with immunotherapies such as anti-cytotoxic T-lymphocyte antigen-4 or anti-programmed death-ligand 1 antibodies.¹ Immunotherapies have become an attractive alternative in many tumour types due to the improved tolerability profile and survival benefit compared to therapeutic standards.^{2,3}

In addition to treatment efficacy and tolerability, patients' well-being and health-related quality of life (HRQoL) are gaining traction as important aspects to ensure adequate patient management in routine practice. The importance and inclusion of HRQoL are not surprising given the recent findings from a systematic review and meta-analysis identifying several domains of HRQoL being independent prognostic factors for survival in oncology.⁴

HRQoL is a distinct part of overall quality of life⁵ (QoL) and relates to those domains concerned with patients' perception of their own health.⁶ From a regulatory perspective, both the European Medicines Agency and the USA Food and Drug Administration have expressed their interest in incorporating the patient perspective in oncology drug development to capture tumour symptoms, physical functioning, and treatment-related toxicities.^{7,8} European payers have also reported an interest in patient-reported

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outcome (PRO) data.⁹ Both the European Society for Medical Oncology and the American Society of Clinical Oncology have incorporated HRQoL elements in their quantitative measures of clinical benefits of newly developed anticancer therapies.^{10,11} As such, to meet stakeholders' expectations, sponsors have been increasingly using PRO data to assess HRQoL in their oncology trials.¹²

A comprehensive set of recommendations on the selection, implementation, analysis, and reporting of PRO data, including HRQoL, in oncology clinical trials has been published.¹³ However, while the use of PROs is becoming an increasingly systematic and standard practice in oncology clinical trials, HRQoL management, including both its assessment and discussion, lacks a similar standardised approach and faces logistical constraints in clinical practice.¹⁴ Nonetheless, patients are ideally placed to discuss their HRQoL, symptoms, and experience with their disease and treatment with their health care providers. Furthermore, patients are willing to play an active role in determining treatment decisions in cancer care.¹⁵

Therefore, it is key to understand physicians' current views and future perspectives on the integration of HRQoL in their daily clinical practice in order to: (i) support the consideration and recognition of the importance to manage HRQoL of oncology patients, (ii) promote fair access to treatments, (iii) ensure that HRQoL is taken into consideration in any therapeutic decisions, and (iv) actively involve patients in decision making for their therapeutic management.

The aim of this study was to discuss how to operationalise and incorporate patients' HRQoL management in daily practice, with a view to achieving a level of consensus between physicians on when HRQoL should be discussed and assessed throughout the care pathway of oncology patients.

MATERIALS AND METHODS

Consensus methods are widely employed and accepted in medical and health care research.¹⁶⁻¹⁸ In this study, a Delphi methodology was employed as it is a useful methodological approach where there are gaps in current knowledge or no set guidelines in a specific area.¹⁹

Delphi approach

The Delphi approach is a method used to seek a consensus among a panel of experts about a topic of interest using a series of sequential rounds of questions on which feedback is provided to the panellists between each round.²⁰ This feedback consists of an aggregated presentation of response distributions for questions along with supportive free text written by panellists when available. In the absence of consensus on specific questions, they are reiterated at the next round for panellists to reconsider their responses in light of the presented results. Panellists may not necessarily respond in each round and may still join subsequent rounds.²¹ Thresholds for consensus vary between 55% and 90% in the literature, with thresholds of 70%-80% commonly cited in oncology studies.^{20,22-25}

This Delphi consensus process took place between April and October 2019 and included three rounds programmed to be accessed online. Each round was designed to take 15-30 min to complete. Responses given by the panellists were anonymous. Based on the literature and discussion with the scientific committee, consensus was defined as at least 70% of participants selecting the same response option or group of response options.

Scientific committee

A scientific committee was created to ensure the quality, relevance, and validity of the project.

Experts in the management of patients with lung cancer and/or HRQoL assessment in patients with cancer (VW, MB, ABC, DD, and A-CT) formed the scientific committee. The board had multiple objectives, including the definition, discussion, and validation of the overall approach of the Delphi and the development and review of results obtained during each round to help with understanding and interpretation.

