Satisfaction with follow-up consultations among younger adults treated for cancer: The role of quality of life and psychological variables

Gisela Michel^{1,2}, Diana Greenfield³, Kate Absolom⁴, Christine Eiser¹
on behalf of the Late Effects Group Sheffield

¹Dept of Psychology, University of Sheffield, Western Bank, Sheffield, S10 2TP, UK

²Institute of Social and Preventive Medicine, University of Bern, Finkenhubelweg 11, 3012 Bern, Switzerland

³Academic Unit of Clinical Oncology, Weston Park Hospital, Sheffield S10 2SJ, UK

⁴Psychosocial Oncology and Clinical Practice Research Group, Bexley Wing, St James's Institute of Oncology, Beckett Street, Leeds, LS9 7TF, UK

Corresponding author:

Gisela Michel

Institute of Social and Preventive Medicine, University of Bern, Finkenhubelweg 11, 3012 Bern, Switzerland

e-mail: michel@ispm.unibe.ch

Gisela Michel, Universität Luzern, Dept Health Sciences and Health Policy, Frohburgstrasse 3, Postfach 4466, 6002 Luzern, Switzerland

gisela.michel@unilu.ch

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Abstract (words: 235, max 250)

Objective: Given increased survival rates and treatment-related late-effects, follow-up for cancer survivors is increasingly recommended. However, information about adverse events (e.g. possibility of late-effects) may be distressing for the cancer survivor and lead to poor clinic attendance. Survivor satisfaction with appointments and the information provided are important. The Monitoring Process Model provides a theoretical framework to understand how survivors cope with threatening information, and consequences for follow-up care. Our aims were to describe satisfaction with routine follow-up and association between monitoring/blunting and satisfaction with care.

Methods: 349 patients [aged 18-45 years with a history of haematological, germ cell, breast or childhood cancer, >5 years from diagnosis without relapse (>2 years for germ cell survivors), and with a follow-up appointment during the study period] were identified from hospital databases. Participants completed questionnaires before (T1) and after a routine appointment (T2).

Results: 279 (79.9%) questionnaires were completed at T1 and 198 (56.7%) at T2. Clinic satisfaction was higher with shorter waiting time, longer consultation and more topics discussed, but not associated with monitoring. High monitors reported more psychological problems, more importance of clinic attendance and greater value of support groups and professional counselling.

Conclusions: Satisfaction with follow-up is high among young adult cancer survivors. Follow-up was rated more highly by higher monitors, supporting previous findings that monitors seek out health care information. Provision of additional support services might increase satisfaction among survivors with psychological and social problems.

Keywords: cancer, oncology, follow-up, satisfaction, coping, monitoring

Introduction

Advances in treatment of cancer in children and younger adults have resulted in increasing survival rates [1]. However, treatment related late-effects (second malignancies, early mortality, endocrine, pulmonary, and psychosocial problems) can occur long after diagnosis and treatment and affect a substantial number of survivors [2, 3], resulting in recommendations for ongoing screening and regular follow-up [4].

In the paediatric setting, the rationale for follow-up is to monitor and detect late effects, and provide health-education, support and advice [4, 5]. However, the primary focus in the adult setting is on detection of tumour recurrence, with less emphasis on comprehensive care. Evidence-based guidelines to inform appropriate follow-up care have been developed for specific cancers [6-

12]. Despite recommendations, attendance declines over time [13]. Organisation of follow-up thus needs to consider survivors' understanding of the reasons for follow-up, their expectations and satisfaction.

Consultation satisfaction is generally high in cancer patients and survivors [14-18], especially when psychosocial needs are addressed [15] and clinicians are responsive to their concerns [19]. Patients who are more satisfied with their appointments report greater treatment compliance [20, 21], better quality of life (QOL), and lower anxiety and depression [22]. In evaluating follow-up, Absolom and colleagues [23-25] suggested that survivors differ in ratings of *clinical* (identification and treatment of medical problems) or *supportive* care (information about social or health issues). Although both are highly rated [24], survivors

rate clinical more highly than supportive care [23, 25]. However, high expectations regarding supportive care together with low value given to clinical care may result in reduced satisfaction. A potential disadvantage of clinic attendance may be that survivors are reminded of their cancer or risk of late effects, compromising QOL and increasing distress [26-28].

