



# Design of the Cancer Treatment Satisfaction Questionnaire (CancerTSQ)



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## Introduction and Aims

Cancer and its treatment can impact a person's quality of life and well-being (Davidson et al., 2022).

To our knowledge, there are no validated questionnaires designed to measure satisfaction with the full range of cancer treatments. Satisfaction with treatment can influence decisions about whether to continue treatment, compliance with the treatment regimen, and is itself an important outcome of treatment.

The aim was to design a Cancer Treatment Satisfaction Questionnaire (CancerTSQ), which is needed for use by clinicians and in clinical trials of existing treatments as well as any new treatments or treatment combinations in the future.

## Methods

### Participants

Twenty-six UK English-speaking participants (10 men, 16 women; mean age 57 years) were recruited from Barts Health NHS Trust (n=10), UK Maggie's Centres (n=7) and Cancer Research UK (n=9).

The participants had been treated for a range of different cancers including breast, prostate, lymphoma, myeloma, stomach, renal, liver, bowel, head and neck, lung, bone, bladder, gynaecological and oesophageal.

Cancer treatments experienced included surgery, radiotherapy, chemotherapy, immunotherapy, hormone therapy, targeted therapy and stem cell transplant.

### Design

The CancerTSQ was designed using the same template and format as established -TSQ measures (starting with the DTSQ for diabetes; Bradley, 1994). Figures 1 and 2 illustrate the main stages involved in the design of the CancerTSQ.

### Interviews

Semi-structured interviews were carried out using MS Teams, Zoom or telephone to elicit spontaneous mentions of sources of satisfaction/dissatisfaction with cancer treatment prior to completion of a draft version of the CancerTSQ.

Participants rated the importance of each item for inclusion in the questionnaire (from 3 'very important' to 0 'not at all important'). Some participants did not complete importance ratings due to time constraints.

## References

- Bradley C. (1994). The Diabetes Treatment Satisfaction Questionnaire: DTSQ. In: Bradley C, editor. *Handbook of Psychology and Diabetes: a guide to psychological measurement in diabetes research and practice*. Abingdon, Routledge (formerly published by Harwood Academic Publishers); pp. 111–132.
- Davidson J, Taylor M, Gilbride C, Romaine J, Wolstenholme V, Tipples K, Powell M, Harrison M, Bradley C (2020). Evaluation of an individualised quality of life questionnaire for use in people with cancer: the Cancer Dependent Quality of Life ("CancerDQoL") questionnaire. *Value in Health*, 23, Suppl. 2, S472.

Figure 1

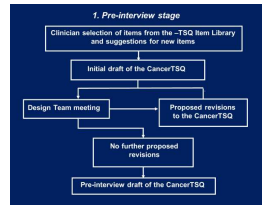
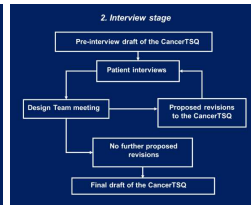


Figure 2



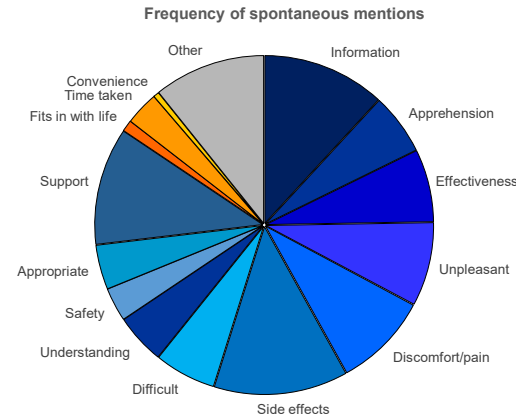
## Results

### Spontaneous mentions

Figure 3 shows the frequency with which aspects of treatment satisfaction were mentioned spontaneously by all 26 participants during the interviews before they were presented with the draft CancerTSQ.

The blue segments show the aspects of treatment satisfaction that were included in the final draft of the CancerTSQ. The orange segments show the aspects of treatment satisfaction that were mentioned but were not included in the final draft of the CancerTSQ. The grey segment includes spontaneous mentions of aspects of clinical care and service satisfaction, which are not included in the CancerTSQ where the focus is on the experience of specific treatments.

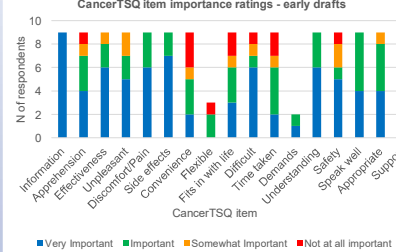
Figure 3



### Importance ratings

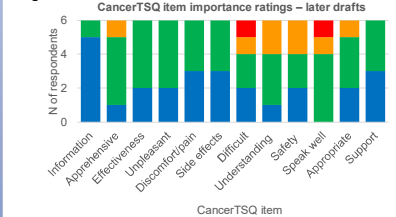
Figure 4 shows CancerTSQ item importance ratings for respondents who received the earlier drafts of the questionnaire. The number of respondents varies due to some items being added to or removed from the draft CancerTSQ between sets of interviews.

Figure 4



In the later drafts (Figure 5), five items had been removed: Convenience, Flexibility, Fits in with life, Demands and Time taken. These items were rated as less important by participants and are likely to be captured by the Difficult item.

Figure 5



Information, Pain/discomfort, Side-effects and Support were consistently rated as 'very important' or 'important' for treatment satisfaction.

## Conclusions

The CancerTSQ is a cancer-specific patient-reported outcome measure enabling patients' satisfaction/dissatisfaction with cancer treatment to be measured in clinical trials and routine clinical practice.

The -TSQ Item Library facilitated the design of the CancerTSQ with no novel items being required to cover all aspects of satisfaction/dissatisfaction with cancer treatments.

The CancerTSQ will be valuable in identifying ways to improve patients' experience of cancer treatment.

Data collection is underway to establish optimal scoring, quantitative validity and reliability of the CancerTSQ.

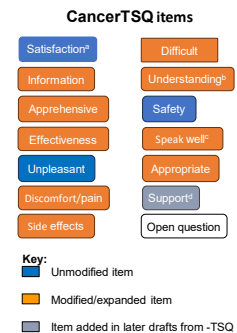
### Final draft of the CancerTSQ

The final draft of the CancerTSQ contained 14 items (Figure 6), all originating from the -TSQ Item Library.

Final items included the 12 items shown in Figure 5, an initial question about overall treatment satisfaction that appears in all -TSQs and an open question at the end of the questionnaire for patients to add any other aspects of satisfaction/dissatisfaction which are not already covered in the questionnaire.

Three of the 12 items from the Item Library shown in Figure 5 were unmodified. Nine items were expanded or modified.

Figure 6



Notes:

- <sup>a</sup>General satisfaction item included in all -TSQs: 'How satisfied are you with your recent treatment for...?'
- <sup>b</sup>Item asks patient about 'understanding of your recent treatment for cancer'
- <sup>c</sup>'Would you speak well of your treatment to someone else who is being offered a similar treatment?'
- <sup>d</sup>Item added in later drafts: 'How satisfied are you with the amount of support you are getting from nurses, doctors and other clinical staff?' The Support item was added due to demand for such an item in the first few interviews. Support from nurses, doctors and other clinical staff would usually be considered in a Clinic/Service Satisfaction questionnaire rather than in a Treatment Satisfaction Questionnaire, but an exception was made here due to patient demand.

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For access to the CancerTSQ and other questionnaires please visit: [www.healthpsychologyresearch.com](http://www.healthpsychologyresearch.com)