Panel selection

Delphi studies may use a sample ranging from a few selected experts to a large group of panellists. The more diverse and heterogeneous a sample of experts is, the larger the sample size required. However, although no guidelines exist in the literature regarding sample size, Delphi panels usually include <50 individuals, with 10-15 individuals deemed sufficient if their background is homogeneous.^{20,22} In this study, the target was to have at least 30 panellists responding to the final round of the Delphi. Assuming a 20% drop-off rate after each round and up to four rounds, the initial pool of panellists was estimated to be 80. To reach that target, an invitation letter describing the project objectives and requirements was sent to 747 physicians identified from a nationwide database of providers who are involved in the management of patients with lung cancer in France. Physicians interested in participating in the Delphi study entered the contracting process. At each round, panellists' participation was recorded to allow them to be compensated for the time taken for completing the round.

Content of the Delphi rounds

The Delphi consisted of three rounds. The first round aimed at covering topics related to timing of HRQoL management (i.e. discussion and assessment) in the patient care pathway and what relevant domains of HRQoL should be included. The second and third rounds aimed at finalising the consensus on the questions from the first round and at further exploring the characteristics (format, structure) and conditions [setting, involvement of other health care practitioners (HCPs)] that should be considered for managing patients' HRQoL in clinical practice. The detailed list of topics, related response options, consensus definitions, and the round at which each topic was covered is presented in [Table 1](#).

Table 1. Structure and content of the Delphi		
Topics Questions asked	Response options (consensus definition)	Round
Time points		
Assessment of the importance of considering HRQoL at each time point of the patient care pathway	Four-point Likert scale (not important, somewhat important, quite important, very important) (quite important + very important $\geq 70\%$)	1
Selection of the three key time points at which HRQoL should be considered	List of all time points (selection of a response $\geq 70\%$ of the respondents)	1 and 2
HRQoL domains		
Assessment of the importance of each HRQoL domain	Four-point Likert scale (not important, somewhat important, quite important, very important) (quite important + very important $\geq 70\%$)	1 and 2
Clinical setting		
Assessment of the clinical setting in which the HRQoL was to be discussed between the physicians and their patients	List of settings (during routine visit, outside routine visit, during hospitalisation) (selection of a response $\geq 70\%$ of respondents)	2 and 3
Involvement of patient relatives in the HRQoL discussion	Yes/no answers (selection of a response $\geq 70\%$ of respondents)	2
Format and structure to assess HRQoL		
Need for a preliminary HRQoL assessment to inform physician –patient discussion	Yes for all patients, yes for most patients, yes for specific patients, no (selection of a response $\geq 70\%$ of respondents)	2 ^a and 3
Format to assess HRQoL	List of format (interview guide, questionnaires, both) (selection of a response $\geq 70\%$ of respondents)	2 ^a and 3
Type of questionnaire	List of format (validated generic, disease, or new questionnaires adapted to clinical practice and recent treatment) (selection of a response $\geq 70\%$ of respondents)	2 ^a and 3
Format of questionnaire	List of format (paper, oral, electronic) (selection of a response $\geq 70\%$ of respondents)	2
Framework for the HRQoL evaluation with a questionnaire	List of framework [by the patient alone at home or in the hospital outside the consultation (e.g. waiting room, during hospitalisation), in the hospital during the consultation with the doctor, in the hospital outside the consultation during contact with another HCP] (selection of a response $\geq 70\%$ of respondents)	2 ^b and 3
Framework for the HRQoL evaluation with an interview	With the physician, with another HCP, both (selection of a response $\geq 70\%$ of respondents)	3
Other HCPs to be involved		
Identification of other HCPs to be involved in HRQoL management, if applicable	List of HCPs (selection of a response $\geq 70\%$ of respondents)	2
Additional questions		
Resources needed to better assess and integrate HRQoL into current clinical practice	Free-text answer (no consensus sought)	2

HCP, health care practitioner; HRQoL, health-related quality of life; QoL, quality of life.