Only rarely have studies compared satisfaction with care in survivors of different cancers [17]. Comparison across different cancers may be useful, since differences in treatment, consequences and late effects may influence expectations and satisfaction with received care. We therefore questioned how far differences in perceptions about disease consequences and personal vulnerability might affect satisfaction with consultation.

Miller [29, 30] proposed a theoretical model to explain how individuals process threatening health information. Individuals are characterised as *monitors* or *blunters* depending on whether they seek (monitors) or distract themselves from threat-related cues (blunters). High monitors can best be described as information seekers while low monitors avoid information and tend to suppress or avoid cognitive and emotional threats. Monitors may be seen as a population at risk since their approach to information gathering leaves them vulnerable to stress. Monitoring can be associated with chronic worry which perpetuates negative thoughts and challenges effective problem-solving. Monitors typically show slower recovery from illness, more treatment side-effects [31], and higher perceived risk for cancer [32]. High monitors are more likely to attend to internal bodily symptoms and to experience greater discomfort and stress [30], to demand more tests, information, help, advice and reassurance, and are more worried before and during follow-up appointments [30, 31, 33]. After appointments, high monitors are generally less satisfied with information provided [31] and experience more distress when confronted with negative or unclear test outcomes [34]. Tailoring the amount of information to individual coping style may reduce level of stress [35, 36], increase motivation to attend screening [37] and decrease the likelihood of regret after breast reconstruction [38]. Individual differences in monitoring/blunting may therefore affect survivors' perceived QOL after cancer,

expectations and satisfaction with follow-up care, and need for information.

Based on this literature, we investigated

- 1) satisfaction with follow-up care among survivors of haematological (lymphoma or acute leukaemia), germ cell, breast cancer or childhood cancer, and the association with demographic and appointment information (time waiting, length of appointment, topics discussed during appointment),
- 2) individual differences in monitoring/blunting among survivors, and
- 3) the contribution of monitoring/ blunting, quality of life and appointment expectations to satisfaction with follow-up.

We predicted that higher monitors would report poorer QOL and greater future vulnerability for late effects, and have higher expectations about follow-up care. Furthermore, given their need for information, we expected higher monitors would want to discuss more topics when attending follow-up, and report greater satisfaction when these topics were discussed. We also predicted that survivors with higher monitoring scores would value support services more highly than those with lower scores.

Methods

Participants and procedure

A cohort of younger adults treated for cancer was recruited from a regional cancer centre in the UK. Eligible patients were aged 18 to 45 years with a history of haematological (lymphoma or acute leukaemia), germ cell, breast or childhood cancer, and a minimum of five years from diagnosis without relapse (two years from diagnosis for the germ cell group). These diagnoses were chosen given their relatively higher incidence among this age-group. Patients were included if they had a follow-up appointment within the study period. Terminally ill patients and those not fluent in English or unable to provide written informed consent were excluded.

Eligible patients were identified from hospital databases and clinic lists between December 2006 and January 2008. Those attending hospital follow-up during this period were contacted by post approximately one week before

appointments and sent information about the study, consent form and questionnaire (Time 1 [T1]) and asked to complete these prior to follow-up. On leaving clinic, survivors were given a second questionnaire to complete at home (Time 2 [T2]) and return in freepost envelopes. The study was approved by the South Sheffield Ethics Committee and all survivors gave written consent.

All cancer survivors received consultant-led care. Breast, germ cell and haematological cancer survivors received their follow-up in the original acute care setting in outpatients clinics alongside patients on active treatment. Childhood cancer survivors received follow-up in a dedicated late effects clinic in an adult hospital with access to specialist nursing, endocrinology, fertility, and psychiatric expertise [39].

