

## The patient's experience of fatigue: a cross-sectional study of cancer patients

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<b>Origin of Study</b>	USA
<b>Type of Study</b>	CROSS-SECTIONAL ONLINE AND TELEPHONE SURVEY
<b>Objectives</b>	<p>Assess the prevalence of fatigue in patients with cancer.</p> <p>Examine relationships between fatigue, anxiety, depression, and somatization.</p>
<b>Study Design</b>	<p>A cross-sectional survey was conducted from April–May 2006. From a chronic illness panel of 550,233 patients, a random sample was selected for an online survey; a sample of patients also was surveyed via telephone from two lists, totaling 177,800 patients.</p> <p>A pretest of seven 1-hour, in-depth telephone interviews examined the readability and completion time of the questionnaire.</p> <p>For health-related quality of life (QOL), fatigue was assessed using an 8-item brief fatigue questionnaire developed from four previously validated instruments and the 13-item Functional Assessment of Cancer Therapy–Fatigue (FACT–F) questionnaire; anxiety, depression, and somatization were measured using the 18-item Brief Symptom Inventory (BSI) and a global severity index; and the degree of debilitation related to fatigue, importance of fatigue reduction, and global health status were assessed using single items with numerical scales ranging from 0–10.</p> <p>Data also were collected on cancer type and duration; current chemotherapy and/or radiotherapy status; side effects of cancer therapy; treatment for side effects; patient age, gender, race, education, income, employment, and ethnicity; burden of time spent on outpatient visits to receive cancer therapy or treatment for side effects; and the impact of such visits on work or daily life.</p>
<b>Patients</b>	Patients were $\geq 18$ years of age, had a cancer diagnosis, and were receiving chemotherapy and/or radiotherapy or had received chemotherapy and/or radiotherapy during the 12 months prior to the survey.
<b>Observations</b>	<p>In all, 1,569 surveys were obtained and analyzed; a response rate of 34% was achieved among eligible participants.</p> <p>Fatigue (79%) was the most commonly reported side effect of cancer therapy; nearly two of three patients rated their fatigue to be debilitating, although only 27% reported receiving treatment for fatigue in the previous year. One in three patients considered fatigue reduction to be very important.</p> <p>Respondents currently receiving chemotherapy and/or radiotherapy reported significantly worse levels of fatigue (<math>P &lt; 0.0001</math>); however, no significant association was found between the duration of primary cancer and fatigue.</p> <p>Unemployed patients, non-white patients, and women reported significantly higher levels of fatigue, and older age was associated with lower fatigue levels.</p> <p>Worse fatigue levels measured by the FACT–F were significantly (all <math>P</math> values <math>&lt; 0.001</math>) associated with higher levels of anxiety, depression, somatization, and the global symptom severity. Scores from the brief fatigue questionnaire were consistent with those obtained with the FACT–F. Finally, lower fatigue was associated with better health status (<math>P &lt; 0.0001</math>). Information on other reported side effects can be seen in the Table.</p>

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### Conclusions

Fatigue was significantly associated with anxiety and depression.

Fatigue was more prevalent among females, unemployed patients, non-whites, younger patients, and those currently receiving chemotherapy.

Fatigue may have a profound effect on daily activities for cancer patients and warrants early identification and treatment.

### Discussion

Cancer-related fatigue is defined as a persistent, subjective sense of tiredness or exhaustion related to cancer or cancer treatment that is not proportional to recent activity and interferes with usual functioning. Such fatigue has multiple causes, including anemia, tumor burden, antitumor treatment, and depression. Cancer patients often do not discuss the symptom of fatigue with their healthcare providers, who in turn do not adequately assess such functional deficits. This results in the underassessment of fatigue in clinical settings. This study was conducted to assess the prevalence of fatigue in cancer patients and to examine the relationships between fatigue, anxiety, depression, and somatization.

The study was based on results from an online survey and a telephone survey conducted in 2006. All patients were currently receiving or had received chemotherapy or radiation therapy during the 12 months prior to the survey. Investigators assessed symptoms and gathered information about other clinical variables, sociodemographic variables, and the burden of treatment on time and quality of life.

Fatigue was the most common side effect of cancer therapy, reported by 79% of respondents. Almost two out of three patients rated their fatigue to be debilitating, and one in three patients considered a reduction in fatigue to be very important—but only 27% of those affected had received treatment for their fatigue.

Fatigue was mostly related to treatment, as significantly worse levels of fatigue were reported by those undergoing current therapy. No significant association was found between the duration of primary cancer and fatigue. In addition, worse levels of fatigue were significantly associated with higher levels of anxiety, depression, somatization, and the global symptom severity. Lower fatigue was associated with better health status.

Other common side effects (reported by > 40%) included pain (48%), nausea and/or vomiting (48%), anxiety (47%), alopecia (47%), insomnia (44%), and diarrhea (42%). Although only 27% were treated for fatigue, the other symptoms garnered more attention. Only one other symptom—infertility—was less likely to be treated (11%) than fatigue (see Table).

### Key Points

- Fatigue was the most common side effect of chemotherapy and/or radiotherapy found in this survey, and one of the most undertreated.
- More research is needed to examine the degree of uniqueness and overlap between physical and psychological symptoms in cancer patients.

### Reference

Henry D, Viswanathan H, Wade SM, Servin M, Cella D. The patient's experience of fatigue: a cross-sectional study of cancer patients. Presented at the 48<sup>th</sup> Annual Meeting of the American Society of Hematology; December 9–12, 2006; Orlando, Florida. Abstract 3356.

#### Reported and Treated Side Effects of Chemotherapy and Radiotherapy by % of Patients

SIDE EFFECT	REPORTED	TREATED*
Fatigue	79%	27%
Pain	48%	63%
Nausea and/or vomiting	48%	63%
Anxiety	47%	42%
Alopecia	47%	–
Insomnia	44%	39%
Diarrhea	42%	45%
Constipation	37%	43%
Anemia	34%	56%
Neuropathy	26%	46%
Mucositis	25%	56%
Infections	24%	67%
Infertility	18%	11%
Other	16%	50%

\*Represents percentage of patients among those experiencing the side effect.