^a Question of round 2 split into different questions in round 3.

^b Response options reviewed after round 2.

To inform the selection of junctures in the patient care pathway at which HRQoL is important to manage, nine time points were initially identified following discussion with the scientific committee: (i) diagnosis of cancer to a patient, (ii) new treatment initiation (surgery, systemic treatment, radiotherapy), (iii) tumour evaluation with cancer progression, (iv) tumour evaluation with no cancer progression (stable disease or responding to treatment), (v) treatment side-effect, (vi) treatment session with no tumour evaluation, (vii) follow-up of patients in remission with no treatment, (viii) decision for palliative/end-of-life care, and (ix) systematically and on a regular basis at every 3- to 6-month visits. To optimise the number of rounds and minimise the burden on panellists, follow-up questions at rounds 2 and 3 focused on the five time points which were selected by at least 30% of the participants during round 1 to be among the three key time points at which HRQoL should be managed.

Based on a review of existing questionnaires and the experience of the scientific committee members, 14 domains of HRQoL were deemed relevant to patients with lung cancer, including: symptoms (pain, shortness of breath,

fatigue, etc.), body image, activities (daily activities, leisure, etc.), mobility and physical function, emotional well-being and expectations towards treatment, emotional well-being in relation to the disease and its outcomes, emotional well-being in relation to the daily life, family life, professional life, social life, partnership, interactions with the medical team, financial situation, and spirituality. These domains were included for panellists to select the domains of HRQoL to be assessed at key time points in the patient care pathway.

The scientific committee further contributed to the development of the non-exhaustive list of HCPs who need to be involved in the management of patients' HRQoL. The list included psychologists, hospital nurses, private nurses, palliative care professionals, generalist practitioners, pharmacists, other HCPs (nutritionists, physiotherapists, physical educators, aestheticians), and social workers.

Data analysis

Descriptive statistics were used to describe the panellists' characteristics, distribution of responses, and level of

consensus. Free-text comments associated with some questions were content-analysed to further explore participant responses.

RESULTS

Description of the panellists

A representative panel of 60 physicians were recruited (13 oncologists, 43 pulmonologists, 4 radiotherapists) and participated in at least one round (53 at round 1, 46 at round 2, 39 at round 3). Just over 50% of panellists ($n = 31$) responded to all rounds.

The mean age of the physicians was 46 years, and one-third of them were female (33%). Physicians were spread geographically over the entire country with a slightly higher proportion in Auvergne-Rhône-Alpes (17%) and Ile-de-France (25%) areas. The demographic characteristics of panellists at each round were similar to the characteristics of the nationwide database (Table 2).

Time points in the patient care pathway for HRQoL management in clinical practice

Consensus amongst the panellists was reached immediately at the first round of the Delphi, supporting that HRQoL should be managed in clinical practice at all time points on the patients' care pathway from diagnosis to end-of-life care (Table 3). Indeed, at least 70% of the panellists indicated that HRQoL management was quite or very important at each time point with time points reaching unanimous agreement ('tumour evaluation with cancer progression', 'treatment side-effect', and 'decision for palliative/end-of-life care' time points).

As a follow-up question, the panellists were asked to select only three main time points at which HRQoL should be considered among the nine proposed time points. Panellists identified 'diagnosis' (70%) and 'palliative/end-of-life care' (78%) as two of the most important time points. Further, while the 'tumour evaluation with cancer progression' and 'new treatment start' were selected by panellists during the second round of the Delphi, as the third key time point but without consensus (57% and 50%, respectively), the scientific committee confirmed those two time points could be overlapping in daily practice.