Measures

T1 questionnaire:

- Monitoring:** We used a modified version of the Threatening Medical Situations Inventory (TMSI) [40]. This included four hypothetical medical scenarios (headache and dizziness, diagnosis of hypertension, removal of a wisdom tooth, being told that cancer treatment might cause late effects) followed by three monitoring and three blunting alternatives (e.g. 'I would ask other people if they have ever had a similar problem' or 'I would not worry about it, there are worse things to have'). Responses were made on five-point Likert scales, where 1 = "I definitely would not do this" to 5 = "I would definitely do this". Factor analysis of this modified version of the TMSI confirmed the presence of two scales reflecting monitoring and blunting. However, we excluded one blunting item (Hypertension: I would decide to relax and take things easy) because it loaded on the monitoring scale. We calculated a total *monitoring/blunting* score by summing the relevant items for each scale and then subtracting the blunting score from the monitoring score [36]. Sensitivity analyses showed that similar results were obtained using this combined *monitoring/blunting* score as
 - with two separate scale scores for monitoring and blunting. For ease of understanding we refer to this total combined score as *monitoring* in the remainder of the text and label survivors as high or low monitors based on scores on the *monitoring* scale. Reliability of the *monitoring* scale in our sample was good ($\alpha=0.86$).
- Generic QOL:** The SF-12v2 [41] yields two summary scores: Physical Component Summary (PCS) and Mental Component Summary (MCS). Scores were T-standardised according to age and gender-matched norms with a mean of 50 and standard deviation of 10. Higher scores represented better QOL. Excellent retest-reliability (between 0.76 and 0.89) and validity were reported for the scale [41].
- Survivor-specific QOL:** To assess survivor-specific QOL, we used two scales from the Cancer Survivors' Quality of Life Scale (QOL-CS) [42]. The QOL-CS *psychological problems scale* (6 items) assesses depression, anxiety and fear especially regarding cancer recurrence and future tests, with higher scores representing more fear. The QOL-CS *social problems scale* (8 items) assesses impact of cancer and treatment on the individual's social environment with higher scores representing more problems. Cronbach's alpha for both scales was good (psychological problems: $\alpha=0.89$; social problems: $\alpha=0.79$).
- Expectations for attending follow-up:** Survivors rated the importance (1-5) of different reasons (9 items) for attending follow-up. Previous factor analysis revealed two scales: *Supportive care* (receive psychological support, get advice about everyday things, talk to staff who understand what I have been through, get advice about how to keep healthy) and *clinical care* (get reassurance about my health, get advice about late effects, get the best medical care, check cancer has not come back) excluding one item (help clinic staff learn more about late effects of cancer and treatment) [24] (Cronbach's alpha in

our sample: *clinical* care: $\alpha=0.67$; *supportive* care: $\alpha=0.83$).

- **Topics to discuss during consultations:** Ten topics were listed (current health, medication, late effects, health behaviour, contraception, fertility, sexual problems, work/education, insurance and ‘anything else’). Survivors were asked if they wanted to discuss each during their next appointment on a scale from 1=“strongly disagree” to 5=“strongly agree”. A total number of topics was computed (0-10) by recoding “agree” and “strongly agree” responses into a single option.
- **Helpfulness of additional follow-up services:** Survivors were asked to rate the helpfulness (1 “not at all helpful” to 5 “very helpful”) of additional services (support groups, professional counselling, nutritional information, employment/career support). An alternative response was provided: “I already use this service”.
- **Late effects and vulnerability [24]:** Survivors were asked to indicate from a list of 18 late effects whether they ‘already have this problem’ and how likely they might be in the future (1=“very unlikely” – 5=“very likely”). We calculated i) the total number of current late effects and ii) mean future vulnerability over all late-effects.
- **Demographic information:** This included chronological age, gender, marital status and employment status.

T2 questionnaire:

- **Satisfaction:** This questionnaire was developed to assess outpatient satisfaction in an oncology population [43]. Survivors rated 29 statements (1 “strongly agree” to 4 “strongly disagree”). Where necessary, items were recoded so that higher scores indicate more satisfaction. Two items were excluded because they were answered “not applicable” by 102 (52.9%) and 91 (46.9%) of participants, respectively. We excluded a further 3 items with low loadings on any of the factors. Using principal component analysis, we extracted two factors, which were similar to results by Loblaw and colleagues [44]:

“*Information exchange*” (e.g. I really felt understood by the doctor, I feel the doctor was being honest with me) and “*Quality of appointment*” describing physician engagement during the appointment (e.g. the doctor used words I did not understand, the doctor seemed rushed). The two factors were highly correlated ($r=0.72$, $p<0.001$). Cronbach’s alpha for both scales was excellent: *information exchange* $\alpha=0.90$, *quality of appointment* $\alpha=0.95$.

