

What Do Patients Rank As More Important In Quality Of Life And Patient Reported Outcome Evaluation: Symptoms Or Summative Assessments?

Results Of A Survey Of 3860 Patients with Breast, Lung And Prostate Cancers With Implications For Drug Development



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Abstract

Background: Patient (pt) involvement in establishing content validity (CV) is critical for QL and PRO instrument development. Instruments usually contain both multi-dimensional summative items and single Sx items. As endpoints in drug development, the FDA has emphasized Sx assessment in PRO guidance (www.fda.gov) and has questioned the CV of many instruments as not having sufficient pt input. This survey was conducted to 1) provide in depth CV in several major cancers, and 2) provide an opportunity to assess whether pts agree with the FDA in prioritizing Sx over summative items in PRO/QL evaluation.

Methods: Lung, breast or prostate cancer pts registered with the web-based NexCura resource (www.nexcura.com) were surveyed. Pts ranked 20 to 21 issues, including general, physical, functional, psychosocial and summative items, on a 5-point scale. 3860 pts completed the anonymous web survey. Multiple demographic factors were also assessed to allow subgroup analysis. **Results:** The table shows the 5 highest ranked items as rated in the single top category ("very important"); ranking did not change if the 2 top categories were used. The highest rated items are the same in all 3 cancers; none of the top ranked items are disease specific, and clearly pts rate summative items above typical cancer Sx.

Patient Ranking of the Highest Rated Items as "Very Important" (Percent of Patients and Rank Order)

	Lung Cancer (n=660)	Breast Cancer (n=1072)	Prostate Cancer (n=2128)
Quality of Life	80% (1)	82% (1)	76% (1)
Maintaining Independence	71% (2)	75% (2)	74% (2)
Ability to perform normal activities	64% (4)	62% (5)	66% (3)
Ability to sleep	63% (5)	69% (3)	51% (6)
Fatigue	58% (7)	61% (6)	40% (7)

Conclusions: This study represents the largest survey of pt expressed concerns. While both Sx and summative items are important, pts consistently prioritize summative items. Interestingly, among these 3 different major cancer types pts ranked most items in a similar order. Patients' rank preference should be taken into account when determining what constitutes benefit in evaluating QL and PROs.

Background

- Identifying issues of importance for patients with cancer is central to assessing health related quality of life (QL) and patient reported outcomes (PRO) during all points of the illness trajectory.
- While many issues are meaningful to patients, some are of greater importance than others. Only through sampling patient views can this ranking be determined.
- Patient input is essential to the development of disease specific programs and establishing valid QL instruments. Some items may differ by the type of cancer, while others may be more universal.
- Validated QL instruments aid in evaluating the effectiveness of interventions and in assuring that appropriate goals are met.
- Only through large patient samples can the content validity be properly determined for these instruments. Additionally, only by knowing which items are rated highest by patients can it be determined if treatment approaches are meeting the needs and expectations of patients.
- Used appropriately, with well-established psychometrics including content validity, these instruments can be useful in drug development to identify benefits not readily apparent by other means and as more cost-effective measures of benefit.
- Instruments usually contain both multi-dimensional summative items and single symptom items.
- As endpoints in drug development, the FDA has emphasized symptom assessment in patient-reported-outcome guidance and has questioned the content validity of many instruments as not having sufficient patient input.

*<http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM119322.pdf> - accessed 5/22/2010

Objectives

- To establish a large data set to support content validity for quality of life and patient reported outcomes ("PROs") questionnaires in breast, lung and prostate cancer
- To determine which quality of life issues are of greatest importance to patients with breast lung and prostate cancer and whether differences between FDA guidance and patient input exists
- To determine which issues are considered to be the most important and whether ratings differ by cancer type, gender, age group or other key factors

Methods

- This methodological study used an online survey approach.
- The established patient base of the web-based NexCura patient information resource was used to electronically survey patients with breast cancer, lung cancer and prostate cancer. Patients who had previously visited this site (www.nexcura.com), and had registered are routinely asked if it is agreeable to contact them in the future. Such patients were sent an invitation to participate anonymously in this survey, and if agreed, an electronic survey was sent. No patient identifier was used at any time.
- Selection criteria: patients with either active disease or with a history of breast, lung or prostate cancer. Caregivers were excluded. Demographic stratifications included age, gender, educational level, stage of disease, and treatment history.

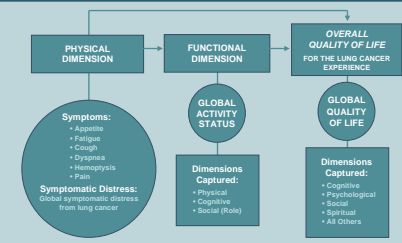
Instruments:

- A questionnaire with 18 to 21 items in a categorical format, encompassing physical, functional, psychological, social and spiritual domains was completed by each patient. The content was based on:
 - an expert panel of oncology health care professionals
 - review of existing quality of life instruments
- The questions varied from disease-specific to general items. The initial content for lung cancer was based on the content validity process for the well-validated Lung Cancer Symptom Scale (LCSS). The Prostate Cancer (PCSS-QL) and Breast Cancer (BCSS-QL) are based on the LCSS: theoretical framework model.