Importance of HRQoL domains at specific time points

Consensus was reached for a discussion covering multiple dimensions of HRQoL, with specific HRQoL domains discussed at selected time points. At least 10 of the 14 dimensions were considered important at any time point (Table 4). A greater degree of consensus was achieved in the symptoms domain, which was rated as important by almost all panellists (98%-100%) and at all time points, followed by emotional well-being in relation to the disease and its outcomes domain (87%-100%). The time point with the greatest degree of consensus for HRQoL domains was 'diagnosis of cancer', with only professional life, financial situation, and spirituality not achieving consensus at this

time point. HRQoL management at the time of decision for palliative/end-of-life care was slightly differentiating from other time points, with spirituality being considered as an important domain to discuss by 85% of the panellists, while it was considered important by only 20%-52% of the panellists at any other time point. Other HRQoL domains considered less important for discussion at the time of palliative care/end of life included body image and activities domains which were rated at 56% each with no consensus among the panellists. There was no consensus on the importance of domains relating to professional life and financial situation at any time point.

Clinical setting for HRQoL discussion between physicians and patients

When asked about the clinical setting for discussion about HRQoL at key time points in a patient care pathway, consensus was achieved for HRQoL discussions as part of the routine visit at all time points with the greatest degree of consensus for discussing 'treatment side-effects'. Similarly, for HRQoL during hospitalisation, nearly all time points, with the exception of new treatment initiation, achieved consensus (Supplementary Table S1, available at <https://doi.org/10.1016/j.esmooop.2021.100239>). No consensus supporting an HRQoL discussion at a dedicated time outside of routine visits was reached with the exception of the 'palliative/end-of-life care' time point. Additionally, a consensus was reached that patient relatives should be included in the HRQoL discussion at all time points (76%-97% of physicians), except when discussing treatment side-effects which did not meet the consensus threshold (59%) (Supplementary Table S2, available at <https://doi.org/10.1016/j.esmooop.2021.100239>).

Format and structure of HRQoL assessment in clinical practice

Although HRQoL assessment before the visit was recognised as being of interest at all time points, consensus was not achieved for a systematic assessment for all patients at all time points (Supplementary Table S3, available at <https://doi.org/10.1016/j.esmooop.2021.100239>).

Physicians were asked about the method of HRQoL discussions, specifically whether this should be by a discussion supported by an interview guide with pre-defined questions, use of a patient self-completed questionnaire, or by some other method. No consensus was reached on methods used to assess HRQoL despite the two iterations (round 2 and round 3), but a slightly greater preference for a discussion supported by an interview guide was recorded, except when focusing on treatment side-effects (Supplementary Table S4, available at <https://doi.org/10.1016/j.esmooop.2021.100239>). There was an overall consensus on having an HRQoL discussion supported by an interview guide at some time points in the patient care pathway (82% of panellists checked at least once 'interview guide' at one time point). Further, there was an interest in using self-administered questionnaires that patients would

Characteristics	Round 1 (n = 53)	Round 2 (n = 46)	Round 3 (n = 39)	Panellists (n = 60)	Overall pool (n = 747)
Age, years					
Mean (SD)	46 (9)	47 (9)	47 (10)	46 (9)	50 (10)
Min-max	30-64	30-63	30-64	30-64	29-78
Female, n (%)	18 (34)	15 (33)	11 (28)	20 (33)	288 (39)
Specialty, n (%)					
Oncology	20 (38)	19 (41)	20 (49)	13 (22)	196 (26)
Pneumology	38 (72)	33 (72)	26 (67)	43 (72)	471 (63)
Radiotherapy	3 (6)	3 (7)	4 (8)	4 (7)	80 (11)
Type of practice, n (%)					
Cancer centre	7 (13)	7 (15)	7 (18)	8 (13)	45 (6)
University hospital	16 (30)	18 (39)	17 (44)	17 (28)	154 (21)
Private hospital/practice	8 (15)	5 (11)	3 (8)	10 (17)	228 (31)
Other hospital	24 (45)	18 (39)	13 (33)	25 (42)	302 (40)
French region, n (%)					
Auvergne-Rhône-Alpes	10 (19)	9 (20)	7 (18)	10 (17)	93 (12)
Bourgogne-Franche-Comté	3 (6)	3 (6)	2 (5)	4 (7)	33 (4)
Bretagne	2 (4)	2 (4)	2 (5)	2 (3)	38 (5)
Centre-Val de Loire	2 (4)	2 (4)	1 (3)	2 (3)	29 (4)
Grand Est	5 (9)	5 (9)	4 (10)	6 (10)	69 (9)
Hauts-de-France	3 (6)	3 (6)	4 (10)	5 (8)	73 (10)
Île-de-France	14 (26)	14 (26)	9 (23)	15 (25)	141 (19)
Normandie	2 (4)	2 (4)	2 (5)	2 (3)	47 (6)
Nouvelle-Aquitaine	6 (11)	6 (11)	5 (13)	7 (12)	71 (10)
Occitanie	2 (4)	2 (4)	1 (3)	2 (3)	57 (8)
Provence-Alpes-Côte d'Azur	4 (8)	4 (8)	1 (3)	4 (7)	57 (8)
Pays de la Loire	0 (0)	0 (0)	1 (3)	1 (2)	38 (5)