- **Information about appointment:** Survivors estimated how long they waited before the appointment (0-20, 21-30, 31-60, 61-90, 91-120 minutes, over two hours), and time with the doctor (0-5, 6-10, 11-20, 31-30, 31-40 minutes, over 40 minutes).
- **Topics discussed:** Survivors recorded if any of the topics described above were discussed (yes, no) and we scored the total number.

Analyses

Analyses were performed using STATA 10.0. Measures were scored as described above. We used correlations, t-tests and ANOVAs to determine the association between *monitoring*, *satisfaction* and other variables. To determine *satisfaction with information exchange* and *satisfaction with quality of appointment* we conducted two separate multivariable linear regression analyses including all variables previously significant at the 0.05 level in the univariable analyses. With a sample size of 279 completed T1 questionnaires we could detect a difference of 0.17 standard deviations with a power of 0.80 and α of 0.05. With the sample size of 198 survivors who completed both T1 and T2 questionnaires, we could detect a difference of 0.20 standard deviations with a power of 0.80 and α of 0.05.

Results

A total of 349 survivors were eligible and scheduled for a routine follow-up appointment during the study period (Figure 1). 279 (79.9%) completed questionnaires at T1, and 198 (56.7%) also completed T2 questionnaires. Characteristics of the sample are shown in Table 1. There were no differences between survivors who completed

both questionnaires and those who only completed T1 questionnaires in terms of gender, diagnosis, employment status or time since diagnosis, but those who completed both questionnaires were more often in a relationship, older when completing questionnaires and older on diagnosis than those who did not complete the T2 questionnaire (Table 1). Means, standard deviations, and range for each scale are shown in Table 2. Time since diagnosis was longer for survivors of childhood cancer (mean=20.9; SD=7.9) than other diagnostic groups (haematological cancer: mean=11.7, SD=4.8; germ cell cancer: mean=4.4; SD=2.1; breast cancer: mean=6.0, SD=1.7; $p<0.001$)).

Most survivors reported waiting less than 20 minutes before their appointment (N=116 of 197, 58.9%) and an additional 41 waited between 20-30 minutes (20.8%). Most survivors estimated their appointment between 6 and 10 minutes (N=82 of 198, 41.4%), but 43 (21.7%) estimated less. Survivors of childhood (N=27; 60.0%) and breast cancer (N=11; 50.0%) reported longer appointments.

Of 275 survivors, 155 (56.4%) reported one or more late effect. Germ cell survivors reported fewer late effects than survivors of other tumours ($F(3,270)=3.75$; $p=0.012$). In terms of generic QOL, both PCS ($t=0.17$, $p=0.863$) and MCS ($t=0.08$, $p=0.940$) were comparable with population norms (Table 2).

1) Satisfaction with clinic attendance

Survivors rated their satisfaction with *information exchange* and *quality of appointment* highly (Table 2). Satisfaction scores were not related to any demographic variables (Table 3, Figure 2), except that employed survivors reported higher satisfaction with *quality of appointment* than non-employed ($t=2.88$, $df=189$, $p=0.004$).

Shorter waiting times, longer appointments, and more topics discussed were all associated with higher satisfaction of both kinds (Table 3, Figure 2; we also calculated an index of fit, to reflect how far topics discussed at the appointment match those that survivors wanted to discuss and results were essentially the same).

There was a main effect for diagnosis ($F(4,193)=2.76$; $p=0.029$) such that lymphoma survivors (mean=3.6; CI:3.48-3.73) were more satisfied with *quality of appointment* than either germ cell (mean=3.39; CI:3.27-3.51; $t=2.50$; $df=124$; $p=0.014$) or child cancer survivors (mean=3.33; CI:3.17-3.48; $t=2.79$; $df=105$; $p=0.006$), independent of time since diagnosis. Satisfaction with *information exchange* was not dependent on diagnosis ($F(4,193)=1.43$; $p=0.225$), current late effects or future vulnerability (Table 3, Figure 2).

2) Associations between monitoring, QOL, and reasons for attending clinic

A *monitoring* score could not be calculated for two survivors (thus analyses are based on 277 T1 questionnaires and 196 at T2). The *monitoring* score was 0 or negative for 58 survivors (20.9%) (i.e. they achieved higher scores for blunting compared with monitoring). *Monitoring* was not associated with any demographic or medical variable (Table 3), and there were no differences in *monitoring* based on gender ($t=5.0$, $df=275$, $p=0.618$) or diagnosis ($F(4,272)=1.4$, $p=0.233$).