* Hollen et al. *Supp Care Cancer* 1994, and *Cancer* 1994

Quality of Life Dimensions

Conceptual Model for the LCSS, BCSS and PCSS Instruments for Use in Patient Management and Clinical Trials



Methods

Patients were asked to rank each issue on a 5-point categorical scale assessing the importance of each item. The scale ranged from:

"Very Important" to "Not Important at All"

The results are given by the percent rating the item in the highest category ("very important") or in the two highest categories ("very important" plus "important").

Demographic stratifications included:

- disease extent
- age
- hormonal status
- time since diagnosis
- prior or current treatment (surgery, RT, chemotherapy, hormonal, targeted, and CAM approaches)

Results

Comparison of Highest Rated items for BCSS, LCSS and PCSS

Items Ranked by two the Highest Categories ("Very Important" plus "Important") (Percent of Patients and Rank Order)

	Lung Cancer Patients (n=660)	Breast Cancer Patients (n=1072)	Prostate Cancer Patients (n=2128)
Quality of Life	98% (1)	99% (1)	98% (1)
Maintaining Independence	97% (2)	97% (2)	97% (2)
Ability to perform normal activities	96% (3)	97% (5)	97% (3)
Ability to sleep	94% (4)	97% (3)	94% (4)
Fatigue	93% (5)	95% (6)	89% (7)

Comparison of Highest Rated items for BCSS, LCSS and PCSS

Items Ranked in the Highest Category ("Very Important") (Percent of Patients and Rank Order)

	Lung Cancer Patients (n=660)	Breast Cancer Patients (n=1072)	Prostate Cancer Patients (n=2128)
Quality of Life	80% (1)	82% (1)	76% (1)
Maintaining Independence	71% (2)	75% (2)	74% (2)
Ability to perform normal activities	64% (4)	62% (5)	66% (3)
Ability to sleep	63% (5)	69% (3)	51% (6)
Fatigue	58% (7)	61% (6)	40% (7)

Ranking of Disease Specific Items – Symptoms: Items ranked mid-range

- Disease-Specific symptoms tended to be ranked in the mid-range of importance, rather than at the top of the list of importance:
 - Prostate Cancer Symptoms were ranked from the 7th to the 11th most important (Pain, Urinary Issues, Items regarding Sexuality)
 - Breast Cancer Symptoms were ranked from the 9th to the 11th most important (Pain, Hot flashes, Vaginal dryness, Breast swelling)
 - Lung Cancer Symptoms were ranked from the 6th to the 15th most important (Pain, Dyspnea, Hemoptysis, Cough, Hoarseness)
- Of these multiple disease-related symptoms, pain was more highly ranked (generally from the 6th to the 11th most important item) across all 3 cancers, and as expected was ranked higher by patients with metastatic disease

Comparison of Lowest Rated Items for BCSS, LCSS and PCSS

Items Ranked the Lowest (those least ranked as "Very Important" plus "Important") (Percent of Patients and Rank Order)

	Breast Cancer Patients (n=1072)	Lung Cancer Patients (n=660)	Prostate Cancer Patients (n=2128)
Anxiety	47% / 85% (8)	40% / 78% (14)	35% / 78% (13)
Cough	31% / 68% (14)	28% / 65% (17)	NA*
Sexual Difficulties	27% / 60% (17)	20% / 48% (20)	41% / 79% (14)
Problems with urination	NA*	27% / 65% (18)	35% / 81% (12)
Hot Flashes	24% / 57% (19)	NA*	10% / 35% (18)
Appetite	20% / 63% (20)	33% / 80% (15)	13% / 64% (17)

* % ranked "very important" / % ranked "very important" + "important" (rank NA= not assessed in this malignancy)

Content Validity Survey in Lung Cancer - Limitations of this Web-Based Methodology -

- Patients had to have access to a computer and have some degree of computer literacy
- Patients had to have enough interest in their disease and treatment to:
 - Go online to seek additional information
 - Complete a survey form
- As with all methods, patients who were very ill are less able to participate
 - Are similar to the overall population of patients with these malignancies in the U.S.
 - Information from large subgroups of importance was obtained
- However, those who participated:
 - Are similar to the overall population of patients with these malignancies in the U.S.
 - Information from large subgroups of importance was obtained

Conclusion

- This study represents the largest survey of patient expressed concerns.
- While both symptoms and summative items are important, patients consistently prioritize summative items above symptoms. Even the pain item, including in patients with metastatic disease, is ranked by patients to be below overall quality of life and the ability to maintain independence.
- Interestingly, among these 3 different major cancer types patients ranked most items in a similar order, again with summative items out-ranking symptoms.
- Patients' rank preference should be taken into account when determining what constitutes benefit in evaluating quality of life, symptoms and patient-reported outcomes.
- Only through asking patients directly could these findings be determined. Recently the FDA has increasingly emphasized evaluating symptom control as part of clinical trials in new agent development. While symptom control is meaningful to patients (as also seen in this survey), it must be realized that patients rank summative items even higher.
- True PRO evaluation should assess the areas of greatest patient-expressed importance as well as on symptom control.

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*<http://www.fda.gov/downloads/Drugs/GuidanceComplianceRegulatoryInformation/Guidances/UCM119322.pdf> - accessed 5/22/2010

For more information on the LCSS, please go to www.lcss-ql.com.