SD, standard deviation.

complete and to which clinicians would have access for review (64% of panellists checked at least once 'self-administered questionnaire' at one time point).

No consensus was reached on the type of questionnaire to use (i.e. a generic questionnaire, a lung cancer-specific questionnaire, or a new questionnaire specifically developed for clinical practice and adapted to recent treatments) if a questionnaire was considered for the collection of QoL information. No consensus was found for the time and place of completion of such a questionnaire, 61% (<70%-threshold) of the panellists selected the option for an administration outside the clinical visit (i.e. at home or in the waiting room).

No consensus was found for the HCP (nurse, physician, other) who should conduct the interview, in case of the use of an interview guide to collect QoL information.

Other health care practitioners to involve and needs for additional resources

Panellists were asked to identify HCPs who should be involved in HRQoL discussions and management. Despite the fact that a consensus was not reached for all time points for all HCPs, responses provided by the panellists revealed that a multidisciplinary team should be involved in the patients' HRQoL management throughout their care pathway (Table 5).

During round 2, 36 panellists confirmed that they would require additional resources to ensure HRQoL discussions and management were implemented in their clinical practice. The types of additional resources included more staff, such as a nurse, a psychologist, or another physician ($n = 22$), more time ($n = 21$), and more tools, such as electronic tablets or questionnaires ($n = 9$).

Time points	Not important (%)	Somewhat important (%)	Quite important (%)	Very important (%)
Diagnosis of cancer to a patient	0	6	26	68
New treatment initiation (surgery, systemic treatment, radiotherapy)	0	6	30	64
Tumour evaluation with cancer progression	0	0	32	68
Tumour evaluation with no cancer progression (stable disease or responding to treatment)	0	11	53	36
Treatment side-effect	0	0	51	49
Treatment session with no tumour evaluation	0	17	53	30
Follow-up of patients in remission with no treatment	2	28	51	19
Decision for palliative/end-of-life care	0	0	13	87
Systematically and on a regular basis every 3-6 months	0	25	47	28

In bold: consensus reached ($\geq 70\%$) to consider as quite or very important. HRQoL, health-related quality of life.

Table 4. Response distribution on the importance of HRQoL domains at key time points

HRQoL domains	Diagnosis of cancer (%)	New treatment initiation (%)	Tumour evaluation with cancer progression (%)	Treatment side-effect (%)	Decision for palliative/end-of-life care (%)
Symptoms (pain, shortness of breath, fatigue, etc.)	100	98	98	98	98
Body image	85	70	70	72	56
Activities (daily activities, leisure activities, etc.)	83	78	74	76	56
Mobility and physical function	93	96	93	87	72
Emotional well-being and expectations towards treatment	87	98	91	93	80
Emotional well-being in relation to the disease and its outcomes	96	98	100	87	91
Emotional well-being in relation to the daily life	89	91	93	87	93
Family life	91	89	87	76	98
Professional life	56	52	39	39	37
Social life	78	74	72	59	91
Partnership	70	63	61	41	83
Interactions with medical team	91	96	93	89	96
Financial situation	56	50	37	20	43
Spirituality	50	26	52	20	85

In bold: consensus reached ($\geq 70\%$) to consider as important; in italics: $< 30\%$ to consider as important [i.e. consensus reached ($\geq 70\%$) to consider as not important]. HRQoL, health-related quality of life.