Neither PCS nor MCS was associated with *monitoring*. In terms of survivor specific QOL, higher monitors reported more psychological problems, but there was no association with social problems (Table 3). There was no correlation between *monitoring* and number of self-reported late effects or vulnerability for future late effects (Table 3).

Higher monitoring scores were associated with higher rated importance for both *clinical* and *supportive* reasons for attending follow-up (Table 3). Analyses of specific expectations showed that higher *monitors* rated “get advice about how to keep healthy” ($r=0.13$; $p=0.033$), “check the cancer has not come back” ($r=0.14$, $p=0.024$), and “receive psychological support” to be more important ($r=0.15$, $p=0.016$). There was no association between number of topics (Table 3) or the specific topics survivors wanted to discuss (data not shown) and *monitoring*.

Monitors rated additional support groups and professional counselling to be more helpful than low monitors, but there was no association between *monitoring* and **interest in** nutritional or employment/career advice (Table 3).

3) Associations between appointment satisfaction and psychological variables

Survivors with higher MCS reported more satisfaction with both *information exchange* and *quality of appointment*. Survivors reporting more survivor specific psychological and social problems, in contrast, reported lower satisfaction with *quality of appointment*. Survivors who rated *clinical care* during follow-up as highly important were especially satisfied with *information exchange* (Table 3).

Monitoring was not associated with either satisfaction score (Table 3). There was also no interaction between *monitoring* and waiting time, length of appointment or topics discussed when predicting satisfaction with follow-up (data not shown).

We conducted two separate multivariable linear regression analyses to determine contributors to satisfaction including all variables previously significant at the 0.05 level. Better MCS, greater importance of *clinical care*, shorter waiting time, longer appointment and greater number of topics discussed were associated with satisfaction with *information exchange*. Satisfaction with *quality of appointment* was higher if more topics were discussed and lower in germ cell and childhood cancer survivors compared to lymphoma survivors (Table 4).

Discussion

This group of cancer survivors reported good quality of life and few current late-effects. This in part reflects their relatively young age, since late-effects increase with age. This raises a challenge for follow-up, in that survivors who are feeling relatively well are asked to attend clinic. Issues about the kind of care provided and extent to which it meets expectations are therefore crucial.

As reported previously [14-17, 45] follow-up satisfaction was relatively high, and did not differ depending on gender as previously reported [24]. There was no association with demographic variables except that employed survivors reported higher satisfaction with *quality of appointment*. In contrast, waiting time, length of appointment, and especially number of topics

discussed were associated with satisfaction. These results support previous findings that while time spent with the doctor is significant, how this time is spent is key [17, 46]; discussing relevant topics increased satisfaction independent of appointment length [16]. Childhood cancer survivors reported lower satisfaction compared to younger adult cancer survivors independent of time since diagnosis. This may reflect differences in aims and organisation between paediatric and adult services [23].

Survivors with good mental health (MCS) reported higher satisfaction, although those reporting psychological or social problems tending to be less satisfied with the *quality of appointments*. A negative relationship between psychological problems and appointment satisfaction has been shown previously with cancer patients in acute care [17]. This may suggest that those with psychological problems are more likely to feel their concerns are not addressed. The availability of psychosocial specialties could improve satisfaction and provide practical help.

Similar to previous findings, survivors who rated *clinical care* as important were more satisfied with the *information exchange* during their appointment [24]. There was also a slight trend towards importance of *supportive care* and less satisfaction with the *quality of follow-up appointment* suggesting that there might indeed be a lack of supportive care during follow-up. Patient satisfaction might therefore benefit if clinicians can communicate the clinical focus. Although *clinical care* is a major rationale for follow-up, providing good supportive care is an integral part of care even if clinicians often have insufficient time to deliver this themselves.

Our study also showed that the theoretical concept of monitoring/blunting can contribute to understanding survivors' expectations about follow-up after cancer. There was general support for the hypothesised relationship between monitoring and need for information [33, 36, 47], perceived value of professional support [31] and compromised QOL (i.e. psychological problems), although the anticipated relationship between monitoring and number of topics survivors wanted to discuss was not supported. However, all survivors rated both *clinical* and *supportive* reasons to be important (importance of care was high even for survivors with low monitoring

scores (lowest tertile): *clinical* care: mean=4.6, 95%CI: 4.5-4.7; *supportive* care: mean=3.5, 95%CI: 3.3-3.7) suggesting that, independent of monitoring, young cancer survivors appreciate the reasons for clinic attendance.

In our sample, appointment satisfaction was not associated with *monitoring*, suggesting that currently clinics address issues of concern for all survivors, regardless of their preference for information seeking. Whether or not this would apply to those who no longer attend clinic is an issue for future research.

Methodological considerations

Our sample included a cohort of survivors of childhood and younger adult cancers attending follow up. One fifth of our sample had a monitoring score of zero or negative and therefore included a considerable number of low monitors. With time since diagnosis, it is possible low monitors may find follow-up less valuable and are fail to attend. Different ways to provide follow-up for this group need to be identified.

Critically, our sample did not include those who did not attend in the time period of the study, or had discharged themselves from care. Lack of satisfaction with follow-up might be an important reason for non attendance. Organisation of follow-up needs to address the concerns of this group.

Conclusion

Satisfaction with follow-up was high in younger adult cancer survivors, but depended on QOL, expectations of care and appointment characteristics such as waiting time and appointment length. Our findings supported the hypotheses that higher monitors reported more psychological problems, higher expectations about follow-up care, and valued additional support services. However, higher monitors did not differ in what they wanted to discuss or appointment satisfaction. Additional research is needed to decide how to prevent loss to follow-up in these survivors or to provide other models of follow-up care that are more relevant to the needs of long term survivors. Good communication regarding the predominantly clinical nature for follow-up is essential. Other services, especially psycho-social support, should

be provided in order to increase satisfaction and retain survivors for follow-up.

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Conflict of interest statement

None declared.

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Table 1: Sample description and comparison between responders to time 1 and time questionnaires and non-responders to time 2 questionnaire

	Total				Responders T1 & T2 questionnaire		Non-responders T2 questionnaire		
	N	%			N	%	N	%	p
Total	279	100			198	100	81	100	
Gender									
Male	160	57.3			111	56.1	49	60.5	0.497
Female	119	42.7			87	43.9	32	39.5	
Diagnosis									
Lymphoma	91	32.6			62	31.3	29	35.8	0.091
Haematology	5	1.8			5	2.5	0	0.0	
Germ cell	85	30.5			64	32.3	21	25.9	
Breast	26	9.3			22	11.1	4	4.9	
Childhood	72	25.8			45	22.7	27	33.3	
Marital status									
Not in relationship	101	36.2			64	32.3	37	45.7	0.033
In relationship	175	62.7			132	66.7	43	53.1	
Employment status									
Employed	217	77.8			156	78.8	61	75.3	0.232
Unemployed	55	19.7			35	17.7	20	24.7	
	Mean	SD	min	max	Mean	SD	Mean	SD	p
Chronological age	34.5	7.4	18.1	45.4	35.1	7.0	32.9	8.0	0.020
Age at diagnosis	23.1	11.7	0.1	42.5	24.2	11.2	20.5	12.3	0.014
Time since diagnosis	11.3	8.2	2.0	36.1	10.9	8.0	12.4	8.6	0.160

Min: minimum; Max: maximum; SD: standard deviation, df: degrees of freedom

Table 2: Descriptive statistics for all scale scores

	N	Mean	SD	Min	Max
Quality of life					
PCS (SF-12)	268	52.7	8.6	19.4	71.4
MCS (SF-12)	268	48.8	10.2	13.0	70.3
Psychological problems ^a	278	2.4	1.6	0	6
Social problems ^a	278	1.6	1.1	0	5.1
Late effects					
Number of current late effects	275	1.4	1.9	0	13
Vulnerability ^b	270	2.6	0.7	1	4.4
Expectations for care					
Importance of clinical care ^c	278	4.7	0.4	3	5
Importance of supportive care ^c	276	3.6	0.8	1	5
Number of topics wanted to discuss	275	3.8	2.3	0	10
Appointment characteristics					
Number of topics discussed	197	2.8	1.8	0	9
Satisfaction with appointment					
Quality	198	3.4	0.5	2	4
Information exchange	198	3.2	0.5	1.6	4
Helpfulness of additional services^d					
Support groups	264	3.2	1.2	1	5
Professional counselling	261	3.3	1.3	1	5
Nutritional advice	265	3.6	1.3	1	5
Employment/career advice	260	2.9	1.3	1	5