DISCUSSION

This Delphi study aimed to reach a consensus from a panel of French physicians involved in the management of patients with lung cancer on the need and process for integrating HRQoL discussions to guide therapeutic decisions and support patient management in daily practice. The results identified consensus in that HRQoL should be an integrated part of the routine clinical visit in oncology practices and is key in the successful interaction between patients and their physicians. Further, the results also highlighted the need for a multidisciplinary and coordinated approach to HRQoL management in clinical practice. However, the application of HRQoL management and the role of each HCP are not yet well defined, with no standardised approaches identified. Despite iterative questions at the different Delphi rounds to probe physicians, the ideal tools to assess HRQoL are also yet to be identified.

A number of studies have reported the use of PRO questionnaires in oncology clinical practice and shown that their implementation can improve patient management and physician–patient communication.^{14,26–28} Several studies have focused on the feasibility and the interest of HRQoL

questionnaires in routine practice, including the use of electronic monitoring-based or web-based approaches, but few studies have investigated the patient and clinician expectations regarding HRQoL management in France.^{29–31} In addition, recent findings indicate that current standardised PRO questionnaires may have limitations in capturing all the patient relevant domains of HRQoL for patients treated with immunotherapies.³² Notwithstanding the absence of a consensus on the ideal instruments for HRQoL assessment, both interview guides and questionnaires prove useful depending on which time point of the patient care pathway they are implemented and patient/physician preferences. Still, further research is needed to confirm the ideal approach for HRQoL assessment (i.e. questionnaire, a standardised interview, or a combination of both) and to ensure a harmonised approach across practices.

With regard to the various time points in the patient care pathway, palliative/end-of-life care held a different status compared to all the other identified time points in HRQoL management. Several qualitative studies have demonstrated the importance of integrating spirituality in the discussion around HRQoL specifically for palliative/

Table 5. Response distribution on involvement of other health care practitioners for HRQoL management

Health care practitioner	Diagnosis of cancer to a patient (%)	New treatment initiation (%)	Tumour evaluation with cancer progression (%)	Treatment side-effect (%)	Decision for palliative/end-of-life care (%)	At none of those time points (%)
Psychologist	96	37	72	15	89	0
Hospital nurse	83	74	46	78	65	0
Private nurse	17	11	7	48	39	24
Palliative care professional	17	11	41	15	93	4
Generalist practitioners	83	59	63	67	83	2
Pharmacist	20	33	9	48	13	35
Other practitioner (nutritionist, physiotherapist, physical educator, aesthetician, etc.)	46	48	35	43	67	9
Social worker	83	17	30	15	72	9
Other	4	2	2	4	4	—

In bold: consensus reached ($\geq 70\%$) to consider the need to involve that HCP in HRQoL management; in italics: $< 30\%$ to consider the need to involve that HCP in HRQoL management [i.e. consensus reached ($\geq 70\%$) to consider not to involve that HCP in HRQoL management]. HCP, health care practitioner; HRQoL, health-related quality of life.

end-of-life care³³ and the consensus approach employed in this study confirmed that this was recognised as essential by physicians. The ‘palliative/end of care’ and ‘diagnosis’ time points are also considered as the time points requiring a stronger and more multidisciplinary involvement of HCPs as compared to other time points. The differences seen in patient management for palliative care may reflect the change in treatment management and physician perceptions shifting from tumour size reduction to control and/or relieve symptoms while trying to prevent HRQoL deterioration.³⁴

No consensus was reached relating to the importance of considering professional life and financial impact at any time point during the therapeutic pathway. This could be linked to the fact that patients with lung cancer mostly concern a retired population for which professional life impact is not relevant. In addition, the local context may also have some influence, knowing that in France there are options for taking prolonged sick leave and there is a wide-reaching health insurance coverage. The authors acknowledge that health care systems around the world are different and that if the study were replicated in other geographies then financial impact may be very different.