^aHigher scores indicate more problems^bHigher scores indicate higher self-rated vulnerability of late effects^cHigher scores indicate higher importance^dHigher scores indicate ratings of more helpfulness of specific services

Table 3: Correlations between survivor characteristics, satisfaction with follow-up appointment and *monitoring*

	Satisfaction with						Monitoring	
	Quality of appointment		Information exchange					
	N	r	p	r	p	N	r	p
Demographics								
Age current	198	0.09	0.231	0.02	0.815	277	0.03	0.608
Age at diagnosis	198	0.12	0.087	0.07	0.347	277	-0.04	0.488
Time since diagnosis	198	-0.10	0.177	-0.08	0.266	277	0.09	0.147
Appointment characteristics								
Time waiting	197	-0.19	0.006	-0.17	0.017			
Length of consultation	198	0.16	0.028	0.25	0.000			
Number of topics discussed	197	0.15	0.033	0.26	0.000	195	-0.05	0.459
Late effects								
Number of current late effects	196	0.00	0.956	0.06	0.389	274	-0.02	0.717
Vulnerability	193	-0.13	0.082	-0.07	0.309	269	-0.03	0.656
Expectations for care								
Importance of clinical care	197	0.05	0.516	0.16	0.025	276	0.15	0.015
Importance of supportive care	196	-0.11	0.116	0.06	0.368	274	0.12	0.046
Number of topics wanted to discuss						273	-0.04	0.524
Quality of life								
PCS (SF-12)	191	0.01	0.944	-0.08	0.268	267	0.10	0.092
MCS (SF-12)	191	0.21	0.004	0.16	0.024	267	0.05	0.453
Psychological problems	197	-0.15	0.034	-0.10	0.177	277	0.16	0.008
Social problems	197	-0.20	0.005	-0.06	0.402	277	-0.03	0.667
Satisfaction with appointment								
Quality						196	-0.03	0.632
Information exchange						196	-0.03	0.722
Helpfulness of additional services								
Support groups						262	0.19	0.002
Professional counselling						259	0.14	0.021
Nutritional advice						263	0.07	0.239
Employment/career advice						258	0.05	0.459

Table 4: Multivariable linear regressions for satisfaction with follow-up appointment

	Satisfaction with quality of appointment				Satisfaction with information exchange			
	Coef.	95%CI	t	p	Coef.	95%CI	t	p
Breast cancer (compared to lymphoma)	-0.10	-0.34-0.14	-0.81	0.418				
Germ cell cancer	-0.28	-0.46-(-0.10)	-3.11	0.002				
Haematological cancer	-0.46	-0.97-0.05	-1.76	0.080				
Child cancer	-0.30	-0.52-(-0.09)	-2.75	0.007				
Being unemployed	-0.12	-0.33-0.09	-1.11	0.270				
MCS (SF-12)	0.00	-0.01-0.01	0.46	0.643	0.01	0.00-0.01	2.15	0.033
Clinical care					0.25	0.06-0.44	2.60	0.010
Psychological problems	-0.02	-0.08-0.04	-0.75	0.454				
Social problems	-0.07	-0.15-0.01	-1.73	0.086				
Time waiting	-0.07	-0.14-0.01	-1.67	0.096	-0.07	-0.15-0.00	-1.97	0.050
Length of consultation	0.08	-0.01-0.16	1.71	0.090	0.11	0.03-0.20	2.71	0.007
Number of topics discussed	0.05	0.01-0.09	2.22	0.028	0.06	0.02-0.10	3.23	0.001
Constant	3.55	2.99-4.11	12.50	0.000	1.35	0.32-2.39	2.59	0.011
F(11,171)=4.28, p<0.001, R ² =0.22, adjusted R ² =0.17					F(5,182)=5.96, p<0.001, R ² =0.18, adjusted R ² =0.16			