Similarities can be observed when comparing our findings from the present study and those from cross-sectional surveys with patients with cancer assessing content, quality, and expectations regarding HRQoL.³⁵ Even if gaps were highlighted by patients between their expectations and the day-to-day clinician practice, both patients and physicians valued the importance of integrating HRQoL discussion during the entire care pathway as a critical lever to improve care outcomes and patient welfare. Both patients and physicians identified unmet needs to allow for a stronger rationale for the integration of HRQoL into routine clinical practice.

This study is not without limitations. In line with the target sample size set in the literature, 60 French physicians involved in the management of patients with lung cancer participated in the Delphi study, including 31 who responded to all three rounds.^{20,22} Our sample may be biased, as panellists who agreed to participate were most likely interested in the subject of HRQoL management. However, comments in the free-text sections denoted different perspectives on the importance to discuss HRQoL or not. The characteristics of the panellists were close to the characteristics of the larger database of 747 French physicians involved in pulmonary oncology. The only exception was that our sample had slightly more physicians from Ile-de-France and Auvergne-Rhône-Alpes areas. The majority of the panellists (72%) were pulmonologists. This is in line with current practice in France where patients with lung cancer are most frequently managed and treated by oncopulmonologists and not oncologists like in other countries.

This study includes a French perspective on the integration of HRQoL in routine practice and focused specifically on lung cancer, which is the most common cancer affecting both women and men in France and worldwide.³⁶ Future similar work in other parts of the world would be useful as HCPs’ clinical practice is tied to the health system in the

country, including care pathways, local guidelines, and funding. Similarly, future studies could explore the landscape in other cancer types and explore if HRQoL management is cancer-dependent or not. While it is likely that it is important to capture HRQoL element across all patients, it is likely that there could be some slight differences across cancer types, and that specific HRQoL domains may be more important to patients with a cancer than to patients with another type of cancer.

In conclusion, consensus was reached on HRQoL, as a multidimensional concept, to be considered as an inherent part of routine clinical visits in thoracic oncology by French physicians, and to be key in the patient–physician interaction. This study identified the practical implementation, in particular the tools to be used for assessing HRQoL, as the main unmet need regarding integrating HRQoL in clinical practice.

ACKNOWLEDGEMENTS

We thank all physicians who participated in the Delphi panel. We also thank Muna Tahir (ICON plc) and Bryan Bennett (Bristol-Myers Squibb) for their support in manuscript editing and medical writing.

FUNDING

This work was supported by Bristol-Myers Squibb (no grant number).

DISCLOSURE

BA, MA, and JL, employees of ICON plc, were paid consultants to Bristol-Myers Squibb. HL, A-FG, and F-EC are employees of Bristol-Myers Squibb. ABC reports personal fees from Bristol-Myers Squibb, Boehringer-Ingelheim, and Merck Sharp & Dohme; grants from Merck KGaA; grants, personal fees, and non-financial support from Novartis and Roche; and personal fees and non-financial support from Pfizer, AstraZeneca, and Takeda, outside the submitted work. VW reports personal fees from Bristol-Myers Squibb, during the conduct of the study; personal fees and support for meeting attendance from Bristol-Myers Squibb and Roche; support for meeting attendance from Boehringer Ingelheim and Pfizer; and personal fees from AstraZeneca, Merck Sharp & Dohme, Takeda, and Amgen, outside the submitted work. ACT was paid as consultant/speaker by AstraZeneca, Bristol-Myers Squibb, Boehringer Ingelheim, Merck Sharp & Dohme, Novartis, Pfizer, Vifor Pharma, and Roche. All other authors have declared no conflicts of interest.

DATA SHARING

The datasets obtained and/or analysed during this study are available from the corresponding author on reasonable request.

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